

April 2025
Technical Report
Volume I of VI

**ARCHAEOLOGICAL DATA RECOVERY,
ROBINSON TERMINAL SOUTH,
SITE 44AX0235
ALEXANDRIA, VIRGINIA**

Prepared For:

**RT SOUTH ASSOCIATES, LLC
10 DUKE STREET
ALEXANDRIA, VIRGINIA 22314**



**241 East Fourth St., Suite 100
Frederick, MD 21701**

**Archaeological Data Recovery,
Robinson Terminal South, Site 44AX0235
Alexandria, Virginia**

Volume I of VI

A handwritten signature in black ink, appearing to read 'Kathleen Child', with a stylized flourish at the end.

**Kathleen M. Child, M.A.
Principal Investigator**

Technical Report

By

**Kathleen M. Child, M.A., Katie L. Kosack, M.A., Cynthia L. Pfanstiehl, M.A.,
Martha R. Williams, M.A., M.Ed., Daniel J. Grose, B.A., and Aubrey Farrell, M.A.**

**R. Christopher Goodwin & Associates, Inc.
241 E. Fourth Street, Suite 100
Frederick, Maryland 21701**

April 2025

For

**RT South Associates, LLC
10 Duke Street
Alexandria, Virginia 22314**

ABSTRACT



This report describes the results of Phase I-III archaeological investigations conducted at Site 44AX0235 (Robinson Terminal South), located in City Block 73, in Alexandria, Virginia. The site encompasses 3.22-ac of developed urban land located southeast of the intersection of Duke Street and South Union Street, in Old Town Alexandria. The project area is bounded by Duke Street to the north, Wolfe Street to the south, Union Street to the west, and by the Potomac River to the east. The project area is locally known as Robinson Terminal South (RTS) and, until recently, was the location of the warehouse and office facilities for the Robinson Terminal Warehouse Corporation.

In compliance with the City of Alexandria's Archaeological Ordinance No. 3413 (1989), Section 11-411 of the City's Zoning Ordinance (1992), archaeological investigations were undertaken for the Robinson Terminal property prior to planned redevelopment of the property. History Matters, LLC and Thunderbird Archeology, a division of Wetland Studies and Solutions, Inc. (WSSI), each prepared Documentary Studies for the property (Claypool and Johnston 2014; Mullen et al. 2014). Based on their study, Mullen et al. (2014) determined the property had a high potential to contain intact, historically significant archaeological resources related to the mid eighteenth-century development of Alexandria's waterfront area, including well-preserved maritime resources, such as wharves, bulkheads and potentially ships.

In consultation with Alexandria Archaeology, WSSI undertook phased archaeological investigations of the RTS project area during 2017-2018. The investigations included archaeological monitoring during the removal of overburden soil, mechanized trench excavation, and hand-excavation of test units. During the initial phase of investigation, a total of 31 mechanized trenches

totaling approximately 1,520 linear ft (463.3 m), were excavated. As part of the evaluation, a total of 55 test units and two excavation blocks of varying size were placed to evaluate potentially significant archaeological resources. Resource Management Plans were prepared for 32 features and those features were subject to more intensive investigation. An additional 69 test units and 37 excavation blocks of varying size were completed as part of data recovery investigations in fulfillment of individual Resource Management Plans.

Field excavations had focused on examining deposits in the interiors of dwellings, store or warehouses, and other buildings identified within the project area. Some deposits provided information on the building's occupants or their activities, while other foundations contained only later fill material. The best preservation occurred within buildings situated near the waterfront, where sediments from past flood events combined with fill soil deposited during land-making covered and help protect archaeological deposits. Many of these deposits were also situated below the modern water table, which aided in the preservation of organic items, such as wood, leather, and plant material.

A total of 251 historic archaeological features and deposits were identified during the archaeological investigations. The features dated broadly from the mid-eighteenth century through the twentieth century and included the remains of wharves, warehouses, dwellings, stores, a large merchant mill and numerous other features. Intact deposits related to land making activity, as well as to daily life in Alexandria, were identified and in some instances, could be directly related to past occupants or owners of the property. Among the features identified were eight privies of varying types, 15 historic pits, 73 postholes, the foundations of 23 buildings and structures. Many of the postholes contained the remains of wooden

posts that once marked property lines or internal property divisions. Also identified were the remains of three wooden sailing vessels that had been incorporated into land-making structures. The vessels were part of a mid-eighteenth program of bulkhead and wharf construction that eventually became the foundation for the creation of the land comprising the present project area and were among the earliest features identified during the study.

In 2020, two years after fieldwork had been completed, analysis of the artifact collection began. Alexandria Archaeology catalogued and arranged conservation for the fragile items already stored in their laboratory, while R. Christopher Goodwin & Associates, Inc. (Goodwin & Associates) began the task of processing and analyzing the remaining artifacts and soil samples collected from Site 44AX235. To place the collection within a more relevant historical context and aid in its interpretation, Goodwin & Associates also conducted additional historical research focused on exploring the eighteenth and early nineteenth century development of the RTS Project Area. Goodwin & Associates also created a field specimen (FS) list to track artifact proveniences and digitized the hand-written lists of field-discarded items provided by WSSI staff. Oxford Archaeology was contracted to analyze photogrammetry data collected by WSSI staff; the resulting 3D images were provided to Alexandria Archaeology in 2021.

Goodwin & Associates processed a total of 204,817 artifacts from 1,300 individual contexts. A total of 8,984 of the processed artifacts would be catalogued and discarded in accordance with established protocols, leaving a total curated artifact collection of 195,891 historic artifacts and 279 pre-contact artifacts. Also incorporated into the inventory as discarded material were approximately 45,827 artifacts (totaling 17,896.59 kg) consisting mostly of brick, shell, stone and other non-diagnostic materials that WSSI staff discarded during field investigations. Of the 198 soil samples taken during the field investigations, 47 samples were subject to flotation, 119 samples were water-screened, and 32 samples, mostly of unknown provenience, were held as soil samples. Special analysis undertaken on selected feature

contexts included archaeobotanical, parasitology, palynological (pollen), phytolith, and zooarchaeological analysis. A dendrochronological study of wharf and ship timbers had previously been conducted by the Oxford Tree-Ring Laboratory under contract with WSSI in 2019.

Supplemental archival research identified numerous industries and commercial enterprises that operated within the Project Area. The earliest industries were associated with maritime commerce and included a mid-late eighteenth century shipyard and wharf operated by Thomas Fleming. Nineteenth century industries included a large merchant mill known as Pioneer Mills, a lumber and coal yard operated by local cabinet-maker James Green, a Baltimore & Ohio Railroad railway depot and the Bryant Fertilizer Company warehouse. Small commercial enterprises also were found within the Project Area, such as a bakehouse, a tavern, several storehouses, a carpenter's shop, a possible tailor or seamstresses' shop, and a possibly chandlery. Many of the dwelling residents and business owners were identified. Some of their names like Thomas Fleming, James Hooe, William Hartshorne and James Green were well-known. Other names were less well known, but were still important.

Free and enslaved African Americans who worked, labored and lived in the Project Area were some of those people whose names may never be known, but whose presence was revealed through historical documents. Some of the artifacts recovered during the archaeological investigation were likely used or owned by African Americans. Artifacts such as faceted blue glass beads and pierced coins items are often attributed to the presence of free or enslaved African Americans and these items were recovered from various features. African American use and discard of material culture extends beyond artifacts possibly imbued with ritual significance to include artifacts of daily life and labor and many of the common items recovered during the investigation may have been used by African Americans, both free and enslaved.

During the eighteenth and nineteenth centuries, property owners could increase their land by filling in unusable land. The earliest land making structures were bulkheads and earth-filled cribbed structures that were built directly on the tidal

sands. Dendrochronology dated some of the trees used to build the structures in the project area to the 1770s. There were few buildings in the project area in the 1770s and most of these were warehouses or sheds that had been built on the tidal flats to support maritime industries. By late eighteenth century, warehouses, stores and workshops lined a waterfront area that only decades before had been a tidal wetland. The trampled reeds of the wetland, mixed with tidal sands, were identified archaeologically and underlay more than five feet of fill material deposited as the land was raised above the tidal waters. Just as new buildings, structures, and roads were built upon the fill material, new docks and wharves were also built.

With the exception of the foundations of Pioneer Mills and the existing building that stands at 2 Duke Street, few significant archaeological features dating after the mid-nineteenth century were identified. Isolated footings, machine pads, utility lines and posts from numerous fence lines comprised most of this later evidence. The massive stone and brick foundation of Pioneer Mills, including the remains of nine of its French buhr millstones, was identified in northeastern corner of the Project Area. Its construction had cut through the stone foundation of an earlier ware-

house foundation that had been build upon the timbers of an even earlier bulkhead and wharf. This use and reuse of space was typical for the project area and underscored the complexity and magnitude of the archaeological field investigations and the amount of data that was collected and analyzed in the effort to reveal the hidden past of the RTS property.

While archaeological reports typically contained recommendations, for the RTS project, this report is the final phase of a comprehensive data recovery effort that encompassed the entire 3.22-ac Project Area. The planned redevelopment of the Robinson Terminal Warehouse property has been completed. A majority of the archaeological resources within the project footprint have been fully investigated. The only exceptions are a portion of Ship 3 that underlies the current alignment of Wolfe Street and which was left in place; and a portion of Feature 81, a large foundation in the southwestern portion of the project area, that also was preserved in place. Archaeological monitoring of future construction in those locations is recommended to avoid impacting these important archaeological resources.

TABLE OF CONTENTS



Abstract	I-ii
List of Figures	I-vii
List of Tables	I-x
I. Introduction	I-1
Introduction	I-1
Project Description	I-5
Project Personnel	I-5
Thunderbird Archeology/WSSI	I-5
R. Christopher Goodwin & Associates, Inc.	I-7
Organization of the Report	I-7
II. Research Design and Methods	I-9
Introduction	I-9
Research Objectives	I-9
Research Questions	I-9
Archival Research Methods (Goodwin & Associates)	I-10
Archaeological Field Methods (Thunderbird Archeology/WSSI)	I-10
Archaeological Monitoring	I-11
Mechanized Trench Excavation	I-11
Test Unit Excavation	I-11
Feature Excavation	I-14
Analysis of Archaeological Field Results (Goodwin & Associates)	I-23
Archaeological Laboratory Analysis (Goodwin & Associates)	I-28
Basic Historic Artifact Analysis Methods	I-29
Detailed Historic Artifact Analyses	I-30
Temporal Analysis	I-30
Minimum Number of Vessels (MNV)	I-30
Basic Pre-Contact Lithic Artifact Analysis Methods	I-31
Soil Sample Processing Methods	I-31
Water Flotation Methods	I-32
Water Screening Methods	I-32
Records and Curation	I-33
III. Natural and Cultural Setting	I-34
Natural Setting	I-34
Geology and Soils	I-34
Watershed	I-35

Terrain and Topography	I-35
Previous Investigations	I-40
Cultural Resources Surveys.....	I-40
Archaeological Sites	I-41
Architectural Resources.....	I-41
Pre-Contact Context	I-41
Pre-Contact Cultural Sequence	I-42
Paleoindian (ca.15,000 - 8,000 B.C.)	I-42
Archaic (ca. 8,000 - 1,200 B.C.).....	I-43
Woodland Period (1,200 B. C. – A. D. 1600).....	I-44
The Contact Period (ca. 1600-1650).....	I-45
Indians in the Post-Europea Contact Period	I-45
Pre-Contact Archaeological Potential of the RTS Project Area.....	I-45
General Historical Context	I-46
Eighteenth Century (ca. 1749-1800)	I-46
Antebellum Period (ca. 1800 – 1860)	I-50
Civil War through 1900	I-53
Early Twentieth Century (ca. 1900-1945)	I-55
References	I-65

LIST OF FIGURES



Figure 1-1	Map of Virginia, showing the location of the Project Area	I-2
Figure 1-2	Detail from the Alexandria, Virginia, USGS 7.5' Quadrangle (1984 photorevised), showing the approximate location of the Project Area.	I-3
Figure 1-3	Aerial photograph showing the location of the Project Area	I-4
Figure 1-4	Map showing proposed development in relationship to historic shorelines (Source: Board of Architectural Review Certificate of Appropriateness – Minor Changes, Amendment 01, July 29, 2019, provided by RT South).	I-6
Figure 2-1	Photograph showing WSSI staff monitoring excavation in the area of the planned parking garage, view northeast (WSSI staff, 3/29/2018).	I-12
Figure 2-2	Photograph showing WSSI Field Director Dan Baicy monitoring removal of overburden soil in the northwestern portion of the Project Area, view northwest (WSSI staff, 3/6/2017)	I-12
Figure 2-3	Photograph showing an overview of Trench 4 (foreground) enlarged to connect with Trench 11 (PG-1) (background), view south (WSSI staff, 6/12/2017) . .	I-13
Figure 2-4	Photograph showing WSSI staff recording Trench 6A, view southeast (WSSI staff, 1/25/2017)	I-13
Figure 2-5	Photograph showing WSSI staff dry-screening soil removed during excavation of Feature 18 (foreground) and Feature 4 (background), view south (WSSI staff, 5/11/2017)	I-14
Figure 2-6	Photograph showing WSSI staff hand-cleaning Feature 151 (foreground), while additional staff mark the locations of support posts for Feature 134 (background) and monitor the removal of overburden soil (center), view north (WSSI staff, 3/15/2018)	I-22
Figure 2-7	Photograph showing WSSI staff hand-cleaning Feature 5, view northwest (WSSI staff, 2/24/2017)	I-23
Figure 2-8	Photograph showing WSSI staff recording excavation unit results during investigation of Feature 45, view east (WSSI staff, 5/15/2017)	I-24

Figure 2-9	Map showing the boundaries of Lot 77, Lot 85 and the public lands on Point Lumley (PL) that were used during analysis of the RTS artifact collection (RCG&A staff)	I-25
Figure 2-10	Map showing the analytical subdivisions of Lot 77, Lot 85 and the public lands on Point Lumley (PL) that were used during the analysis of the RTS artifact collection (RCG&A staff)	I-26
Figure 2-11	Map showing Lot and Parcel boundaries overlaid on map showing the locations of archaeological features (RCG&A staff)	I-27
Figure 3-1	Detail from George Washington's (1748) Plat of the land where on stands the town of Alexandria, showing the natural configuration of the future site of Alexandria (Bellhaven) (Image: Library of Congress).. . . .	I-47
Figure 3-2	Detail from George Washington's (1749) Plan of Alexandria, Now Bellhaven, showing the division of land into blocks and lots, and listing purchasers of each lot. Original survey by John West Jr. (Image: Library of Congress) . . .	I-48
Figure 3-3	Detail from Ewing and Sinclair's 1845 map of the Alexandria waterfront area, showing the foundry and brewery (numbered 15 and 17) on the waterfront immediately south of the RTS project area. (Image: Library of Congress). . .	I-52
Figure 3-4	Detail from Charles Magnus' 1863 Bird's Eye View of Alexandria, VA, showing types of vessels commonly using waterfront wharves and docks. (Image: Library of Congress).	I-54
Figure 3-5	Detail from G. M. Hopkins 1877 Atlas of Alexandria (Plate H), showing the extent of James Green's business interests within the RTS project area. (Image courtesy of Alexandria Archaeology).. . . .	I-56
Figure 3-6	Detail from Sanborn Map Company's 1885 Insurance Map of Alexandria, Virginia (Plate 9), showing the surviving brick and frame dwellings within the RTS project area. (Image: Library of Congress).	I-57
Figure 3-7	Detail from Sanborn-Perris' 1891 Insurance Map of Alexandria, Virginia (Plate 11), showing the surviving brick and frame dwellings within the RTS project area. (Image: Library of Congress).. . . .	I-58
Figure 3-8	Detail from Sanborn-Perris' 1896 Insurance Map of Alexandria, Virginia (Plate 8), showing two surviving brick dwellings, the B&O RR's freight depot, and rail spurs within the RTS project area. (Image: Library of Congress).. . . .	I-59
Figure 3-9	Detail from the Sanborn Map Company's 1907 Insurance Map of Alexandria, Virginia (Plate 14), depicting the expansion of the Bryant Fertilizer Company and Aitcheson Lumber Company complexes into the RTS project area. (Image: Library of Congress).. . . .	I-61

Figure 3-10	Detail from the Sanborn Map Company's 1912 Insurance Map of Alexandria, Virginia (Plate 14), documenting the entry of three new businesses—Texas Oil, Emerson Engine, and Herfurth—into the RTS project area. (Image: Library of Congress).	I-62
Figure 3-11	Part of the Sanborn Map Company's 1921 Insurance Map of Alexandria, Virginia (Plate 11), showing changes in the four business enterprises that operated within the RTS project area. (Image: Library of Congress).	I-63
Figure 3-12	Detail from the Sanborn Map Company's 1941 Insurance Map of Alexandria, Virginia (Plate 12), showing the total occupation of the RTS project area by the Southern Iron Works and the Robinson Terminal Warehouse Company. (Image: Library of Congress).	I-64

LIST OF TABLES



Table 2.1	Summary of Primary Features identified during Phase I-III Archaeological Investigations	I-15
Table 2.2	Summary of Sub-features identified during Phase I-III Archaeological Investigation	I-18
Table 2.3	Summary of Soil Samples by Feature Number	I-20
Table 2.4	Summary of Processed Soil Samples	I-32
Table 3.1	Summary of Previously Identified Archaeological Resources within 0.25-mi (0.4 km) of the Project Area	I-36
Table 3.2	Summary of Previously Identified Architectural Resources within 0.25-mi (0.4 km) of the Project Area	I-38

CHAPTER I

INTRODUCTION



Introduction

This report describes the results of archaeological data recovery investigations conducted at Site 44AX0235, Robinson Terminal South (RTS), located in Old Town Alexandria, Alexandria, Virginia. The site is bounded by Duke Street on the north, the Potomac River on the east, Wolfe (Wolf) Street on the south and Union Street on the west (Figures 1-1, 1-2 and 1-3). Hotel Indigo Old Town Alexandria (an IHG Hotel) and Point Lumley Park are located on the northern side of Duke Street, opposite the Project Area. Roberdeau Park, which is an extension of Shipyard Park and Windmill Hill Park, is located at the eastern end of Wolfe Street, near the southeastern corner of the Project Area.

Thunderbird Archeology, a division of Wetland Studies and Solutions, Inc. (WSSI), conducted all archaeological fieldwork for the Robinson Terminal South project. Archaeological fieldwork was undertaken from 2017-2018. The RTS property was developed fully at the time of the archaeological investigation and included the warehouse and office facilities for Robinson Terminal Warehouse Corporation. These buildings and structures were demolished over the course of the archaeological investigation, as excavation for Robinson Landing commenced.

In 2014, in compliance with the City of Alexandria's Archaeological Ordinance No. 3413 (1989), Section 11-411 of the City's Zoning Ordinance (1992), History Matters, LLC prepared a documentary study that detailed the developmental history of the RTS property (Claypool and Johnston 2014). This was followed by a supplemental documentary study conducted that same year by Thunderbird Archaeology (WSSI), which expanded on the ownership history of individual properties within the RTS Project Area and provided an archaeological assessment of the research potential of those properties (Mullen et

al. 2014). Mullen et al. (2014:68-69) determined that the RTS property had a high potential to contain intact, historically significant archaeological resources related to the mid eighteenth-century development of Alexandria's waterfront area. In particular, the recovery of buried wood fragments from geotechnical soil borings provided evidence that well-preserved maritime resources, such as bulkhead and wharf structures and derelict ships, may be located within the project area.

In consultation with Alexandria Archaeology, WSSI undertook archaeological monitoring during construction, followed by targeted Phase I/II archaeological investigations at the RTS property beginning in 2017. A *Scope of Work for Archaeological Evaluation; Robinson South Terminal* (dated February 20, 2017) preceded the archaeological investigations and defined the study objectives and methods. The Phase I/II archaeological study included archaeological monitoring during the removal of overburden soils, as well as the excavation of a series of 31 mechanized excavation trenches across accessible portions of the project area. The study revealed the remains of numerous archaeological features, including building foundations, privies, postholes, refuse pits, and wharf structures. Test units were placed within selected features to assess their potential archaeological significance. A total of 34 archaeological features were recommended for additional archaeological investigation.

Archaeological data recovery was undertaken concurrently with the Phase I/II archaeological investigations; all archaeological fieldwork was concluded in 2018. To initiate the data recovery effort, WSSI prepared a series of Resource Management Plans that identified and addressed project impacts to the 34 potentially significant archaeological resources. Alexandria Archaeology reviewed and approved the Resource Management Plans prior to their implementation. The

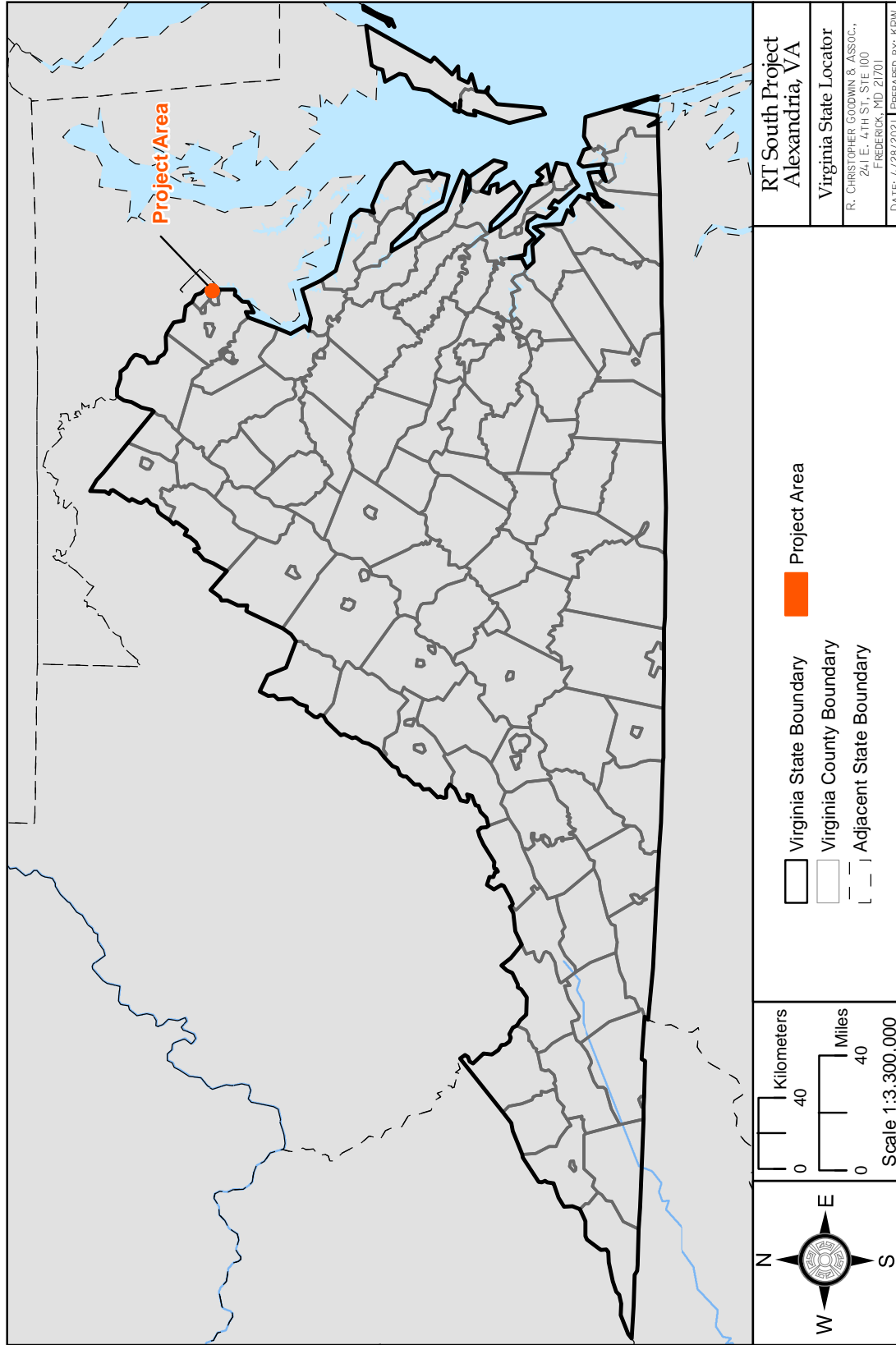


Figure 1-1 Map of Virginia, showing the location of the Project Area

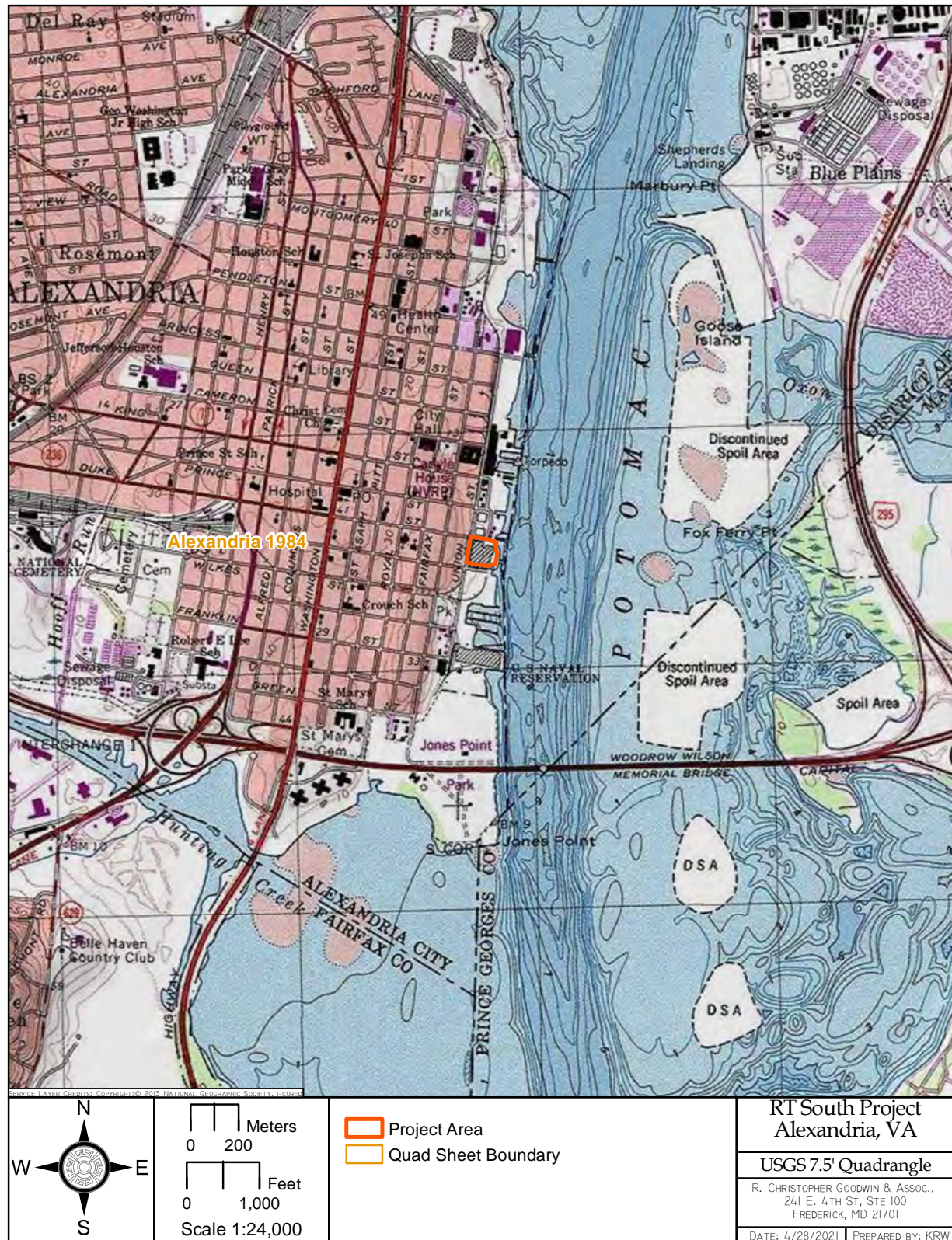


Figure 1-2 Detail from the Alexandria, Virginia, USGS 7.5' Quadrangle (1984 photorevised), showing the approximate location of the Project Area.



Figure 1-3 Aerial photograph showing the location of the Project Area

Resource Management Plans prepared for the project are provided in Volume VI of this report.

All work undertaken for this project was conducted pursuant to the above-cited *Scope of Work for Archaeological Evaluation; Robinson South Terminal* (dated February 20, 2017) and Archaeological Resource Management Plans. All work was subject to permit applications obtained under the City of Alexandria's Archeological Ordinance No. 3413 (1989), Section 11-411 (adopted June 24, 1992). All archaeological investigations were conducted in accordance with the standards established in the Secretary of Interior's *Standards and Guidelines for Archaeology and Historic Preservation*; and the *Guidelines for Conducting Historic Resources Survey in Virginia* (Virginia Department of Historic Resources [VDHR] 2011). Archaeological field investigations were concluded in 2018 and followed the City of Alexandria's *Archaeological Standards* (1996). Laboratory analysis and reporting followed the City of Alexandria revised *Archaeological Standards* (1996, revised 2021).

Project Description

The RTS Project Area encompasses modern City Block 73 (Tax Parcel 75-03004 [1-4]). Bounded by Wolfe Street on the south, Union Street on the West, Duke Street on the North and the Potomac River on the east, this block contained a total of 3.22-ac that collectively was known as Robinson Terminal South. The block was zoned W-1 (warehouse); it was developed fully with warehouse, storage and office facilities for the Robinson Terminal Warehouse Corporation. These structures occupied 2.17 ac, or over two-thirds (67.39 percent) of the land within the project area. The remaining land was covered by impervious surfaces.

When the initial permits were secured in 2014, the planned redevelopment of the RTS property was proposed to include the new construction of nine buildings containing 92 townhouse and multi-family residential units and 11,473 ft² of specialty retail and restaurant space (DSUP 2014-006; Figure 1-4). As part of the redevelopment process, a majority of the standing structures within the RTS Project Area were demolished. The building at 2 Duke Street was the

only building not demolished; this building has been renovated. A below-grade parking garage extending along the southern and western sides of the development area was proposed to contain 149 parking spaces. Construction plans called for the excavation of at least 10 ft (3.05 m) of soil in the location of the planned below-grade parking garage. The finished floor of the garage was projected to have an elevation of -2.42 ft (-0.74 m) above mean sea level (amsl), which was at least 9.74 ft (2.97 m) below the construction control benchmark set along Wolfe Street.

Planned infrastructure improvements included the installation of new utilities, as well as the construction of new roadways and pedestrian paths. The existing right-of-way for Strand Street would be retained and reconfigured to include a section designated for pedestrian-only access. A large open space area fronting the Potomac River waterfront would allow access to existing waterfront docks. The development has been completed and is currently known as Robinson Landing. New roads within the development include Pioneer Mill Way, Merchant Alley, Fleming Alley and Bakers Walk.

Project Personnel

Thunderbird Archaeology (WSSI) conducted the initial documentary study for the RTS project, followed by the archaeological fieldwork. R. Christopher Goodwin & Associates, Inc. (Goodwin & Associates) undertook analysis of the artifacts collection and authored this report. The key personnel for each organization are provided below.

Thunderbird Archeology/WSSI

Thunderbird Archeology, a division of Wetland Studies and Solutions, Inc. (WSSI), of Gainesville, Virginia, conducted the archaeological field investigations at Robinson Terminal South and undertook initial processing of the artifact collection from the project. John P. Mullen, M.A., RPA served as Principal Investigator for Archaeology. Daniel Baicy, M.A., RPA conducted the archaeological fieldwork along with Thomas Cuthbertson, M.A., Edward McMullen, M.A., and a team of WSSI staff, interns, archaeologists, and other specialized experts.

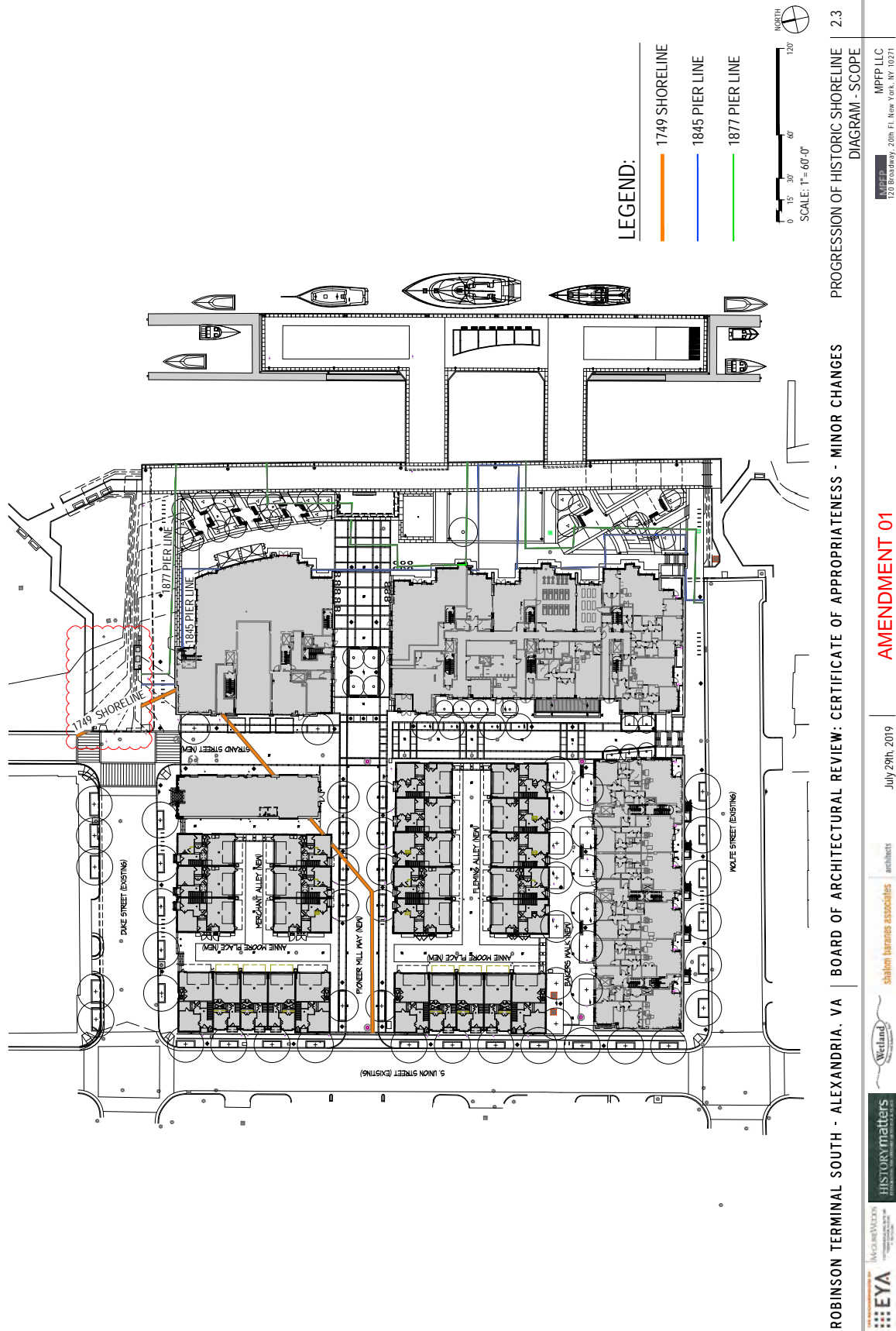


Figure 1-4 Map showing proposed development in relationship to historic shorelines (Source: Board of Architectural Review Certificate of Appropriateness – Minor Changes, Amendment 01, July 29, 2019, provided by RT South)

The WSSI archaeological crew included David Carroll, Jonathan Fleming, Vincent Gallacci, Chad Heflin, Catherine Herring, Zachary Hudson, Caleb Jeck, Edward Johnson, John Kolar, Amanda Lacklen, Jennifer Laqualia, Sara Mack, David Madden, Kate Mott, Daniel Osborne, Robin Ramey, Penne Sandbeck, Kathleen Jockel Schneider, Stephanie Sharpes, Margaret Stone, Jeremy Smith, Valerie Vendrick, Courtney Williams, and Angelica Wimer. Elizabeth Waters Johnson, M.A. served as Laboratory Manager and conducted the Phase I and II artifact analyses with the assistance of Amber Nubgaard, Lily Sipe, and archeological field staff.

The following 2017 and 2018 WSSI summer interns assisted with the field investigations: Stephen Bendele, Janelle Bernosky, Samantha Bohn, Sean Britton, Courtney Bridges, Alex Eitler, Seth Finkel, Adam Grocholl, Landry Horner, Scott Huebner, Trevor Marable, Katie Moody, Colin Morrison, Eirini Sarri, Patrick Sommer, Ellyse Sutliff and Jordan Van Roe. The WSSI survey team included Eric Calladine, Tyler Covarrubias, Cory Dietrich, Brian Hollinger, Andre Kendall, Chad Laskaris, Ben Longest, Jeff Monaco, Nick Rodriguez, Nicholas Rossi, and Paul Szarowicz.

WSSI also welcomed the assistance of archaeologists, primarily from Jeannie Ward at Applied Archaeology and Historic Associates, Inc. and including Alyse Bearman, Erin Cagney, Kaitlin Crow, Kendall Crumpler, Chelsea Cohen, Scott Emory, Emily Falk, Amy Fanz, Nicole Grigg, Caroline Herritt, Daniel Hildebran, Norah Hoffman, Brian Johnson, Ryan Killion, Andrew Landis, Anna LaValley, Jocelyn Lee, Samantha Lininger, Amanda Michel, Sara Mack, Alice Muntz, Isabel Osmundsen, Katelyn Pelusio, Victor Ponte, Craig Schaefer, Kathleen Scott, Charles Simpson, Sasha Slepushkina, Jay Taylor, and Steve Tornow.

Finally, John Broadwater (SpiritSail Enterprises), Chelsea Cohen (University of Pennsylvania), Dana Coleman (Towson University), Nichole Doub (Maryland Archaeological Conservation Laboratory), Tim Mancl (TJM Historical Consulting), George Schwarz (Underwater Archaeology Branch of the Naval History and Heritage Command), Bruce Terrell and Frank Cantellas (NOAA Maritime Heritage Program), Mi-

chael Worthington (Oxford Dendrochronology), and all of the staff at Alexandria Archaeology (Eleanor Breen, Garrett Fesler, Benjamin Skolnik, Tatiana Niculescu), assisted with initial interpretations and excavations.

R. Christopher Goodwin & Associates, Inc.

R. Christopher Goodwin & Associates, Inc. (Goodwin & Associates) of Frederick, Maryland undertook laboratory processing and analyses of artifacts and soil samples recovered from the Robinson Terminal South project. Goodwin & Associates conducted comprehensive historic background research in an effort to contextualize the artifact collection and provide a relevant interpretive framework to guide future analysis of the extensive artifact collection obtained during the archaeological investigation. The results of this effort are contained within these report volumes, prepared by Goodwin & Associates.

Kathleen M. Child, M.A., R.P.A. oversaw the organization of this report and served as primary author. Archival research to aid in interpretation of the artifact collection was conducted by Cynthia Pfanstiehl, M.A., Kathleen M. Child, M.A. and Martha R. Williams, M.A.Ed. Katie L. Kosack, M.A. supervised laboratory processing and analysis of the artifact collection and authored report sections pertaining to artifact analysis, as well as provided research monographs for the concluding chapters of this report. She was assisted in the lab by Dan Grose, B.A., Thomas Wambach, M.A., and Jenna Whitcome, B.A.; and by lab interns Joshua Hood and Martha Berkheimer. Justin Lev-Tov, Ph.D. performed the faunal analysis and prepared portions of the report pertaining to faunal analysis. Kristopher R. West, M.A., prepared the graphics for this report and Ms. Sharon Little produced the report.

Organization of the Report

This report has undergone numerous revisions from its initial date of publication. The most recent version of this report (published in 2025) is divided into six volumes (I-VI). This volume, Volume I, contains an overview of the Robinson Terminal South project along with the research objectives and methods used for the ensuing archaeological investigations and analyses. An

overview of the natural and cultural setting also is provided in Volume I.

Volumes II-IV provide details on the archaeological features identified during the fieldwork phase of the RTS project, as well as details of the results of laboratory analysis of the artifacts recovered during the fieldwork phase. In an effort to contextualize this data, additional site-specific historical background research was conducted and has been added, where appropriate, to each volume. Volumes II-IV examine the RTS Project Area as it was originally laid out in 1749 by the Town Trustees for the newly established town of Alexandria. Volume II provides a historical overview of Town Lot 77, as well as detailed information on the archaeological features and artifacts associated with that lot. Volume III contains information on Town Lot 85, established in 1763,

as well as the archaeological features and artifacts associated with that lot. The historic development, archaeological features, and artifacts associated with the Public Lands on Point Lumley, which originally were set aside for the use of the Town Trustees, are contained within Volume IV.

Volume V provides a summary of the project findings and addresses the research questions posed in the Scope of Work. The results of specialized analysis conducted for the RTS collection, as well as several original research questions that were raised during the course of the analysis also are contained within Volume V. The final volume, Volume VI, contains artifact and faunal inventories for Site 44AX0235, the project Scope of Work, and the Resource Management Plans prepared by WSSI as part of the data recovery effort.

CHAPTER 2

RESEARCH DESIGN AND METHODS



Introduction

The archeological investigations at Site 44AX0235 were conducted over the course of two years (2017-2018). The investigations were staged to coincide with various phases of project construction, which ranged from pre-construction activities such as utility relocation to final-stage site grading. Although archaeological investigations typically can be divided into three parts (Phases I-III), the archaeological investigations at Site 44AX0235 often flowed uninterrupted from initial discovery and evaluation phases (Phases I and II) into the final data recovery phase (Phase III). Neither were the archaeological field records clear where division of effort began or ended for each phase of investigation. These efforts are discussed in broad scope below and in more specific detail within the individual archaeological features discussions found in later volumes of this report series.

Research Objectives

The research objectives for the archaeological investigations at Site 44AX0235 were stated in the *Scope of Work for Archaeological Evaluation* prepared by WSSI (dated February 20, 2017). These objectives were:

1. to gather geomorphological data relevant to understanding the “banking out” process within the Project Area; and,
2. to determine the overall potential for intact archaeological resources within the Project Area.

These objectives followed the generalized recommendations of the documentary study prepared by WSSI (Mullen et al. 2014). In that report, Mullen et al. (2014:68-69) had concluded that the RTS property had a high potential to contain intact and significant archaeological resources spanning the entire period of historic develop-

ment of the property, which extended from the early eighteenth century through the modern period. The potential for deeply buried resources including ships, wharf and bulkhead structures, as well as evidence of more shallowly buried resources such as building foundations was judged to be high based upon the recovery of wood debris within geotechnical soil borings. The soil borings also recovered natural alluvial sediments that suggested shoreline deposits underlay a portion of the project area.

The methods proposed for the archaeological evaluation included the excavation of a series of mechanized trenches to assess the archeological potential of different portions of the Project Area. The trenches were proposed to occur following demolition of the existing structures and prior to the start of large-scale site grading. A total of 31 trenches totaling approximately 1,520 linear ft (463.3 linear m) were excavated during this effort. Although the total number of features identified during trench excavation remains unclear, it was concluded that large portions of the Project Area retained sufficient integrity to address research questions.

Research Questions

Research questions for Site 44AX0235 were posed in the *Scope of Work for Archaeological Evaluation*. These research questions are mirrored in the feature-specific Archaeological Resource Management Plans prepared by WSSI. Typically, only those questions relevant to identified resource were included in the Resource Management Plan.

The research questions developed for Site 44AX0235 relied on identifying archaeological markers relevant to discussing important historical events and patterns of social and economic development in the City of Alexandria. Additional topics related to evidence of natural disasters, the influence of the Civil War, and pat-

terns of residential (as opposed to commercial) property use. The research questions, as stated in the Scope of Work prepared by WSSI, are cited below in their entirety:

- Archeological excavations at the Indigo Hotel [44AX0229] revealed evidence of engineered infilling and land creation north of Point Lumley: a bulkhead wharf and a vessel that had been also been used as the framework for the engineered fill. Were similar methods used to create new land south of Point Lumley?
- Can we locate and identify Thomas Fleming's shipyard? Shipyard sites are largely absent from the archeological record; therefore, the remains of Fleming's wharf, secondary structures and subsurface features related to his shipbuilding venture becomes even more important to complement the documentary record.
- Will the site contain the remnant eighteenth and nineteenth century wharves and structures?
- Is the current building on 2 Duke Street resting partially on the foundation of Col. Hooe's Warehouse?
- Will the stratigraphic profile reveal evidence of the fires that devastated this block?
- Did the foundations of the Pioneer Mills survive?
- Can we identify historic resources associated with the Civil War occupation of the waterfront?
- Can we attribute any historic remains (features or artifacts) to the various industries on the block- blacksmiths, carpenters, coopers, grocers, etc? To the domestic component of the block?

Archival Research Methods (Goodwin & Associates)

Historical research for this report utilized primary and secondary source data obtained from local repositories in the City of Alexandria and also accessed from online sources. The extensive files, map collections, and digital resources available at Alexandria Archaeology provided historic tax assessors' valuations, nineteenth and twentieth century historic maps, and relevant business directories of the city. City directories, ad-

ditional map and photographic files, and specialized topical vertical files related to aspects of the property's history and development were obtained in the Local History/Special Collections of the Kate Waller Barrett Branch of the Alexandria Public Library. The land records archived at the City of Alexandria Clerk of Court's office facilitated reconstruction of a partial chain of title for the property.

Online sources consulted for the project included the digital map collections from the Library of Congress; nineteenth and twentieth century census returns available at Ancestry.com; and Alexandria Archaeology's digital archive of archaeological reports related to projects in other areas of the city. Data collected by V-CRIS was used to identify cultural resources and surveys conducted within a 1/2-mile radius of the project area; this radius was used to provide a broad view of prehistoric and historic land use patterns in the area in order to assist in assessing the project areas' potential.

Archaeological Field Methods (Thunderbird Archeology/WSSI)

Thunderbird Archeology/WSSI (WSSI) undertook staged archaeological investigations at Site 44AX0235 during 2017-2018. The investigation methods included: archaeological monitoring, Phase I/II level archaeological investigation; and Phase III level archaeological mitigation. The entire 3.22-ac Project Area was subject to archaeological investigation. Phase I/II methods were defined in the *Scope of Work for Archaeological Evaluation; Robinson South Terminal* (dated February 20, 2017). Phase III mitigation strategies were defined by resource-specific management plans, which were developed for potentially significant archaeological features or deposits identified during Phase I/II level archaeological investigation. The Resource Management Plans defined the research goals and excavation methods for 34 archaeological features.

A general overview of excavation methods was provided in the *Scope of Work for Archaeological Evaluation; Robinson South Terminal* (dated February 20, 2017); that document is summarized below. Modifications to methods that occurred during execution of Resource Manage-

ment Plans also are described in feature-specific discussions, as appropriate. All archaeological excavations were supervised by the professional archaeological staff of WSSI. Per state regulations, Utility811 review was completed prior to the start of archaeological fieldwork.

It was understood that all work was conducted in accordance with standards established in the Secretary of Interior's *Standards and Guidelines for Archeology and Historic Preservation* and the *Guidelines for Conducting Historic Resources Survey in Virginia* (Virginia Department of Historic Resources [VDHR] 2011). Archaeological fieldwork was completed in 2018 and complied with the City of Alexandria's *Archeological Standards* (1996). The work also was subject to the terms of the archeological permits issued by Alexandria Archaeology and the City of Alexandria, Virginia.

Archaeological Monitoring

Archaeological monitoring was undertaken for utility installations, as well as during mass-excavation of archaeologically sensitive areas of the site. Mass-excavation was conducted in controlled lifts and included work performed in construction of slurry walls, building footings, and excavation of a below-grade parking garage. Removal of engineered fill placed during the construction process as a mitigative measure related to FEMA flood-control requirements also was monitored, as was excavation conducted to remove areas of unsuitable fill material.

All monitoring was performed by professional archaeological staff of WSSI (Figures 2-1 and 2-2). Archaeological features and deposits exposed during monitoring were documented using standard field recordation forms. If warranted, these records were supplemented by scale drawings and photographs. Areas in which potentially significant archaeological features or deposits were discovered were marked for avoidance pending consultation with Alexandria Archaeology. Limited hand-excavation was undertaken during monitoring, as required to assess the potential significance of exposed deposits and features.

Mechanized Trench Excavation

A total of 31 mechanized trenches totaling approximately 1,520 linear ft (463.3 m) were

excavated during the Phase I/II study. Mechanized trenches were excavated using a backhoe equipped with a flat-bladed bucket. Trenches measuring from 3.5-5 ft (1-1.5 m) in width were excavated to an average depth of 5 ft (1.5 m) below surface (Figure 2.3). Trench length varied from 25 ft (7.6 m) to 140 ft (42.7 m) depending upon trench location and objectives. Excavation depths were measured from the post-demolition construction surface, which was stabilized through the addition of engineered fill material over the demolition surface. A representative stratigraphic profile was drawn for each trench, and all trenches were photographed in profile view (Figure 2-4). Suspected cultural deposits and features were drawn and photographed in plan view, as appropriate. Trenches were refilled upon completion of recordation.

Test Unit Excavation

A total of 124 test units and 37 excavation blocks were excavated during the combined Phase I-III investigations. Test units and excavation blocks were hand-excavated. Test units typically measured 3 x 3 ft (0.9 x 0.9 m), while excavation blocks varied in size from 6 x 6 ft (1.8 x 1.8 m) to 9 x 12 ft (2.7 x 3.7 m) in size. Soil from hand-excavated units and blocks was removed in natural stratigraphic horizons termed "fill." Where additional vertical control was required, arbitrary excavation levels were used to subdivide natural stratigraphic horizons; these divisions also were termed "fill."

Unless otherwise specified, all removed soils were screened through 0.25-in hardware cloth (mesh) (Figure 2-5). Representative profile drawings and photographs were taken of each unit and block excavation. Standardized excavation level and feature recordation forms were used to document excavation results. Recordation of soils followed standard nomenclature and Munsell Color Chart designations. All unit measurements were taken in tenths of feet, and all excavation depths were measured from a control datum established in proximity to the excavation unit or block. The excavation depth for each "fill" or "level" was derived from the center point of the unit or block. Recovered artifacts were placed in resealable plastic bags labeled with appropriate provenience in-



Figure 2-1 Photograph showing WSSI staff monitoring excavation in the area of the planned parking garage, view northeast (WSSI staff, 3/29/2018)



Figure 2-2 Photograph showing WSSI Field Director Dan Baicy monitoring removal of overburden soil in the northwestern portion of the Project Area, view northwest (WSSI staff, 3/6/2017)



Figure 2-3 Photograph showing an overview of Trench 4 (foreground) enlarged to connect with Trench 11 (PG-1) (background), view south (WSSI staff, 6/12/2017)



Figure 2-4 Photograph showing WSSI staff recording Trench 6A, view southeast (WSSI staff, 1/25/2017)



Figure 2-5 Photograph showing WSSI staff dry-screening soil removed during excavation of Feature 18 (foreground) and Feature 4 (background), view south (WSSI staff, 5/11/2017)

formation. Artifacts that were not retained for laboratory analysis, such as brick, coal, shell, and mortar/plaster, were counted and/or weighed in the field. The counts and/or weights were recorded on a Discard Log maintained across all phases of the archaeological project.

Since unit and block excavation was undertaken during the construction phase, not all units were refilled upon completion. Units placed in locations where additional excavation was required to reach finished grade typically were left open to facilitate archaeological monitoring. Units placed in locations where additional excavation was not required or that were delayed significantly due to the overall schedule were refilled upon completion of recordation.

Feature Excavation

A total of 248 historic archaeological features and deposits were identified during archaeological investigation of Site 44AX0235 (Tables 2-1 and 2-2). The features included a wide variety of architectural, domestic, construction and transportation-related features (Table 2-3). Post-

holes and post removal holes ($n=74$) represented the most common feature type, while the remains of ships ($n=3$), portions of bulkhead or wharf structures ($n=17$) and building foundations ($n=23$) were the largest features identified during the project. The most informative features were privies. A total of eight privies of different types also were identified.

WSSI excavated a total of 160 features (64.5%). Initial feature excavation was undertaken by hand (Figures 2-6 and 2-7). Small features were sampled through bisection, while larger features were sampled through the placement of test units and excavation blocks. Unless specified by a feature-specific Resource Management Plan, feature excavation proceeded following natural stratigraphic levels; all removed soils were screened through 0.25-in hardware cloth. As appropriate and where site conditions permitted, selected feature soil was water-screened through 0.125-in hardware cloth. Recovered artifacts were placed in resealable plastic bags labeled with appropriate provenience information.

Table 2.1 Summary of Primary Features identified during Phase I-III Archaeological Investigations

Feature #	Lot	Parcel	Feature Type	Total
1	Public Lands	PL-4	Unknown	1
2	Public Lands	PL-4	Unknown	1
3	Public Lands	PL-4	Unknown	1
4	77	77-3	Building/Structure Foundation	1
5	77	77-1	Building/Structure Foundation	1
6	Public Lands	PL-3	Post hole/Post	1
7	Public Lands	PL-3	Isolated Board/Timber	1
8	Public Lands	PL-3	Post hole/Post	1
9	Public Lands	PL-3	Building/Structure Foundation Element	1
10	Public Lands	PL-2	Isolated Board/Timber	1
11	Public Lands	PL-2	Building/Structure Foundation	1
12	77	77-1	Privy	1
13	77	77-1	Privy	1
14	Public Lands	PL-3	Post hole/Post	1
15	Public Lands	PL-2	Post hole/Post	1
16	Public Lands	PL-2	Post hole/Post	1
17	Public Lands	PL-2	Post hole/Post	1
18	77	77-2	Building/Structure Foundation	1
19	77	77-2	Drainage Feature	1
20	Public Lands	PL-2	Post hole/Post	1
21	Public Lands	PL-2	Post hole/Post	1
22	77	77-2	Debris	1
23	77	77-4	Building/Structure Foundation	1
24	Public Lands	PL-3	Building/Structure Foundation	1
25	Public Lands	PL-3	Post hole/Post	1
26	77	77-1	Debris	1
27	Public Lands	PL-2	Post hole/Post	1
28	Public Lands	PL-2	Pit	1
29	Public Lands	PL-2	Post hole/Post	1
30	Public Lands	PL-2	Post hole/Post	1
31	Public Lands	PL-3	Soil Deposit	1
32	77	77-5	Privy	1
33	77	77-5	Post hole/Post	1
34	Public Lands	PL-3	Building/Structure Foundation	1
35	Public Lands	PL-3	Building/Structure Foundation Element	1
36	Public Lands	PL-3	Pit	1
38	Public Lands	PL-3	Building/Structure Foundation Element	1
39	Public Lands	PL-3	Building/Structure Foundation Element	1
40	Public Lands	PL-3	Post hole/Post	1
41	Public Lands	PL-3	Pit	1
42	Public Lands	PL-2	Post hole/Post	1
		PL-3	Post hole/Post	1
43	Public Lands	PL-2	Building/Structure Foundation	1
44	Public Lands	PL-2	Building/Structure Foundation	1
45	77	77-1	Building/Structure Foundation	1
46	77	77-1	Pit	1

Feature #	Lot	Parcel	Feature Type	Total
47	Public Lands	PL-2	Unknown	1
48	77	77-4	Privy	1
49	Public Lands	PL-3	Privy	1
50	Public Lands	PL-1	Post hole/Post	1
53	Public Lands	PL-2	Post hole/Post	1
54	77	77-3	Soil Deposit	1
55	77	77-2	Post hole/Post	1
56	Public Lands	PL-3	Pit	1
57	Public Lands	PL-3	Other	1
58	77	77-1	Building/Structure Foundation Element	1
59	Public Lands	PL-3	Unknown	1
60	Public Lands	PL-3	Post hole/Post	1
61	Public Lands	PL-3	Post hole/Post	1
62	Public Lands	PL-2	Post hole/Post	1
63	Public Lands	PL-2	Post hole/Post	1
64	Public Lands	PL-2	Post hole/Post	1
65	Public Lands	PL-2	Unknown	1
66	Public Lands	PL-3	Post hole/Post	1
67	Public Lands	PL-3	Unknown	1
68	Public Lands	PL-3	Unknown	1
69	77	77-1	Debris	1
70	Public Lands	PL-3	Unknown	1
71	Public Lands	PL-3	Post hole/Post	1
72	Public Lands	PL-3	Post hole/Post	1
73	Public Lands	PL-3	Pit	1
74	Public Lands	PL-3	Post hole/Post	1
75	Public Lands	PL-3	Pit	1
76	77	77-5	Building/Structure Foundation Element	1
77	77	77-4	Post hole/Post	1
78	85	85-3	Post hole/Post	1
81	85	85-3	Building/Structure Foundation	1
82	85	85-3	Isolated Board/Timber	1
83	77	77-5	Building/Structure Foundation Element	1
84	77	77-5	Pit	1
85	77	77-5	Post hole/Post	1
86	85	85-3	Post hole/Post	1
87	85	85-3	Post hole/Post	1
88	77	77-6	Utility	1
89	85	85-3	Post hole/Post	1
90	Public Lands	PL-2	Post hole/Post	1
91	Public Lands	PL-1	Building/Structure Foundation	1
93	85	85-3	Barrel	1
94	85	85-3	Post hole/Post	1
95	85	85-3	Barrel	1
96	77	77-5	Post hole/Post	1
97	Public Lands	PL-1	Post hole/Post	1

Feature #	Lot	Parcel	Feature Type	Total
98	Public Lands	PL-1	Post hole/Post	1
99	Public Lands	PL-1	Post hole/Post	1
100	Public Lands	PL-1	Post hole/Post	1
101	Public Lands	PL-1	Post hole/Post	1
102	Public Lands	PL-2	Post hole/Post	1
104	Public Lands	PL-5	Building/Structure Foundation	1
106	85	85-1	Unknown	1
107	85	85-1	Unknown	1
108	85	85-1	Unknown	1
109	85	85-1	Unknown	1
110	85	85-1	Post hole/Post	1
112	85	85-2	Building/Structure Foundation	1
113	Public Lands	PL-2	Unknown	1
114	Public Lands	PL-2	Unknown	1
115	Public Lands	PL-1	Unknown	1
116	Public Lands	PL-1	Unknown	1
117	77	77-6	Building/Structure Foundation Element	1
118	85	85-2	Building/Structure Foundation	1
120	85	85-2	Building/Structure Foundation	1
122	85	85-4	Post hole/Post	1
123	85	85-4	Road/Walkway	1
124	85	85-1	Other	1
125	85	85-1	Building/Structure Foundation	1
126	Unknown	Unknown	Unknown	1
127	85	85-1	Building/Structure Foundation Element	1
128	85	85-1	Building/Structure Foundation Element	1
129	85	85-1	Isolated Board/Timber	1
130	85	85-1	Building/Structure Foundation Element	1
131	85	85-1	Building/Structure Foundation Element	1
132	85	85-1	Unknown	1
133	85	85-1	Unknown	1
134	Public Lands	PL-4	Building/Structure Foundation	1
135	85	85-4	Building/Structure Foundation	1
136	85	85-4	Road/Walkway	1
137	Public Lands	PL-4	Post hole/Post	1
138	Public Lands	PL-4	Post hole/Post	1
139	85	85-4	Building/Structure Foundation	1
140	85	85-4	Post hole/Post	1
141	85	85-4	Post hole/Post	1
142	85	85-4	Post hole/Post	1
143	85	85-4	Post hole/Post	1
144	85	85-4	Post hole/Post	1
145	85	85-4	Post hole/Post	1
146	85	85-4	Post hole/Post	1
148	85	85-4	Building/Structure Foundation	1
149	Public Lands	PL-4	Building/Structure Foundation Element	1

Feature #	Lot	Parcel	Feature Type	Total
150	85	85-1	Privy	1
151	85	85-4	Building/Structure Foundation	1
152	85	85-2	Building/Structure Foundation Element	1
153	85	85-2	Building/Structure Foundation	1
155	Public Lands	PL-4	Ship	1
156	85	85-2	Privy	1
157	85	85-1	Privy	1
159	85	85-4	Ship	1
160	Public Lands	PL-4	Wharf/Bulkhead/Cribbing	1
161	85	85-2	Wharf/Bulkhead/Cribbing	1
162	85	85-4	Wharf/Bulkhead/Cribbing	1
165	85	85-4	Wharf/Bulkhead/Cribbing	1
166	Public Lands	PL-4	Other	1
168	Public Lands	PL-4	Wharf/Bulkhead/Cribbing	1
200	Public Lands	PL-4	Ship	1
201	Public Lands	PL-4	Isolated Board/Timber	1
202	Public Lands	PL-4	Wharf/Bulkhead/Cribbing	1
251	Unknown	Unknown	Unknown	1
256	Unknown	Unknown	Unknown	1
257	Unknown	Unknown	Unknown	1
Grand Total				158

Table 2.2 Summary of Sub-features identified during Phase I-III Archaeological Investigation

Sub-Feature #	Lot	Parcel	Feature Type	Total
4-1	77	77-3	Soil Deposit	1
4-2 (SE Quad)	77	77-3	Isolated Board/Timber	1
4-2 (Unit 7)	77	77-3	Building/Structure Foundation Element	1
4-3	77	77-3	Pit	1
4-4	77	77-3	Pit	1
4-5	77	77-3	Barrel	1
4-6	Unknown	Unknown	Unknown	1
4-7	Unknown	Unknown	Unknown	1
4-8	Unknown	Unknown	Unknown	1
5-1	77	77-1	Building/Structure Foundation Element	1
5-2	77	77-1	Soil Deposit	1
5-3	77	77-1	Post hole/Post	1
5-4	77	77-1	Pit	1
11-1	Public Lands	PL-2	Post hole/Post	1
12-1	77	77-1	Building/Structure Foundation Element	1
18-01	77	77-2	Building/Structure Foundation Element	1
18-02	77	77-2	Pit	1
18-03	77	77-2	Other	1
18-04	77	77-2	Drainage Feature	1
18-05	77	77-2	Drainage Feature	1
18-06	77	77-2	Drainage Feature	1
18-07	77	77-2	Drainage Feature	1
18-08	77	77-2	Drainage Feature	1

Sub-Feature #	Lot	Parcel	Feature Type	Total
19-01	77	77-2	Other	1
24-1	Public Lands	PL-3	Other	1
24-2	Public Lands	PL-3	Building/Structure Foundation Element	1
24-3	Public Lands	PL-3	Unknown	1
24-4	Public Lands	PL-3	Pit	1
24-5	Public Lands	PL-3	Unknown	1
24-6	Public Lands	PL-3	Unknown	1
24-7	Public Lands	PL-3	Soil Deposit	1
34-1	Public Lands	PL-3	Post hole/Post	1
44-1	Public Lands	PL-2	Drainage Feature	1
44-2	Public Lands	PL-2	Drainage Feature	1
44-3	Public Lands	PL-2	Building/Structure Foundation Element	1
44-4	Public Lands	PL-2	Builder's Trench	1
44-5	Public Lands	PL-2	Building/Structure Foundation Element	1
45-1	77	77-1	Building/Structure Foundation Element	1
45-2 (45, NE Quad)	77	77-1	Post hole/Post	1
45-2 (TU 20)	77	77-1	Post hole/Post	1
45-3	77	77-1	Soil Deposit	1
76-01	77	77-5	Building/Structure Foundation Element	1
76-02	77	77-5	Building/Structure Foundation Element	1
76-03	77	77-5	Building/Structure Foundation Element	1
76-04	77	77-5	Building/Structure Foundation Element	1
76-05	77	77-5	Building/Structure Foundation Element	1
76-06	77	77-5	Building/Structure Foundation Element	1
76-07	77	77-5	Building/Structure Foundation Element	1
76-08	77	77-5	Building/Structure Foundation Element	1
76-09	77	77-5	Building/Structure Foundation Element	1
81-01	85	85-3	Post hole/Post	1
81-02	85	85-3	Post hole/Post	1
83-01 (Unit 77)	77	77-5	Soil Deposit	1
83-01/02 (Unit 76)	77	77-5	Post hole/Post	1
83-03	77	77-5	Post hole/Post	1
84-01	77	77-5	Unknown	1
84-02	77	77-5	Post hole/Post	1
91-1	Public Lands	PL-1	Post hole/Post	1
91-2	Public Lands	PL-1	Wharf/Bulkhead/Cribbing	1
91-3	Public Lands	PL-1	Wharf/Bulkhead/Cribbing	1
91-4	Public Lands	PL-1	Post hole/Post	1
91-5	Public Lands	PL-1	Pit	1
91-6	Public Lands	PL-1	Barrel	1
91-7	Public Lands	PL-1	Post hole/Post	1
91-8	Public Lands	PL-1	Post hole/Post	1
91-9	Public Lands	PL-1	Natural	1
104-1	Public Lands	PL-5	Debris	1
104-2	Public Lands	PL-5	Post hole/Post	1
104-3	Public Lands	PL-5	Natural	1
104-4	Public Lands	PL-5	Building/Structure Foundation Element	1
118-1	85	85-2	Wharf/Bulkhead/Cribbing	1

Sub-Feature #	Lot	Parcel	Feature Type	Total
125-10	85	85-1	Soil Deposit	1
125-11	85	85-1	Unknown	1
125-12/13	85	85-1	Pit	1
125-14	85	85-1	Building/Structure Foundation Element	1
125-2	Unknown	Unknown	Unknown	1
131-1	85	85-1	Soil Deposit	1
131-2	85	85-1	Post hole/Post	1
134-1	Public Lands	PL-4	Unknown	1
134-2	Public Lands	PL-4	Unknown	1
134-3	Public Lands	PL-4	Unknown	1
136-1	85	85-4	Post hole/Post	1
139-1	85	85-4	Post hole/Post	1
139-2	85	85-4	Post hole/Post	1
159-1	85	85-4	Unknown	1
165-1	85	85-4	Wharf/Bulkhead/Cribbing	1
165-2	85	85-4	Wharf/Bulkhead/Cribbing	1
165-3	85	85-4	Wharf/Bulkhead/Cribbing	1
165-4	85	85-4	Wharf/Bulkhead/Cribbing	1
165-5	85	85-4	Wharf/Bulkhead/Cribbing	1
168-1	Public Lands	PL-4	Wharf/Bulkhead/Cribbing	1
168-2	Public Lands	PL-4	Wharf/Bulkhead/Cribbing	1
168-3	Public Lands	PL-4	Wharf/Bulkhead/Cribbing	1
Grand Total				93

Table 2.3 Summary of Soil Samples by Feature Number

Feature/ Sub-Feature	Feature Type	Total # Soil Samples
4-1	Soil Deposit	1
4-3	Pit	3
4-5	Barrel	1
4-6	Unknown - No Feature Record	1
4-7	Unknown - No Feature Record	1
4-8	Unknown - No Feature Record	1
5	Building/Structure Foundation	5
5-1	Building/Structure Foundation Element	1
5-2	Soil Deposit	2
5-3	Post hole/Post	1
5-4	Pit	2
9	Building/Structure Foundation Element	4
11-1	Post hole/Post	1
12	Privy	6
13	Privy	5
14	Post hole/Post	1
15	Post hole/Post	1
16	Post hole/Post	1
17	Post hole/Post	1

Feature/ Sub-Feature	Feature Type	Total # Soil Samples
18	Building/Structure Foundation	4
18-2	Pit	4
18-4	Drainage Feature	1
18-5	Drainage Feature	3
18-6	Drainage Feature	2
18-7	Drainage Feature	1
18-8	Drainage Feature	1
20	Post hole/Post	1
21	Post hole/Post	1
23	Building/Structure Foundation	3
24-4	Pit	1
28	Pit	1
29	Post hole/Post	1
30	Post hole/Post	1
34-1	Post hole/Post	1
36	Pit	2
40	Post hole/Post	1
41	Pit	1
42	Post hole/Post	1
44-1	Drainage Feature	1
44-2	Drainage Feature	2
44-3	Building/Structure Foundation Element	4
44-4	Builder's Trench	1
45	Building/Structure Foundation	2
45-2 (45, NE Quad)	Post hole/Post	1
46	Pit	5
48	Privy	7
49	Privy	5
54	Soil Deposit	1
57	Other	1
77	Post hole/Post	1
78	Post hole/Post	1
81	Building/Structure Foundation	1
81-2	Post hole/Post	1
83-1 (Unit 77)	Soil Deposit	1
83-1/83-2 (Unit 76)	Post hole/Post	2
84-2	Post hole/Post	2
86	Post hole/Post	1
91	Building/Structure Foundation	16
91-1	Post hole/Post	1
91-2	Wharf/Bulkhead/Cribbing	5
91-4	Post hole/Post	1

Feature/ Sub-Feature	Feature Type	Total # Soil Samples
91-6	Barrel	4
91-7	Post hole/Post	1
91-9	Natural	2
93	Barrel	2
99	Post hole/Post	1
101	Post hole/Post	1
102	Post hole/Post	1
104-2	Post hole/Post	2
120	Building/Structure Foundation	2
125	Building/Structure Foundation	26
125-2	Unknown - No Feature Record	1
125-12/13	Pit	1
125-14	Building/Structure Foundation Element	4
126	Unknown - No Feature Record	1
137	Post hole/Post	1
138	Post hole/Post	1
157	Privy	3
159-1	Unknown	3
166	Other	2
200	Ship	2
251	Unknown - No Feature Record	1
256	Unknown - No Feature Record	1
257	Unknown - No Feature Record	1
Grand Total		198



Figure 2-6 Photograph showing WSSI staff hand-cleaning Feature 151 (foreground), while additional staff mark the locations of support posts for Feature 134 (background) and monitor the removal of overburden soil (center), view north (WSSI staff, 3/15/2018)



Figure 2-7 Photograph showing WSSI staff hand-cleaning Feature 5, view northwest (WSSI staff, 2/24/2017)

Features were documented using standard feature recordation forms (Figure 2-8). Information recorded on the forms was supplemented by scale plan and profile drawings and by photographs taken at different stages of excavation. Where appropriate, soil samples for specialized analysis and/or flotation were collected from intact feature strata. The volume of the samples varied depending upon the size of the feature and the layer being sampled. An adequate sample was considered to be 1-gallon (3.8-l) of soil.

Analysis of Archaeological Field Results (Goodwin & Associates)

Under a separate scope of work, Goodwin & Associates undertook analysis and reporting on the artifact collection generated by the archaeological investigations at Site 44AX0235. The analysis was conducted in consultation with Alexandria Archaeology and included detailed artifact analysis, a discussion of excavated feature types, and the conduct of specialized analyses for selected features and artifact groups. Supplemental

to this scope of work, Goodwin & Associates also conducted historical background research for 15 study areas within the RTS property. The study areas were defined during analysis and were intended to provide historical contexts relevant to interpretation of the archaeological resources identified during the field investigations. The supplemental background research focused on developing individual property histories that provided detailed information on property ownership for each of the newly defined study areas.

The study areas used throughout this report were intended to reflect the historical configuration of the Project Area during the turn of the nineteenth century (late 1700s-early 1800s). This was the time period to which a majority of the archaeological features dated and, due that fact, was judged to be the most appropriate period around which to develop an organizational framework for analysis of the artifacts recovered during the archaeological investigation. This also proved to be a period of rapid change within the Project Area, where the two large land-holdings in the



Figure 2-8 Photograph showing WSSI staff recording excavation unit results during investigation of Feature 45, view east (WSSI staff, 5/15/2017)

Project Area were being subdivided and sold. Lot 77 was one of the original town lots, laid out in 1749, and was privately owned. Lot 85 had been laid out in 1763, as the town expanded to the south, and also was privately owned (Figure 2-9). The other major property within the Project Area was Point Lumley, a small peninsula of land that jutted into the Potomac River on the southern end of Alexandria. The trustees of the Town of Alexandria had retained ownership of Point Lumley and leased various portions of it for commercial and industrial use.

For the purposes of discussion, each of the major property holdings within the Project Area was subdivided into smaller study areas. Lot 77 was divided into six study areas (Parcels 77-1 through 77-6), Lot 85 was subdivided into four study areas (Parcels 85-1 through 85-4), and the municipal lands on Point Lumley were subdivided into six study areas (PL-1 through PL-6) (Figure 2-10).

The analytical divisions used for Lot 77 generally followed the pattern of lot development that had been established by the end of the nine-

teenth century. By 1794, Lot 77 had been subdivided into smaller lots. The lots fronting Union Street had been developed as residential and commercial properties, while an interior lot bordering Lot 85 was undeveloped. These lots are discussed as Parcels 77-1 through 77-6. Parcels 77-1 through 77-4 were located on natural land, while Parcels 77-5 and 77-6 were located on land made by filling in part of the natural shoreline. A majority of the archaeological features identified within Lot 77 dated from this period, making it an appropriate contextual period for discussion of those features (Figure 2-11).

Archaeological features in Lot 85 exhibited a broader range of use, with some of the earliest features dating from the mid-late eighteenth century. Most of the archaeological features sampled during the field investigations were in use during the early nineteenth century and, as such, this period was the most appropriate for discussion of the archaeological results. Much of the land in Lot 85, although privately owned, was leased. The analytical divisions for Lot 85 followed the boundaries of early nineteenth century leases (ca.

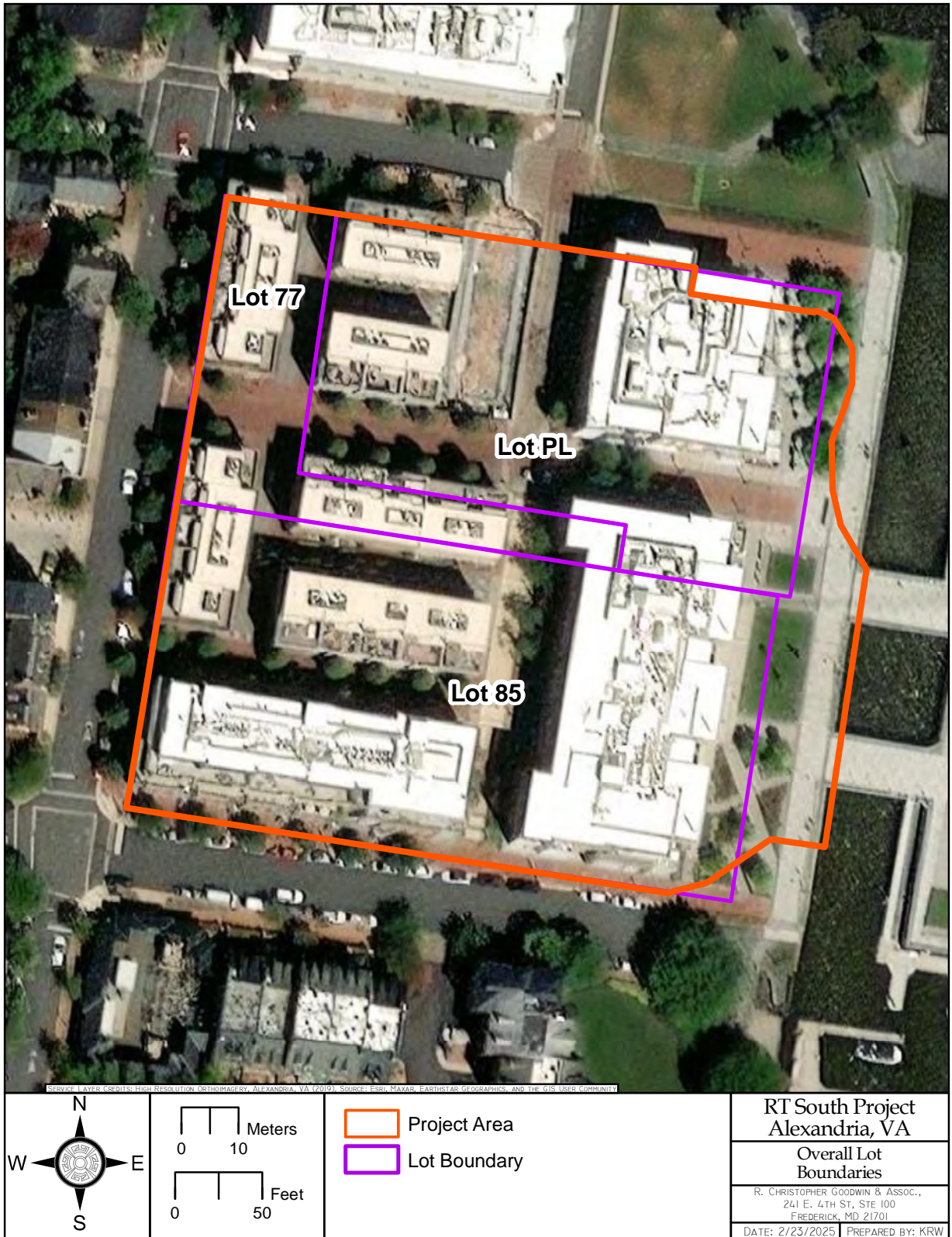


Figure 2-9 Map showing the boundaries of Lot 77, Lot 85 and the public lands on Point Lumley (PL) that were used during analysis of the RTS artifact collection (RCG&A staff)

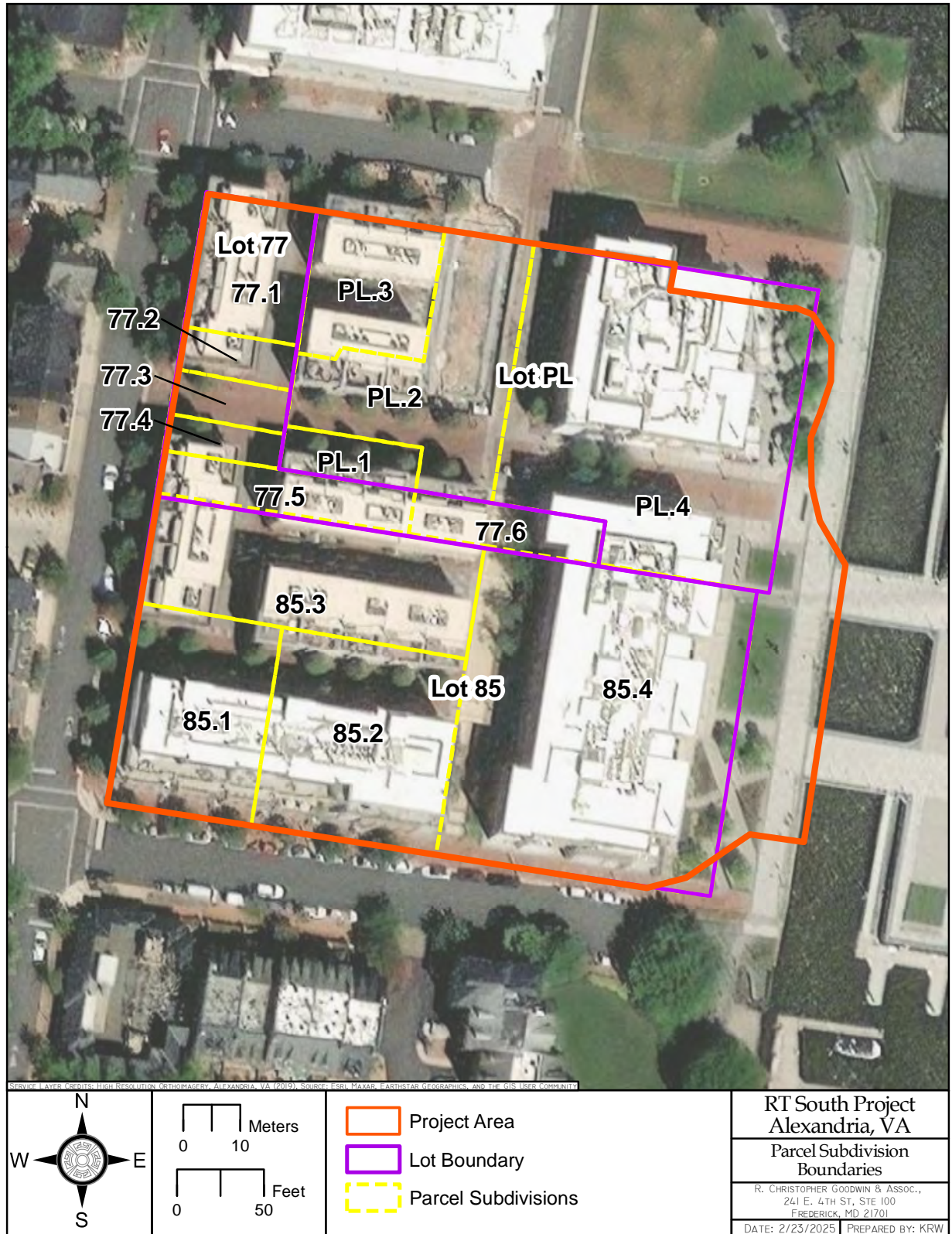


Figure 2-10 Map showing the analytical subdivisions of Lot 77, Lot 85 and the public lands on Point Lumley (PL) that were used during the analysis of the RTS artifact collection (RCG&A staff)

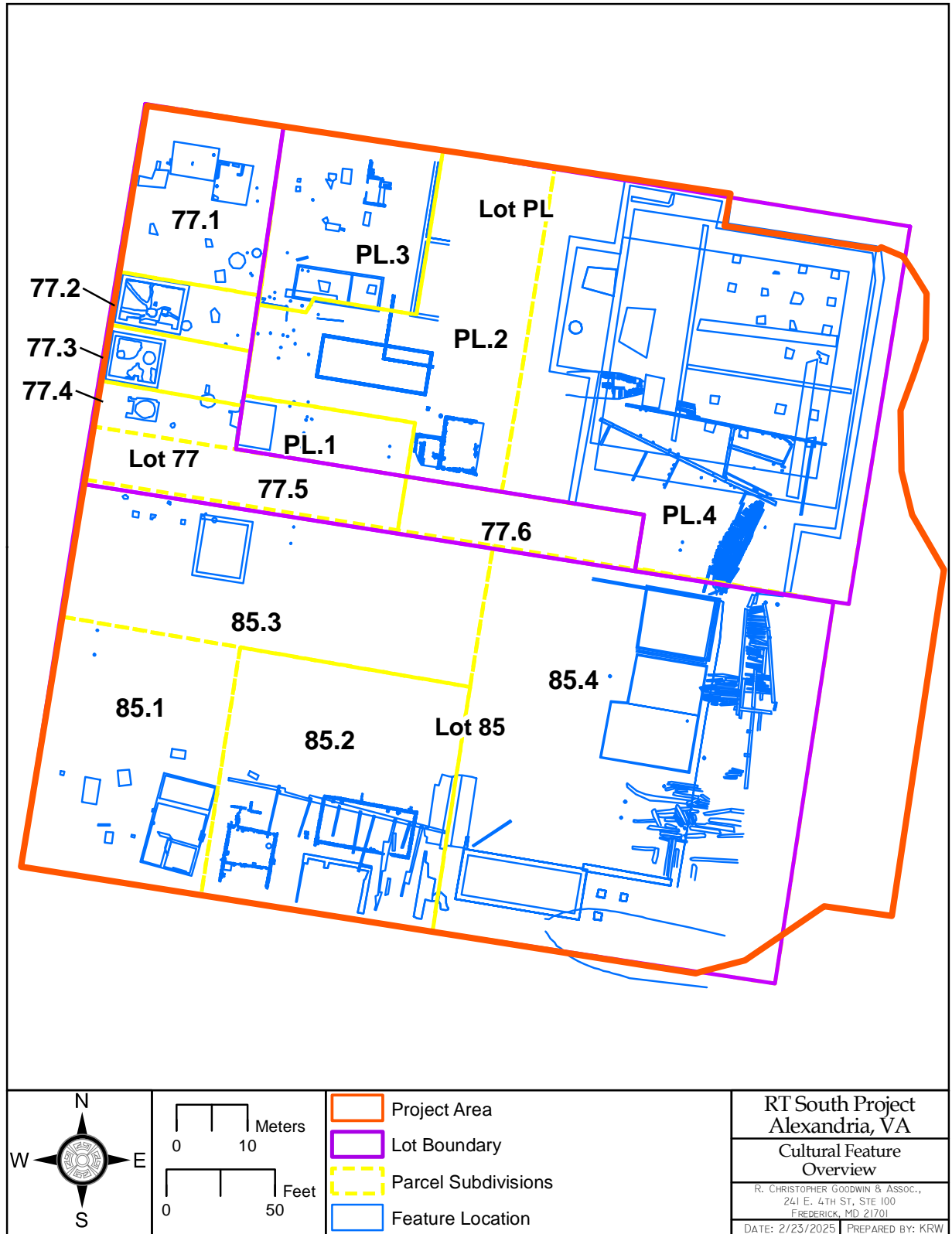


Figure 2-11 Map showing Lot and Parcel boundaries overlaid on map showing the locations of archaeological features (RCG&A staff)

1802-1826) that would have been in place at the time when the archaeological resources were in use. Parcels 85-1 through 85-3 were located east of the Strand and included a variety of residential and commercial buildings, while Parcel 85-4 was located west of the Strand and contained mainly industrial and storage (warehouse) buildings. The majority of the land within Lot 85 was made by filling in the shoreline along Point Lumley.

The leased lands on Point Lumley developed differently than the privately owned Lots and it is not until the mid-nineteenth century, when the lands on Point Lumley began pass from municipal to private ownership, that the chain of ownership is well documented. For example, some individuals who obtained leases for land on Point Lumley were quick to sublet all or portions of their lease to other individuals. Those individuals might, in turn, lease the land. This created multiple layers of leases that often appeared as multiple different people or companies occupying the spot of land. Due to regulations governing the leased lands, the structures also were impermanent and changed frequently. The six analytical divisions developed for Point Lumley (PL-1 through PL-6) reflect areas where distinct archaeological resources were present that could permit discussion of those specific periods of land use.

Archaeological Laboratory Analysis (Goodwin & Associates)

Artifacts recovered during archaeological investigations for the RTS project were received from the client on April 2, 2020. Those artifacts had been recovered by WSSI during Phase I-III archaeological investigations of site 44AX0235. The “boxed” artifact collection consisted of 238 banker-style boxes, three (3) plastic storage totes, and one (1) pallet of oversize artifacts. Artifacts in the boxed artifact collection were stored in archival plastic bags labeled with horizontal provenience data. Labels indicating box contents were marked on the exterior of each box and included on a separate inventory sheet within each box. Original field records were received from Alexandria Archaeology on April 28, 2020. Those records consisted of two (2) banker-style boxes of original field records, three (3) X-Ray film sheets, and two (2) map tubes containing original field maps.

Also included in the overall artifact collection for Site 44AX0235 were a number of fragile, organic artifacts that had been transferred directly to the offices of Alexandria Archaeology at the conclusion of field investigations. These artifacts are housed in a separate climate-controlled (refrigerated) facility in the archaeological laboratory of Alexandria Archaeology. The professional staff of Alexandria Archaeology is in the process of performing a conservation-needs assessment for that collection. Alexandria Archaeology provided Goodwin & Associates with a preliminary inventory; that information has been incorporated into the overall artifact inventory for Site 44AX0235. Artifacts requiring conservation have been removed from the “refrigerated” collection and are undergoing conservation at the Maryland Archaeological Conservation Laboratory (MAC Lab) (Niculescu, March 26, 2021, personal communication).

The “boxed” collection received by Goodwin & Associates was inventoried upon arrival at the laboratory of Goodwin & Associates in Frederick, Maryland. As part of the inventory process, a field specimen (FS) number was assigned to each individual provenience within the artifact collection. The condition of individual artifacts also was assessed for degree of stability prior implementation of any processing procedures.

The artifact collection was in various stages of processing and cataloging; it included some boxes of unprocessed materials. Unprocessed materials were cleaned, re-bagged and sorted into categories of artifacts that could be wet washed or dry-brushed. All unprocessed artifacts were cleaned by hand, air dried and sealed in clean, re-sealable polyethylene 4 mil bags. Provenience data were placed on the outside of each bag, as well as on acid-free paper tags placed inside each bag. Artifacts that had been previously processed by WSSI staff were not re-bagged; these artifacts are contained in re-sealable polyethylene 2 mil bags, which met curation standards at the time the collection was processed in 2018.

Artifact data were inventoried using a Microsoft Access® computer program to permit manipulation of chronological, functional, and distributional data. Each entry included specific artifact information including additional

description(s), applicable metrics, and site and provenience designations. All laboratory procedures followed applicable federal, state, or local curatorial guidelines.

Basic Historic Artifact Analysis Methods

During data recovery investigations, artifact analysis includes basic identification of material type, manufacturing type or method, and decorative elements. Information from the Phase III-level analysis was intended to provide data for determination of relevant temporal periods and for characterization of site and/or feature type and function. The coded catalogue system for historic artifacts incorporates artifact attribute data, artifact counts, comments, and manufacture date range information.

The classification system proceeds from the most general attributes of an artifact and progresses to the most specific. The basic categories used to organize this information include Group, Class, Type, Sub-Type, Modification, and Date Range. Certain classes of artifacts are subjected to additional descriptive analyses that record specific measurements, glaze, color, and other relevant morphological aspects. Categories and classificatory types are determined using standard literature in the field, including Miller (1980, 1991), Miller et al. (2000), Noël Hume (1969), Jones and Sullivan (1989), South (1977), Worthly (1982), Majewski and O'Brien (1987) and others. Whenever possible, assignment of type and manufacture date ranges were based on those provided in the Alexandria Archaeology Laboratory Reference Book: Lexicon and Illustrated Glossary (Magid 2010). Where possible, manufacture's marks are used in conjunction with artifact types to refine temporal associations of particular artifact collections.

In addition to the general literature on artifact types, online resources were consulted for specific attributes, descriptions, and visual data. These include Lindsey (2021) and Whitten (2021) for recent glass bottle and bottle mark research. Recent ceramics research was accessed at sites like the Florida Museum of Natural History (FLMNH) digital type collection (2016); the Maryland Archeological Conservation Lab's (MAC Lab) digital collection of diagnostic arti-

facts from Maryland sites (2021); and the Digital Archive of Comparative Slavery (DAACS) website (Thomas Jefferson Foundation 2015). More detailed analyses of specific ceramic types may be found in research published in the *Ceramics in America* series (Hunter 2001 – 2008, 2011-2014; Hunter and Beckerdite 2009- 2010).

Data were recorded using individual fields for each attribute; however, some of these fields have been conflated for presentation in the report. The primary basis for the classification of historic artifacts is the material from which they are made. Artifacts initially were designated as Ceramic, Glass, Metal, Organic, Stone, Manufactured, Synthetic, Composite, Other, or Indeterminate material types. More specific information about the material follows, and includes the basic classes of ceramic (earthenware, porcelain, stoneware), the manufacturing methods of glass artifacts, the element or alloy of metal artifacts, the scientific kingdom of non-food organic materials (floral or faunal), and similar classifications of the other group materials.

Fields were included for artifact colors, manufacturing method (non-glass artifacts), styles, and regional origins of artifacts. These attributes are presented in the report inventory under the Type category. The Sub-Type designation identifies the form and/or recovered portion of the artifact. The report inventory category includes fields that report shape, condition, and function of the artifacts. The Modification category may include information on intentional modifications such as decorative types (for example, transfer print or hand painted ceramics, pressed or cut glass), and unintentional modifications such as burning or corrosion.

In addition to the five primary report categories of Group, Class, Type, Sub-Type, and Modification that appear on the final copy of the inventory, several other internal categories were used in the cataloguing system. The most common of these is the assignation of artifacts to one or more functional categories. Only one of the functional fields was based on Stanley South's (1977) functional classifications, which was included in the analysis for comparative purposes. South's functional categories include architecture, clothing, furniture, kitchen, miscellaneous, industrial, and

personal, arms, transportation, mortuary, and activities. Additional functional fields were included in the inventory to provide finer distinctions than are possible using South's 1977 categories. For example, ceramics may be classified as serving, preparation, consumption, or display items, rather than being subsumed under the single, often inadequate and sometimes incorrect, category of kitchen items.

Detailed Historic Artifact Analyses

Temporal Analysis

Temporal analysis informed much of the artifact analyses for Site 44AX0235. Determination of temporal ranges and average periods of use or occupation were integral to understanding and interpretation of individual features, and to feature groupings and overall patterns of development along the Alexandria waterfront. These analyses permitted association of features or distinct portions of artifacts with the documentary record, and at times with specific households or groups of individuals. Consideration was given to the factors that may influence temporal ranges derived for artifact assemblages, including unknown factors such as the length of time that passed from an object's date of manufacture to its deposition as part of an artifact assemblage.

For each feature, diagnostic artifacts, defined as an artifact or group of artifacts with a known manufacture date or date range, were identified during cataloging of the artifact collection. Using both relative and absolute methods, diagnostic artifacts were analyzed further to calculate temporal associations. A suite of dating methodologies was employed. The use of *terminus post quem* dating, or the date after which, refers to the first possible date of manufacture of the most recent artifact within a specific context. In addition, the earliest and latest occurring artifacts or manufacture range for a particular artifact or group of artifacts was considered in order to develop the range between which materials likely were deposited. Temporal data also were combined with stratigraphic data to ascertain temporal sequences within individual features and lots as well as across the site.

Absolute dating methods were employed when possible to specify points in time. In some

cases, artifacts marked with their date of manufacture were recovered (e.g. coinage). Artifacts dated with such specificity were rare. Therefore, a number of other techniques were employed including known manufacture ranges for historic period ceramics used to determine the mean ceramic date (MCD) of particular features, group of features, or collection of artifacts. All MCDs first were calculated using sherd counts and manufacture ranges provided in the Alexandria Archaeology Laboratory Reference Book: Lexicon and Illustrated Glossary (Magid 2010), or the DAACS Mean Ceramic Date Type File (Thomas Jefferson Foundation 2006). Vessels counts were used to refine MCDs when applicable. A mean artifact date (MAD) also was calculated when non-ceramic diagnostic artifacts were present within a particular collection. This technique applied the same process as MCD but incorporated all diagnostic artifact types. These calculations provided the average date for when the artifacts were deposited (Deetz 1996:25), i.e., a mean occupation or use date. All temporal data were compared with the historical record in order to ascertain associations with recorded events and household ownership/occupation.

Minimum Number of Vessels (MNV)

When applicable, the goal of these analyses also was to associate distinct deposits or activity areas with the documentary record. The ultimate goal was the association of specific collection with historical actors or groups of individuals from the past. Selection of samples was integral to MNV determinations and analysis. Ideally, features with discrete collections such as privies, foundations and distinct trash disposal areas, were the most appropriate candidates for MNV analysis.

The methodology used in determining MNV was based on Voss and Allen's (2010) approach to MNV calculation, which combined quantitative and qualitative analysis. The nature of the ceramics – including both hand-formed and mass manufactured forms – also was considered when developing the MNV methodology. Vessel groupings were determined based on ware type as well as form, decorative technique, and standard measurements (e.g. vessel diameters). In instances where paste and glaze were highly variable and

less standardized, even within a single vessel, the qualitative approach (see Voss and Allen 2010) was employed. Sherds that shared attributes were assigned to vessel groupings. Distinctions also were made between related sherds, defined as vessels fragments that likely derived from the same vessel or that had enough shared attributes that they could not be assigned to a different vessel grouping with confidence; if included, cross-mended sherds, e.g., sherds of vessels that refit to form more complete vessels. Where applicable, MNV counts were used in calculations such as mean ceramic dating in order to refine temporal sequences and to provide a more realistic picture of the artifact collections. A similar methodology also was applied to glass and other artifact sub-assemblages when appropriate.

Basic Pre-Contact Lithic Artifact Analysis Methods

Alexandria certainly has a rich history, and that history also includes habitation of the area by peoples during the Pre-contact period. Although a small portion of the overall artifact assemblage, evidence of the earliest occupation of what is now Alexandria were noted. During the first stage of analysis, all collected Pre-contact lithic artifacts were subdivided into formal descriptive categories. Weight measurements were made to a tolerance of 0.01 g using an Acculab digital scale (Model #V-200); dimensions were measured to a tolerance of 0.01 mm. Interpretations of utilization and raw material class were made using a Meiji Techno EMZ-Series zoom stereo microscope. Procedures for measuring edge angles of lithic artifacts were based on the technique outlined by Keeley (1980).

In general, lithic materials were divided into four distinct categories primarily based on interpretations of technological attributes, although interpretation of functional attributes also was a goal. Categories included Group, Class, Type, and Subtype; these are defined below. The Group category includes basic divisions of lithic artifacts into Core, Debitage, Biface, Uniface, Ground-stone, Fire-Cracked Rock, Use-modified tool, and other; these categories are based on technological interpretations. The Class category consists of raw material designations, including rhy-

olite, argillite, jasper, chert, chalcedony, quartz, quartzite, ironstone, greenstone, amphibolite, steatite, sandstone, and silicified sandstone. The artifact Type category assigns the reduction stage of the lithic artifact. The subdivision includes Primary, Secondary and Non-cortical flakes, or from which flake reduction stage a uniface was made, finished or unfinished bifaces or ground-stone tools, and amount of remnant cortex on core surfaces. The Subtype or morphology category permits recordation of distinct descriptive attributes for biface stages, flakes, cores, ground-stone tools, scrapers, awl, drill, use modified tools, beads, manos, abraders, metates, pestles, pipes, vessels and net sinkers.

Soil Sample Processing Methods

A total of 198 individual soil samples contained in 38 boxes were included in the “boxed” artifact collection for site 44AX0235. Upon receipt of the soil samples at the laboratory of Goodwin & Associates in Frederick, Maryland, all soil samples bags were checked against the box inventories provided by WSSI. All samples were inventoried and a FS/Soil Sample number (beginning with 5000) was assigned to each transferred sample. Samples were stored in a clean, dry location prior to processing. A suite of processing techniques was employed including water flotation or water screening.

WSSI collected a majority of the samples during Phase III field investigations. The samples derived from 84 features, with the majority of the samples originating from fill material within postholes (n=32; 38.1 percent) (Table 2.3). Samples taken from deposits within building foundations were the next most common type of sample. These samples comprised 29.8 percent (n=29) of the feature types sampled, including features such as: builder’s trenches (n=2); foundations (n=8); soil layers within foundations (n=6); drainage features (n=8); chimney bases or “hearths” (n=2) and intrusive pits within foundations (n=2). Of the nine privies identified, six were “intact” and were sampled.

Although the field methods recommended a 1-gal soil sample size, the received soil samples were not of consistent volume and were assumed to vary according to the quantity of soil available

for sample. Multiple soil samples also had been collected from 34 of the sampled features. For example, 26 samples were taken from Feature 125. Each sample derived from a different horizontal and/or vertical location within the feature, and no more than one sample bag was collected for each distinct horizontal/vertical location.

All of the feature proveniences that were sampled during archaeological field investigations appeared to be “intact” cultural deposits. Some proveniences clearly contained primary deposits, while others appeared to contain secondary deposits that may have research value in relation to exploring the processes of shoreline infilling (land creation) and historic lot development. Soil sample proveniences that may have value for specialized study were determined through review of field records and photographs provided by WSSI. To further refine the selection of samples for potential specialized study, samples processed by flotation were examined following flotation to determine if macrobotanical or faunal material was present.

In consultation with Alexandria Archaeology, soil samples deriving from intact privy deposits were recommended for the full range of specialized studies (Table 2.4). Samples from unknown proveniences (no associated field records) or from ship contexts were designated as “no action – hold soil.” Goodwin & Associates processed the remaining samples either through water flotation or water screening depending upon whether the supporting documentation suggested that the proveniences had research potential.

Table 2.4 Summary of Processed Soil Samples

RCG&A Processing Method	Total Number of Samples
Water Flotation	47
Water Screening	119
Hold as Soil for Specialized Analysis	14
Hold as Soil (no feature information)	18
Total	198

Water Flotation Methods

Water flotation is a recovery technique that utilizes the difference in density of organic and inorganic materials to achieve the isolation of organic remains from the soil matrix. Flotation en-

ables the recovery of all sizes and classes of botanical material preserved in a soil sample. It also allows for a quantitative analysis of vegetative remains. The system used by Goodwin & Associates applied a modified SMAP system (Watson 1976) consisting of a two-part machine using available water pressure and air to agitate and separate artifacts and botanical remains from the soil matrix.

The heavy and fine fractions of each soil sample were treated as separate units. The fine fraction was collected from the machine by 0.5 mm (0.002 in) techno mesh; the heavy fraction was collected from 3.175 mm (0.125 in) mesh. Both fractions are air dried and passed through a 5 mm (0.002 in) screen to facilitate sorting, resulting in >5 mm and a <5 mm samples. Each was examined separately under lighted magnification. Diagnostic artifacts and botanical and faunal remains were recovered from each. Materials that otherwise were discarded in the field (e.g. brick, oyster, shell, mortar, plaster, etc.) were left in the remainder.

Light fractions were passed through a 2 mm screen to facilitate sorting, resulting in >2 mm and a <2 mm samples. The >2 mm sample was examined under lighted magnification. Diagnostic artifacts and botanical and faunal material were recovered. Materials that otherwise were discarded in the field (e.g. brick, oyster, shell, mortar, plaster, etc.) were not removed from the sample and were left in the remainder. The <2 mm sample was left unsorted due to the size of the materials. All separated materials and fraction remainders were retained.

Additional soil samples were left unprocessed. These generally included samples from known and intact privy layers that were further subsampled for specialized studies and the remainder processed by Justine McKnight via water flotation for purposes of specialized botanical analysis.

Water Screening Methods

Water screening is a recovery technique used to isolate artifacts from the surround soil matrix using a fine mesh screen and a water source. Samples that were water screened at the laboratory Goodwin & Associates first were washed through a 3.175 mm (0.125 in) mesh using avail-

able water pressure. The material recovered from each sample was air dried and each was examined under lighted magnification. All obvious artifacts were recovered. Additionally, botanical and faunal remains were separated from the sample. Samples and separated classes of remains were placed in clear archival plastic bags. Materials typically discarded in the field (e.g. brick, oyster, shell, mortar, plaster, etc.) were not removed from the sample and were left in the remainder. Each remainder was weighed and placed in an archival bag and stored along with the sample.

Additional samples were water screened by the previous contractor; those materials, largely macro botanical remains, were boxed and stored

as part of the artifact collection. These materials were provided for archaeobotanical analysis.

Records and Curation

All artifacts within the “boxed” artifact collection were cataloged and prepared for curation following the City of Alexandria Archaeological Standards Collections Management Section (Alexandria Archaeology 2007) and applying agreed-upon project-specific curatorial methodologies (Kosack 2020, Personal Communication). All associated field records and cultural materials will be curated at the Office of Historic Alexandria, Alexandria Archaeology in Alexandria, Virginia.

CHAPTER 3

NATURAL AND CULTURAL SETTING



The Robinson Terminal South Project Area encompasses the entirety of Lot 73 in Old Town Alexandria. This 3.4-ac city block is bounded by Duke Street, South Union Street, Wolfe Street and the Potomac River. It is fully developed. The Project Area most recently housed warehouse, storage and office facilities for Robinson Terminal Warehouse Corporation. The warehouse and storage structures were built during the mid-twentieth century, between 1941 and 1959. The office building, located at 2 Duke Street, was an adaptive reuse of an earlier structure believed to have been constructed during the early nineteenth century.

The Project Area lies within the Old Town Archaeological Resource Area, which encompasses the historic urban center of the City of Alexandria. This area is significant for its potential to contain a diversity of archaeological resources that date from the earliest period of the city's founding in 1749 through the modern period. These resources reflect the breadth of the city's history as it expanded from a small port town to a city with distinct residential neighborhoods and industrial-commercial corridors and a range of manufacturing and craft businesses. Archaeological excavations in the Old Town Resource Area typically reveal earlier building foundations that have generated high quantities of historic artifacts. The Project Area includes portions of historic Town Lots 77 and 85, as well as lands that were owned by the Town of Alexandria.

The Project Area also is located within the Alexandria Historic District (Old and Historic District; VDHHR 100-0121), a National Register-listed historic district that includes much of the Old Town Archaeological Resource Area. This area is described in City Ordinance No. 1338; it is bounded by Franklin Street, Washington Street, Queen Street and the Potomac River. Established in 1966, this district includes a range of late-

eighteenth to nineteenth century residential and commercial buildings that are significant for their architectural styles. The district is estimated to include 200 buildings dating from the eighteenth century and including early warehouses and taverns. The district is significant as "one of the very few urban areas in the state where enough of the old buildings have survived so that one can grasp a sense of an early town environment" (Old and Historic District, NR Nomination Form 1966).

Natural Setting

Geology and Soils

The project area lies within the Western Shore physiographic section of the Atlantic Coastal Plain province. This province extends westward from the Piedmont province to the Atlantic Ocean. It is characterized by gently rolling topography crossed by steep-sided stream valleys. A revised map of unconsolidated surficial geological units for Alexandria, Virginia and vicinity shows that the Project Area is underlain by Artificial Fill (Af) composed of "sandy and gravelly materials" (Lyttle et al. 2017). Late Pleistocene age deposits of the Old Town terrace (Qto) underlie these and other more recent deposits along the eastern edge of Alexandria (Fleming 2015a). The upper portion of the Old Town terrace varies from stratified silt and clay to medium or coarse sand; the lower portion consists of gradually coarsening sediments separated by distinct organic horizons (Fleming 2015a). The modern surface of the Old Town terrace lies at 30-35 ft (9.1-10.7 m) in elevation. This deposit is suspected to have a total thickness of about 125 ft (38.1 m) along the waterfront in Old Town Alexandria.

Deeper geological deposits belong to the Potomac Formation (Fleming 2015b). Composed of consolidated riverine deposits, the Potomac Formation underlying Alexandria is estimated to be 113-131 million years old (Fleming 2015, citing

Hueber 1982). Arell clay (Kpa) is suspected to underlie Old Town Alexandria, extending along the Potomac River between Daingerfield Island and Hunting Creek. Likely formed from sediments that settled in an oxbow lake, this deposit outcrops as mottled green and reddish brown clay that is very stiff to hard (Fleming 2015b).

NRCS soils mapped for the project area are classified as Urban Land-Grist Mill (Soil Survey Staff 2018). Urban Land denotes areas where the original soils have been disturbed by excavation, grading, or filling (Harper 2007:84-85). These soils are common in developed urban areas where past construction has altered the landscape. Soils of the Grist Mill series are very deep and well drained former marine sediments that typically are not prone to flooding or ponding. These soils are common in upland settings on the Coastal Plain. Their general profile consists of a shallow A1 horizon of very dark grayish brown (10YR 3/2) loam directly overlying a C1 horizon of strong brown (7.5YR 5/6) sandy clay loam (Soil Survey Staff 2018).

Watershed

The Project Area is incorporated within the Potomac-Shenandoah watershed (Virginia DCR 2017). This expansive drainage area covers the northern portion of Virginia and includes the Potomac, South Fork of the Shenandoah, and North Fork of the Shenandoah Rivers. It forms part of the larger Potomac River watershed, which includes parts of four states and the District of Columbia. In the City of Alexandria, the Potomac-Shenandoah watershed is divided into eight local sub-watersheds. The Project Area lies within the Potomac River watershed (City of Alexandria 2019).

The nearest water source to the project area is the Potomac River that borders the eastern edge of the project area. The majority of the Project Area lies within FEMA Zone AE; thus, it is subject to inundation during 1%-annual chance flood events (FEMA Flood Insurance Map 2020). More commonly known as the 100-year floodplain, this area is considered at high risk for flooding. The flood elevation of the 100-year floodplain is mapped at 10 ft (3.1 m) above mean sea level (amsl).

Terrain and Topography

As noted above, the project area is located within a developed portion of the City of Alexandria where the natural topography has been altered extensively by historic development. When the City was founded in 1749, the Project Area was situated on the southern edge of a shallow crescent-shaped bay that extended northward from Point Lumley to Tobacco Point, also known as West's Point. The southern half of Point Lumley as well as a portion of the active shoreline were included within the Project Area boundaries. Point Lumley was typical of land along the cove; it consisted of a high bluff overlooking shallow tidal flats. Duke Street was extended to the Potomac River in 1751, providing access to the river along the southern end of the Town, thus establishing the northern edge of the Project Area.

In 1755, Alexandria's Town Trustees began efforts to create useable land along the southern edge of town. The trustees contracted with John Carlyle to build a large warehouse on the shoreline north of Duke Street. Once built, the 100-ft (30.5 m) long warehouse foundation was filled with earth. The warehouse was excavated archaeologically as part of Site 44AX0229 (Baicy et al. 2020). This process of wharf construction and infilling continued within the Project Area as the Town Trustees gave various approvals for the construction of warehouses and wharves on the public lands south of Duke Street. Private lot owners also extended their properties by constructing wharves and filling the tidal flats with soil borrowed from the bluff tops or from other convenient sources.

The process of filling the shoreline progressed rapidly during the last quarter of the eighteenth century. In 1780, except for the roadways by which Oronoco Street reached Point West and Duke Street sloped to Point Lumley, there was no way to reach the river shore except via rough and precipitous inclines cut through the high bluff that overtopped the river side. Earth cut from the hills was used in filling the cove in front of the town; the process was called "banking out." While grading was in progress and before porches could be completed, temporary steps and ladders furnished access to the doors" (*Alexandria Gazette*

Table 3.1 Summary of Previously Identified Archaeological Resources within 0.25-mi (0.4 km) of the Project Area

VDHR Site Number	Site Name	Site Categories	Site Types	VDHR Time Periods
44AX0003	Carlyle House	Transportation/ Communication	Other	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)
44AX0030	The Coleman Site	Domestic	Dwelling, single	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)
44AX0044	Apothecary Shop Well	Commerce/Trade	Store	Indeterminate
44AX0049	Ramsey House	Domestic	Dwelling, single	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789)
44AX0050	The Wilkes Street Tunnel	Transportation/ Communication	Railroad	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)
44AX0056	209 Wolfe St.	Domestic	Dwelling, single	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0064	407 S. Lee St.	Domestic	Dwelling, single	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0065	412 S. Royal St.	Domestic	Dwelling, single	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0068	424 S. Royal	Domestic	Dwelling, single	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0069	Carter House, 217 S. Fairfax St.	Domestic	Dwelling, single	Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)
44AX0071	407 S. Fairfax St.	Domestic	Dwelling, single	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0081	Carlyle-Dalton Wharf	Commerce/Trade	Wharf	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829)
44AX0085	212 S. Fairfax Street	Domestic	Dwelling, single	Colony to Nation (1751 - 1789), Early National Period (1790 - 1829)
44AX0091	4KS (Holiday Inn Site)	Domestic	Dwelling, multiple	Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)
44AX0094	Market Block	Commerce/Trade	Tavern/Inn	Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)
44AX0095	3KS (Gadsby's Arcade)	Commerce	Other, business (tinsmith, cabinet shop)	Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)
44AX0098	115 South Union Street	Commerce/Trade	Wharf/Bulkhead	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829)
44AX0106	Hooe House	Domestic	Dwelling, single	Colony to Nation (1751 - 1789), Early National Period (1790 - 1829)
44AX0107	306 South Fairfax	Domestic	Dwelling, multiple	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)
44AX0110	207 Prince Street	Domestic, Subsistence/ Agriculture	Dwelling, single, Stable	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829)

VDHR Site Number	Site Name	Site Categories	Site Types	VDHR Time Periods
44AX0114	Harborside	Unknown	Unknown	Pre-Contact, Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0115	305 Duke	Domestic	Dwelling, single	Historic/Unknown
44AX0116	Gilpen House, 208 King St.	Domestic	Dwelling, single	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829)
44AX0117	124 S. Fairfax	Domestic	Dwelling, multiple	Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)
44AX0119	Old Ford Plant; Kieth's Wharf and Battery Cove	Commerce/Trade	Wharf	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0123	205 N. Union	Commerce/Trade	Wharf	Historic/Unknown
44AX0126	100 Wolfe	Industry/Processing/Extraction	Distillery	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)
44AX0146	Dockside, 104 S. Union	Commerce/Trade, Transportation/Communication	Warehouse, Wharf	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0156	Joseph Ingle Cabinet Shop 112 S. Royal St.	Commerce/Trade	Store	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)
44AX0157	George Seaton House 404 S. Royal St.	Domestic	Dwelling, single	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)
44AX180	Lee St. Site	Domestic	Dwelling, multiple, Other, Privy, Stable	Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)
44AX0192	[no site name]	Domestic	Dwelling, single	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0229	220 S. Union Street	Commerce/Trade, Domestic	Artifact scatter, Dwelling, multiple, Other, Warehouse	Pre-Contact, Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0235	Robinson Terminal South	Commerce/Trade, Domestic, Transportation/Communication	Artifact scatter, Dwelling, multiple, Shipwreck, Warehouse, Wharf	Pre-Contact, Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)
44AX0237	211 Strand Street	Commerce/Trade	Warehouse	Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)
44AX0254	317 Prince St.	Domestic	Dwelling, multiple	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)

Table 3.2 Summary of Previously Identified Architectural Resources within 0.25-mi (0.4 km) of the Project Area

VDHR Number	Secondary VDHR Number	Property Names	Property Addresses	National Register Eligibility Status
100-0002	100-0121	Athenaeum, The (Historic), Old Dominion Bank (Historic), Old Dominion Bank Building (NRHP Listing)	201 Prince Street	NRHP Listing, VLR Listing
100-0005	100-0121-1089	Alexandria Water Company (Historic), Bank of Potomac (Historic), Bank of Potomac - Executive Office and Governor's Residence of the Restored Government of Virginia (NRHP Listing), Farmers and Mechanics Savings Bank (Historic), Farmers' Bank of Virginia (Historic), The Statehouse Apartments (Current Name), Virginia Apartments (Historic)	413-415 1/2 Prince Street, 415 Prince Street	NRHP Listing, VLR Listing
100-0010	100-0121-0169, 44AX0003	Carlyle House Historic Park (Current Name), Carlyle House, 121 N Fairfax St (Historic/Location), John Carlyle House (NRHP Listing)	121 Fairfax Street North	NRHP Listing, VLR Listing
100-0011	100-0121	Chequire House (Historic)	202 King St.	
100-0013	100-0121	The Peruke Shop (addition) (Historic/Current)	403 Prince Street	
100-0016	100-0121	Craddock-Crocker House (Historic), Deneale House (Historic/Current)	323 South Fairfax Street	
100-0017	100-0121	Craik, Dr., House (Historic/Current)	210 Duke Street	
100-0018	100-0121-0496	Dick, Elisha Cullen, House (Historic/Current)	209 Prince Street	
100-0019	100-0121-0193	Dr. Brown House (Historic)	212 South Fairfax	
100-0020	100-0121-0190	Duffey House (Historic)	203 South Fairfax	
100-0022	100-0121-0495	Fairfax-Moore House (NRHP Listing), George William Fairfax House (Current Name)	207 Prince Street	NRHP Listing, VLR Listing
100-0026		Flounder Warehouse (Historic), Little Theatre Workshop (Current)	Ramsay's Alley	
100-0027	100-0121-0125	House, 418 Duke Street (Function/Location)	418 Duke Street	
100-0030		Roberdeau, General, House (Historic)	418 S. Lee St.	
100-0031	100-0121-0368	George Johnston House (Historic), House, 224 S Lee St (Function/Location), Johnston-Vowell House (Historic)	224 Lee Street South	
100-0033		Gilpin House (Historic)	206 Gilpin St.	
100-0035	100-0121	Green House, 209 South Fairfax Street (Historic/Current)	209 South Fairfax Street	
100-0042	100-0121	House, 201 Duke Street (Function/Location)	201 Duke Street	
100-0048	100-0121	House, 124 S. Fairfax St. (Historic/Current)	124 South Fairfax Street	
100-0051	100-0121-0344	Warehouse, 106 South Lee Street (Function/Location)	106 South Lee Street	
100-0052	100-0121-0366	House, 221-225 South Lee Street (Function/Location)	221 S. Lee St.	
100-0055	100-0121-0378	House, 310 South Lee Street (Function/Location)	310 South Lee Street	
100-0056	100-0121-0388	House, 401 South Lee Street (Function/Location)	401 South Lee Street	
100-0057	100-0121-0547	House, 212 South Pitt Street (Function/Location)	212 South Pitt Street	
100-0059	100-0121-0485	House, 115 Prince Street (Function/Location)	115 Prince Street	
100-0060		House, 128 Prince Street (Function/Location)	128 Prince Street	
100-0061	100-0121-0494	Farmer's Bank, The (Historic), First National Bank (Historic), Hood, Robert Townsend (Col), House (Historic/Current), House, 200 Prince Street (Function/Location)	200 Prince Street	
100-0062	100-0121-0499	Harper-Vowell, House (Historic/Current), House, 211 1/2 Prince Street (Function/Location)	211 Prince Street	
100-0072	100-0121-0671	House, 213 South Royal Street (Function/Location)	213 South Royal Street	
100-0073	100-0121-0672	House, 214 South Royal Street (Function/Location)	214 South Royal Street	
100-0074	100-0121-0674	House, 216 South Royal Street (Function/Location)	216 South Royal Street	

VDHR Number	Secondary VDHR Number	Property Names	Property Addresses	National Register Eligibility Status
100-0075	100-0121-0676	House, 218 South Royal Street (Function/Location)	218 South Royal Street	
100-0076	100-0121-0677	House, 219 South Royal Street (Function/Location)	219 North Royal Street	
100-0079	100-0121-0483	Brice, John, House (Current), House, 113 Prince Street (Function/Location)	113 Prince Street	
100-0080	100-0121-0475	Harper, John, House (Historic), Old Ship Chandler's Shop (Historic)	103 Prince Street	
100-0081		Patterson, John, House (Historic/Current)	6 King Street	
100-0086	100-0121	Leadbeater Drug Store (Historic/Current)	100 Fairfax Street, South	
100-0093	100-0121-0497	House, 210 Prince Street (Function/Location), Michael Swope House (Historic/Current)	210 Prince Street	
100-0098	100-0121-0201	First Presbyterian Church of Alexandria (Historic), Old Presbyterian Meeting House (NRHP Listing), Presbyterian Meeting House (Historic)	123 St. Asaph Street South	NRHP Listing, VLR Listing
100-0101	000-9800-0001	Ramsay House (Historic/Current), William Ramsay House (Historic)	221 King Street	
100-0104	100-0121	St. Paul's Episcopal Church (Historic/Current)	228 Pitt Street, South	NRHP Listing, VLR Listing
100-0106	100-0121-0171	Stabler-Leadbeater Apothecary Shop (NRHP Listing), Stabler-Leadbeater Apothecary Shop Museum (Historic/Current)	105-107 Fairfax Street South	NHL Listing, NRHP Listing, VLR Listing
100-0107		Swift Alley Tobacco Warehouse (Historic/Current)	2 Swift Alley	
100-0108	100-0121-0176	Wales House (Historic/Current)	120 South Fairfax Street	
100-0110	100-0121-0166	House, 113 North Fairfax Street (Function/Location), Kitchen & Slave Quarters, 213 Ramsey Alley (Function/Location), Ramsay-Atkinson House (Historic), William Ramsay House (Historic/Current)	113 Fairfax Street North	
100-0111	100-0121-1139	House, 619 South Lee Street (Function/Location), Justice Black House (Historic), Vowell-Snowden-Black House (Current Name)	207 Franklin Street, 619 Lee Street South	
100-0118	100-0121-1142	Lindsey-Nicholson Corp. Automotive Supplies (Historic), The Lucky Knot (Current Name), Warehouse, 101-103 King Street (Function/Location), Warehouse, corner of Union & King Streets (Descriptive)	100 Union Street North, 101-103 King Street	
100-0119	100-0121-1143	Building 10, Torpedo Plant Complex (Historic), The Torpedo Factory Art Gallery (Current), Torpedo Factory, 101 North Union Street (Historic/Location)	101 Union Street, North	
100-0121		Alexandria Historic District (NRHP Listing)	Fairfax Street North, Fairfax Street South, King Street, Lee Street South, Prince Street, Royal Street North	NHL Listing, NRHP Listing, VLR Listing
100-0121		Alexandria Historic District (NRHP Listing)	Fairfax Street North, Fairfax Street South, King Street, Lee Street South, Prince Street, Royal Street North	NHL Listing, NRHP Listing, VLR Listing
100-0283		Elk (Descriptive)	318 Prince Street	
100-5399		Ford Plant (Historic), Old Ford Plant (Current Name)	700 Union Street South	

1797, Oct 12). By 1785, the crescent-shaped bay had been filled sufficiently to allow the construction of Union Street, which forms the western boundary of the Project Area.

Current elevations within the Project Area range from approximately 11 ft (3.4 m) amsl along South Union Street to approximately 7 ft (2.1 m) amsl on the bulkhead fronting the Potomac River. Historic accounts suggest that elevations along the western edge of the Project Area originally may have been as high as 30 ft (9.1 m) amsl. The eastern edge of the Project Area would have lain in the Potomac River and would have been submerged. A notation on Washington's (1748) *Map of Alexandria* shows 7 ft (2.1 m) of water lay within the cove at high tide and that the "shoals" narrowly extended around the tip of Point Lumley.

Previous Investigations

The Virginia Cultural Resource Information System (V-CRIS) records site 44AX0235 as encompassing the entire Project Area. This archaeological site was identified in 2017 during Phase I/II archaeological investigations conducted for planned development of Robinson Terminal South. Prior to identification of this site, no archaeological sites or architectural resources were recorded within the project area. The Project Area lies within the Alexandria Historic District (VDHR 100-0121). Although it was unclear if resources on the property were considered contributing elements to that district.

Cultural Resources Surveys

V-CRIS records indicate that five Phase I level cultural resources surveys have been conducted in the vicinity of the project area. The Project Area was included within the area of potential effects for the Woodrow Wilson Bridge Improvement Project (VDHR Report AX-052) and in a supplemental survey conducted for the same project (VDHR Report AX-068). It was not specifically evaluated as part of those projects (Stevens et al. 1996; Sayers 1999). Those projects evaluated architectural resources within the Area of Potential Effect (APE) and revised the APE of the bridge improvement project. The initial study identified four individual properties and a

suburb within the revised APE. Two properties, Hunting Terrace and Hunting Towers, were determined not eligible for listing on the National Register of Historic Places. The George Washington National Masonic Memorial and Union Station were determined potentially eligible and an assessment of impacts was recommended.

A documentary study and archaeological investigation conducted at 400 South Union Street as part of the Harborside development project revealed the majority of the property consisted of a man-made wharf that had been built during the late eighteenth century (Knepper and Prothro 1989; VDHR Report AX-024). The wharf (site 44AX114) continued in use through the nineteenth century as a shipyard and commercial wharf. The property also contained a brewery, iron foundry, and locomotive works; most recently it was the location of an electrical power plant. Evidence of each of these industries was revealed during the archaeological study. No additional work was recommended after construction plans were changed to cap the deposits and build on a pier-supported concrete slab.

Archaeological investigations conducted at 323 South Fairfax Street revealed mid-nineteenth century archaeological features associated with the occupation of the Elliot House (Jiriko-wic et al. 2004). The features included a well and a cistern, as well as foundation features related to renovation of the house. The site was designated 44AX0192. Fill within the cistern dated from ca. 1848-1855, while the well was abandoned and filled sometime after 1910. The well and cistern were excavated completely, and no additional work was recommended.

A documentary study and Phase I archaeological investigation conducted southeast of the Project Area at Windmill Hill Park revealed that this landform was composed of mid-late twentieth century fill material (Maas et al. 2016). The documentary study had indicated a high potential for nineteenth to twentieth century archaeological resources, including evidence of nineteenth century shipbuilding facilities and the remains of the sailing ship *Young Hero*. The only feature identified was a concrete bulkhead built during the late 1950s. The bulkhead was determined not eligible for listing on the Nation-

al Register of Historic Places, and no additional work was recommended.

Archaeological Sites

A total of 35 archaeological sites have been identified within a 0.25 mi radius of the Project Area (Table 3.1). Four of these sites, summarized below, were located within one-block of the Project Area.

Two previously identified archaeological sites are located on the north side of Duke, directly opposite the Project Area. Site 44AX0229, located at 220 S. Union Street, was the site of a public warehouse and wharf constructed by John Carlyle in 1755 under contract to the Alexandria Trustees (Baicy et al. 2020). Archaeological investigations conducted in 2015 revealed the warehouse foundation, an associated bulkhead and privy, a scuttled ship that had been used as cribbing to fill in the shoreline, and the foundations of the mid-nineteenth century-modern period Bryant Fertilizer Factory and Warehouse. Site 44AX0237, located at 211 Strand Street, included the remains of late eighteenth and early nineteenth century warehouses, as well as light industrial structures (McMullen and Mullen 2020).

Site 44AX114 is located south of the Project Area on the opposite side of Wolfe Street. That site was identified in 1989 at 400 South Union Street during archaeological investigations for the Harborside development project (Knepper and Prothro 1989; VDHR Report AX-024). That project revealed evidence of the wharf constructed by Daniel Roberdeau during the eighteenth century. By 1774, Roberdeau had constructed a distillery complex on the opposite side of S. Union Street that included a stone distillery house, a store house, a cooper's shop and several other structures. The storehouse measured 50-ft by 50-ft and included granaries on the second and third floors and a sail loft on the fourth floor. The 66-ft wide wharf adjoined the public wharf and had a combined reach into the Potomac River of 156 ft. The wharf was constructed within a shallow cove; its surface consisted of wood chips and pine tar. The site later was used variously as a foundry, locomotive repair shop, and electrical power generating plant.

According to VCRIS, site 44AX126 is an eighteenth to nineteenth century artifact concentration that was identified in 1977 during construction of new townhouse northwest of the intersection of Wolfe and South Union Streets. The site was reported to contain a brick wall that had been breached by bottle hunters. Alexandria's City Archaeologist visited the site but was unable to document the exposed artifacts and feature due to construction activity. The wall and bottles are suspected to have been related to Daniel Roberdeau's distillery, which stood in that area during the late eighteenth century.

Architectural Resources

In addition to these previously identified archaeological sites, 52 documented architectural resources are recorded within a 0.25 mi radius of the Project Area (Table 3.2). These resources include dwellings, commercial and municipal buildings, and mixed-use industrial buildings. Six of the architectural resources are listed on both the National Register of Historic Places (NRHP) and the Virginia Landmarks Register (VLR).

Pre-Contact Context

Regional archaeological studies generally have suggested that sustained and intensive occupation of the Northern Virginia area probably began during the Late Archaic period, although scattered and small campsites dating from earlier eras have been identified throughout the region. The relatively level floodplain expanses along major waterways like the Potomac and estuaries such as Hunting Creek would have attracted at least seasonal pre-contact interest due to the presence of aquatic resources and seasonally available migratory waterfowl. A large encampment found at the juncture of Hunting Creek and the Potomac River yielded diagnostic materials that evidenced occupation from the Late Archaic through the Late Woodland periods (Site 44AX0053; Boyd and Randolph 2010). Archaeological investigation conducted for Potomac Yards also yielded evidence of Woodland-period occupation along the Potomac River (Site 44AX040; Mullen and Barse 2012).

In general, pre-contact sites that have been identified elsewhere in Alexandria have consti-

tuted small, short-term encampments often identified in low-density scatters of lithic debitage. Quartz and quartzite are common lithic materials readily available from both outcrops and stream-bed sources in the region. Most small, short term encampments were related variously to tool manufacture, resource procurement, or resource processing. They generally were located “on gentle upper slopes and on terraces and benches adjacent to small streams, where lithic and food resources most likely would have been readily available” (Williams et al. 2001:7). Only one pre-contact quarry/lithic extraction site, the Hilger-Mullen site (44AX0021), has been recorded within the City of Alexandria. This site also was identified on a steep slope overlooking Holmes Run (VDHR Site Form).

Pre-Contact Cultural Sequence

Virginia’s pre-contact traditionally has been divided into three major periods: Paleoindian, Archaic, and Woodland. The definition of units that follows incorporates concepts based on broad themes that have been adopted by the City of Alexandria (Alex City 2020, 2021) and by the Virginia Department of Historic Resources (VDHR 2018 a-g). The latter source includes separate chronological sections on “Indians A.D. (e.g., “Contact Period”)” and “Modern Indians” (VDHR 2018 f-g). Particular emphasis has been placed herein on pre-contact cultures that are documented archaeologically within Northern Virginia and the upper Potomac watershed.

Paleoindian (ca.15,000 – 8,000 B.C.)

The environmental setting for Paleoindian and the succeeding Early Archaic periods was conditioned by climatic transition from the Late Pleistocene to the Holocene. The climate during the earliest stage of this transition reflected the “last effects of the glaciers” upon environments in the Middle Atlantic area (Custer 1984:44). The time frame and narrative for this period have been expanded to incorporate evidence of pre-Clovis occupations, particularly those discovered at sites along the Nottoway River (including Cactus Hill [44SX202]), in Sussex County in southeastern Virginia.

Paleoindian populations clearly ranged across what is now the Middle Atlantic region. Clovis,

Mid-Paleo, and Dalton projectile points are the traditionally accepted diagnostic indicators of the Paleoindian period, although few of these cultural markers have been obtained from stratigraphically intact contexts. However, the aforementioned discovery of pre-Clovis cultural horizons at Cactus Hill and other North American sites have forced archaeologists to re-evaluate their previously held view that Clovis culture was “first” (Malakoff 2008-9; 2016-17:43; Montaigne 2020:32). Several pre-Clovis occupations, including two hearth features, were documented at Cactus Hill; the artifacts from these features differed markedly from those associated with more traditional Clovis period occupations. Moreover, immunological analyses of selected artifacts also revealed blood residues from several mammals, including bovine (species unspecified), rabbit, elk, and deer. Calibrated radio-carbon dates obtained from two hearth features returned dates of between 15,000 and 16,000 ybp (Boyd 2003:63, 68; Blondino et al. 2018:13).

Coalescence of small mobile bands (probably related family groups) is thought to have characterized the Paleoindian lifestyle. Some researchers have hypothesized that generalized foraging was the primary subsistence strategy (e.g., Blondino et al. 2018:14), although more recent reassessment of plant and animal remains recovered from sites like Shawnee-Minisink in Pennsylvania (e.g., Gingerich 2011) have challenged this view. Nonetheless, the transitory nature of the Paleoindian lifestyle left largely random evidence for Paleoindian occupation.

Gardner’s now-classic analysis of the Paleoindian settlement system in the Shenandoah Valley (Gardner 1979, 1983), which identified six site types (quarry sites, quarry reduction stations, quarry related base camps, base camp maintenance stations, outlying hunting stations, and isolated point finds), also has been revisited. For example, Blanton and Margolin (1994) cautioned that due to the inundation of marine and riverine sites and to the paucity of systematic surveys in submerged settings, the then-current (1994) sample likely did not capture the constellation of site types that could occur within the Paleoindian settlement system.

One important environmental factor for understanding Paleoindian and subsequent Early Ar-

chaic site distributions is the phenomenon of post-Pleistocene sea level rise (Kraft 1976; Newman and Rusnak 1965; Stuiver and Daddario 1963). Prior to Holocene marine transgression, sea level was approximately 300 ft (91.44 m) lower than its current level; the Atlantic coastline was located at least 62 mi (100 km) seaward of its present position (Blanton and Margolin 1994:5). During the Pleistocene, a much larger coastal plain area was potentially available for human habitation, and the area now represented in the modern coastal plain was an upland/inland environment. As the Pleistocene climate moderated, sea levels rose inundating many postglacial sites and creating estuaries. Sediments were redistributed across former riverine floodplains, including those of the ancestral Susquehanna River and its major tributary, the Potomac (Coleman et al. 1990:1268). As a result, many sites dating from the Paleoindian period likely are submerged today.

To date, only one isolated Clovis projectile point has been recovered within the boundaries of Alexandria; it was found on a bluff overlooking Hunting Creek at the southern edge of the city (Alex City 2020, 2021).

Archaic (ca. 8,000 - 1,200 B.C.)

The Archaic period incorporates three generally recognized temporal and cultural subdivisions. During the Early Archaic (8,000 - 6,000 B.C.), side- and corner-notched projectile points such as Palmer, Kirk, and Warren, first made their appearance. Diagnostics of the Middle Archaic (6,000 - 2,500 B.C.) include bifurcate base points like St. Albans, LeCroy, and Kanawha, as well as the Stanly, Guilford and Neville types (Custer 1984). Late Archaic (2,500-1,200 B. C.) diagnostics include the Savannah River projectile points/knives and other broadspear variants that suggest possible interaction with Native American cultures to the north and south.

Between 8,000 and 6,000 B.C., basic subsistence strategies and settlement patterns that were adopted during the Paleoindian period slowly began to change as the ambient forest landscape transitioned in response to the gradually warming climate. Analysis of biological samples from Cactus Hill suggested that “deciduous forest was well on its way to dominance by ca. 8,000 B. C.”

(Barber 2003:122). Such environmental changes were mirrored by shifts in available animal species; larger game animals of the post-Pleistocene period (e.g., bison, moose, and caribou) were replaced by deer, turkey, rabbit, elk, and bear. Acorns, hickory nuts, fruits, and other plant foods became more widely distributed (VDHR 2018a; Barber 2003:123). Such environmental changes facilitated a subsistence strategy based on foraging, albeit seasonal and somewhat more restricted in comparison to the wider-ranging opportunistic foraging practiced during the Paleoindian period (Barber 2003: 127; VDHR 2018a; Blondino et al. 2018:16). A single ca. 9,000-year-old serrated Early Archaic projectile point was recovered beneath some four feet of fill during archaeological studies related to the reconstruction of the Wilson Bridge (Alex City 2021).

From 6,000 to 5,000 B. C. (the Middle Archaic), the onset of the full Holocene impacted the environment (Custer 1984:62-63). Gardner (1978:47) summarized human adaptation in response to these environmental changes:

. . . by 6500 B.C . . . conditions had changed so dramatically that the adaptations of the long-lived Paleoindian-/Early Archaic system could no longer function in a viable manner. The hunting emphasis was thus abandoned and general foraging rose to pre-eminence. This resulted in a major settlement shift . . . to a focus on the zonal distribution of generalized, but seasonally available set of resources.

Middle Archaic sites have been recorded in all of the counties of Virginia’s Coastal Plain; the limited artifactual evidence that is available shows that Morrow Mountain I and II and Guilford projectile points were most abundant. Associated tool forms ranged from hammerstones to mortars and “abrading stones” to unifacial and bifacial side scrapers; the majority of lithic materials were obtained locally (Tolley 2003:139).

The Late Archaic period corresponded roughly to the Atlantic/Sub-Boreal Transition (3,000 -1,000 B.C.), a period that “culminated in the xerothermic or ‘climatic optimum’ around 2,350 B.C., that was “drier and 68°F (20°C) warmer than

modern conditions” (Kavanagh 1982:9). Blanton (2003:177) observed that the Late Archaic was a period during which “. . . there was a marked tendency toward ‘intensification’ or ‘focal orientation’ in subsistence and settlement.” For the Delmarva Peninsula, Wesler et al. (1981:434) posited “. . . a generalized foraging subsistence pattern with growing emphasis on estuarine resources. Large camps, often associated with shell middens, would be expected along the shorelines and lower drainages, with small hunting camps along the uplands. . . .” Diagnostics indicative of Late Archaic occupation include projectile points of the Laurentian tradition (Otter Creek, Brewerton), the Piedmont tradition (Bare Island, Lackawaxen), and the terminal Archaic broad spear tradition. In Alexandria, a major Late Archaic lithic processing site was identified and documented in 1993 at the Stonegate development on West Braddock Road (Cressey 1994). Excavations at Jones Point produced even more abundant evidence of Late Archaic occupation in the Alexandria area (Site 44AX0053: Boyd and Randolph 2010). That major site yielded not only spear points and knives, but also numerous fragments of fire-cracked rock, lithic chipping debris, and pieces of soapstone bowls. The site, which also produced evidence of structures, may have been a seasonal location used by indigenous people to exploit resources during the spring and early summer.

Woodland Period (1,200 B. C. – A. D. 1600)

The Woodland Period, which archeologists also subdivide into three sub-periods, was a time of major change for Native American populations across the continent. Indigenous peoples transitioned from a semi-mobile, seasonally based subsistence lifestyle to a largely sedentary one in which permanent towns, villages and hamlets became the principal settlement pattern, and cultivated maize, beans, and squash provided a significant portion of the diet (Hodges 1998:201). Stylistic and morphological changes marked culturally and temporally identifiable ceramic types, as did the evolution of specific forms of lithic tools, including projectile points.

Ceramics, which were introduced during the Early Woodland period (1,200 B. C. - 500 B. C.), replaced bulkier soapstone vessels and less dura-

ble fiber or skin containers (VDHR 2018c). One of the earliest ceramic types originated locally in Northern Virginia; Marcey Creek ware can be identified by its use of crushed steatite (soapstone) as a tempering agent (Egloff and Potter 1982:95; Artemel et al. 1988:6). Accokeek ceramics, tempered primarily with sand and cord-marked on vessel exteriors, are thought to provide another reliable diagnostic indicator of Early Woodland occupations in the Potomac Valley (VDHR 2020a). The broadspear projectile points that typified the Late Archaic period were abandoned in favor of smaller and thicker lanceolate, notched, and stemmed bifaces, including a class identified in the literature as “teardrops” (Klein 2003:215-216). Early Woodland peoples constructed round or oval dwellings using saplings driven into the earth in circular or oval shapes; storage and fire pits were contained within the perimeters of these houses (VDHR 2018c). One apparent Early Woodland occupation site was identified in 2012 by Mullen and Barse at the former Potomac Yards. Although most of the pre-contact materials recovered from this site consisted of rhyolite, quartz, and quartzite flakes, site 44AX0204 also yielded at least 16 fragments of quartz-tempered Early Woodland period ceramics (Mullen and Barse 2012:Table 13).

The Middle Woodland (500 B. C. – A. D. 900) saw a continuation and intensification of the settlement patterns that emerged during the Early Woodland. Triangular projectile points, which outnumbered all other types, are believed to signal the adoption of bow-and arrow hunting strategies (as opposed to spears) (Hodges 1998:Table 14, VDHR 2018d). Shell-tempered Mockley ceramics also are considered diagnostic of the later portions of this period (Egloff and Potter 1982:103).

The Late Woodland (A. D. 900 – A. D. 1600) witnessed rapid intensification of trends already in place during the previous period. Citing Martin Gallivan’s 1999 research, Hodges (2004:5) noted that sedentariness and an expanding population were factors that underlay Late Woodland social dynamics. A combination of hunting, fishing, seasonal foraging, and the deliberate cultivation of maize, beans, and squash provided a reliable subsistence base to support the region’s growing pop-

ulation (VDHR 2018e). Socio-political stratification and gender-based production tasks had solidified. By the end of this temporal subdivision, towns, villages and hamlets had become the norm. Shell-tempered Townsend wares were the dominant ceramics of the period, and they have been associated with Algonquian-speaking populations in eastern Virginia (VDHR 2020b).

The Contact Period (ca. 1600-1650)

By the time the English arrived in Virginia, the historically well-documented Powhatan paramount chiefdom, an alliance of around 30 previously independent Algonquian-speaking groups, had formed in southeastern Virginia (north and east of the James River) (Rountree 1989:8-15; VDHR 2018f; Turner 2021). Somewhat less well-known were two equally well-organized chiefdoms that exerted authority along the Potomac River: Potomac Creek and Conoy/Piscataway. Based primarily in what is now Maryland, the Piscataways' dominion extended roughly from St. Mary's County, Maryland to the Potomac Fall Line, and also may have included some indigenous groups on the Virginia side of the river (Potter 1993:19). Thus, the future site of Alexandria may have been within the Piscataway sphere of influence.

John Smith's Virginia explorations included a voyage to the Fall Line of the Potomac River (today's Great Falls) in 1608; he documented the furthest extent of his penetration of this region on his 1612 map. That map depicted four towns and villages on the western Potomac shore between the Occoquan River and the present site of Washington D. C.: Tauxenent, at Belmont Bay; Namassingakent, on Dogue Creek; Assaomeck, just south of Hunting Creek; and Namoraughquend, on the site of today's Ronald Reagan/Washington National Airport (Rountree et al. 2007:276, 278). Smith's initial voyage up the Potomac was followed in the next two decades by a succession of trading ventures undertaken by entrepreneurs like Captain Samuel Argyll, Henry Fleet (Day 2003), Henry Spelman, and others, some of whom had lived among the local tribes and learned their languages. European traders in the upper Potomac region exchanged European goods for food and later beaver skins. They also were introduced to

the increasingly complex world of Native American interactions and often shifting political alliances that Potter (1993:179-198 *passim*) has documented in some detail.

By the mid-seventeenth century, Euro-American landowners had begun to patent large tracts of property on the upper Potomac. Margaret Brent, whose 700-acre patent from the Colony of Virginia in 1654 encompassed much of what is now the City of Alexandria, was one of the first such grantees. Although Native Americans apparently continued to occupy lands along the upper Potomac through the mid-seventeenth century, by that century's end, many had vacated their ancestral homes in this region. Curry (2015) recounted the relocation of many of Maryland's Piscataway tribe to Zekiah Swamp and later to Heater's (Conoy) Island, while Potter (1993:197) observed that some Doegs (Tauxenents) may have moved south to the Rappahannock River.

Indians in the Post-European Contact Period

According to the Virginia Department of Historic Resources (VDHR), Virginia's historic Native American tribes began to reassert their identities and resurrect their cultural heritage during the twentieth century. The State of Virginia currently recognizes 11 tribes, seven of which have achieved federal recognition (VDHR 2018g; Turner 2021). None of those recognized tribes is associated with the Northern Virginia region.

Pre-Contact Archaeological Potential of the RTS Project Area

Relatively little pre-contact cultural material had been recovered during projects previously conducted in or near the core waterfront areas of Alexandria (Artemel et al. 1988; Knepper and Prothro 1989; Gardner et al. 2001; Mullen and Barse 2012:Table 13). Except for deeply buried stratified materials obtained during the intensive excavations at Jones Point (see Barse and Harbison 2000, 2006), pre-contact artifacts were recovered primarily from mixed historic/pre-contact contexts. This perhaps is not surprising given the "banking out" process that characterized Alexandria's waterfront development during the late eighteenth century. During the banking process, soils taken from the tops and upper slopes of the

bluffs along the river were redeposited as fill to “build out” the shallow Potomac shoreline. Thus, it is likely that some pre-contact cultural material was included in the fill that was removed from adjacent elevated areas.

General Historical Context

Cultural resources studies previously conducted for the Robinson Terminal South project, as well as independent research undertaken by Alexandria Archaeology on the development of Alexandria’s waterfront, have provided a detailed history of land development within the Project Area. Those studies include *Robinson South Terminal* (Mullen et al. 2014) and *Robinson Terminal South Property History* (Claypool and Johnston 2014), as well as extensive research files and published articles prepared by Ted Pulliam (Alexandria Archaeology). That information has been compiled into a general historical context that summarizes significant aspects of this research. Detailed lot histories and additional resource-specific historical narratives have been noted as appropriate in analytical discussions in later chapters of this report.

Eighteenth Century (ca. 1749-1800)

Alexandria’s (*briefly* Belhaven’s) waterfront originally consisted of an area extending from West’s Point on the north to Point Lumley on the south. The intervening shoreline appeared as a series of flats surmounted on the west by high bluffs; today, John Carlyle’s former home stands upon one remaining vestige of those original bluffs. Although the adjacent Potomac River channel was 48 ft (8 fathoms) deep, access to the shoreline was impeded by shallows (designated as “Shoals or Flats”) on Washington’s 1748 map (Figure 3-1), which were only 4 to 7 ft deep. The difficulties of reaching solid ground were exacerbated by the continual disposal of trash and debris from vessels, and from silt run-off from the higher elevations along the shorelines (Shephard 2006:1-2). Such conditions hampered mercantile activity; cargo transfer from onshore facilities to and from deeper draft merchant vessels in the channel (i.e., brigantines, sloops, and the like) would have required “lightering”—that is, transshipment using smaller “flats” like the bateaux, dories, or barges

commonly used during the colonial period to transport bulk cargoes and to shift merchandise in shallower waters (Terrell 2006:13-14).

Knepper and Prothro (1989:5) suggested that the original survey of Alexandria made in 1749 showed that public landings had been established at both West’s Point and Point Lumley. However, development at the former location already had progressed by the time George Washington drew his initial survey map in 1748. By 1745, Virginia’s House of Burgesses had authorized the establishment of ferries that connected “West’s” Point with two locations across the Potomac in Maryland (City of Alexandria, VA 2015). The “Hunting Creek warehouse” on Hugh West’s land apparently was in full operation; Washington depicted no fewer than five structures, identified as “Mr. Hugh West’s Ware Houses,” along the north side of the road that led to West’s Point (Washington 1748).

In 1749, surveyors Daniel Jennings and John West Jr. prepared a plat that showed the lands included in the new town of Alexandria (Fairfax County 1742-1845). By the following year, Washington had redrawn West’s original town survey map to depict the town divided into individually numbered quarter city blocks (Washington 1749) (Figure 3-2). Each of those lots was auctioned by the Trustees of the town (City of Alexandria, VA 2015) and became private; the absolute “points” at either end of the waterfront remained spaces reserved for public use. The southern boundary of Washington’s map fell short of depicting the parcel that would become Lot 85, which is included in the present RTS project area.

The problem of accessing the Potomac River’s deep channel did not remain unresolved for long. The process of “banking out”—that is, filling in and realigning the shoreline between West’s Point and Point Lumley began during the mid-eighteenth century. It was encouraged further through legislative action on the part of House of Burgesses, which expanded the town boundaries in 1762 (Ryan 2009:10), and by the Trustees, who decided that any additional “made” land would remain the property of the lot’s owner(s) (Knepper and Prothro 1989:5; Niculescu 2019). A wide range of materials was used to accomplish the infilling process including sand and dirt gen-



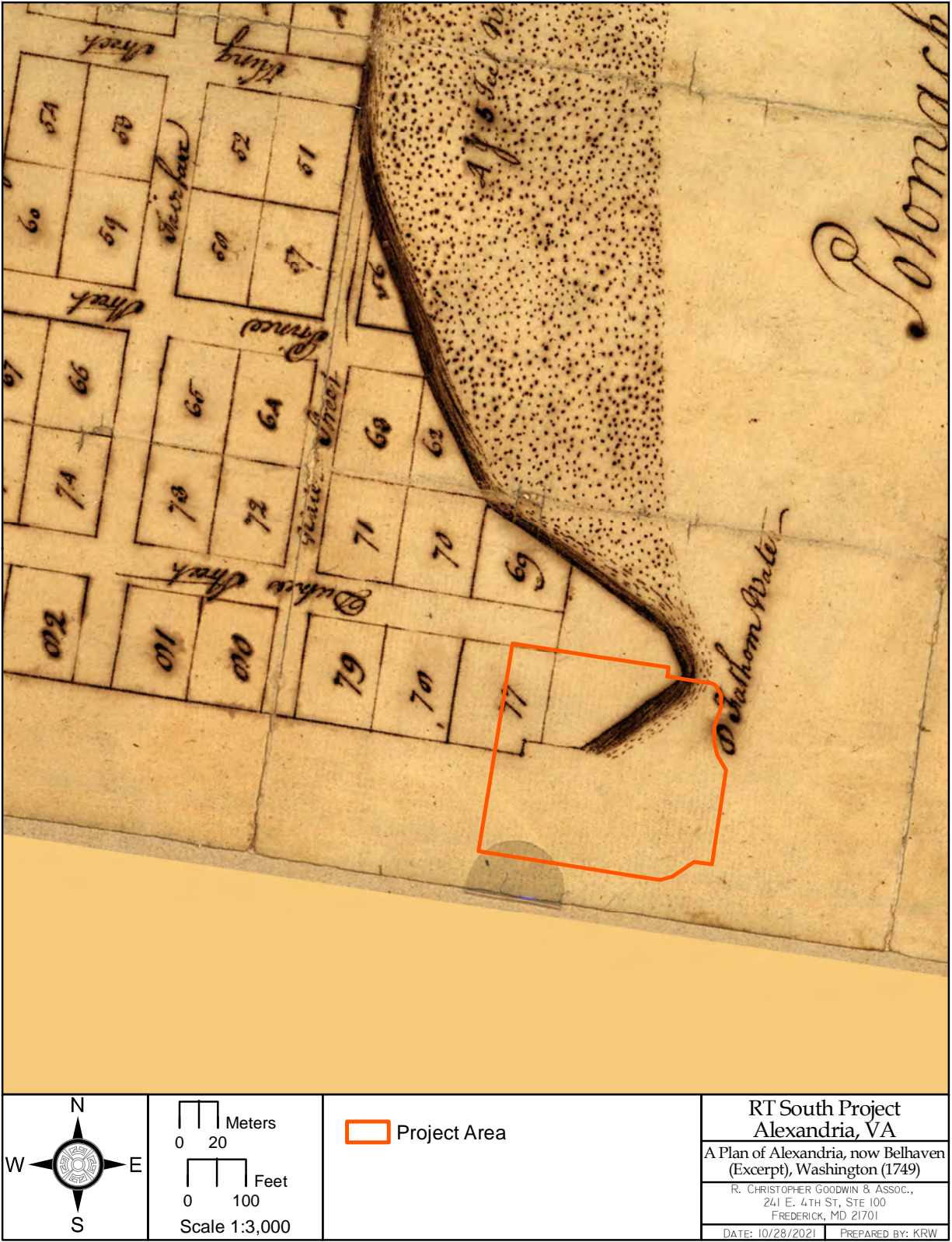


Figure 3-2 Detail from George Washington's (1749) Plan of Alexandria, Now Bellhaven, showing the division of land into blocks and lots, and listing purchasers of each lot. Original survey by John West Jr. (Image: Library of Congress)

erated by re-grading streets to facilitate access to the more elevated sections of the nascent town, as well as the deliberate burial of derelict vessels (Shephard 2006:4; Skolnik 2018:6; Niculescu 2019). Four of these were exposed by the excavations conducted in the vicinity of the Robinson Terminal, and three were exposed at Robinson Terminal. The practice was pursued most actively during the last quarter of the eighteenth century, resulting in the creation of 13 additional blocks of “made” land (Skolnik 2018:6). By 1798, when Gilpin produced his “Plan of the Town of Alexandria in the District of Columbia,” the shallow flats that had characterized the town’s waterfront only 40 years before had been obliterated completely. Water Street extended for the entire length of the town between Penny Hill and Oronoco Streets; and a new thoroughfare, Union Street, provided improved access to the waterfront.

Cribbed or cobb wharves quickly lined Alexandria’s newly created shoreline. Whether crib or cobb, these structures were filled in using a variety of materials ranging from (again) derelict vessels and excavated soil and sand to, “stone from Great Falls, shingles from Norfolk, iron from the Snowden ironworks on the Patuxent River, [and] tree logs from Port Tobacco [Md]” that reportedly filled in the wharf structure that was erected at Point Lumley in 1774 (Riker 2008:11). Archaeological and archival investigations conducted over the past three decades have found evidence of at least six of these wharves, including the ca. 1759 Carlyle/Dalton/Fitzgerald wharf at the foot of Cameron Street (44AX123)(Shephard 2006:7-10; Riker 2008); at 205 N. Union Street (Virginia Department of Historic Resources [VDHR] 2020); those associated with the Hotel Indigo site at 220 South Union Street (44AX229)(Skolnik 2018:6); Roberdeau’s Wharf at the foot of Wolfe Street (Knepper and Prothro 1989; Shephard 2006:7-10); in the Lee Street block (Bromberg et al. 1999:2); and Harper and Keith’s Wharf (44AX0119) at the foot of Gibbon Street (Artemel et al. 1988:i, 13).

While warehouses likely were the most common structures erected atop these wharves, many other types of commercial enterprises also occupied these warehouse blocks, often as tenants or leaseholders. For example, Miller (1987a:21)

noted a 1774 *Virginia Gazette* advertisement that extolled the virtues of a new distillery under construction at the foot of Wolfe Street. The south side of Duke Street on Point Lumley was occupied by Robert Hooe and Richard Harrison, who were commission merchants (Pulliam 2006). In 1780, that partnership had obtained a lease for part of the point from the Town of Alexandria (Alexandria Land Records Book B:153; Pulliam 2017). They constructed a warehouse and a “scale house” on part of that parcel, but they also apparently sublet some of the property to a variety of lessees. In fact, Skolnik (2018:6) pointed out that excavations at the Hotel Indigo site (referenced above) exposed an entire complex of structures and features including house foundations, privies, wells, a (later) fertilizer factory, portions of John Carlyle’s warehouse at Point Lumley (possibly constructed to store provisions for Braddock’s troops ca. 1755), a bulkhead wall, and the remains of an eighteenth-century vessel.

Ted Pulliam exhaustively documented the myriad sequence of deeds and leases that chronicle early ownership and occupation of blocks 77 and 85, portions of which lie within the present RTS project area. Citing Ring and Pippinger’s analysis of Town Lots and early Alexandria deed records (Ring and Pippinger (2008; Alexandria Land Records Book B:153), Pulliam noted that Thomas Fleming obtained a lease for Lot #77 at Point Lumley from the heirs of Nathaniel Chapman, its original purchaser, in September, 1760. In 1774, Fleming procured an additional 25-ft parcel from the Trustees (Pulliam 2017). Fleming had operated a wharf and a shipyard (probably a launching way or slipway parallel to the existing shoreline) (Reiss n.d.:7-9) at this general location at least since the 1750s (Pulliam 2006). According to one history of the city, Thomas Fleming was Alexandria’s “most prominent” shipbuilder; he is credited with building the eight-gun vessel *Ranger* (Pulliam 2006c), and he also may have constructed the sloops *Hero* and *Jenny* in the 1760s (City of Alexandria 2017).

After Fleming’s death in 1786, his executors either sold and/or divided this property among his heirs, who themselves ultimately sold their interests. In 1794, one large (56 x 80 ft) section on the southeast corner of Duke and Union streets was

purchased by George Slacum (Slocum), whose heirs subsequently leased several buildings on the property. Mutual Assurance Society Record No. 2056 (1815) indicates that all three structures on this lot were of frame construction, and that the largest one served as both a dwelling and a store. Two parcels were owned by Robert Hooe of Fairfax County; Mutual Assurance Declaration #36 (1796) specified that these lots were occupied by a four-story wood and stone warehouse and a two-story frame dwelling; there also may have been a “scale house” on one of these parcels.

The remaining lots fronting on Union Street ultimately were obtained by Thomas Patten; these smaller lots (approximately 24 x 56 ft) each were developed with tenement houses (Pulliam 2006:1) at least one of which was leased to one Elizabeth Mason. Some of Fleming’s remaining property at Point Lumley was leased by the Trustees, first to John Hill, and later to James Campbell in three parcels (Alexandria Land Records, Books B:352; F:138; I:118). One curious aspect of the Campbell lease was that it authorized James Campbell to remove any wooden buildings that he erected on the leased property; however, the same authorization did not extend to brick buildings, which would become the property of the town when the lease expired (Alexandria Land Records, Book B:353). By the mid-1820s, James Campbell’s two sons, Loudoun and William (listed in the 1791 city directory as a house joiner and a carpenter, respectively, and who served as lumber inspectors for the port), had inherited title to their father’s property and had subdivided it into three parcels (Pulliam 2017:2).

Pulliam considered all of the parcels discussed above as part of Lot 77; he described them as on solid (i.e., unbanked) land. However, he also identified a small section at the extreme southeastern corner of Lot 77 that was established on “made” land. In the partition of his estate, Thomas Fleming’s daughter Nancy was assigned the southernmost portion of this section; this parcel would have fronted on Union Street, and in the mid-nineteenth century it was incorporated into Lot #85. Fleming’s daughter Bridget, wife of James Kirk, inherited Fleming’s remaining property within Lot #85. This property consisted of three subdivided lots (Parcels 3, 4, and 5) extend-

ing eastward from Union Street to the Potomac River, with Strand Street, a 30-ft wide alley, serving as a dividing line between parcels 3 and 4. A variety of buildings and structures occupied these lots, including a wharf, a two-story dwelling, a bake house and ovens leased by Andrew Jamieson, and Jamieson’s enclosed wood yard (Fairfax County Land Records Book U:120; Alexandria Land Records Book D:413; 469, 473; Book F:309). Small wooden dwellings occupied by unskilled laborers (black and white) likely were interspersed among the commercial structures.

Archaeological investigations conducted across portions of Lot 77 and 85 at the Robinson Terminal South site have uncovered a wide variety of features associated with the development of this economically and racially diverse late eighteenth to early nineteenth century neighborhood (Pulliam n.d.: 1810 census and tax data), including dwellings, a steam flour mill, a bakery, warehouses, wharves, privies, wells, three vessels, and portions of “the Strand” (Pulliam 2006a:2; Skolnik 2018:8).

Antebellum Period (ca. 1800 – 1860)

The development of Alexandria during this period including its waterfront, continued along much the same lines as it had during the late eighteenth century when the Virginia Assembly first designated Alexandria as one of several “exclusive” ports of entry for foreign vessels (Henning’s Statutes 1784, quoted in Ryan 2009:21). Commerce flourished, particularly after internal transportation improvements like the Little River and Leesburg to Georgetown Turnpikes (today’s Routes 50/236 and 7) were extended westward to the wheat-producing Piedmont. These improved commercial corridors stimulated the growth of Alexandria’s milling industry and supported the city’s mercantile warehouses from which the region’s exports—particularly its flour and wheat—flowed to markets on the continent, in the West Indies, and in New England. In return, Alexandria merchants imported both luxury goods and raw materials like crude sugar and molasses, which gave rise to a thriving sugar refining industry (Alexandria City 2019a). Passenger ferries and packets connected city residents with ports in the wider Mid-Atlantic region, including Aquia

Creek, Georgetown, Washington, and even Norfolk. After 1815, this service changed even more radically as steamboats gradually replaced sail-powered vessels like ships, sloops, and schooners (*Virginia Journal* and *Alexandria Advertiser*:3 [4/6/1786], quoted in Riker 2008) as the principal mode of transporting passengers (Riker 2008:15; Alexandria City 2020a).

Two periods during the early years acted to retard the port's development: (1) the tariffs and embargoes imposed in response to the Napoleonic Wars (Alexandria City 2019a), and (2) the British attack on Washington in 1814 (Alexandria City 2020a). While the former inflicted long-term economic damage, the latter event was abrupt, shocking, and perhaps more consequential. In August of 1814, a squadron of seven British vessels appeared in the channel below Alexandria, situated in such a way "that they might have laid [the town] in ashes in a few minutes" (Shomette, quoted in Alexandria City 2020a). Negotiations having failed to resolve the situation, the city fathers surrendered—but reportedly not before scuttling all vessels then in port (Riker 2008:16). British forces thereafter divested the city's residents of much of their wealth, making off with flour, tobacco, cotton, sugar, and other commodities before retreating back down the Potomac (Alexandria City 2020a).

Although Alexandria's commerce rebounded after the conclusion of the War of 1812, its subsequent mercantile recovery proved sporadic. By the 1820s, the city had lost its status as a major U.S. port, although a lively trade continued with the Southern states, the West Indies and the European continent. Yet other aspects of the city continued to move forward. For example, by the 1850s, both a gas plant and a publicly supplied source of potable water were available to Alexandria residents (Alexandria City 2020c). Entrepreneurs in the city also turned to industry—and, unfortunately, to the internal slave trade—as ways of augmenting their fortunes (Alexandria City 2020 a, b). In the 1830s, the industrial base primarily featured smaller-scale ventures like bakeries, tanneries, cigar factories, and two shipyards (Joseph Martin, quoted in Alexandria City 2019b).

By the 1850s, that base had expanded to encompass much larger industrial works including

a locomotive factory, a steam furniture manufactory, and numerous machine shops and foundries. Ewing and Sinclair's (1845) map of Alexandria indicate that a foundry and a brewery occupied the wharves immediately south of the RTS project area (Figure 3-3). The city's economic growth was enhanced further by the establishment of reliable transportation links (including a canal), particularly with the Piedmont and Appalachian regions to the west. Of the four railroads that served the city by the 1850s, one—the Orange and Alexandria—directly accessed Alexandria's waterfront via the Wilkes Street tunnel beneath Lee Street; a "turn-out" of this line serviced the Virginia Locomotive and Car Works located on the waterfront at Wolfe and Union Streets. The coal and agricultural staples that poured into the city were stored and exported abroad; in exchange, the guano fertilizer and farm machinery used by commodity producers were sent west to the Shenandoah Valley and beyond. This brisk exchange was partially responsible for a major renovation of businesses and wharves along Alexandria's waterfront (Alexandria City 2020c).

Lots 77 and 85 underwent numerous changes in occupancy during the antebellum period, all of which stemmed from the partition of Thomas Fleming's former landholdings in the area. Part of Lot 77, in particular the large parcel located at the intersection of Duke and Union Streets, was purchased by George Slacum (Slocum). The remaining three lots on Union Street, all developed with wooden tenements, were allocated by estate executors to Thomas Patten (Puliam 2006a:1-2). Stone foundations and brick flooring that potentially relate to these tenements were exposed during Phase I test trenching in this area. Analyses of the chain of title and deeds for the large corner property suggest that three wooden buildings may have stood within that parcel. Two Mutual Assurance Declarations (#175 [1798] and #2056 [1815]) indicate that a two-story store was one of those buildings, and that the other two were wooden houses owned by George Slacum and his heirs. Slacum did not live in the project area; he and his wife Jane Harriett and their seven children lived in a house on Fairfax and Wilkes Streets (Alexandria Tax Assessment 1810). Samuel Smith and Robert Massey



Figure 3-3 Detail from Ewing and Sinclair’s 1845 map of the Alexandria waterfront area, showing the foundry and brewery (numbered 15 and 17) on the waterfront immediately south of the RTS project area. (Image: Library of Congress)

leased the combination dwelling and commercial structure from the late eighteenth into the early nineteenth century. Slacum's heirs continued to control all of these parcels until 1851, when his daughter Helen Ludlum sold the combined properties to Samuel Thompson (Alexandria Land Records Book M-3:384; Book 28:226).

On Point Lumley, the Corporation was taxed for property on Duke Street and Point Lumley, a value of \$1,000 in 1850 (Alexandria Tax Assessments 1850, Ward 1). William H. Fowle of the Alexandria Flour Mill Company leased the Corporation lands on the south side of Duke Street in 1854 (Alexandria Land Records Book Q-3:116). This lease included all of the waterfront property east of the Strand. George and William Fowle erected their six-story, steam-powered Pioneer Mills on the leased land and began operations in 1854 (Alexandria Gazette, 8/14/1854 p.3). The mill could manufacture 800 barrels of flour per day nearly all of which was shipped out to New York City (Pulliam 2006c:2). In 1856, a cooper's shop was constructed west of the Strand to provide barrels for the mill.

Although a small portion of Lot 85 had been allocated to Fleming's daughter Nancy in 1797, Fleming sold most of his property to his son-in-law James Kirk, who had married Fleming's daughter Bridget (Pulliam 2006b). For nearly five decades thereafter, Kirk's executors and heirs leased parcels of this property to various tenants, among whom were Joseph Dean, Thomas Preston and Thomas Janney, William Patterson, Henry Daingerfield, Josiah Davis, John Murray and Company, and Hartshorne and Miller. At least one warehouse stood on Hartshorne's parcel at the beginning of this period (Alexandria Land Records Book S:26). Perhaps the most significant feature of the tract was its wharf, which was begun during James Kirk's lifetime "but not finished before his death" (Pulliam 2006b:1). Several subsequent deeds mentioned this wharf, including one that in 1803 specified that the lessee was obligated to repair damages sustained by the structure (Fairfax County Land Records Book U:120, 125). Lease documents also mention other buildings and structures that populated these lots during the Fleming/Kirk ownership period, including one or more dwellings, a "brick tenement,"

a bake house and ovens, and an enclosed wood yard (Fairfax County Land Records Book U:120; Alexandria Land Records Book D:413, 460, 473; Book F:309). Beginning in the 1820s and for the ensuing 25 years, James Green gradually acquired all of these parcels; he continued to retain possession into the 1880s (Pulliam 2006b:1-2).

Civil War through 1900

Four years of Civil War brought about significant dislocation and disruption to life in Alexandria. Southern sympathizers fled the city in droves; it is estimated that Alexandria lost two-thirds of its original residents (Alexandria City 2017b). Union troops stayed in Alexandria for the entire duration of the war and for five years thereafter, it also became home to numerous African-Americans who had fled their former places of bondage. These so-called "contrabands" or freedmen settled in small enclaves throughout the town that adopted names like Petersburg, Contraband Valley, and Pump Town. The Federally authorized Freedmen's Bureau attempted to ameliorate the dismal conditions that most freedmen were forced to endure, but that program was discontinued until 1868 due to the indifference or outright hostility of those in the postbellum Reconstruction Congresses.

During the war years, Alexandria became a key link in the Union's military supply chain; its riverfront bustled with activity as Charles Magnus' (1863) Bird's Eye View of Alexandria clearly attests (Figure 3-4). A mix of steam and sail-powered craft including transports, tugs, and "freight boats" (Riker 2008:23), crowded the Potomac River channel. Contemporary observers wrote of "miniature mountains of hay and pyramids of oat bags" and "spacious and antiquated warehouses" on the wharves that were filled with military supplies. Nearly penniless freedmen found employment loading and unloading these goods. In fact, one observer noted that "Alexandria for the past two years can boast of more shipping at its wharves than any other city of its size in the Union. . ." (quoted in Alexandria City 2017b). By the end of the war, however, the city's harbor lay in ruins and its wharves "rotted in the sun."

By the early 1870s, Alexandria's mercantile community had begun the slow process of revival.



Figure 3-4 Detail from Charles Magnus' 1863 *Bird's Eye View of Alexandria, VA*, showing types of vessels commonly using waterfront wharves and docks. (Image: Library of Congress).

The Pioneer Mills facility had been transformed into a commissary and storehouses to accommodate troops, and, during the post-war years, the mill struggled to make a profit. In 1872, a correspondent for the *Washington Chronicle* newspaper could list numerous viable enterprises in the town including: “two planing mills, a brass and iron foundry, machine shops of the Orange, Alexandria and Manassas and Washington and Ohio railroads, two plaster mills, two flour mills and several small wheat and corn mills, the Mount Vernon Cotton Factory, three cabinet factories, a shipyard, a large tannery occupying half a square of ground, a pottery, several brick and lime kilns, one of the best cracker factories in the country, two distilleries, two cigar factories, and several coach and wagon factories” (quoted in Miller 1987b:265).

That same observer also noted the importance of Alexandria as a transfer point for coal coming down the Alexandria Canal from the Appalachians. Side-wheel and stern-wheel steamers

provided nearly all of the passenger and cargo transport to and from Alexandria's docks. The Weems Line, one of the most prominent companies in the shipping business, operated throughout the Chesapeake region. Two competitors emerged in the 1880s and 1890s: the Norfolk and Washington Steamboat Company and the Inland Seaboard and Coasting Company. A marine railway that repaired and constructed both ocean-going vessels, most notably schooners, and Portner's shipyard, which made smaller schooner-rigged craft like pungy boats, operated at the southern end of the waterfront (Artemel et al. 1988; Knepper and Prothro 1989:18, 22). But sail-powered craft were slowly declining in importance. The launch of the three-masted schooner *Henry S. Culver* and the four-masted schooner *William T. Hart* from the Agnew shipyard in 1883 foreshadowed the end of such traffic on the Potomac River (Ryan 2009:105; Alexandria City 2019c).

During the late nineteenth century, the nature of the enterprises that occupied the area around

Lots 77 and 85 also began to change, as late nineteenth century Sanborn maps show (Figures 3-5, 3-6, 3-7)(Sanborn Map and Publishing Company 1885; Sanborn-Perris Map Company 1891, 1896). The Civil War years had not been kind to the commercial warehouses, smaller individually-owned manufacturing businesses, and brick and wooden rental dwellings that until then characterized development in this area. Financial difficulties and natural and man-made disasters took their toll. For example, a major flood in 1889 submerged most of the waterfront and its wharves under “several feet” of water (Alexandria City 2019c). A “cyclone” that hit Alexandria in late September, 1896, heavily damaged or destroyed many properties along this section of the waterfront, including portions of the former Pioneer Mills and its cooper shop, a Vulcanizing Works at the foot of Wolfe Street, and Herbert Bryant’s fertilizer storehouse (Alexandria Gazette 9/30/1896, quoted in Alexandria City 2019c). The vulcanizing process strengthened green timber and inhibited decay and attacks by insects by subjecting the material to high heat [a process known as “roasting”][Haskin Wood Vulcanizing Company 1892]. Finally, a devastating fire the following year consumed nearly all of what remained of Pioneer Mills (Alexandria City 2019c).

Although the eastern end of Lot 77 was dominated by the large Pioneer Mills complex, other industrial enterprises occupied the areas around Point Lumley including the parcels included in the RTS project area.

A shipyard complex close to the former Pioneer Flour Mill included a shipyard that constructed at least one schooner and also a steam dredge (Miller 1998). Pulliam’s documentation suggests that during this period, the parcels on Lot 77 and 85 apparently were integrated, at least in part. During the early postbellum period, James Green’s lumber yard and coal dock occupied nearly all of the project area (Hopkins 1877) (Figure 3-5). However, upon Green’s death, his heirs almost immediately sold seven individual parcels to the Potomac Manufacturing Company (Alexandria Land Records, Book 11:391), which operated an iron works at the foot of Wolfe Street that produced boiler plate for John Agnew’s shipyard in 1883 (Miller 1998:12). In 1884, the Vir-

ginia Iron Ship Building Company purchased all of that property and leased the former Pioneer Mills site (Alexandria Land Records Book 15:1). In the late 1880s, Virginia Iron Ship Building was named a defendant in a chancery case brought by the city; they apparently lost. Between 1893 and 1894, after the chancery court handed down its decision, the Real Estate and Improvement Company of Baltimore was assigned to handle the sale of the property as stipulated in the judgment. The Haskins Wood Vulcanizing Company thereafter purchased all 13 of the former Virginia Iron Ship Building parcels (Alexandria Land Records, Book 30:119-124; Book 45:155)(Pulliam 2006b). But the Sanborn maps throughout this period (Figures 3-6, 3-7, and 3-8) show that relatively little development occurred within the RTS project area itself, save for the removal of several frame dwellings and the construction of a B&O Railroad Freight depot sometime between 1885 and 1896.

Early Twentieth Century (ca. 1900-1945)

In many respects, the first half of the twentieth century, an economically and commercially profitable period for Alexandria, represented yet another period of growth for the city. Alexandria gained notoriety as a manufacturing center, particularly for glass, fertilizer, beer and leather. Previously established electric trolley lines expanded their service; the Union station of the Richmond, Fredericksburg, and Potomac Railroad (RF&P) opened in 1905 at the north end of King Street; and the following year, the Potomac Yards rail classification facility went into service at the northern end of the city. By the onset of World War II, Potomac Yards was the largest complex of its kind on the East Coast of the United States (City of Alexandria 2019d). The trend towards developing outlying suburbs that first began during the preceding decade accelerated with the development of enclaves like Rosemont, Del Ray, Braddock Heights, and St. Elmo (Alexandria City 2017c, 2019d).

Portions of the city’s waterfront continued to flourish, thanks in part to the continued operation of steamboat and ferry service to Baltimore, Norfolk, and Washington. One major waterfront project was the construction in 1917-18 of the

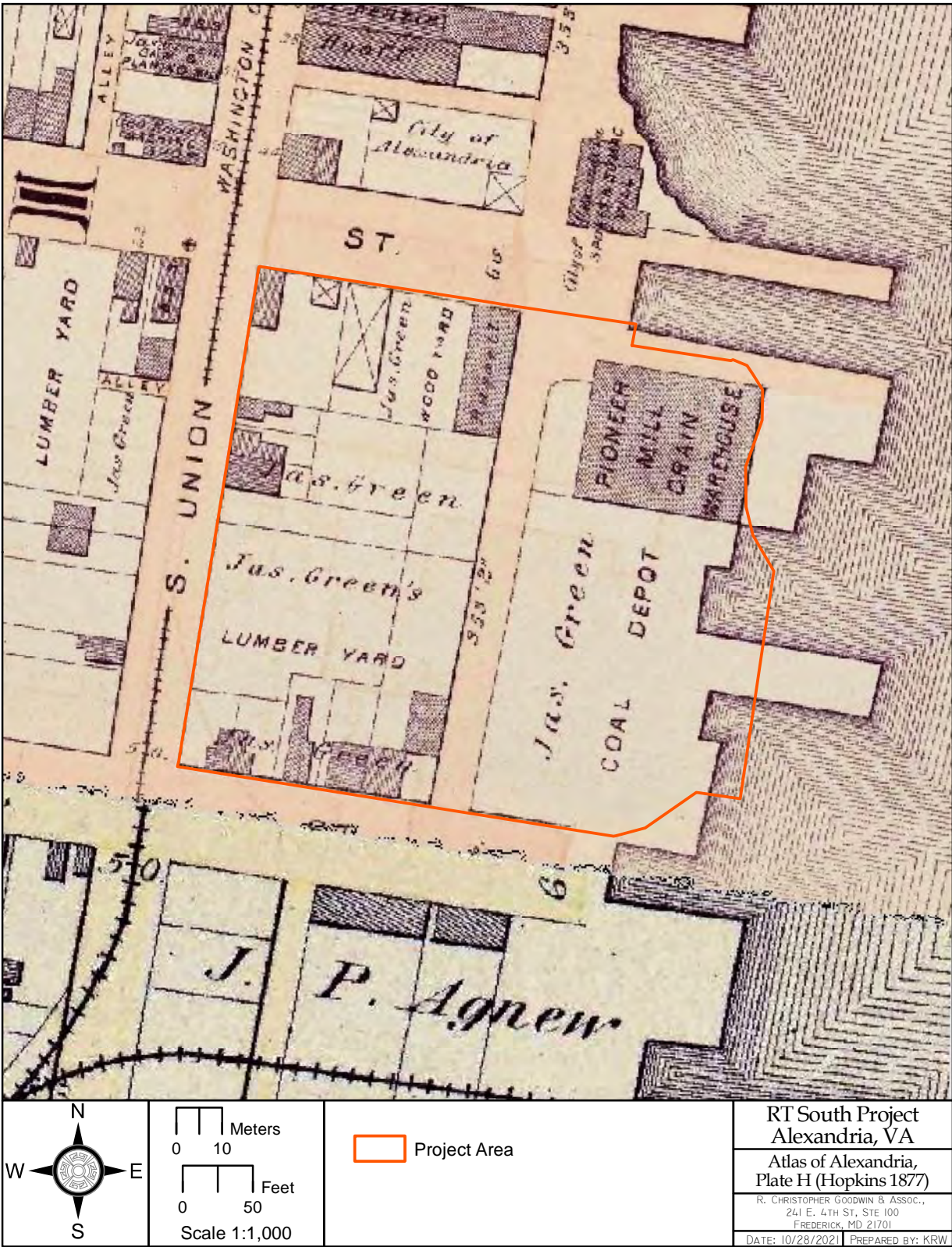


Figure 3-5 Detail from G. M. Hopkins 1877 Atlas of Alexandria (Plate H), showing the extent of James Green's business interests within the RTS project area. (Image courtesy of Alexandria Archaeology).

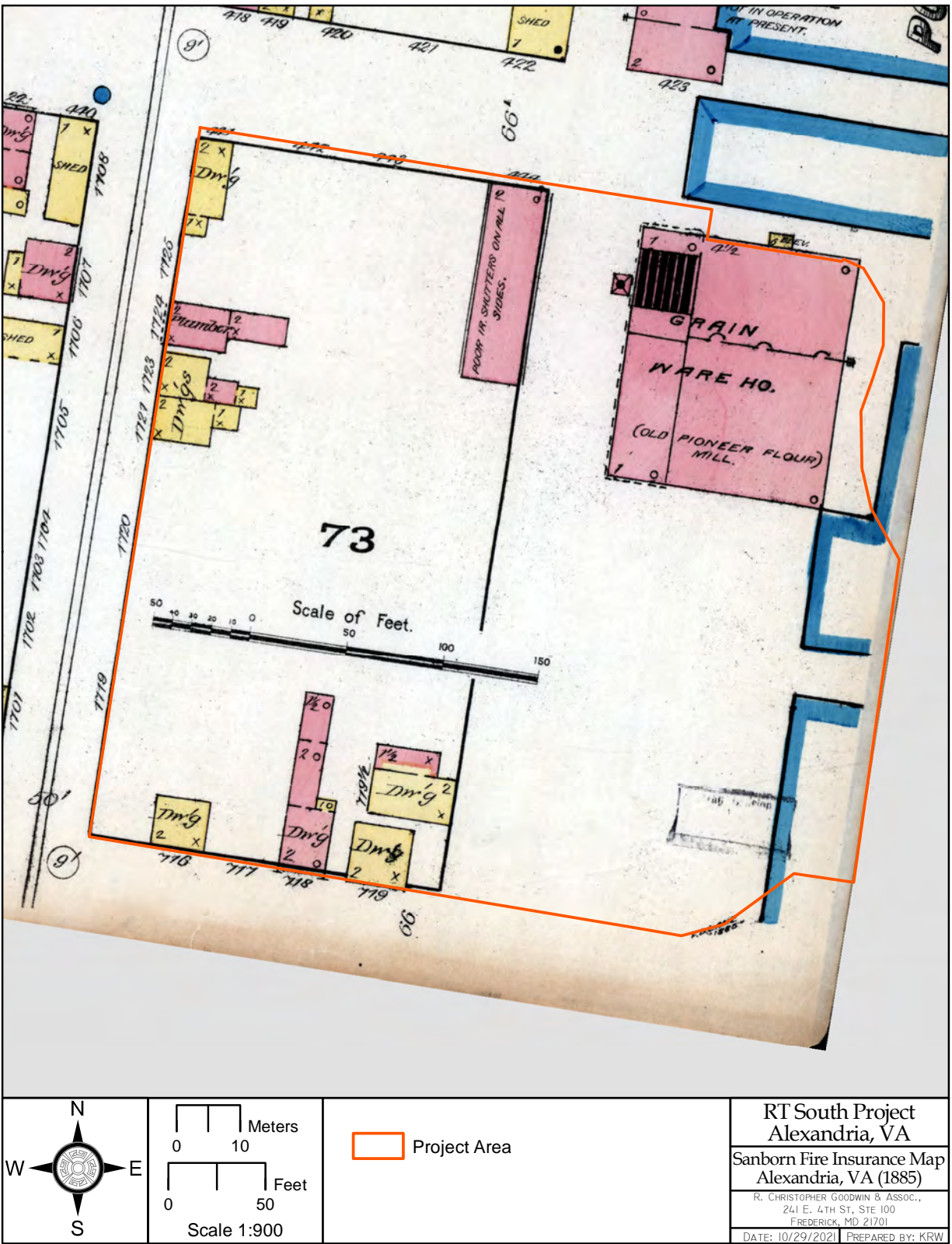


Figure 3-6 Detail from Sanborn Map Company's 1885 Insurance Map of Alexandria, Virginia (Plate 9), showing the surviving brick and frame dwellings within the RTS project area. (Image: Library of Congress).



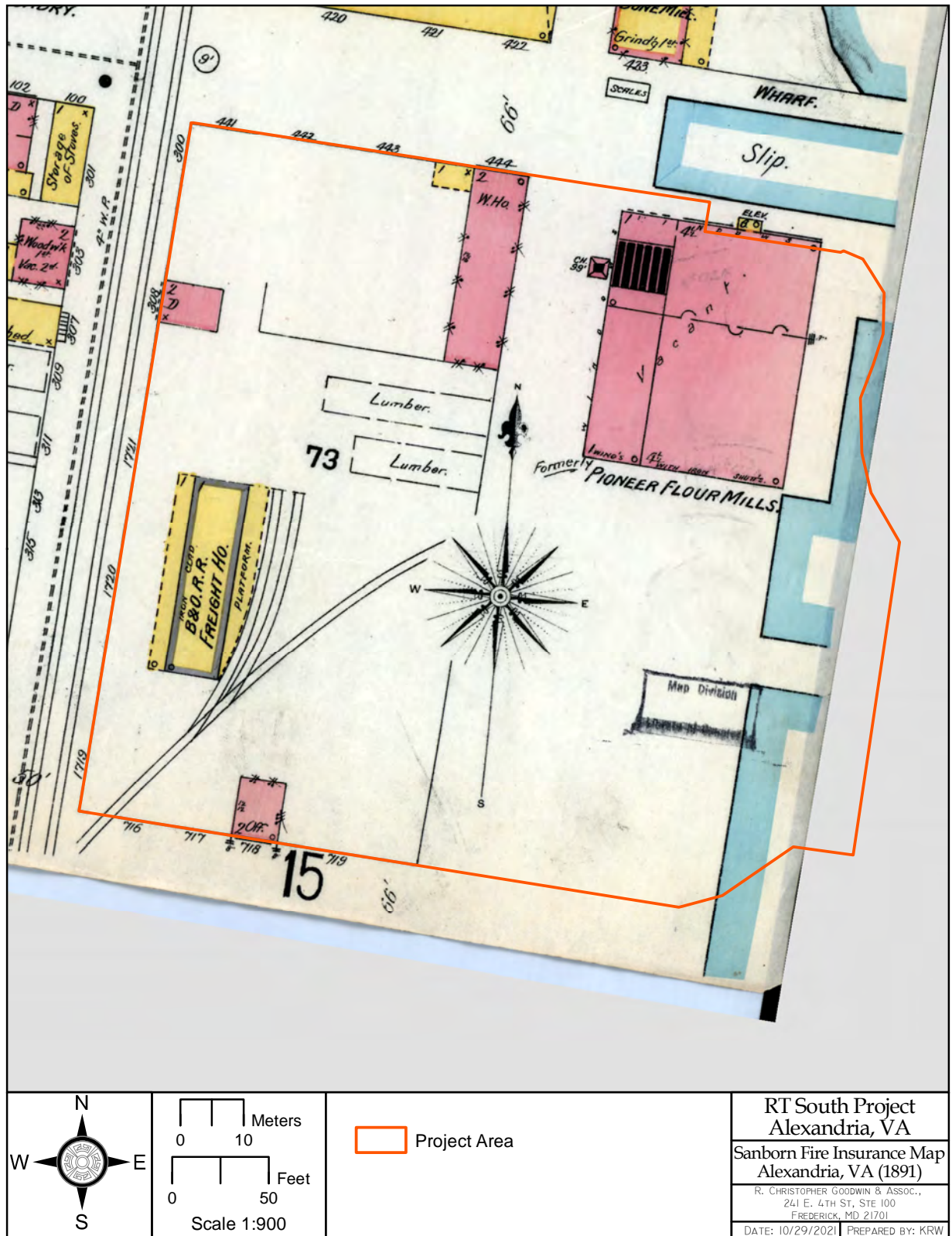


Figure 3-8 Detail from Sanborn-Perris' 1896 Insurance Map of Alexandria, Virginia (Plate 8), showing two surviving brick dwellings, the B&O RR's freight depot, and rail spurs within the RTS project area. (Image: Library of Congress).

85,000 sf Torpedo Factory at the foot of King Street. Immediately after World War I, and again during World War II, the Torpedo Factory manufactured and/or stored ordnance for the United States Navy, becoming a significant employer for over 5,000 World War II workers (Williams 2015). A marine railway, wharf and shipyard were located near the southern end of the city's Potomac River frontage (Artemel et al. 1988:34). The railway closed in 1931 and the property was eventually sold to the U.S. government in 1942 (Artemel et al. 1988:34). Roberdeau's wharf also operated into the early twentieth century (Knepfer and Prothro 1989:22), but other parts of the waterfront deteriorated and decayed as business ventures changed and moved away from the area. Riker (2008:31) noted that docks rotted and many frequently-vandalized buildings became "slums."

Early twentieth century Sanborn maps (Sanborn Map Company 1907, 1912, 1921; Figure 3-9, 3-10, 3-11) again provide supplementary details for Pulliam's (2006 a,b) and Miller's (1993) documentation for the occupants of Lots 77 and 85 during the first half of the twentieth century. By 1893, four of the lots on Lot 77 had been merged into a single complex owned by the Aitcheson Brothers, whose lumber yard lay largely west of Union Street (see Figure 3-7). In 1918, the Virginia Corporation Commission issued a charter to Rudolph, Sally, and Hugo Herfurth (two of whom also may have owned an artificial stone factory on Lot 85 [Sanborn 1912]) to op-

erate a factory that made and sold engines and "automobile machinery" on part of that property (*Washington Post* 1914; Sanborn 1921). The former site of Pioneer Mills had been redeveloped as well. The 1912 and 1921 Sanborn maps show the occupants as the Emerson Engine Company, which manufactured marine engines, and later the Safety First Manufacturing Company, which had a foundry and made couplings (Sanborn 1912, 1921). Bryant's Fertilizer Company established a second warehouse on the southeast corner of Duke and Union; they also maintained an office in an adjacent brick building on Union, one of the two surviving former nineteenth century brick dwellings within the general RTS project area at that time. Sometime within the five years between 1907 and 1912, the Texas Oil Company took possession of the abandoned B&O freight depot (Sanborn 1912).

Many of these parcels subsequently were absorbed, first by the expansion of the Southern Iron Works complex (Alexandria Land Records Book 172:298), and in the late 1930s by the Robinson Brothers, who eventually formed the Robinson Terminal Warehouse Company (Hopkins 1941; Pulliam 2006a:2; 2006b:2)(Figure 3-12). During this process, the street formerly known as "the Strand" was abandoned as a public thoroughfare and became incorporated into adjacent properties (Miller 1988 [City Council Minutes, November 14, 1938]).

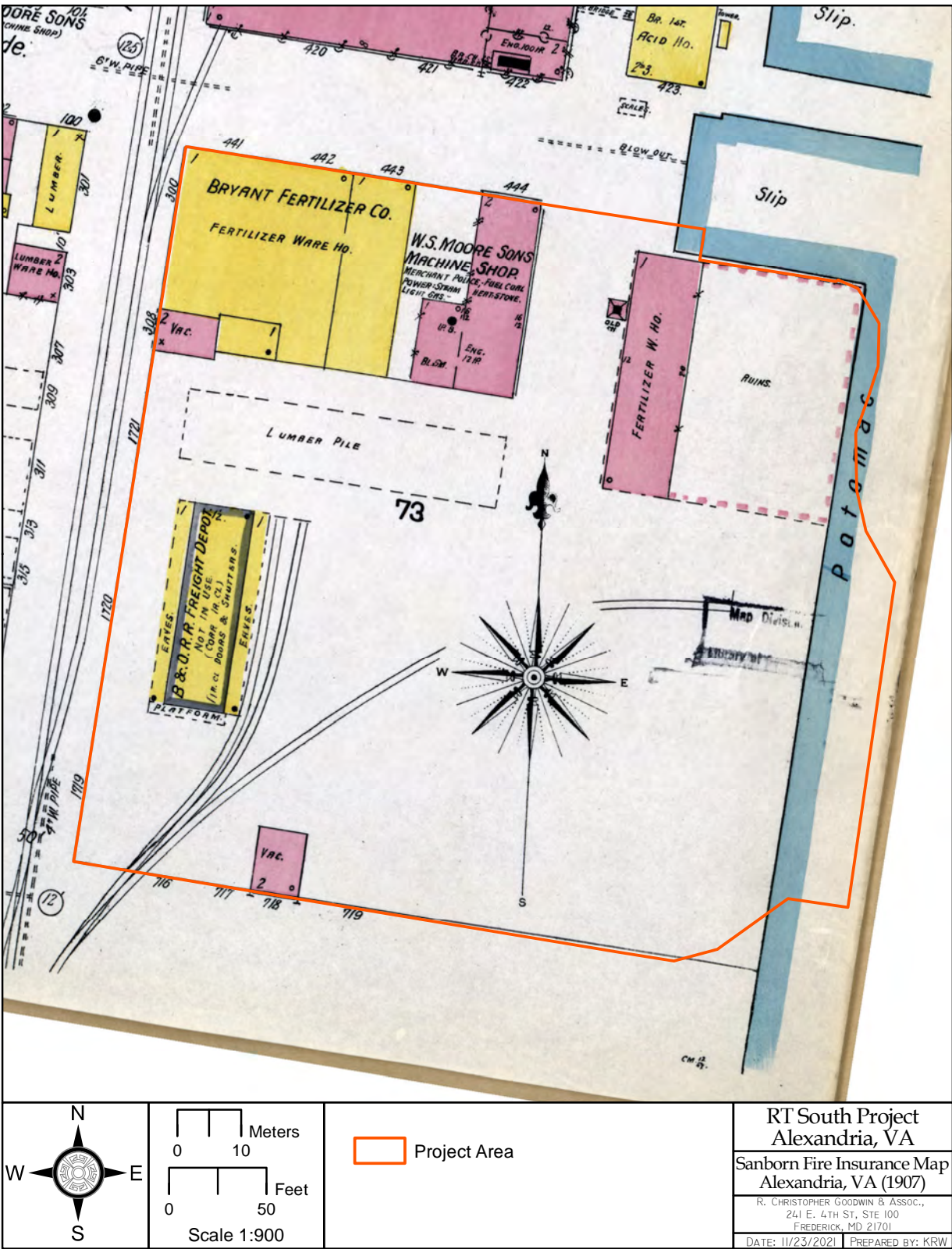


Figure 3-9 Detail from the Sanborn Map Company's 1907 Insurance Map of Alexandria, Virginia (Plate 14), depicting the expansion of the Bryant Fertilizer Company and Aitcheson Lumber Company complexes into the RTS project area. (Image: Library of Congress).

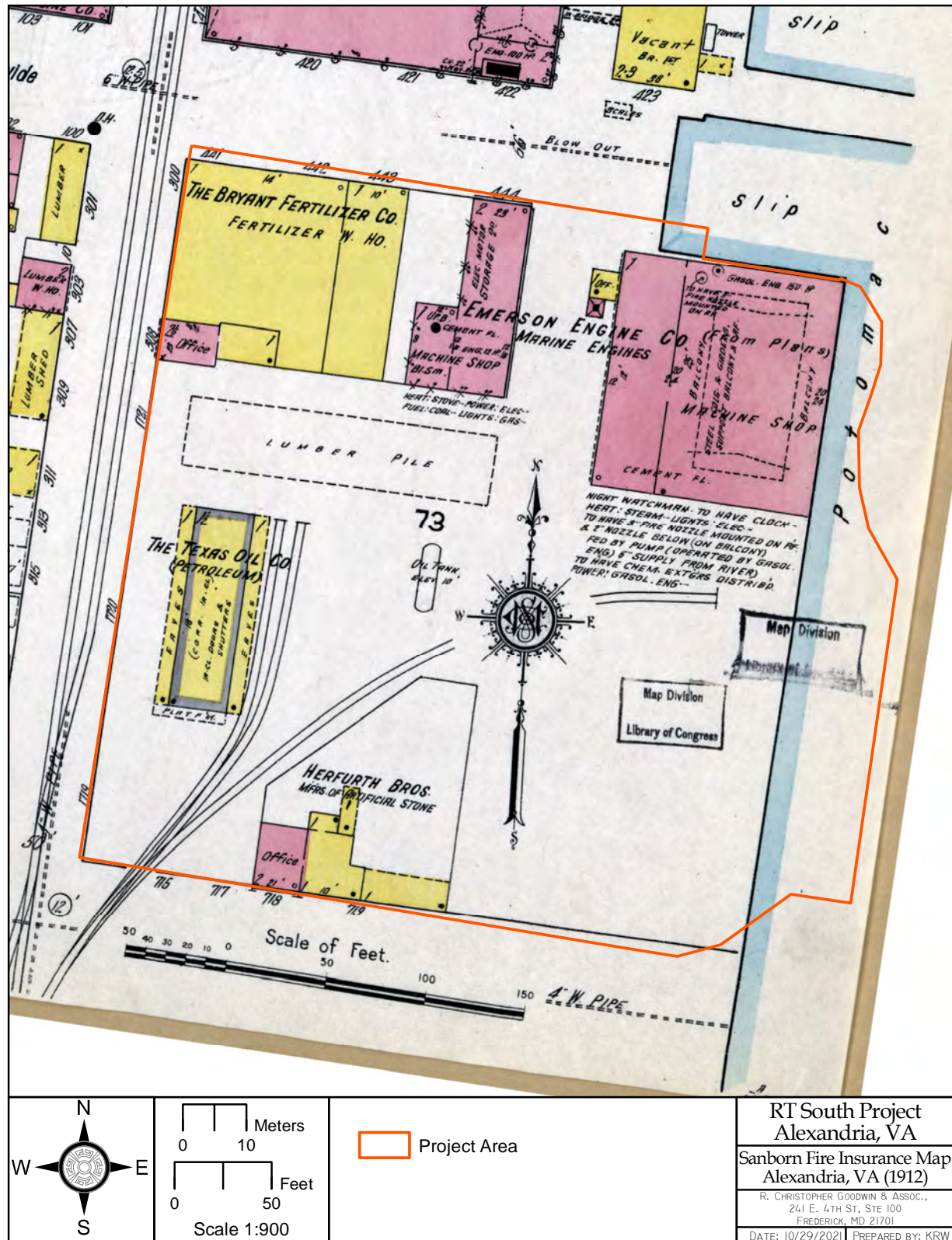


Figure 3-10 Detail from the Sanborn Map Company's 1912 Insurance Map of Alexandria, Virginia (Plate 14), documenting the entry of three new businesses—Texas Oil, Emerson Engine, and Herfurth—into the RTS project area. (Image: Library of Congress).



Figure 3-11 Part of the Sanborn Map Company's 1921 Insurance Map of Alexandria, Virginia (Plate 11), showing changes in the four business enterprises that operated within the RTS project area. (Image: Library of Congress).

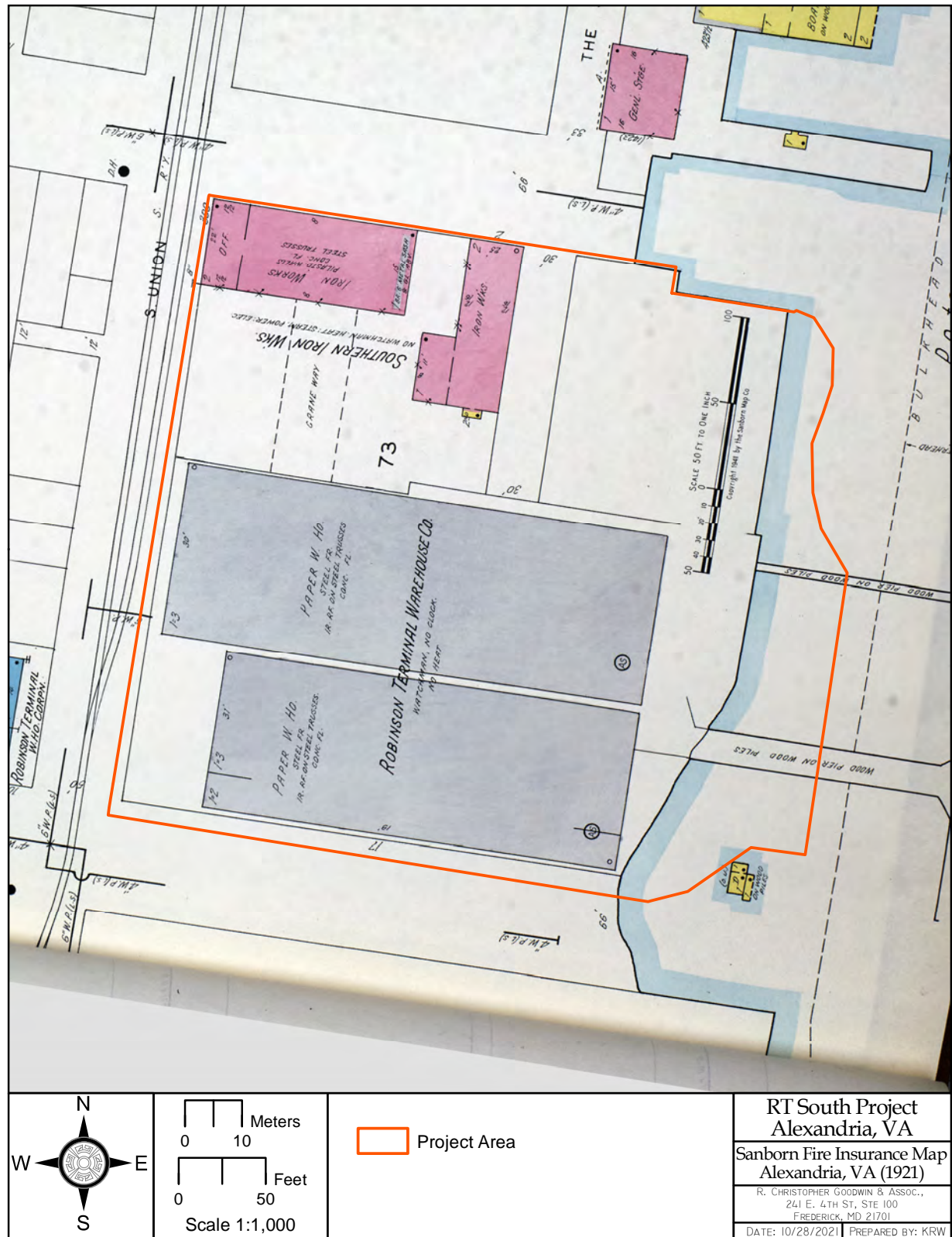


Figure 3-12 Detail from the Sanborn Map Company's 1941 Insurance Map of Alexandria, Virginia (Plate 12), showing the total occupation of the RTS project area by the Southern Iron Works and the Robinson Terminal Warehouse Company. (Image: Library of Congress).

REFERENCES



Primary Sources

- Alexandria Advertiser and Commercial Intelligencer*, 1801
Alexandria Daily Gazette, Commercial & Political, 1808-1810
Alexandria Gazette, 1794-1894
The Times, Washington, 1899
Virginia Journal and Alexandria Advertiser, 1785-1786

Secondary Sources

Alexandria Archaeology

- 2007 City of Alexandria Archaeological Standards: Collection Management Section. Alexandria Archeology, Office of Historic Alexandria, Alexandria, Virginia.
- 2009 Traveler's Accounts of the Historic Alexandria Waterfront. Organized by Kelsey Ryan for the Office of Historic Alexandria/Alexandria Archaeology, City of Alexandria. Accessed online < <https://www.alexandriava.gov/uploadedFiles/oha/info/TravelersAccountsHistoricAlexandriaWaterfront.pdf>> 18 February 2022.
- 2010 *Alexandria Waterfront History Plan*. Alexandria Archaeology, Office of Historic Alexandria, Alexandria, Virginia. Accessed online < <https://www.alexandriava.gov/uploadedfiles/planning/info/waterfront/aacwaterfronthistoryplan.pdf>> 30 November 2021.

Artemel, Janice, Elizabeth Crowell, Donald Hull, and Dennis Knepper

- 1988 Phase IIA Archaeological Study, Old Ford Plant Site, Alexandria, VA. Submitted to Urbco, Hartford, CT. Prepared by Engineering Science, Washington.

Baicy, Daniel, David Carroll, Elizabeth Waters Johnson, and John P. Mullen

- 2020 Archaeological Evaluation and Mitigation at Site 44AX0229: Hotel Indigo (220 South Union Street), Alexandria, Virginia. Prepared by Thunderbird Archaeology Associates.

Barber, Michael B.

- 2003 A Review of Early Archaic Research in Virginia: A Re-Synthesis a Decade Later. *Quarterly Bulletin of the Archeological Society of Virginia* 58 (3):121-134.

Barse, William P. and Jeffrey Harbison

- 2000 *Phase II Archaeological Testing on the Prehistoric and Historic Components of Site 44AX185, Jones Point Park, Alexandria, Virginia*. URS Corporation, Florence, NJ.
- 2006 *Phase III Archeological Mitigation of the Prehistoric and Historic Components of Site 44AX185, Jones Point Park, Alexandria, Virginia*. URS Corporation, Florence, NJ.

- Beaudry, Mary C.
2006 *Findings: The Material Culture of Needlework and Sewing*. Yale University Press. New Haven, Connecticut.
- Blanton, Dennis
2003 Late Archaic in Virginia: An Updated Overview. *Quarterly Bulletin of the Archeological Society of Virginia* 58 (4):177-206.
- Blanton, Dennis B., and Samuel G. Margolin
1994 *An Assessment of Virginia's Underwater Cultural Resources*. Virginia Department of Historic Resources Survey and Planning Report Series No. 3. William and Mary Center for Archaeological Research, Williamsburg, Virginia.
- Blondino, Joseph, Mike Klein, and Curtis McCoy
2018 *Archaeological Assessment of the Northern Portion of the City of Virginia Beach, Virginia*. Prepared for Virginia Department of Historic Resources, Richmond. Dovetail Cultural Resources Group, Fredericksburg, VA.
- Boyd, Clifford
2003 PaleoIndian Research in Virginia and Beyond. *Quarterly Bulletin of the Archeological Society of Virginia* 58 (1):58-93.
- Boyd, Varna and Anthony Randolph
2010 *Phase I Archeological Survey of Area A and Phase II Evaluation of Site 44AX52 Jones Point Park, Alexandria, Virginia*. Report prepared by Potomac Crossing Consultants for Federal Highway Administration and Virginia Department of Transportation. VDHR Report
- Bradbury, Andrew P. and Philip J. Carr
1995 Flake Typologies and Alternative Approaches: An Experimental Assessment. *Lithic Technology*. 20(2):100-115.
- Bromberg, Francine, Pamela J. Cressey, Barbara H. Magid, Bernard K. Means, Michael Miller, and Steven Shepard
1999 *A Community Digs Its Past: The Lee Street Site*. Alexandria Archaeology Publication No. 122. Office of Historic Alexandria, Alexandria, VA.
- Brumbach, Hetty Jo
1987 A Quarry/Workshop and Processing Station of the Hudson River in Pleasantdale, New York. *Archeology of Eastern North America* 15:59-83.
- Bushman, Richard L.
1993 *The Refinement of America: Persons, Houses, Cities*. Vintage Books, New York.
- Chappell, Gordon
1973 Historic Resource Study, West Potomac Park: A History. Historical Resource Study Proposal No. CNCP-H-13. Prepared for United States Department of Interior, National Park Service, Denver Service Center Historic Preservation Team. Electronic document, <http://npshistory.com/publications/ncr/hrs-w-potomac-park.pdf>.

Chesterman, Charles W. and Kurt E. Lowe

- 1992 The Audubon Society Field Guide to North American Rocks and Minerals. Alfred A. Knopf. New York.

City of Alexandria, Virginia

- 1933 Planning and Zoning Map. Planning and Zoning Commission. Map files, Alexandria Public Library.
- 1989 Archaeological Ordinance No. 3413. Adopted Nov 18, 1989 (<http://tps.cr.nps.gov/pad/AlexOrdinance.cfm>).
- 1992 Zoning Ordinance, Section 11-411: Archaeological Protection. Adopted June 24, (<http://tps.cr.nps.gov/pad/AlexOrdinance.cfm>).
- 2015 The 1740s. In Discovering the Decades. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28266>. 10 July 2020.
- 2017 Old Town North Small Area Plan. Adopted by Ordinance #5082 on September 16, 2017). Electronic document: <https://www.alexandriava.gov/uploadedFiles/planning/info/masterplan/City Master Plan Map/OldTownNorthSAPCurrent.pdf>.
- 2017a The 1760s. In Discovering the Decades. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28278>. 14 July 2020.
- 2017b The 1860s. In Discovering the Decades. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28414>. 21 July 2020.
- 2017c The 1890s. In Discovering the Decades. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28726>. 27 July 2020.
- 2019 Watersheds in Alexandria, February 2019. Electronic Document: <https://www.alexandriava.gov/uploadedFiles/tes/oeq/info/WatershedsParcels.pdf>.
- 2019a The 1800s. In Discovering the Decades. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28302>. 14 July 2020.
- 2019b The 1830s. In Discovering the Decades. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28398>. 15 July 2020.
- 2019c The 1880s. In Discovering the Decades. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28724>. 27 July 2020.
- 2019d The 1900s. Discovering the Decades. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28728>. 27 July 2020.
- 2020a The 1810s. In Discovering the Decades. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28306>. 14 July 2020.
- 2020b The 1820s. In Discovering the Decades. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28392>. 15 July 2020.

- 2020c The 1850s. In *Discovering the Decades*. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=28408>. 15 July 2020.
- 2020d Archaeology at Contrabands and Freedmen Cemetery. Electronic document. Accessed at <https://www.alexandriava.gov/historic/archaeology/default.aspx?id=39008>. 3 May 2021.
- 2021 Archaeology and Alexandria's First People.: 13,200 years ago to ca. 1675 CE. Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=49344>. 3 May 2021.
- City of Alexandria/Alexandria County (Alexandria Land Records)
1790-1941 Various Deeds. Excerpts copied in Ted Pulliam's notes on Lots 77 and 85. Copies in Alexandria Archaeology, Alexandria, VA.
- City of Alexandria/Alexandria County (Alexandria Tax Assessment)
1802-1850 Property Tax Records, Ward 1. Electronic images and or digital copies supplied by Alexandria Archaeology, Office of Historic Alexandria, Alexandria, VA.
- City of Alexandria/Alexandria County (Accounts/Wills/Probates)
1790-1850 Various Records. Ancestry.com. *Virginia, U.S., Wills and Probate Records, 1652-1900* [database on-line]. Original data: Virginia County, District, and Probate Courts.
- Clark, William Bullock, Edward B. Matthews, B.L. Miller, C.K. Swartz, E.W. Berry, A. Bibbins
1911 Prince George's County Report. Maryland Geological Survey. The Johns Hopkins Press, Baltimore, MD.
- Claypool, Julia and Edna Johnston
2014 *Robinson Terminal South Property History*. Report prepared for EYA by HistoryMatters, Washington, D.C.
- Colman, Steven, Jeffrey Halka, C. H. Hobbs, Robert Mison, and David Foster
1990 Ancient Channels of the Susquehanna River beneath Chesapeake Bay and the Delmarva Peninsula. *Geological Society of America Bulletin* 102:1268-1279. Electronic document. Accessed at <https://scholarworks.wm.edu/cgi/viewcontent.cgi?article=3021&context=vimsarticles>. 7 May 2021.
- Cressey, Pamela J.
1994 'Lithic scatters' unearthed at Stonegate tell of prehistoric tool-makers and hunters. *Alexandria Gazette Packet* (June 23). Electronic document. Accessed at <https://www.alexandriava.gov/historic/info/default.aspx?id=4073>. 7 May 2021.
- Cumbaa, Stephen
1986 Bone Button Making—A "Cottage" Industry? *The Ottawa Archaeologist* 13:2-4.
- Curry, Dennis
2015 Heater's Island and the Piscataway Indians. In *Our History, Our Heritage*. Maryland Historical Trust. Electronic document. Accessed at <https://mdhistoricaltrust.wordpress.com/2015/04/24/heaters-island-piscataway/>. 11 May 2021.

- Custer, Jay F.
1984 *Delaware Prehistoric Archaeology*. University of Delaware Press, Newark, Delaware.
- Day, Maria
2003 Henry Fleet. In *Archives of Maryland* (Biographical Series). Electronic document. Accessed at <https://msa.maryland.gov/megafile/msa/speccol/sc3500/sc3520/002800/002831/html/2831bio.html>. 4 May 2021.
- Deetz, James
1996 *In Small Things Forgotten: An Archaeology of Early American Life*. Revised Edition, Doubleday Press, New York.
- Delgado, James P.
1990 "Ships were constantly arriving..." The Hoff Store Site and the Business of Maritime Supply and Demand in Gold Rush San Francisco. *Historical Archaeology*. Special Publication #7.
- Ebright, Carol A.
1992 Early Native American Prehistory on the Western Shore: Archeological Investigations at the Higgins Site. Maryland State Highway Administration Project Planning Division Archeological Report Number 1.
- Egloff, Keith T., and Steven R. Potter
1982 Indian Ceramics from Coastal Plain Virginia. *Archaeology of Eastern North America* 10: 95-117).
- Engineering Science, Inc.
1993 *Maritime Archaeology at Keith's Wharf and Battery Cove (44AX119): Ford's Landing, Alexandria, Virginia*. Report prepared for Cook Inlet Region of Virginia by Engineering Science, Inc., Washington, D.C.
- Ewing, Maskell, and Thomas Sinclair
1845 Plan of the Town of Alexandria, D.C., with the environs, exhibiting the outlet of the Alexandria Canal, the shipping channel, wharves, Hunting Cr., &c. Philadelphia. Electronic image. Accessed at <https://www.loc.gov/resource/g3884a.ct003374/?r=-0.022,0.579,0.241,0.125,0>. 4 July 2020.
- Facciola, Stephen
1990 *Cornucopia - A Source Book of Edible Plants*. Kampong Publications.
- Fairfax County
1742-1856 Record of Surveys. Land Records, Microfilm Reel 36.
- Federal Emergency Management Administration (FEMA)
2020 Flood Insurance Rate map. Electronic Document. Accessed at: <https://hazards.fema.gov/fema-portal/prelimdownload/searchResult.action>

Fesler, Garrett

- 2021 Ground Truthing Archaeological Interpretations: Revisiting Annapolis' Spirit Bundles. DAACS Conversations Presentation. Accessed online < <https://www.daacs.org/research/playlists/daacs-conversations/>> 18 February 2022.

Fleming, Anthony H.

- 2015a *Geologic Map of the city of Alexandria and Vicinity, showing Surficial Geology, Landforms, and Major Areas of Artificially Modified Land*. Electronic Document. Accessed at https://www.alexandriava.gov/uploadedFiles/recreation/parks/plate_5_Surficial_Geology.pdf.
- 2015b *Geologic Map of the Potomac Formation (Early Cretaceous) in the City of Alexandria, Virginia and Vicinity*. Electronic Document. Accessed at https://www.alexandriava.gov/uploadedFiles/recreation/parks/plate_4_Potomac_Formation_map.pdf

Flenniken, J.J.

- 1987 The Lithic Technology of the East Lake Site, Newberry Crater, Oregon Report prepared for USDA/Forest service, Deshutes National Forest , Bend, Oregon.

Florida Museum of Natural History (FLMNH)

- 2016 Historical Archaeology Digital Type Collection (Ceramic Type Collection). Historical Archaeology at the Florida Museum of Natural History, University of Florida, Gainesville. Accessed online http://www.flmnh.ufl.edu/histarch/gallery_types/about.asp, March 2016.

Ford, Ben

- 2001 *Shipbuilding in Maryland, 1637-1850*. Master's Thesis, Department of Anthropology, The College of William and Mary, Williamsburg, Virginia.

Galke, Laura

- 2018 A Thimble of my Love. Lives & Legacies Blog, The George Washington Foundation. Accessed online < <https://livesandlegaciesblog.org/2018/02/14/a-thimble-of-my-love/>> 29 November 2021.

Garcia, Richard

- 2016 *The Currency and Coinage of Gibraltar, 1704-2014*. Gibraltar Chronicle, Ltd. Published by Her Majesty's Government of Gibraltar. Accessed online <http://www.gibraltarnationalmint.gov.gi/GibraltarCoinageHigh.pdf>

Gardner, William M.

- 1978 Comparison of Ridge and Valley, Blue Ridge, Piedmont, and Coastal Plain Archaic Period Site Distribution: An Idealized Transect (Preliminary Model). Unpublished manuscript.
- 1979 Paleoindian Settlement Patterns and Site Distribution in the Middle Atlantic (Preliminary Version). Unpublished manuscript.
- 1983 Get Me to the Quarry on Time: The Flint Run Paleoindian Model Revisited (Again). Paper presented at the 48th Annual Meeting of the Society for American Archaeology, Pittsburgh, Pennsylvania

- Gardner, William, Gwen J. Hurst, and Kimberly Snyder
 2001 *Phase I – III Archeological Investigations at 118 King Street, Alexandria, Virginia*. Prepared for Starwood Urban Investments, Inc., Washington. Thunderbird Archeological Associates, Inc., Woodstock, VA.
- Gilpin, George
 1798 Plan of the town of Alexandria in the District of Columbia, 1798. Electronic image. Accessed at <https://www.loc.gov/item/91681006/>. 3 April 2021.
- Gingerich, Joseph
 2011 Down to Seeds and Stones: A New Look at the Subsistence Remains from Shawnee-Minisink. *American Antiquity* 76 (1): 127-144. Electronic document. Accessed at https://www.jstor.org/stable/41331877?read-now=1&refreqid=excelsior%3Ac5b310f26eba47570869a6f6bbc04668&seq=15#page_scan_tab_contents. 7 May 2021.
- Goodwin, Lorinda B.R.
 1999 *An Archaeology of Manners: The Polite World of the Merchant Elite of Colonial Massachusetts*. Kluwer Academic/Plenum Publishers, New York.
- Gramly, Richard Michael
 1982 The Vail Site: A Paleo-Indian Encampment in Maine. *Bulletin of the Buffalo Society of Natural Sciences* 30. Buffalo, New York.
- Grillo, Kate, Jennifer Aultman, and Nick Bon-Harper
 2012 DAACS Cataloging Manual: Buckles. The Digital Archaeological Archive of Comparative Slavery. Accessed online < <http://www.daacs.org/wp-content/uploads/buckles.pdf> > 30 November
- Harper, John David, Jr.
 2007 *Soil Survey of Arlington County, Virginia*. United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), in cooperation with Virginia Polytechnic Institute and State University. Viewed online: https://www.nrcs.usda.gov/Internet/FSE_MAN-USSCRIPTS/virginia/VA013/0/Arlington.pdf.
- Harrington, H. D.
 1967 *Edible Native Plants of the Rocky Mountains*. University of New Mexico Press.
- Haskin Wood Vulcanizing Company
 1892 *Vulcanized Wood*. Electronic document. Accessed at <https://archive.org/details/WoodVulcanizing/mode/2up>. 27 July 2020.
- Hill, Erica A.
 1995 Thimbles and Thimble Rings from the circum-Caribbean Region, 1500-1800: Chronology and Identification. *Historical Archaeology* 29(1):84-92. Reprinted in *Approaches to Material Culture Research for Historical Archaeologists*, 2nd Edition, David R. Brauner Editor, pp. 309-317.
- Hinks, Stephen
 1988 *A Structural and Functional Analysis of 18th Century Buttons*. Unpublished Master's Thesis, Department of Anthropology, The College of William and Mary, Williamsburg, Virginia.

Hodges, Mary Ellen N.

1998 *Native American Settlement at Great Neck: Report of VDHR Archaeological Investigations of Woodland Components at Site 44VB7, Virginia Beach, Virginia, 1981-1987*. Research Report Series No. 9, Virginia Department of Historic Resources, Richmond.

2004 Late Woodland Period Research in Virginia: Recent Trends and Contributions. *Quarterly Bulletin of the Archeological Society of Virginia* 59 (1):pp. 1-13.

Holmes, Edwin F.

1985 *A History of Thimbles*. Cornwall Books, London.

Hopkins, G. M.

1877 *City Atlas of Alexandria, Virginia* (Plate H). G. M. Hopkins, Philadelphia. Electronic reference. Accessed at <https://catalog.loc.gov/vwebv/holdingsInfo?searchId=26276&recCount=25&recPointer=5&bibId=265274>. 3 August 2020.

House, John H.

1975 A Functional Typology for Cache Project Surface Collections, in the Cache River Archeological Project: An Experiment in Contact Archeology, Michael B. Schiffer and John H. House, eds. Arkansas Archeological Survey, Research Series No. 8.

Hume, Ivor Noël

1969 *A Guide to Artifacts of Colonial America*. University of Pennsylvania Press. Philadelphia, Pennsylvania.

Hunter, Robert (editor)

2001-2008 *Ceramics in America*. Robert Hunter, editor. Chipstone Foundation, London.

Hunter, Robert and Luke Beckerdite (editors)

2009-present *Ceramics in America*. Robert Hunter and Luke Beckerdite, editors. Chipstone Foundation, London.

Jirikowic, Christine, Gwen Hurst and Tammy Bryant

2004 Archeological Investigations at the Elliott House, 323 Fairfax Street, Alexandria, Virginia. Prepared for Old Presbyterian Meeting House by Thunderbird Research Corp. VDHR Report No. AX-090.

Jones, Lynn

2000 Crystals and Conjuring at the Charles Carroll House, Annapolis, Maryland. African Diaspora Archaeology Newsletter 7(1). Accessed online <http://scholarworks.umass.edu/adan/vol7/iss1/2> on 14 September 2021

Jones, Olive and Catherine Sullivan

1989 The Parks Canada Glass Glossary for the description of containers, tableware, flat glass, and closures. Ottawa, Ont.: National Historic Parks and Sites, Canadian Parks Service, Environment Canada.

Jones, Olive R.

1993 Commercial Foods, 1740-1820. *Historical Archaeology* 27(2):25-41.

- Justice, N.D.
1987 Stone Age Spear and Arrow Points. Indiana University Press, Bloomington.
- Kavanagh, Maureen
1982 *Archeological Resources of the Monocacy River Region, Frederick and Carroll Counties, Maryland*. Submitted to the Maryland Historical Trust, Frederick County Planning Commission, Carroll County Planning and Zoning Commission.
- Keeley, Lawrence H.
1980 Experimental Determination of Stone Tool Uses: A Microwear Analysis. The University of Chicago Press, Chicago.
- Klein, Michael
2003 The Past Decade of Research on the Early Woodland Period in Virginia. *Quarterly Bulletin of the Archeological Society of Virginia* 58 (4): pp. 207-xxx.
- Klippel, Walter E. and Bonnie E. Price
2007 Bone Disc Manufacturing Debris from Newfoundland to Antigua During the Historic Period. In *Bones as Tools: Current Methods and Interpretations in Worked Bone Studies*, edited by Christian Gates-Pierre and Renee B. Walker, pp. 133-142. BAR International Series 1622, Oxford.
- Klippel, Walter E. and Gerald F. Schroedl
1999 African slave craftsmen and single-hole bone discs from Brimstone Hill, St Kitts, West Indies. *Post-Medieval Archaeology* 33:222-232.
- Klingelhofer, Eric
1987 Aspects of Early Afro-American Material Culture: Artifacts from the Slave Quarters at Garrison Plantation, Maryland. *Historical Archaeology* 21(2):112-119.
- Knepper, Dennis, and Kimberly Prothro
1989 *Historical and Archaeological Investigation of Roberdeau's Wharf at Harborside, Alexandria, Virginia*. Prepared for 400 South Union Street Venture, Alexandria. Prepared by Engineering Science, Inc., Washington.
- Kosack, Katie
2020 "Re: Update on Artifact Labeling Methods for Robinson Terminal South (RTS) Artifact Collection (Site 44AX235)" Received by Office of Historic Alexandria/Alexandria Archaeology, 19 May 2020.
- Kraft, J.C.
1976 Geological Reconstructions of Ancient Coastal Environments in the Vicinity of the Island Field Site, Kent County, Delaware. *Transactions of the Delaware Academy of Science* 5:83-117.
- Kraus, Lisa, John Bedell, and Charles LeeDecker
2010 *Archaeology of the Bruin Slave Jail (Site 44AX0172)*. The Louis Berger Group, Inc., Washington, D.C. Archaeological Site Report, 44AX172.

- Leone, Mark P. and Gladys-Marie Fry
 1999 Conjuring in the Big House Kitchen: An Interpretation of African-American Belief Systems Based on the Uses of Archaeology and Folklore Sources. *The Journal of American Folklore* 112(445):372-403.
- Lindsey, Bill
 2021 Historic Glass Bottle Identification & Information Website. U.S. Department of the Interior Bureau of Land Management and the Society for Historical Archaeology. Accessed online <http://www.sha.org/bottle/index.htm> March 2021.
- Lynch, Anna M., and Kelsey Ryan
 2009 *Antebellum Reminiscences of Alexandria, Virginia, extracted from Memoirs of Mary Louise Slacum Benham*. Accessed at <http://alex.gov/uploadedFile/historic/info/archaeo/Slacum.pdf>. 30 July 2021.
- Lyttle, Peter T., John N. Aleinikoff, William C. Burton, E. Allen Crider Jr., Avery A. Drake Jr., Albert J. Froslich, J. Wright Horton Jr., Gregorios Kasselas, Robert B. Mixon, Lucy McCartan, Arthur E. Nelson, Wayne L. Newell, Louis Pavlides, David S. Powars, C. Scott Southworth, and Robert E. Weems
 2017 *Geologic Map of the Washington Wet 30' x 60' Quadrangle, Maryland, Virginia, and Washington, D.C.* Electronic document. Accessed at https://ngmdb.usgs.gov/Prodesc/proddesc_106759.htm. 15 March 2021.
- Magid, Barbara H.
 2010 Alexandria Archaeology Laboratory Reference Book. City of Alexandria. Alexandria, Virginia.
- Magnus, Charles
 1863 Bird's Eye View of Alexandria, Va. Privately printed, New York and Washington. Electronic image. Accessed at <https://www.loc.gov/item/81694373/>. 4 July 2020.
- Maisch, Christian J., and Mark B. Williams
 2012-2021 George Washington Slacum. *Dictionary of Falklands Biography*. Accessed at http://falklandsbiographies.org/biographies/slacum_george. 23 July 2021.
- Majewski, Teresita and Michael O'Brien
 1987 The Use and Misuse of Nineteenth Century English and American Ceramics in Archaeological Analysis. In *Advances in Archaeological Method and Theory* 11: 97-207. Edited by Michael B. Schiffer, Academic Press, Inc., New York.
- Malakoff, David
 2008-2009 Rethinking the Clovis. *American Archaeology* 12 (4): pp. 26-31.
 2016-2017 How Were the Americas Colonized? *American Archaeology* 20 (4):pp. 39-46.
- Marcel, Sarah Elizabeth
 1994 Buttoning Down the Past: A Look at Buttons as Indicators of Chronology and Material Culture. *Chancellor's Honors Program Projects*. Electronic resource available from The University of Tennessee, Knoxville, https://trace.tennessee.edu/utk_chanhonoproj/42. Accessed June 2, 2021.

- Maryland Archaeological Conservation Lab (MACL)
 2021 Diagnostic Artifacts in Maryland. Maryland Archaeological Conservation Lab. Accessed online <http://www.jefpat.org/diagnostic/index.htm>, March 2021.
- McGrath, Kathryn J., Thomas F. Majarov and Thomas W. Davis
 1999 *Phase III Archeological Data Recovery of Site 18PR119, Sherwood II Development, Prince George's County, Maryland*. Report prepared for by R. Christopher Goodwin & Associates, Inc. for South Charles Realty Corporation, Baltimore, Maryland.
- McMullen, Edward and John P. Mullen
 2020 Archaeological Evaluation and Excavation Monitoring, 211 Strand Street, City of Alexandria, Virginia. VDHR Report AX-222. Report prepared by Thunderbird Archaeological Associates.
- Miller, George L.
 1980 Classification and Economic Scaling of 19th Century Ceramic. *Historical Archaeology* 14:1-40.
 1991 A Revised Set of CC Index Values for Classification and Economic Scaling of English Ceramics from 1787 to 1880. *Historical Archaeology* 25: 1-23.
- Miller, George L., Patricia Samford, Ellen Shlasko, and Andrew Madsen
 2000 Telling Time for Archaeologists. *Northeast Historical Archaeology* 29(29): Iss. 1, Article 2.
- Miller, T. Michael (ed.)
 1987a An Early Distillery, Located at the Foot of Wolfe Street. *Pen Portraits of Alexandria, Virginia: 1739 – 1900*. Heritage Books, Inc., Maryland. In *Traveler's Accounts of the Historic Alexandria Waterfront*. Office of Historic Alexandria/Alexandria Archaeology, Alexandria, VA. Electronic document, Accessed at <https://www.alexandriava.gov/uploadedFiles/oha/info/TravelersAccountsHistoricAlexandriaWaterfront.pdf>. 13 July 2020.
 1987b "Building Improvements." *Pen Portraits of Alexandria, Virginia, 1739- 1900*. Maryland: Heritage Books Inc., Maryland. In *Traveler's Accounts of the Historic Alexandria Waterfront*. Office of Historic Alexandria/Alexandria Archaeology, Alexandria, VA. Electronic document. Accessed at <https://www.alexandriava.gov/uploadedFiles/oha/info/TravelersAccountsHistoricAlexandriaWaterfront.pdf>. 21 July 2020.
 1988 Resolution Concerning the Strand. In Pulliam's collected notes on Point Lumley.
 1993 The Prince to Duke Street Waterfront: Part II. *The Fireside Sentinel* VII(6). Electronic document. Accessed at <https://www.alexandriava.gov/uploadedfiles/historic/info/history/WaterfrontHistoryPrinceToDukePart2.pdf>. 31 July 2020.
 1998 Businesses of Yesteryear: The Potomac Manufacturing Company and Virginia Iron Ship Building Company. *The Alexandria Chronicle* VII(2):12-14. Electronic document. Accessed at https://alexandriahistorical.org/wp-content/uploads/2018/05/1998_Summer_Chronicle.pdf. 24 July 2020.

- Moerman, Daniel E.
1998 *Native American Ethnobotany*. Timber Press. Oregon.
- Montaigne, Fen
2020 The Fertile Shore. *Smithsonian* 50 (9): pp. 30-41, 110-112.
- Mottana, Annibale, Rodolfo Crespi, and Giuseppe Liborio
1978 Guide to Rocks and Minerals. Simon & Schuster Inc. New York.
- Morin, Edward and Jeffrey Harbison
2005 Woodrow Wilson Bridge Project. Supplemental Environmental Assessment Archeological/Geomorphological Investigations Within Four Alternatives Proposed for Access and Parking Areas, Jones Point Park, Alexandria, Virginia. URS Corporation, Florence, NJ.
- Mrozowski, Stephen A.
2006 *The Archaeology of Class in Urban America*. Cambridge University Press, New York.
- Mullen, John P. and William P. Barse
2012 *Archeological Investigations within a Portion of Potomac Avenue and Associated East/West roads and of Site 44AX0204, Potomac Yard Property, City of Alexandria, Virginia*. Final Revision. VDHR Report #AX-144. Prepared for Potomac Yard Development, LLC by Thunderbird Archeology a Division of Wetland Studies and Solutions, Inc., Gainesville, Virginia.
- Mullen, John P., Luan Cao, and David Carroll
2014 *Robinson South Terminal, City of Alexandria, Virginia. Documentary Study*. Prepared for EYA by Thunderbird Archeology, A Division of Wetland Studies and Solutions, Inc., A Davey Company, Gainesville, Virginia.
- Nance, J.D.
1971 Functional Interpretations from Microscopic Analysis. *American Antiquity* 36(3):361-366.
- Newman, W. S. and G. A. Rusnak
1965 Holocene Submergence of the Eastern Shore of Virginia. *Science* 148:1463-1466.
- Niculescu, Tatiana
2019 "And Fill it Solidly with Brushwood and Earth, or Such of Them As Would Suit Him Best": 18th and 19th Century Landmaking in Alexandria, Virginia. Alexandria Archaeology, Office of Historic Alexandria, Alexandria, VA.
- Nilsson, E.
1988 Flaked Stone Artifacts from CA-MEN-2138. Report submitted to PAR & Associates, Sacramento, CA.
- Neumann, Thomas W.
1989 Phase II Intensive Survey, Historic and Prehistoric Archeological Investigations at Lock Haven, Clinton County, Pennsylvania. Three Volumes. Prepared by R. Christopher Goodwin & Associates, Inc. for the U.S. Army Corps of Engineers, Baltimore District.

- Noël Hume, Ivor
1969 A Guide to Artifacts of Colonial America. University of Pennsylvania Press, Philadelphia, PA.
- Patten, Drake
1992 Mankala and Minkisi: Possible Evidence of African-American Folk Beliefs and Practices. *African-American Archaeology* 6:5-7.
- Pippinger, Wesley E.
2000 *Alexandria, Virginia 1808 Census (Wards One, Two, Three and Four)*. Willow Bend Books, Westminster, Maryland.
- Polglase, Christopher R, Thomas W. Neumann, and R. Christopher Goodwin
1990 *Phase III Archeological Data Recovery at Russett Site 17 (18AN687) and Russett Site 21 (18AN685), Anne Arundel County, Maryland*. Report prepared by R. Christopher Goodwin & Associates on behalf of the Russett Center Limited Partnership, Beltsville, Maryland.
- Polglase, Christopher R, Thomas W. Neumann, and R. Christopher Goodwin
1991 *Phase III Archeological Data Recovery at Russett Site 8 (18AN666), Anne Arundel County, Maryland*. Report prepared by R. Christopher Goodwin & Associates on behalf of the Russett Center Limited Partnership, Columbia, Maryland.
- Potter, Stephen R.
1993 *Commoners, Tribute, and Chiefs: The Development of Algonquian Culture in the Potomac Valley*. University Press of Virginia, Charlottesville and London.
- Pulliam, Ted
2006 Duke to Wolfe, Point Lumley. In *Alexandria Waterfront Heritage*. Office of Historic Alexandria. Alexandria, VA.
- 2006a Duke to Wolfe: Lot 77, Chain of Title Summary. Original document copied from Alexandria Archaeology Research Files.
- 2006b Duke to Wolfe: Lot 85, Chain of Title Summary. Original document copied from Alexandria Archaeology Research Files.
- 2006c Robinson Terminal South: Overview and Highlights. Original document copied from Alexandria Archaeology Research Files
- 2017 Robinson Terminal South—Point Lumley: Burials Property Chain of Title Research. Original document copied from Alexandria Archaeology Research Files.
- Ring, Constance, Wesley Pippinger, James D. Munson, and T. Michael Miller
2008 *Alexandria Town Lots, Together with the Proceedings of the Board of Trustees, 1749-1780*. Heritage Books, Baltimore.
- Reiss, Warren
n.d. Historic Evaluation of Shipways and Marine Railways, Old Ford Plant, Alexandria, VA. (Appendix C-1). In *Maritime Archaeology at Keith's Wharf and Battery Cove (44AX119), Ford's Landing, Alexandria, VA*. Engineering Science, Inc., Washington.

Riker, Diane

- 2008 Fitzgerald's Warehouse, King and Union Streets. *Studies of the Old Waterfront*. Office of Historic Alexandria, Alexandria Archaeology.

Ritchie, William A.

- 1971 A Typology and Nomenclature for New York Projectile Points. Bulletin Number 384. New York State Museum, Division of Research and Collections. The University of the State of New York, the State Education Department, Albany, NY.

Ritter, Eric W. and K.D.Tyree

- 1999 Rockshelter Excavations on Hogback Ridge, Tehama County, California: The Archeological Record. Bureau of Land Management, Redding.

R.L. Sanborn Map Company (Sanborn)

- 1885 *Alexandria, Virginia* (Plate 9). Electronic image. Accessed at https://www.loc.gov/item/sanborn08968_001/. 30 July 2020.
- 1891 *Alexandria, Virginia* (Plate 11). Electronic image. Accessed at https://www.loc.gov/item/sanborn08968_002/. 30 July 2020.
- 1896 *Alexandria, Virginia* (Plate 8). Electronic image. Accessed at https://www.loc.gov/item/sanborn08968_003/. 30 July 2020.
- 1902 *Fire Insurance Map of Alexandria, Virginia* (Plate 14). Electronic image. Accessed at https://www.loc.gov/item/sanborn08968_006/. 22 October 2020.
- 1907 *Alexandria, Virginia* (Plate 14). Electronic image. Accessed at <https://www.loc.gov/resource/g3884am.08968005/?sp=1&r=-0.379,0.155,1.208,0.592,0>, 31 July 2020.
- 1912 *Fire Insurance Map of Alexandria, Virginia* (Plate 14). Electronic image. Accessed at https://www.loc.gov/item/sanborn08968_006/. 22 October 2020.
- 1921 *Insurance Map of Alexandria, Virginia* (Plate 11). Electronic image. Accessed at <https://www.loc.gov/resource/g3884am.08968007/?st=gallery>. 22 October 2020.
- 1941 *Insurance Map of Alexandria, Virginia, including unincorporated sections known as Belle Haven and New Alexandria* (Plate 12). Electronic image. Accessed at https://www.loc.gov/item/sanborn08968_008/. 22 October 2020.
- 1959 *Insurance Map of Alexandria, Virginia, including unincorporated sections known as Belle Haven and New Alexandria* (Plate 12-Revised). Electronic image. Accessed at https://www.loc.gov/item/sanborn08968_008/. 5 April 2021.

Rondeau, Michael F.

- 1995 Glossary of Lithic Technology (Draft). Environmental Project, Caltrans, Sacramento.

Rountree, Helen

- 1989 *The Powhatan Indians of Virginia: Their Traditional Culture*. University of Oklahoma Press, Norman, OK.

- Rountree, Helen, Wayne Clark, and Kent Montford
 2007 *John Smith's Chesapeake Voyages, 1607-1609*. University of Virginia Press, Charlottesville and London.
- Russell, Aaron E.
 1997 Material Culture and African-American Spirituality at the Hermitage. *Historical Archaeology* 31(2):63-80.
- Ryan, Kelsey (editor)
 2009 *Travelers' Accounts of the Historic Alexandria Waterfront*. Office of Historic Alexandria/Alexandria Archaeology, Alexandria, VA. Electronic document. Accessed at <https://www.alexandriava.gov/uploadedFiles/oha/info/TravelersAccountsHistoricAlexandriaWaterfront.pdf>. 13 July 2020.
- Samford, Patricia
 1996 The Archaeology of African-American Slavery and Material Culture. *The William and Mary Quarterly* 53(1):87-114.
- Shephard, Stephen
 2006 Reaching for the Channel: Some Documentary and Archaeological Evidence of Extending Alexandria's Waterfront. *The Alexandria Chronicle*, Alexandria Historical Society, Alexandria, VA.
- Shomette, Donald G.
 1985 *Maritime Alexandria: An Evaluation of Submerged Cultural Resource Potentials at Alexandria, Virginia*. Report prepared for Alexandria Archaeology, Office of Historic Alexandria, Alexandria, Virginia.
- Singleton, Theresa A.
 1995 The Archaeology of Slavery in North America. *Annual Review of Anthropology* 24:119-140.
- Skolnik, Benjamin A.
 2018 Recent Maritime Archaeology on the Alexandria Waterfront. *MAHS News* 29(1):5-10.
- Smith, John
 1612 Map of Virginia. Electronic image. Accessed at <https://www.loc.gov/resource/g3880.ct000377/>. 8 May 2021.
- Soil Survey Staff
 2018 Web Soil Survey and Soil Series Descriptions. United States Department of Agriculture and Natural Resource Conservation Service (NRCS) Electronic documents, <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> and <https://soilseries.sc.egov.usda.gov/osdname.asp>.
- South, Stanley
 1977 *Method and Theory in Historical Archaeology*. Academic Press, New York.
- Stuiver, M. and J.T. Daddario
 1963 Submergence of the New Jersey Coast. *Science* 142:195.

- Tallichet, Marjorie D.
1986 *Alexandria City Directory 1791*. Heritage Books, Inc., Bowie, MD.
- Teitelman, Robert S., Patricia A. Halfpenny, Ronald W. Fuchs II, Wendell D. Garrett, and Robin Emmerson
2010 *Success to America Creamware for the American Market*. Antique Collectors' Club Ltd., Woodbridge, Suffolk.
- Terrell, Bruce
1990 The Battery Cove Wrecks (Appendix C-2). In *Maritime Archaeology at Keith's Wharf and Battery Cove (44AX119), Ford's Landing, Alexandria, VA*. Engineering Science, Inc., Washington.
- Thomas Jefferson Foundation
2006 Digital Archaeological Archive of Comparative Slavery (DAACS) Mean Ceramic Date – Type File. Accessed online <https://www.daacs.org/wp-content/uploads/mcdtypes.pdf> April 2021.
2015 Digital Archaeological Archive of Comparative Slavery (DAACS) Ceramic Cataloging Manual. Accessed online <http://www.daacs.org/about-the-database/daacs-cataloging-manual/> December 2015.
- Tixier, J.
1974 Glossary for the Description of Stone Tools with Special Reference to the Epipalaeolithic of the Maghreb. Newsletter of Lithic Technology: Special Publication Number 1. Translation by M. H. Newcomer.
- Tolley, George
2003 A Review of the Middle Archaic Period in Virginia. *Quarterly Bulletin of the Archeological Society of Virginia* 58 (3):134-147.
- Turner, E. Randolph
2021 Personal communication.
- Tyree, K.D.
1990 The Lithic Assemblage: Technology, Form and Site Use In Archeological Investigations at CA-GLE-105: A Multi-component Site Along the Sacramento River, Glenn County, California, by F. Bayham and K. Johnson, pp. 71-119. Report prepared for the US Department of the Army Corp of Engineers, Sacramento.
1992 Debitage Variation as a Measure of Adaptive strategy: A Study of Three Lithic Assemblages from Shasta County, California. Master's thesis, Department of Anthropology, California State University, Chico, CA.
- U.S. Federal Bureau of the Census (Census)
1850 Seventh Census of the United States. (National Archives Microfilm Publication M432, 1009 rolls); Records of the Bureau of the Census, Record Group 29; National Archives, Washington, D.C.
1860 Eighth Census of the United States, Alexandria County, Jefferson District (National Archives Microfilm Publication M432, 1009 rolls); Records of the Bureau of the Census, Record Group 29; National Archives, Washington, D.C.

- 1870 Ninth Census of the United States, Alexandria County, Jefferson District (National Archives Microfilm Publication M432, 1009 rolls); Records of the Bureau of the Census, Record Group 29; National Archives, Washington, D.C.
- 1880 Tenth Census of the United States, Alexandria County, Jefferson District (National Archives Microfilm Publication M432, 1009 rolls); Records of the Bureau of the Census, Record Group 29; National Archives, Washington, D.C.
- United States Department of Interior, National Park Service (USDI NPS)
- 1983 Secretary of the Interior's Standards for Archeology and Historic Preservation. Federal Register 48, No. 190 (29 September 1983). Government Printing Office, Washington, D.C.
- Virginia Department of Historic Resources (VDHR)
- 2011 *Guidelines for Conducting Historic Resources Survey in Virginia*. October 2011 (http://www.dhr.virginia.gov/pdf_files/Survey%20Manual-RevOct.2011Final.pdf)
- 2015 PIF Resource Information Sheet: Leslie Avenue warehouse #1. Electronic document. Accessed at https://www.alexandriava.gov/uploadedFiles/planning/info/Historic_Preservation/Del_Ray/2015HPDRArtDeco1509Leslie.pdf. 4 April 2021.
- 2018a Early Archaic: 8,000 – 6,000 B. C. In *First People: The Early Indians of Virginia*. Electronic document. Accessed at <https://www.dhr.virginia.gov/first-people-the-early-indians-of-virginia/early-archaic-8000-6000-b-c/>. 27 June 2020.
- 2018b Late Archaic: 2,500 to 1,200 B. C. In *First People: The Early Indians of Virginia*. Electronic document. Accessed at <https://www.dhr.virginia.gov/first-people-the-early-indians-of-virginia/late-archaic-2500-1200-b-c/>. 27 June 2020.
- 2018c Early Woodland: 1,200 B. C. to 500 B. C. In *First People: The Early Indians of Virginia*. Electronic document. Accessed at <https://www.dhr.virginia.gov/first-people-the-early-indians-of-virginia/early-woodland-1200-500-b-c/>. 30 June 2020.
- 2018d Middle Woodland: 500 B. C. – A.D. 900. In *First People: The Early Indians of Virginia*. Electronic document. Accessed at <https://www.dhr.virginia.gov/first-people-the-early-indians-of-virginia/middle-woodland-500-b-c-a-d-900/>. 30 June 2020.
- 2018e Late Woodland: A. D. 900 – A. D. 1600. In *First People: The Early Indians of Virginia*. Electronic document. Accessed at www.dhr.virginia.gov/first-people-the-early-indians-of-virginia/late-woodland-a-d-900-1600/. 30 June 2020.
- 2018f Indians A. D. 1600-1800. In *First People: The Early Indians of Virginia*. Electronic document. Accessed at <https://www.dhr.virginia.gov/first-people-the-early-indians-of-virginia/indians-a-d-1600-1800/>. 30 June 2020.
- 2018g Modern Indians A. D. 1800-the present. In *First People: The Early Indians of Virginia*. Electronic document. Accessed at <https://www.dhr.virginia.gov/first-people-the-early-indians-of-virginia/modern-indians-a-d-1800-present/>
- 2020 Site Form: 44AX0123. V-CRIS System.

- Voss, Barbara L. and Rebecca Allen
 2010 Guide to Ceramic MNV Calculation Qualitative and Quantitative Analysis. Technical Briefs in Historical Archaeology 5:1-9.
- Ward, H. Henry
 1988 Prehistoric Utilization of Ironstone in the Central Middle Atlantic. *Pennsylvania Archaeologist* 58(1:7-25).
- Washington, George
 1748 Plat of the land whereon stands the town of Belhaven [Alexandria], VA. Electronic image. Accessed at <https://www.loc.gov/resource/g3884a.ct000368r/?r=-0.547,0.206,1.686,0.872,0>. 9 July 2020.
 1749 A Plan of Alexandria [now Belhaven]. Electronic image. Accessed at <https://www.loc.gov/resource/g3884a.ct000223/?r=-0.037,0.046,0.772,0.4,0>. 9 July 2020.
 1788 Letter to Thomas Newton, Jr., 1 August 1788. National Archives, Founders Online. Electronic document. <https://founders.archives.gov/documents/Washington/04-06-02-0377>.
- Washington Post*
 1914 Engine Company Incorporated. 19 September, p. 11 (Classified). Electronic document. Accessed at https://www.newspapers.com/image/?clipping_id=49534. 31 July 2020.
- Watson, P., J.
 1976 In Pursuit of Prehistoric Subsistence: a comparative account of some contemporary flotation techniques. *Mid-Continental Journal of Archaeology* 1:77 – 100.
- Wesler, Kit W., Dennis J. Pogue, Aileen F. Button, Gordon J. Fine, Patricia A. Sternheimer, and E. Glyn Ferguson
 1981 *The M/DOT Archeological Resources Survey: Volume 1: Eastern Shore*. Maryland Historical Trust Manuscript Series Number 7. Annapolis, Maryland.
- White, Carolyn L.
 2002 *Constructing Identities: Personal Adornment from Portsmouth, New Hampshire, 1680-1820*. PhD Dissertation, Boston University, Boston Massachusetts.
- White, D. P.
 1977 The Birmingham Button Industry. *Post-Medieval Archaeology* 11:67-79.
- Whittaker, John C.
 1994 *Flintknapping: Making and Understanding Stone Tools*. University of Texas Press.
- Whitten, David
 2021 Glass Bottle Marks. Accessed online <http://www.glassbottlemarks.com/>, March 2021.
- Wilkie, Laurie A.
 1997 Secret and Sacred: Contextualizing the Artifacts of African-American Magic and Religion. *Historical Archaeology* 31(4):81-106.

Williams, Martha R., David J. Soldo, and Joshua Roth

- 2001 *Archeological Monitoring and Phase II Archeological Investigations of Block F, United States Patent and Trademark Office (USPTO) Relocation Site, Alexandria, Virginia*. Prepared for Roy F. Weston, Inc., West Chester, PA by R. Christopher Goodwin & Associates, Inc., Frederick.

Williams, Mike

- 2015 The Torpedo Factory Art Center: Alexandria's World War II Landmark. In *Boundary Stones* (WETA blog). Electronic document. Accessed at <https://boundarystones.weta.org/2015/10/20/torpedo-factory-art-center-alexandrias-world-war-ii-landmark>, 30 July 2020.

Worthy, Linda H.

- 1982 Classification and Interpretation of Late Nineteenth and Early Twentieth Century Ceramics. In *Archaeology of Urban America: The Search for Pattern and Process*. Edited by Roy S. Dickens, Jr. Academic Press, New York.