

**ARCHAEOLOGICAL ASSESSMENT  
HAMPTON ROADS BRIDGE TUNNEL STUDY  
DRAFT ENVIRONMENTAL IMPACT STATEMENT  
CITIES OF HAMPTON AND NORFOLK, VIRGINIA**

**VDHR File No. 2011-0804  
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## MANAGEMENT SUMMARY

In April and May of 2012, Cultural Resources, Inc. (CRI), in association with Rummel, Klepper & Kahl (RK&K), conducted an archaeological assessment for the Hampton Roads Bridge Tunnel (HRBT) Environmental Impact Statement (EIS) pursuant to Section 106 of the National Historic Preservation Act (36 CFR 800.4(b)(2)). The assessment took place in Hampton and Norfolk, Virginia and was conducted for the Virginia Department of Transportation (VDOT; VDOT Project 0064-965-004, P101; UPC 99037). The purpose of the archaeological assessment was three-fold: 1) to identify all areas of existing survey coverage and identify all previously recorded archaeological sites associated with the study window; 2) to determine what, if any, additional archaeological survey may be required within the study window for the proposed undertaking; and 3) to determine the likelihood for the study window to contain archaeological resources that are important chiefly for reasons other than information potential.

The three primary tasks were addressed utilizing a map-based research plan which included focused background research. To facilitate the assessment, a study window for archaeological resources was defined for the proposed undertaking. The study window extended 150 feet on either side of the existing pavement of I-64 and was also expanded in several locations to 250 feet on either side of the existing pavement. The study window is comprised primarily of areas of modern development and/or roadways, or is characterized by low-lying or in-filled wetlands. Nearly all of the current study window suitable for subsurface archaeological survey was investigated during a 1999 study conducted by Louis Berger and Associates. Due to the presence of this existing survey coverage data, and the updated assessment of current conditions associated with the study window, it is recommended that additional identification-level archaeological survey may be required for only a few select portions of the study window.

Limited additional survey is recommended for two portions of the study window; the first in Hampton on the north side of I-64 within Pasture Point Historic District, west of Pembroke Avenue and the second within a small section of open land on the east side of the intersection of I-64/I-564 in Norfolk west of the Forest Lawn Cemetery. It appears likely from a review of aerial photography that these areas have been disturbed by the construction of I-64, but neither were surveyed during the 1999 efforts. Subsurface verification of potential disturbances or areas of potentially intact stratigraphy in these areas is recommended.

Two sites, 44HT0009 (also recorded as 44HT0089) and 44HT0090 were recommended as potentially eligible for listing on the NRHP during the 1999 survey work and appear to have suffered little additional disturbance since that time. Additional Phase II level investigation, including close-interval shovel testing as well as larger test units within potential impact areas, is recommended for both sites to determine the current condition of the site as well as to conclusively determine their National Register eligibility.

Further investigation of 12 identified underwater targets located within the present HRBT study window was recommended, following the 1999 archaeological survey. Additional investigation of these 12 targets is recommended. It is likely that these targets may be related to the dredging of the Hampton Roads Channel and ultimately construction associated with the Hampton Roads Bridge Tunnel, however the information gleaned at the Phase I level was inconclusive.

The results of the background research and an assessment of current conditions within the study window suggest that there is a low potential for the identification of new archaeological sites that would be considered important for reasons other than information potential. The survey conducted in 1999 investigated nearly 100 percent of the area suitable for subsurface testing and

identified only two sites, 44HT0009 (44HT0089) and 44HT0090, both of which were recommended for further work based upon their information potential. Although portions of newly listed Phoebus and Pasture Point historic districts are associated with the study window, it is unlikely that archaeological resources associated within these districts would be chiefly important for anything other than information potential. While not a historic district, it is important to note the proximity of the Hampton National Cemetery (VDHR File 114-1048) to the archaeological study window on the north side of I-64. While during the 1999 survey efforts no significant archaeological deposits, indications for potential unmarked burials, or intact soil stratigraphy, it is still important to note the presence of this resource within the study window. The 1891 section of the cemetery was built as an enclosed cemetery area, and it is unlikely that additional burials would be located outside the current limits of the resource. There is a low potential that archaeological resources chiefly important for reasons other than information potential and associated with this resource would be identified.

Archaeological resources associated with battlefields may be considered important chiefly for reasons other than information potential; however, it is unlikely that such archaeological resources exist within the current study window. The study window is associated with three American Battlefield Protection Program (ABPP)-defined battlefield resources, however the ABPP-defined Core Areas associated with the two Civil War battlefields are located over a mile to the west of the study window. It is recommended that there is an extremely low potential for identifying archaeological sites associated with either engagement within the study window. The potential for identifying intact archaeological deposits associated with the 1813 Battle of Hampton is also recommended as extremely low. In general, the land portions of the study window have been heavily disturbed and exhibit a low potential for containing intact, previously unidentified archaeological deposits, and the underwater portions of the study window are too far from the military engagement areas to contain any battlefield resources.

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## I. INTRODUCTION AND METHODOLOGY

In April and May of 2012, Cultural Resources, Inc. (CRI), in association with Rummel, Klepper & Kahl (RK&K), conducted an archaeological assessment for the Hampton Roads Bridge Tunnel (HRBT) Environmental Impact Statement (EIS) and pursuant to Section 106 of the National Historic Preservation Act (36 CFR 800.4(b)(2)). The assessment took place in Hampton and Norfolk, Virginia and was conducted for the Virginia Department of Transportation (VDOT; VDOT Project 0064-965-004, P101; UPC 99037). The HRBT study corridor is approximately 11.7 miles long and extends from the Interstate 64 (I-64) and Interstate 664 (I-664) interchange in Hampton and continues southeast to the I-64 and Interstate 564 (I-564) interchange in Norfolk. VDOT is completing an EIS (EIS) for the study, in compliance with the National Environmental Policy Act (NEPA). This assessment has been completed as part of study compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966.

The study window for this assessment is comprised primarily of areas of modern development and/or roadways, or is characterized by low-lying or in-filled wetlands. Nearly all of the current study window suitable for subsurface archaeological survey was investigated during a 1999 study conducted by Louis Berger and Associates. The CRI Principal Investigators conducting this assessment and preparing the report meet the professional qualification standards of the Department of the Interior (48 FR 44738-9) for archaeology. The investigations conform to the qualifications specified in the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (Federal Register 48:44716-44742, September 29, 1983) and the *Guidelines For Conducting Historic Resource Survey In Virginia* (2011) promulgated by the Virginia Department of Historic Resources (VDHR).

President Ellen M. Brady and Vice President Dane Magoon were the principal investigators, and co-authored the report. GIS Technician Sean Sutor prepared the graphics for the report. Background research at the VDHR was conducted by Historian, Brian Schools. Project background and additional information was provided by RK&K staff. Their assistance is greatly appreciated.

### **Assessment Methodology**

The primary purpose of this assessment is to provide an archaeological overview for the HRBT DEIS. The three primary tasks were addressed utilizing a map-based research plan which included focused background research. To facilitate the assessment, a study window for archaeological resources was defined for the proposed undertaking. The study window extended 150 feet on either side of the existing pavement of I-64 and was also expanded in several locations to 250 feet on either side of the existing pavement. The areas of expansion include the vicinity of Pasture Point Historic District and Strawberry Banks in Hampton. The purpose of the archaeological assessment was three-fold: 1) to identify all areas of existing survey coverage and identify all previously recorded archaeological sites associated with the study window; 2) to determine what, if any, additional archaeological survey may be required within the study window for the proposed undertaking; and 3) to determine the likelihood for the study window to contain



Figure 1. Location of the Study Window on the Newport News North, Newport News South, Hampton, and Norfolk North, Virginia USGS 7.5' Quadrangles.

archaeological resources that are important chiefly for reasons other than information potential.

#### *Overview of Previous Work in the study window and Historic Context Review*

The research was based on a review of work previously conducted in the study window as well as on information available via the VDHR's Data Sharing System (DSS) and GIS-based mapping system. CRI staff conducted pertinent background research with the goal of establishing a historic context overview with reference to the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* and the VDHR's *Guidelines for Conducting Historic Resource Survey in Virginia* (VDHR 2011). The background research also focused on providing an overview of previous work within the study window in order to identify previously unsurveyed areas that retain integrity and that may also retain the potential for the identification of significant archaeological resources. This assessment of previous work included the following:

- Review of 1999 HRBT Alternatives Study conducted by Louis Berger.
- Map overlays generated in ArcGIS illustrating previous survey coverage and current study window
- Review of additional sources at the VDHR for additional survey coverage in study window since 1999
- Review of DHR GIS data including Phase I level survey coverage layer
- Review of both Architectural and Archaeological records to identify potential concerns and sites important for reasons other than information potential

#### *Current Conditions Assessment*

CRI staff also prepared a GIS-based current conditions assessment which included an overview of environmental context and conditions as well as a review of the current built environment within the study window. The conditions assessment was conducted with the goal of identifying areas within the study window that retain the potential for the identification of archaeological resources. A review of aerial photography coupled with map overlays showing the change in conditions over time was utilized to meet this study goal. Additionally, the conditions assessment was utilized to illustrate the potential of the study to impact resources already determined potentially significant that have yet to be fully evaluated. The current conditions assessment included the following tasks:

- GIS-based assessment of current conditions utilizing current aerial photography and map overlays
- Review and summation of environmental context prepared during previous investigations in the study window
- Identification of potential areas that retain integrity and may require additional Phase I level survey coverage

## II. HISTORIC CONTEXT SUMMARY

The following section provides a generalized context in which to identify and determine significance of archaeological resources that may be present within the study window. This context is not designed as a full historic context for the region, but an overview of the background and history of the specific study vicinity. The following context was summarized from the manuscript entitled *Archaeological Assessment and Predictive Model for the Hampton Roads Bridge Tunnel* prepared in draft form for the VDOT by Dovetail Cultural Resource Group, Inc. and dated November 2011 as well as the 1999 cultural resources survey performed by LBA. Small amounts of additional research and context were added to augment the context by CRI staff.

### Prehistoric Context

Virginia's prehistoric cultural chronology is subdivided into three major time periods including the Paleoindian (11,000–8,000 B.C.), Archaic (8,000–1,000 B.C.), and Woodland (1,000 B.C.–A.D. 1600) periods. More recently, a fourth subdivision has also been utilized; the Pre-Clovis period (?–11,000 B.C.). These subdivisions are based primarily on changes in subsistence exhibited by material remains and settlement patterns.

The majority of Paleoindian remains in Virginia are represented by isolated projectile points and what appear to be small temporary camps. However, Recent work at the Cactus Hill site in Sussex County (44SX202) has provided evidence of the earliest known occupation in Virginia (McAvoy and McAvoy 1997). Investigations at this site yielded information suggesting that Native Americans occupied the Nottoway River basin as early as 15,000 years B.P. The Archaic Period (8,000–1,000 B.C.) follows the Paleoindian period and generally coincides with the end of the Pleistocene epoch, marked in the region by a climatic shift from a moist, cool period to a warmer, dryer climate. In eastern Virginia, a temperate climate was established and the formation of the Chesapeake estuary began (Dent 1995). Increasing differences in seasonal availability of resources brought on by post-Pleistocene changes are thought to coincide with increasing emphasis on strategies of seasonally geared mobility. Archaic populations are thought to have organized social groups of 20 to 30 individuals (band-level social organization) with settlement patterns characterized by frequent seasonal movements within well-defined territories corresponding to the seasonal availability of resources and, in some instances, shorter-interval movements. The Archaic period was followed by the Woodland period (1,000 B.C.–A.D. 1600), which is characterized by the introduction of ceramic technology, an intensified reliance upon horticulture and agriculture, and increased sedentism (Klein and Klatka 1991; Mouer 1991).

### Historic Context

#### *Contact Period through the Antebellum Period (1607-1860)*

In May 1607, a small group of Englishmen under the authority of the Virginia Company of London arrived at Jamestown Island, where they established the first permanent

English settlement at Jamestown Fort. Captain John Smith, colonist and leader of the Jamestown settlement, explored much of the Chesapeake Bay region, including the vicinity of the current study area. At this time the Tidewater Region was politically dominated by the Powhatan chiefdom, which was comprised of a number of Algonquian-speaking tribes occupying the majority of southeastern Virginia (Potter 1993). A map depicting Virginia at the time of his explorations, *Virginia Discovered and Discribed* (1624), shows Native American settlements identified during his explorations. The settlement of Kecoughtan, located near the mouth of a creek near the western approach to the Hampton Roads Bridge Tunnel is identified on Smith's map and in the vicinity of the current study window. It has been suggested that it may be located in the vicinity of the Veterans' Administration Building (Rountree 1989).

Kecoughtan was apparently an independent entity in the late 1500s when Chief Powhatan killed the local chief and moved the villagers to a location north of the York River. In 1608, the former inhabitants reoccupied Kecoughtan led by Powhatan's son, Pochins (Rountree 1989). The village population has been estimated at 180 people including 20 warriors. In 1610, the English erected Fort Charles and Fort Henry along the Hampton River (Turner and Opperman n.d) during which time the Kecoughtan were forcibly removed by Sir Thomas Gates as restitution for the slaying of Humphrey Blount. The English settlement along the east bank of the Hampton River, initially referred to as Kecoughtan, became Elizabeth City after 1619 which by 1708 was known as Hampton. By the end of the 17th century, settlement was established along the banks of the Hampton River and continued to increase into the 18<sup>th</sup> century (Turner and Opperman n.d.).

Hampton was invaded by the British on June 25, 1813. The British fleet attacked an American Camp at Little England Farm, south of the current study window. At the same time, British troops landed near Newport News and marched east to attack Hampton. British troops also approached Blackbeard Point via barges, near the mouth of the Hampton River. During the battle, British troops disembarked from the barges and took possession of Hampton, approaching the study window from the west. The British force destroyed ordnance and seized supplies during the ten-day occupation of Hampton. In the aftermath, however, British troops vandalized and destroyed portions of Hampton (Echelman et al. 2010).

By the 19<sup>th</sup> century, agricultural practices had depleted soils in the vicinity of the study window. During this time period, improvements to transportation throughout the county were made. The Hampton River and Mill Creek Bridge Company was established to build toll bridges in the county (Taylor 1960; Starkey 1936). Additionally, other industries began to take hold, particularly those related to seafood and oystering. Also during this period, Fort Monroe was completed (1819 to 1834). Fort Monroe was built by military prisoners and civilian workers (Fairfax 2005).

#### *The Civil War (1861-1865)*

Eastern Virginia attracted military attention during 1861 and 1862, when Union and Confederate forces clashed over control of the Chesapeake Bay and its major tributaries.

Fort Monroe was a strong position that could not be taken by the Confederates, and became a gathering place for Union troops (Robins 1967). The Union forces had amassed 4,451 troops at Fort Monroe and nearby Camp Hamilton by May of 1861. From this strong hold they could threaten Norfolk or advance up the peninsula toward the Confederate capital of Richmond (Frye n.d.). Many of the troops involved in the Battle of Big Bethel (1862) and the Peninsula Campaign initially lived in tents at Fort Hamilton.

In 1861, Union soldiers abandoned the Gosport Navy Yard in Norfolk burning the buildings, wharves, and vessels during their exit. To protect gunboats and blockade runners from Union warships and the guns at Fort Monroe, Southern troops reinforced existing fortifications and constructed new batteries along the shores of the James River and the Chesapeake Bay.

During the spring of 1862, Major General George McClellan and the Army of the Potomac sailed to Hampton and up the James and York Rivers to capture Richmond launching the Peninsula Campaign. The Union Navy docked in Hampton, Newport News, Norfolk, and Portsmouth throughout the Civil War, and both Fort Monroe and Fort Wool were important to the Union forces.

Civil War naval battles in the study vicinity and associated with the 1861–1862 blockade of the Chesapeake Bay include the Battle of Sewell’s Point and the Battle of Hampton Roads. The Battle of Sewell’s Point took place in May 1861 when the *USS Monticello*, later joined by the *USS Thomas Freeborn*, opened fire on the unfinished battery at Sewell’s Point. The commander of the *Monticello*, unleashed the ship’s full arsenal on the Sewell’s Point battery. The assault lasted for about an hour and a half at which time the ship’s ammunition ran out and the Confederate battery had only two rounds remaining (Salmon 2001; Appendix C).

The Battle of Hampton Roads in March of 1862 involved the Confederate ironclad, the *C.S.S. Virginia*, renamed as such after the Confederates salvaged the remains of the *U.S.S. Merrimack* scuttled in 1861 by the Union army, and the U.S. Navy ironclad the *U.S.S. Monitor*. On the morning of March 9th the *Virginia* sailed toward the Union fleet anchored at Fort Monroe. The battle began in the early morning when the *Virginia* opened fire on the *U.S.S. Minnesota*. During this engagement, the *Monitor* moved into position near the Confederate *Virginia*, and opened fire. Over the next several hours, the two ships engaged in close range fire as well as attempting to ram the other vessel. The *Virginia* began to leak as the iron plates shifted and separated from the wooden hull. Additionally, the *Monitor’s* commander Lieutenant John L. Worden was wounded and while crew members attended to him, the vessel sailed in the direction of Fort Monroe leading the *Virginia* commander and crew to think that the *Monitor* was retiring from the battle. The *Virginia’s* officers headed for Norfolk, ending the engagement. A total of 433 casualties were suffered during the battle.

## *Reconstruction through the New Dominion (1865 to Present)*

Also in the vicinity of the study window are the Phoebus Historic District and the Pasture Point Neighborhood Historic District. Early settlement of the Phoebus Historic District began along Mill Creek during the seventeenth century. However, until the town was incorporated as Chesapeake city in 1874, the area remained rural (Pollard 2006). Chesapeake City was renamed Phoebus in 1900 in honor of Harrison Phoebus, the owner of the Hygeia Hotel (on the site of the current Chamberlin Hotel) located on the edge of town. Hampton annexed Elizabeth City County, including Phoebus, in 1952. Phoebus declined after the 1957 opening of the Hampton-Roads Bridge Tunnel, which bypassed the town.

The Pasture Point neighborhood was also developed during this time and morphed from a largely rural section of Hampton to a grid-patterned residential area characteristic of early streetcar neighborhoods of the late nineteenth- and early twentieth-century. The grid patterned lay out was developed by New York railroad magnate Collis P. Huntington's Old Dominion Land Company which promoted the development of the Hampton Roads port via shipbuilding and dry-dock facilities tied to the rest of the country by an extensive network of rail lines (Dowling 2008). The increased popularity of automobiles also influenced the development of the suburban Pasture Point neighborhood.

In 1917, the U.S. Naval Operating Base and Training Station (Naval Station Norfolk) was established in the City of Norfolk and population grew in both the City of Norfolk and the City of Hampton as people moved to work associated with the military during the outbreak of World War I. However, following World War I, there was a drop in economic growth as military needs decreased. In character with a wartime economy, the vicinity of the study window witnessed a substantial increase in growth at the onset of World War II. Population growth brought the necessity for residential neighborhoods and overcrowding in both cities became a problem ([www.city.data.com](http://www.city.data.com) 2009).

The original Hampton Roads Bridge Tunnel, now the west bound tunnel, opened on November 1, 1957. The second span of the tunnel was opened in 1976. The HRBT replaced ferry services that once operated between the City of Hampton and the City of Norfolk ([www.roadstothefuture.com](http://www.roadstothefuture.com) 2007). The cities of Hampton and Norfolk are modern urban centers, both relying heavily on military jobs. The City of Hampton is home to more than 140,000 residents, many of whom are employed by the seafood industry, the military, or in tourism ([www.hampton.gov](http://www.hampton.gov) 2012). Similar to Hampton, the City of Norfolk is home to over 240,000 residents a large number of which are employed at Naval Station Norfolk or in the seafood and tourism industries. ([www.city.data.com](http://www.city.data.com) 2009).

The historical setting of the study window in both the cities of Hampton and Norfolk indicates that archaeological sites from a variety of time periods could be expected in the general vicinity. The study window crosses several major waterways whose banks may have been home to both Native American and European inhabitants. Previous archaeological studies have identified such resources in the overall project vicinity dating to a variety of Native American occupational periods through the early 20th century.

### **III. ENVIRONMENTAL AND CURRENT CONDITIONS OVERVIEW**

#### **Introduction**

The study window has been subjected to extensive amounts of research associated with surveys conducted in the late 1990s. The following section offers an overview of the environmental context for the study window. Overall environmental conditions in the study window have not changed drastically in the recent past. However, development particularly in the City of Hampton in the vicinity of I-664 has added to the urban setting of the study window. The construction of the Power Plant development as well as improvements to I-64 in the study window have added to the existing built environment documented in work performed by LBA in 1999 and early 2000.

#### **Physical Description and Environmental Setting**

The study window is located within the Atlantic Coastal Plain and more specifically portions of the Virginia Peninsula and the Tidewater area. The Atlantic Coastal Plain is comprised of flat or gently sloping lowland underlain by two terraces: the Dismal Swamp Terrace and the Princes Anne Terrance (Hatch et al. 1985). The study window is characterized by a relatively temperate climate in an otherwise humid subtropical region. Cool coastal winds help keep summer temperatures an average of 77 to 79 degrees (Hatch et al. 1985:1-2).

In Hampton, the study window crosses several waterways including Newmarket Creek, the Hampton River, and Johns Creek. The study window as it enters the City of Norfolk crosses Willoughby Spit, a suburban built environment and then proceeds along the eastern boundary of the Naval Station Norfolk. The study window between the HRBT and Mason's Creek consists largely of water, wetlands, and landfilled waterfronts. The study window east of Willoughby Spit is located on a low-lying terrace bisected by Oasts and Mason's Creek, both of which flowed into Willoughby Bay prior to channelization (Sara et al. 1999).

Willoughby Spit was named after Thomas Willoughby who was granted land in the vicinity around 1625. Apparently during a storm in 1697 a descendant of Willoughby applied for an amendment to the land grant to account for a section of "new land" that appeared following a storm. Willoughby Spit as it is today was formed following "the Great Hurricane" of 1806. Since that time, general westward movement of sand has created extensive erosion along Willoughby Spit and the rest of Ocean View. Coastal storms constantly threaten homes and businesses built close to the shore because of the erosion and narrow width of the beach. As a result, the City of Norfolk implemented a "beach nourishment" study which included the installation of breakwaters to try to reduce beach erosion and protect the shoreline. More recently, following Hurricane Isabel in 2003, more than 428,000 cubic yards of sand were required to replenish and stabilize the beach at Willoughby and in Ocean View.

The unique freshwater/saltwater environment found in the Tidewater estuary system has served to create a wide degree of faunal diversity in the region. A wide variety of fish

and shellfish species coupled with numerous avian species would have allowed prehistoric inhabitants of the Tidewater area to exploit an abundant food base. Likewise, the cultivation of plants such as corn, beans, and squash and the hunting of mammalian species would have completed a tremendously diverse diet. Oysters, crabs, fresh and saltwater clams, shrimp, mussels, bass, flounder, shad, herring, snapper, sturgeon, and bluefish are among the important riverine and estuary fauna of the tidewater area that would have been exploited by inhabitants of the region (James River Institute for Archaeology 1994; Dent 1995; Stevens 1991).

### **Geology, Topography, and Hydrology**

The pre-Holocene geology of the Virginia Coastal Plain consists of igneous and metamorphic rocks of Precambrian and Paleozoic age overlain by a series of sedimentary deposits dating to the Cretaceous period. Beginning as early as the Late Cretaceous, a cycle of transgression and regression related to glacial activities and consequent sea level fluctuation is responsible for the formation of these sedimentary layers in the coastal plain. These layers have been named the Mattaponi (Upper Cretaceous/Paleocene), Nanjemoy (Eocene), Calvert (Eocene/Miocene), and Yorktown (Miocene) formations (Teifke 1973:10-11).

The Quaternary has been characterized by the continued deposition of clays, silts, sands, gravels and peat bogs. The Late Pleistocene-Holocene geology of the Virginia Coastal Plain has mostly been characterized by marine transgression onto the land, filling what is today known as the Chesapeake Bay. Sedimentary systems affecting the current study area include fluvial and marine-estuarine depositional systems. Fluvial forces included overbank flow and stream meander resulting in alluvial deposition. Marine-estuarine soil deposition occurs during hurricanes, tidal floods, and long shore currents (Onuschak 1973:111-124). A diverse complex of sands, pebble gravel, and laminated silty clays underlies the upland terraces and gravel deposits are present in large enough quantity for local quarrying.

The Chesapeake Bay and the numerous tidally influenced rivers that flow into the bay characterize the drainage of the Tidewater region. The most recent formation of the Chesapeake Bay began sometime after approximately 15,000 years ago, at the end of the Wisconsin glacial advance. At this time, the ancestral Susquehanna River drained the region; however, as glaciers began to melt and sea level rose, ocean waters began to flow into the Susquehanna valley, eventually creating the estuary that exists today (Dent 1995:73,74).

The study window crosses numerous creeks and wetlands, including the Hampton Roads which is a portion of the mouth of the Chesapeake Bay where the James, Elizabeth, and Nansemond Rivers converge.

## Current Conditions in the Study Window

Soils in the study window, as would be expected, are largely characterized as being frequently flooded or as complexes which are predominately characterized as urban land. A large portion of the study window is located adjacent to modern, urban development, or has been substantially compromised by urban development and construction. Table 1 describes the soils within the study window, and both soils and current conditions are illustrated in Appendix C.

Table 1. Soil Types in the Project Vicinity (Web Soil Survey 2012).			
Map #	Soil Type and Class	Slope	Drainage/Erosion Characteristics
1	Altavista-Urban land complex,	0-3%	Moderately well drained
2	Augusta-Urban land complex,	0-2%	Somewhat poorly drained.
3	Axis very fine sandy loam, very frequently flooded	0-2%	Very poorly drained.
4	Beaches		Misc. area no erosion classification
6	Bohicket muck very frequently flooded	0-1%	Very poorly drained.
8	Chickahominy-Urban land complex,	0-2%	Poorly drained.
10	Dragston-Urban land complex,	0-2%	Somewhat poorly drained.
11	Duckston fine sand, frequently flooded	0-2%	Poorly drained.
12	Johnston silt loam frequently flooded	0-2%	Very poorly drained.
13	Lawnes loam, very frequently flooded	0-1%	Very poorly drained.
15	Munden-Urban land complex	0-3%	Moderately well drained.
17	Newflat-Urban land complex,	0-2%	Somewhat poorly drained.
18	Nimmo-Urban land complex,	0-2%	Poorly drained.
20	Seabrook-Urban land complex,	0-3%	Moderately well drained.
22	State-Urban land complex,	0-3%	Well drained.
24	Tomotley-Urban land complex,	0-2%	Poorly drained.
26	Udorthents-Dumps complex		Fill
27	Urban land		No erosion classification
W	Water		

The western portion of the study window is surrounded by dense retail, residential, and industrial development. Since the late 1990s, several development projects have been realized including the Power Plant and the Peninsula Town Center. Both are characterized as dense retail developments and include a combination of stores, restaurants, and entertainment venues.

As the study window progresses to the east toward Norfolk, the corridor crosses man-made wetlands and urban development areas that contain low-rise utilitarian, light industrial, and warehouse facilities. The industrial areas were developed primarily in the 1930s and 1960s and focused on the now-abandoned Chesapeake and Ohio Railroad and later the I-64 corridor (Sara et al. 1999). As the study window crosses the Hampton River, late nineteenth and early twentieth century development is present. This area, Pasture Point, was listed on the NRHP as a historic district in 2008.

Small areas of open space are present as the study window nears Hampton Roads and the approach to the bridge tunnel. These areas include the grounds of Hampton University, Hampton National Cemetery, Hampton Municipal Golf Course (the Woodlands), and Strawberry Banks. The golf course is located on the eastern side of I-64 and is bounded by East Hampton, a post-World War II residential neighborhood (Sara et al 1999). Also on the east side of I-64 is the Phoebus Historic District which was listed on the NRHP in 2006. This district abuts the I-64 corridor.

Soils in the City of Hampton are largely characterized as urban land and in most places Udorthents-Dumps complex which consist of “excavations filled with garbage, trees, metal, fly ash, or dredging (Hampton Roads Planning District Commission [HRDPC] 1994). Soils along the creek crossings are generally categorized as frequently flooded. In the semi-open spaces located along the study window soils range from urban land complexes to stretches of Tetotum silt loam.

On the south of Hampton Roads the study window crosses Willoughby Spit and proceeds east to the terminus at the I-64 and I-564 interchange. The study window in this vicinity is characterized by low lying terraces and wetlands bisected by Oasts and Mason’s Creeks. Willoughby Spit consists of a built environment composed of primarily residential and marine development. Opposite the spit, the study window is occupied by the Naval Station Norfolk much of which is characterized by dredge fill and artificial land masses. There are also stretches of undeveloped wetlands, residential development, and modern military housing. At the I-64 and I-564 interchange, the Forest Lawn Cemetery is located on the east and is separated from the I-64 right-of-way by a strip of woods and 4-laned Granby Street.

Soils in the City of Norfolk are largely marshy and frequently flooded and include soils in the Altavista, Bohicket, Mundon, and Peawicket series as well as those classified as Udorthents. Much of the area categorized as Udorthents are unconsolidated hydraulic fills that have extended shorelines and filled marshy creek areas (Sara et al. 1999). Nearly all of the native vegetation in the study window has been removed and now includes water-tolerant species. Areas classified as Udorthents-Dumps complex are also present within the study window in Norfolk.

Overall, the study window is characterized by urban development with very few areas that remain unaltered or that retain environmental integrity. Dense residential, commercial, and industrial development in Hampton has largely disturbed the natural environmental conditions with only few exceptions. Development on Willoughby Spit and associated with Naval Station Norfolk has left very little in terms of natural environment. While the location of the study window as it crosses several major waterways would suggest that archaeological sites from a variety of time periods would be present, the numerous alterations to the natural environment limits the survival of archaeological remains to only a few locations. The urban development and associated activities characteristic of the study window have likely destroyed or significantly altered any archaeological sites that may have been present.

#### IV. PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

A number of archaeological surveys have been conducted within the vicinity of the current study window and in some cases overlap with the study window. A review of these studies provides a framework for determining the potential archaeological site types that may be located within the study window and also for evaluating the level of integrity that such resources may contain. This review also documents the level of survey coverage that has already taken place within the current study window to assist with the development of recommendations for additional work during future stages of the study. The largest and most important of these surveys is the Phase I level investigation conducted by Louis Berger and Associates (LBA) in 1999 of Candidate Build Alternatives (CBA) 1, 9 and 2 for the VDOT's Hampton Roads Crossing Study. Table 2 (Appendix A: Maps 1-4) documents the basic information for survey work completed in the general vicinity of the study window. Specific studies that fall within the boundaries of the current study area are described in more detail below as is the 1999 survey conducted by LBA.

Eight previously identified archaeological sites are located within the current HRBT study window for the archaeological assessment in the Cities of Hampton and Norfolk, all but one of which are located in the City of Hampton between the Hampton River and the bridge tunnel (Table 3; Appendix A: Maps 5-6). These sites include 44HT0009 (also recorded as 44HT0089), 44HT0031, 44HT0033, 44HT0034, 44HT0035, 44HT0062, 44HT0090, and 44NR0015. A ninth site, 44HT0101, is located on Fort Wool, but is outside the current study window. This site was recommended potentially eligible for listing on the NRHP and would likely be considered a contributing element to the NRHP-listed Fort Wool (VDHR #114-0041). It appears unlikely that this site would be affected by the proposed study, but due to its proximity to and location on Fort Wool was included in the listing of sites. The eight previously recorded sites located directly within the present study window were addressed or recorded during the 1999 survey conducted by LBA and will be discussed in further detail below.

##### **Previous Work in the City of Hampton**

Previous survey work in Hampton is largely located south of the Hampton River and north of the west approach to the bridge tunnel. Points north of the Hampton River are largely disturbed by roadway construction, wetlands, and man-made lakes/drainage ponds. Areas of significance for archaeological survey included the vicinity of Hampton University and the lands associated with Strawberry Banks. Additional survey took place in the vicinity of Poole's Grant located north of the Hampton River, an area which has now been developed.

Table 2. Previously Conducted Archaeological Survey in the Vicinity of the Study Area – Cities of Hampton and Norfolk, Virginia.

<b>DHR Report Number</b>	<b>Citation</b>	<b>Area Surveyed</b>	<b>Sites Identified/Comments</b>
<b>HT4</b>	Wittkofski , J. Mark. 1980 <i>Archaeological Phase II Testing and Survey For the Proposed Rt. 143 Interchange At Hampton, Virginia</i> Virginia Research Center for Archaeology, Richmond Virginia. Report on File VDHR	44HT62 – 11 Acres	44HT0055-44HT0062
<b>HT6</b>	Koski-Karell, Daniel. 1982 <i>Underwater Cultural Resources Phase I Reconnaissance Survey for the Settlers Landing Road – Route 143 Bridge Project, City of Hampton, Virginia</i> Karell Archaeological Services, Washington DC. Report on File VDHR.	Roughly 1060 feet long X 100 feet wide	11 Cultural Magnetic Features – Recommended Not Eligible for listing on the NRHP.
<b>HT13</b>	Lewis, Rhoda O. 1987 <i>Archaeological Testing of the Proposed Water Tower Location VAMC, Hampton, Virginia</i> . The Veterans Administration Central Office, Washington DC. Report on File VDHR.	30 feet in Diameter	No site # - Mitigation of the project was recommended as was further testing
<b>HT15</b>	MAAR Associates, Inc. (no author on report). 1989 <i>Phase I and II Archaeological Investigation, Old Hampton Waterfront Tract, Hampton, Virginia.</i> MAAR Associates, Inc. Report on File VDHR.	4,746.75 square feet total. 80% of total project area.	44HT20 - 18 <sup>th</sup> and 19 <sup>th</sup> century cultural deposits, and over 100 intact features identified. Site recommended for Data Recovery.
<b>HT 21</b>	Department of the Army, (no author on report). 1987 <i>Archaeological Find in Front of Building 9, Fort Monroe, Hampton, Virginia.</i> Department of the Army Fort Monroe, VA. Report on File VDHR.		Carroll Hall foundation – No further work recommended
<b>HT 23</b>	Virginia Archaeological Services, Inc., (no author on report). 1989 <i>Phase I and II Archaeological Survey of the Poole’s Grant 1642 Development Site, Hampton, Virginia.</i> Virginia Archaeological Services, Inc., Newport News, VA. Report on File VDHR.	6.5 Acres	Five areas of habitation or special use. Three late 18 <sup>th</sup> -early 19 <sup>th</sup> century, One prehistoric, One early 20 <sup>th</sup> century
<b>HT39</b>	Stuck, Kenneth E. and Charles M. Downing. 1995 <i>A Phase I Archaeological Survey and Phase II Evaluation of Site 44HT44 Associated with the Proposed Pentran Bus Parking Lot, City of Hampton, Virginia</i> . William and Mary Center for Archaeological Research, Williamsburg, VA. Report on File, VDHR.	85 m north-south X 70 m east-west (280 X 230 feet), approximately 1.5 acres	44HT44 – A multi-component site with cultural material from the Woodland Period and evidence of 17 <sup>th</sup> and 19 <sup>th</sup> century occupations
<b>HT50</b>	Penner, Bruce. 2002 <i>Archaeological Survey of the Post-Review Discovery of a Corduroy Road on the Route 134 – Armistead Avenue North Bridge Replacement Project, City of Hampton, Virginia.</i> Virginia Department of Transportation Hampton Road District, Suffolk Va. Report on File VDHR.	0.14 Acres	44HT0092

<b>HT58</b>	Hayward, Michele H., Frank J. Schiepati, and Mark A. Steinback. 2004 <i>Phase I Archaeological Investigations at the Parade Ground and Continental Park, Fort Monroe, Hampton, Virginia</i> . Panamerican Consultants, Inc., Buffalo NY. Report on File VDHR.		44HT0027 – Not Identified but survey done within boundaries of the site.
<b>HT68</b>	Luceketti, Nicholas M., and Robert Haas 2006 <i>Archaeological Testing at Fort Wool, Hampton, Virginia</i> . James River, Institute for Archaeology, Inc., Williamsburg, VA. Report on File VDHR.	Three 3' X 20' Trenches and six 3' X 3' test units	
<b>HT79</b>	Haas, Robert E., Garrett R. Fesler, and Matthew R. Laid. 2007 <i>A Phase I Archaeology Survey of Approximately 2.10 Acres Around the Footprints of Buildings 69, 70, and 72 at the Hampton Veterans Affairs Medical Complex in Hampton, Virginia</i> . James River, Institute for Archaeology, Inc., Williamsburg, VA. Report on File VDHR.	Approximately 2.10 Acres	Located in 44HT0035 - 434 Artifacts total – 14% pre-1908. Recommended Not Contributing to the larger site and no further work was recommended.
<b>HT45</b>	Magoon, Dane T., Garrett R. Fesler, and Bradley M. McDonald. 1995 <i>Phase I Archaeological Survey of the 28 Acre Strawberry Banks Property, City of Hampton, Virginia</i> . James River Institute for Archaeology, Inc, Williamsburg, VA. Report on File VDHR.	28 Acre total	Re-identified 44HT0008 and 44HT0009. Recommended both potentially eligible.
<b>HT32</b>	Browning & Associates (no author given). 1990 <i>Booker T. Washington Bridge Phase III Archaeological Mitigation Report, Hampton, Virginia</i> . Browning & Associates, Richmond Va. Report on File VDHR.		An urban archaeological site within the 17 <sup>th</sup> -19 <sup>th</sup> century industrial waterfront
<b>HT22</b>	Thomas, Ronald A and Stephen J. Hinks. 1988 <i>Archaeological Data Recovery, Hampton VA Medical Center</i> . MAAR Associates, Inc., Williamsburg, VA. Report on File VDHR.		Refuse deposit was dated to ca. 1905; associated with the Southern Branch of the National Home for Disabled Volunteer Soldiers (1870-1930).
<b>CS55</b>	Sara, Timothy R., Stuart Paul Dixon, Eric F. Griffiths, and Phillip E. Pendleton. 1999 <i>Cultural Resources Survey Hampton Roads Crossing Study</i> . Louis Berger & Associates, Inc., Richmond VA. Report on File VDHR.	225.7 Acres Total (47.5 Acres CBA 1, 178.2 Acres CBA 9)	44CS0244 – 44CS0246 44HT0089 – 44HT0090 44PM0053
<b>CS55</b>	Dolan Research, Inc (no author given). 2000 <i>Phase Ib &amp; II Field Testing &amp; Evaluation of 17 Remote Sensing Targets, Candidate Build Alternatives 9&amp;9/2: Hampton Roads Third Crossing Study</i> . Dolan Research, Inc, Philadelphia, PA.		17 targets were identified for further investigation; 15 were tested and all were determined to be modern debris.
<b>NR54</b>	R. Christopher Goodwin & Associates, Inc. (no author given). 1997 <i>Archaeological Resource Investigation at the Proposed Military Logistics Air Terminal Site at the Naval Air Station, Naval Base Norfolk, Norfolk, Virginia</i> . R. Christopher Goodwin & Associates, Inc., Hampton VA. Report on File VDHR.	45 X 45 (site dimensions)	44NR31 – highly disturbed

<b>NR62</b>	Moore, William H. 2005 <i>An Archaeological Survey of the Proposed Camp Allen Bachelor Housing, Naval Base Norfolk, Norfolk, Virginia</i> . William and Mary Center for Archaeological Research, Williamsburg, VA. Report on File VDHR.	Approximately 15 acres surveyed	44NR32 – 19/20 <sup>th</sup> century site 364 X 656 feet in size
<b>NR69</b>	Polglase, Christopher, Ann Markell, and Katherine Gandine. 2002 <i>Archaeological Resource Assessment and Predictive Model, Naval Station Norfolk, Norfolk, Virginia</i> . R. Christopher Goodwin & Associates, Inc., Fredrick, MD. Report on File VDHR.	Naval Base of Norfolk	Report documented areas of potential within Naval Station Norfolk with recommendations for survey in various areas.
<b>NR34</b>	Ocean Surveys, Inc. (no author given). 1990 <i>Marine Archaeological Surveys, Range Light Locations, Chesapeake Bay</i> . Ocean Surveys, Inc., Old Saybrook, CT. Report on File VDHR.	300 feet by 300 feet around each of the light construction areas	24 Targets were identified during the survey all but 4 were recommended not significant. Four targets were recommended for further testing and identification.

Table 3. Previously Recorded Archaeological Resources Within the HRBT Study Window – Cities of Hampton and Norfolk

Resource	Resource Type	Association	Reference	NRHP Recommendation
44HT0009	Camp; Roseland Manor	Woodland; Late 19 <sup>th</sup> to 20 <sup>th</sup> Century	Browning 1982; JRI 1994; LBA 1999	Potentially Eligible.
44HT0031	Indeterminate	18 <sup>th</sup> to 19 <sup>th</sup> Century	VRCA 1985; LBA 1999	Destroyed
44HT0033	Indeterminate	19 <sup>th</sup> Century; 2 <sup>nd</sup> Half; Late Archaic	VRCA 1985; LBA 1999	Destroyed
44HT0034	Indeterminate	19 <sup>th</sup> Century	VRCA 1985; LBA 1999	Destroyed
44HT0035	Dwelling, Hospital, Agricultural Field, Village	17 <sup>th</sup> to 18 <sup>th</sup> Century; 20 <sup>th</sup> Century 1 <sup>st</sup> half, Woodland	Lewis 1987, JRIA 2007	Eligible; Associated with 114-0101 – No Further Work in the study window
44HT0062	Refuse Scatter	18 <sup>th</sup> to 19 <sup>th</sup> Century	Wittkofski 1980; LBA 1999	Destroyed
44HT0090	Dwelling	Mid 19 <sup>th</sup> to early 20 <sup>th</sup> Century	LBA 1999	Potentially Eligible
44HT0101 (114-0041)	Ft. Wool	19 <sup>th</sup> to 20 <sup>th</sup> Century	JRIA 2006	Potentially Eligible VDHR 2006 NRHP & VLR Listed
44NR0015	Possible Submarine	20 <sup>th</sup> Century: 1 <sup>st</sup> Half	Hazzard 1979	Not Evaluated

In 1980 the Virginia Research Center for Archaeology (VRCA) conducted Phase II archaeological testing on the east “bank of the Hampton River, east of downtown Hampton and northeast of a complex of buildings on Hampton University property” (Wittkofski 1980). The archaeological testing was done on behalf of the Virginia Department of Highways and Transportation in relation to the creation of a Route 143

interchange in the city of Hampton. The area had been previously surveyed by H. A. MacCord, Sr. who had identified one large site (44HT55) and a second smaller site (44HT62). During VRCA's Phase II testing the larger site area was broken down into several sites (44HT55-44HT61), with Phase II testing proceeding on sites 44HT0057 and 44HT0062. Both sites contained cultural material from the 18<sup>th</sup> to 19<sup>th</sup> century and were recommended for no further testing afterwards. Of the eight identified sites, 44HT0059 and 44HT0061 were the only prehistoric sites and were recommended for Phase II testing at a later date, as was 44HT55 which contained archaeological material from the 17<sup>th</sup> century up to the 19<sup>th</sup> century. Sites 44HT0056, 44HT0058, and 44HT0060 which contained cultural material from the late 19<sup>th</sup> century and the 20<sup>th</sup> century were not recommended for any further testing. Site 44HT0062 was located in the current study window, but has since been destroyed.

In 1989, Virginia Archaeological Services, Inc. (VASI) conducted both Phase I and II surveys on the area known as Poole's Grant 1642 (or alternatively as the Hampton Point Site) on the behalf of Southeast Associates, Inc. The area covered about 6.5 acres and resulted in the identification of five areas of habitation or special use. Of the five areas, three contained cultural material from the latter half of the 18<sup>th</sup> century to the early 19<sup>th</sup> century, while another area contained cultural material indicating its use as an early 20<sup>th</sup> century dump site and cellar. The fifth area was the only one that contained prehistoric lithics which were located near a stone hearth (VASI 1989). A site number does not appear to have been assigned to this site. This site has been destroyed and the vicinity of the study window is currently a residential development.

In 1994, the James River Institute for Archaeology (JRIA) conducted a Phase I survey on 28 acres of land called the Strawberry Banks in the City of Hampton, Virginia (Magoon et al. 1995). The property is located near the west approach of the Hampton Roads Bridge Tunnel and fronts Hampton Roads south of I-64. During the survey two archaeological sites were re-identified, 44HT0008 and 44HT0009. Site 44HT0008 was approximately 300 feet by 450 feet in size and contained cultural material relating to the prehistoric Woodland period and the late 19<sup>th</sup>/early 20<sup>th</sup> century. Historical documentation also suggests activity in the area of the site during the 17<sup>th</sup> and 18<sup>th</sup> century. Site 44HT0009 was approximately 750 feet by 1100 feet in size and contained cultural material relating to a Woodland camp, and late 19<sup>th</sup>/20<sup>th</sup> century Roseland Manor. Both sites were recommended potentially eligible for listing on the NRHP. However, it is unclear if the work performed by JRI was officially reviewed by the VDHR or if concurrence with the recommendation of potential eligibility was received.

### **Previous Work in the City of Norfolk**

In comparison to the City of Hampton, previous archaeological survey in the vicinity of the study window within the City of Norfolk is limited (see Tables 2 and 3: Appendix A). The conditions along the I-64 corridor and the current study window are largely disturbed and extensive survey has not been conducted. However, a predictive model for Naval Station Norfolk was prepared by Goodwin and Associates in 2002. A portion of the study window from Mason's Creek to the I-564 interchange is within the bounds of the Naval Station Norfolk. Site 44NR0015, the only previously recorded site within the

study window in Norfolk, identifies a shipwreck near the end of the Willoughby Spit in Norfolk. The site is reportedly a submerged 20th century submarine partially visible above the water at low tide.

In 2002, R. Christopher Goodwin & Associates submitted a preliminary predictive model for the location of cultural resources on Naval Station Norfolk to the United States Navy. The model was compiled from a study of geotechnical, archival, cartographic, and archaeological data (Polglase et al 1992). During the course of the field investigations for the study, archaeological Sites 44NR0027 through 44NR0030 were identified and recorded. Site 44NR0028 was subject to a Phase II during the study. The base was divided into 11 areas for the preparation of the predictive model and report and of those, Areas 1, 2, 3, and 9 had no further work recommended while areas 4, 5, 6, 7, 8, 10, and 11 were recommended for intensive Phase I testing before any construction. Survey Area 11 is located within the study window for the current study. This section is immediately adjacent to existing I-64 and extends from Mason's Creek to the I-564 interchange and west to the I-564/Terminal Boulevard Interchange. Survey Area 11 as defined by the Naval Station Norfolk predictive model is the only survey area located within the current study window. Survey Area 11 was investigated during the 1999 survey by LBA. No archaeological deposits were identified in Survey Area 11.

### **Survey of Candidate Build Alternatives (CBA) 1, 9, and 2, Hampton Roads Crossing Study and Related Studies**

In 1999, Louis Berger & Associates conducted a Phase I survey of Candidate Build Alternatives (CBA) 1, 9 and 2 on the behalf of Michael Baker Jr. Inc., for the Virginia Department of Transportation's Hampton Roads Crossing Study. The combined area covered a total of 225.7 acres. During the survey Louis Berger re-identified twenty-nine previously recorded and sites and identified six new sites (44CS0244, 44CS0245, 44CS0246, 44HT0089, 44HT0090, and 44PM0053). Sites 44CS0244 and 44HT0089 were recommended potentially eligible for listing under Criterion D along with 44HT0090 which was recommended under both Criteria A and D. Sites 44CS0245, 44CS0246 and 44PM0053 were not recommended for inclusion in the NRHP.

CBA 1 and 2 investigated during the 1999 survey were located wholly within and largely coincide with the current study window for the HRBT EIS. Within CBA 1 and 2 a total of seven survey sections were subjected to systematic shovel testing covering a total of 47.5 acres (Appendix A: Maps 1-4). The shovel test survey effort included all areas characterized by minimal ground disturbance or thought to retain the potential for the identification of archaeological sites. A large majority of the study window was characterized by urban, built environment and shovel test survey was not necessary.

The 1999 study was subdivided into sections for purposes of the survey. The first survey section commenced at the I-64/I-664 interchange and proceeded east to the Hampton River. This section was described as primarily urban land including artificial banks and berms associated with the construction of I-64 as well as the channelization of Newmarket Creek (Sara et al. 1999). Additionally, this section of the study window was

and is characterized by dense residential and commercial development. No subsurface survey was conducted in this area because of the widespread disturbances.

The second survey segment described in the 1999 documentation was located in the vicinity of the Hampton Municipal Golf Course (The Woodlands) and Poole's Grant and was located on both the east and west sides of existing I-64 (Transects BB, Q, R, and S). This segment included the investigation of 44HT0062 which has been destroyed by the construction of the Route 143 bridge and the condominium complex at Poole's Grant. Also within this study segment was previously recorded Site 44HT0031. Site 44HT0031 had been previously recorded by the VRCA in 1985 and was documented as being identified in an open field. No evidence for this site was identified within the study corridor. Additional shovel tests were excavated in an area south of Poole's Point and also on the west side of I-64. Intact soils were revealed in both areas; however no archaeological sites were identified (Sara et al. 1999).

Transects N, O, P, and AA were surveyed in the segment containing the National Cemetery as well as Hampton University. This segment is located between the SR 143 interchange (Settlers Landing Road) and the Mallory Street interchanges and consisted largely of vacant land within the study area. Previous archaeological survey work in this area has been conducted on the grounds of the Hampton University as well as the Department of Veterans' Affairs (VA) complex. Previously recorded archaeological sites located in this vicinity and within the survey area included 44HT0033, 44HT0034, and 44HT0035. Sites 44HT033 and 44HT0034, previously recorded as historic and prehistoric artifact scatters in 1985, were documented as having been destroyed by road construction while Site 44HT0035 encompasses the entire VA complex. No archaeological materials associated with 44HT0035 were identified in the survey corridor (Sara et al. 1999). Shovel tests in this vicinity documented disturbance associated with landscaping, filling, and past agricultural activity.

Located along Transects N and O, Site 44HT0090 was identified as a primary refuse deposit located in close proximity to John's Creek and within the boundaries of the Hampton University property. Site 44HT0090 dates to the late nineteenth century and may be associated with the Normal School Farm associated with the Hampton University (Sara et al. 1999). The site was recommended potentially eligible for listing on the NRHP possibly as a contributing element to the NRHP-listed Hampton University property and also for its potential research value. Transect AA was excavated in the vicinity of Hampton National Cemetery within a small strip of undeveloped land bound on the west by I-64 and the cemetery to the east. The Hampton National Cemetery is adjacent to the VDOT right of way and easement for the I-64 corridor. This survey segment identified areas of dense fill that appears to have been placed to reclaim the poorly drained and channelized John's Creek and associated lowlands. In some locations fill deposits were present to over three feet below ground surface (Sara et al. 1999). No intact archaeological deposits were identified in this survey section, however, the boundaries of the cemetery and some interments are present within close proximity to the existing road corridor.

The final survey segment within the City of Hampton was located in the vicinity of Strawberry Banks. A total of 10 shovel test transects (A-J) were excavated across the open property at Strawberry Banks. The 1999 report documents the recordation of a new site 44HT0089, which in fact coincides with the 1994-defined boundaries of 44HT0009. The site number recorded in the DSS system for this site is 44HT0009. Also located in this area was site 44HT0008, which is largely located within the boundaries of 44HT0009, but outside the current study window. Located on the Strawberry Banks property are also the remnants of the former Roseland Manor which was listed on the NRHP and burned in 1985. Elements of the historic site remain largely to the southeast of the study window. The study window passes through the eastern edge of this site which was recommended potentially eligible for listing on the NRHP. In addition, Magoon et al. (1994) note that Civil War maps locate Union Camp Hamilton in the immediate vicinity of site 44HT0009; early seventeenth-century Fort Charles may have been in the area as well. No military artifacts were recovered during the Phase I survey, possibly because no metal detecting was done. Magoon et al. (1995) recommended Site 44HT0009 potentially eligible for listing on the NRHP. Over 1,200 artifacts were recovered from the portion of the HRBT Study Corridor that crosses Site 44HT0009 during the 1999 survey effort (Sara et al. 1999). Site 44HT0009 was recommended potentially eligible for the NRHP in 1994 and also in 1999.

Subsurface archaeological survey within the study window within the City of Norfolk was limited to one location near the intersection of I-64 and I-564 and the eastern terminus of both the current study window and CBA 1 and 2. As it enters Norfolk at Willoughby Spit, the study window is characterized by low lying wetlands, dense residential development, both private and military, and areas of manmade lands resulting from the deposition of dredge spoils. From Willoughby Spit to Mason Creek, subsurface archaeological testing was not conducted. From Mason Creek south to the study terminus, three transects of shovel tests were excavated in areas of open land and light woods along the west side of I-64. Much of this area is on Naval Station Norfolk and was investigated according to the predictive model in development in 1999 and published in 2002. Shovel tests in this section were largely disturbed, however pockets of natural soils were identified. Although some soil integrity was present, no intact archaeological sites were identified. Additional shovel tests were excavated along transects A-D as the 1999 survey area turned to the west toward Terminal Boulevard (CBA 9). While not directly within the current study window, interchange improvements may include this survey section. Subsurface testing in this section revealed heavily disturbed and/or truncated soils that were poorly developed and filled. No archaeological sites were identified.

In addition to the terrestrial survey, underwater archaeological survey was conducted. In the vicinity of CBA 1 and 2, the underwater survey identified 13 targets including the site of previously recorded resource 44NR0015 (Appendix A; Map 7). The 13 targets were spread across the river, but were not evenly spaced, in part because three of the anomalies were identified by multiple targets. Targets are areas within the study window that generated remote sensing signatures that could potentially represent underwater historic resources. The targets are generally located on the seafloor or may be partially submerged. However, it is likely that dredging of the Hampton Roads channel between

Point Comfort and Fort Wool disturbed or destroyed submerged resources leaving behind only debris or significantly disturbed deposits. None of these targets were investigated as the focus of the study turned to CBA 9 and 9/2. A Phase II survey for CBA 9 and CBA 9/2 was conducted by Dolan Research primarily in the vicinity of the Monitor Merrimack Bridge Tunnel and Craney Island. Twelve of these targets are located within the current study window as it crosses Hampton Roads and follows the existing bridge tunnel (Appendix A).

### **Historic Districts and Battlefield Resources**

It is necessary to address the potential for archaeological resources associated with the Pasture Point and Phoebus Historic Districts as well as the presence of three Civil War battlefield resources in the context of this assessment (Appendix B). These resources overlap the study window, were not addressed in the 1999 survey work in the framework of NRHP-eligible resources, and provide additional context in which to evaluate the potential for the identification of significant archaeological resources.

While not a historic district, it is also important to note the proximity of the Hampton National Cemetery (VDHR File 114-1048) to the archaeological study window on the north side of I-64. A noncontiguous portion of the cemetery, which is also the earliest portion of the cemetery dating to 1866, is located south of I-64 and is not located within the study window. The boundary of the Phoebus Section of the Hampton National Cemetery, on the north side of I-64, is adjacent to the existing roadway right of way as noted on the 1977 I-64 highway plans and the VDHR's DSS system. While during the 1999 survey efforts no significant archaeological deposits, indications for potential unmarked burials, or intact soil stratigraphy were identified. The Phoebus Section of the Cemetery was purchased in 1891 and demarcated by a substantial 5-foot high brick wall combined with wrought iron finishes and gates. Portions of the gates and wall were replaced with chain link fencing in the mid-20th century. Because the 1891 section was built as an enclosed cemetery area, it appears unlikely that additional burials would be located outside the current limits of the resource.

#### *Historic Districts Listed on the NRHP Since 1999*

Archaeological survey was not conducted in the vicinity of Pasture Point or Phoebus during the 1999 archaeological survey effort. The portions of the survey corridor that pass through the historic districts are widely disturbed; however, these resources have since been listed on the NRHP and additional consideration may be warranted. It is possible that archaeological resources that predate the periods of significance identified for these historic districts may be present.

Pasture Point (VDHR #114-0118) is a late 19<sup>th</sup>/early 20<sup>th</sup> century neighborhood located north of the central business district in Hampton, Virginia and listed in the NRHP under Criterion A as an example of an early suburb driven by local transportation developments (NRHP Nomination 2008). It is also eligible under Criterion C as a collection of significant residential architectural styles with characteristic urban design composition and grid pattern street layout. The period of significance is 1885-1938 when streetcars

and trolleys dominated local transportation. The district is characteristic of early streetcar developments and features a patterned street layout. This layout is tied to the nationally significant expansion of the railroad system by virtue of its initial platting by Collis P. Huntington's Old Dominion Land Company. Architectural resources within the district exhibit national trends in architectural styles of the time period and include examples of the Queen Anne and late Victorian styles in particular. The construction of I-64 disrupted the original street pattern layout, but the neighborhood maintains architectural integrity and the feeling of its original development pattern, with its tree-shaded streets and orientation around the divided boulevard of Pembroke Avenue (Dowling 2008). Many of the grandest and most varied Queen Anne style houses are set back across broad lawns on Pembroke Avenue, or along waterfront that surrounds the district on three sides. The district is predominately residential, but does include several commercial buildings.

Phoebus Historic District (114-5002) is situated in the City of Hampton along Mill Creek. The community was formally incorporated until 1874 when it was named Chesapeake City. In 1900, the name was changed to Phoebus, in honor of Harrison Phoebus, who developed the well-known Hygeia Hotel as a resort adjacent to the town. The town is laid out in a gridiron pattern that was developed in 1874 upon incorporation. The area developed as a stopover point between Hampton and Norfolk due to its close proximity to Old Point Comfort and the ferry crossing. The town grew during the Reconstruction period with the addition of a railroad line, streetcar line, commercial corridor, and supporting residential buildings. The historic district is listed in the NRHP under Criteria A and C for its development as a town in Elizabeth City County (later annexed to the City of Hampton in 1952) during the fourth quarter of the 19<sup>th</sup> century and for its town planning and architectural character from the period 1874 to 1957. Phoebus also meets the requirements for Criteria Consideration G, extending the period of significance to 1957 linked to the opening of the Hampton Roads Bridge Tunnel in that year (Pollard 2006). The opening of the tunnel resulted in the elimination of major traffic through Phoebus resulting in a halt to construction and modern development. The town of Phoebus appears largely as it did in 1957 when the bridge tunnel opened.

### *Battlefield Resources*

The study window is located at least partly within three previously identified battlefield resources. One is the 1813 Battle of Hampton and the other two are Civil War engagements: the Battle of Sewell's Point (VDHR No.122-5426) and the Battle of Hampton Roads (VDHR No.114-5471). The Battle of Hampton does not have a formal VDHR site number (Appendix B). The limits of the Civil War period battlefields were recently updated and expanded by the American Battlefield Protection Program (ABPP). In 1992, the Civil War Site Advisory Commission (CWSAC) defined a number of Civil War battlefields within Virginia, and their proposed boundaries were documented at the VDHR. In 2009, the American Battlefield Protection Program (ABPP) revised the 1992 CWSAC boundaries for Virginia, and many of the battlefields were greatly expanded in size.

For each battlefield, the ABPP defined Study Areas and Core Areas. The larger Study Area contains all resources known to relate to or contribute to the battlefield event, such

as where troops maneuvered and deployed, immediately before or after combat, and where they fought during combat. Within the Study Area are Core Areas, which denote the actual fighting areas located within the larger battlefield.

In addition, the ABPP defined Potential National Register (PotNR) boundaries for each battlefield. The PotNR boundary represents the ABPP's assessment of a battlefield's current integrity. The PotNR may include portions of the Study Area or the Core Area associated with the battlefield, but is generally the area that the ABPP has determined retains integrity. The PotNR area may include all or some of the Study Area, or all or some of the Core Area, associated with a battlefield engagement. Most importantly, the PotNR boundary does not constitute a formal determination of eligibility by the Keeper of the National Register of Historic Places (NRHP). However, VDHR has agreed to treat all of the ABPP defined Study Areas as National Register-eligible architectural resources, subject to formal review within the Section 106 process. For non-Civil War period resources, the updates are less formal and are available on the ABPP website.

The three battlefield boundaries associated with this assessment, as currently mapped, include both the regions of direct fighting as well as the associated marching routes for soldiers. Both of the Civil War battlefields include substantial areas of open water, and include at least part of the existing HRBT crossing. Due to substantial development in this area over the last 150 years, many elements of the battlefields have succumbed to urban development (Salmon 2001:69; Gossett and Mitchell 2007:62).

#### Hampton (VA401)

The Hampton Battlefield does not have a VDHR site number. As defined by the ABPP, the battlefield includes a large portion of Hampton and is located primarily on land. The study window forms part of the northern edge of the battlefield area. Much of the area associated with the engagement has been extensively developed. The ABPP includes the Hampton Battlefield with a group of sites that offer "Commemorative Opportunities," but are "Fragmented or Destroyed and Threats are Marginal or Do Not Apply" (Gossett and Mitchell 2007:62; Appendix B). Due to the short-term nature of the engagement, and the extensive amount of development that has occurred within this same area, there is a low potential for identifying archaeological resources associated with this engagement within the VDOT study area.

#### Sewell's Point (VA001; VDHR No. 122-5426)

The ABPP has defined a study area of 11,568.96 acres for the battle, 9,878.91 acres of which is classified as potential National Register (PotNR) lands (Appendix B). Portions of the existing HRBT crossing were incorporated directly into the Potential National Register (PotNR) area defined for the NRHP-eligible resource. The HRBT study window and the battlefield study area only overlap on water, and the HRBT study window falls entirely outside of the ABPP Core Area defined for the engagement suggesting that there is a very little possibility for the identification of submerged archaeological resources associated with the core area of fighting for the battle. No land-based component of the battlefield is associated with the HRBT study window.

The only land within the ABPP Core Area is located well over a mile from the HRBT study window, and is focused upon the location of the Confederate battery. This area is located within an active military installation and is entirely excluded from the PotNR lands defined by the ABPP for the resource. Salmon (2001:69) noted that "...no sign of the battery now remains, as the area has been developed by the United States Naval Base there."

The CWSAC classified the battlefield as preservation priority IV.2 (Class D) in 1992. The ABPP (2009) also noted that:

The areas that retain integrity are located essentially on water. On land, only historic and archaeological resources at Fort Monroe and Fort Wool retain integrity. The 2005 BRAC closure of Fort Monroe and subsequent redevelopment plans may threaten historic landscape resources associated with the Civil War-era fortress.

Fort Monroe and Fort Wool are located outside of the ABPP Core Area, were not directly involved in the engagement, and are also located outside of the HRBT study window.

Cox (1999) undertook a remote sensing survey for submerged resources in the small section of the Sewell's Point battlefield within the HRBT study window, identifying a number of unspecified targets east of Sewell's Point. It is important to note, however, that no vessels were lost during the battle. Fired ordinance associated with the engagement is likely concentrated within the Core Area defined for the engagement, and not within the HRBT study window. The potential for archaeological resources associated with the engagement to be identified within the HRBT study window is extremely low.

#### Hampton Roads (VA008; DHR 114-5471)

The Battle of Hampton Roads was a naval engagement, and almost all of the defined battlefield area is comprised of open water. The ABPP has defined a study area of 46,034.51 acres for the engagement, with 35,040.82 acres defined as PotNR lands (Appendix B). Portions of the existing HRBT crossing were incorporated directly into the PotNR lands defined for the NRHP-eligible resource. The HRBT study window and the battlefield study area overlap on land and water; however, the HRBT study window falls entirely outside of the ABPP Core Area defined for the engagement suggesting that there is a very little possibility for the identification of submerged archaeological resources associated with the core area of fighting for the battle.

The HRBT study window is located over a mile from the ABPP Core Area, and the only land associated with Core Area on the Norfolk side of the crossing is part of an active military installation. This same area was excluded from the PotNR designated lands by the ABPP, and has been extensively developed (Salmon 2001:69). The CWSAC classified the battlefield as preservation priority II.2 (Class B) in 1992, noting similar concerns as stated above for the Battle of Sewell's Point.

Cox (1999) undertook a remote sensing survey for submerged resources in the small section of the Hampton Roads battlefield within the HRBT study window (1999). Further investigation of 13 resources was recommended, 12 of which are located within the current study window. It is important to note, however, that no vessels were lost within the vicinity of the HRBT study window. Fired ordnance associated with the engagement is likely concentrated within the Core Area defined for the engagement, and not within the HRBT study window. The potential for archaeological resources associated with the engagement to be identified within the HRBT study window is extremely low.

## V. RESULTS AND RECOMMENDATIONS

In April and May of 2012, Cultural Resources, Inc. (CRI) conducted an archaeological assessment for the Hampton Roads Bridge Tunnel (HBRT) Environmental Impact Statement (EIS) in Hampton and Norfolk, Virginia. The purpose of the archaeological assessment was three-fold: 1) to identify all areas of existing survey coverage and identify all previously recorded archaeological sites associated with the study window; 2) to determine what, if any, additional archaeological survey may be required within the study window for the proposed undertaking; and 3) to determine the likelihood for the study window to contain archaeological resources that are important chiefly for reasons other than information potential.

### **Objective 1: Previous Survey Coverage and Previously Identified Archaeological Sites**

Background research conducted as part of the current study included a review of the previous survey work in the study window vicinity currently available at the VDHR. Additionally, the VDHR archives were consulted for information on previously recorded archaeological sites present within the study window.

Candidate Build Alternatives 1 and 2 investigated in 1999 and reported in the document entitled *Cultural Resource Survey, Hampton Roads Crossing Study, Candidate Build Alternatives 1, 9, and 2* (Sara et al. 1999), largely coincide with the current study window with few variations. During that study, all areas deemed suitable for subsurface testing were investigated and included survey in choice locations in both Hampton and Norfolk. The results of the 1999 survey indicated that a large majority of the study window has been disturbed and the potential for intact significant archaeological resources does not exist. However, in several locations, intact soil deposits were identified and two archaeological sites, 44HT0009 (44HT0089) and 44HT00990, were recommended potentially eligible for listing on the NRHP. Additional previously recorded archaeological sites investigated during the 1999 survey were determined to be lacking in integrity, had been destroyed, or were perhaps mismapped at the VDHR. No further work was recommended for any of those sites.

The research indicates that nearly 100 percent of areas that appear to have the potential for archaeological deposits were surveyed during the 1999 investigation. Additionally, underwater survey was undertaken in Candidate Build Alternatives 1, 2, and 9. Twelve targets were identified in the vicinity of the current study window but were not investigated further.

### **Objective 2: Recommendations for Additional Archaeological Survey within the Study Window**

As noted above, nearly 100 percent of the study window suitable for subsurface archaeological survey was investigated during the 1999 investigation. Largely, the study window has been disturbed by modern development and/or road construction or is characterized by low-lying or in-filled wetlands. The level of survey coverage, coupled

with an assessment of current conditions within the study window, resulted in the determination that additional archaeological survey may be required in only two select portions of the study window.

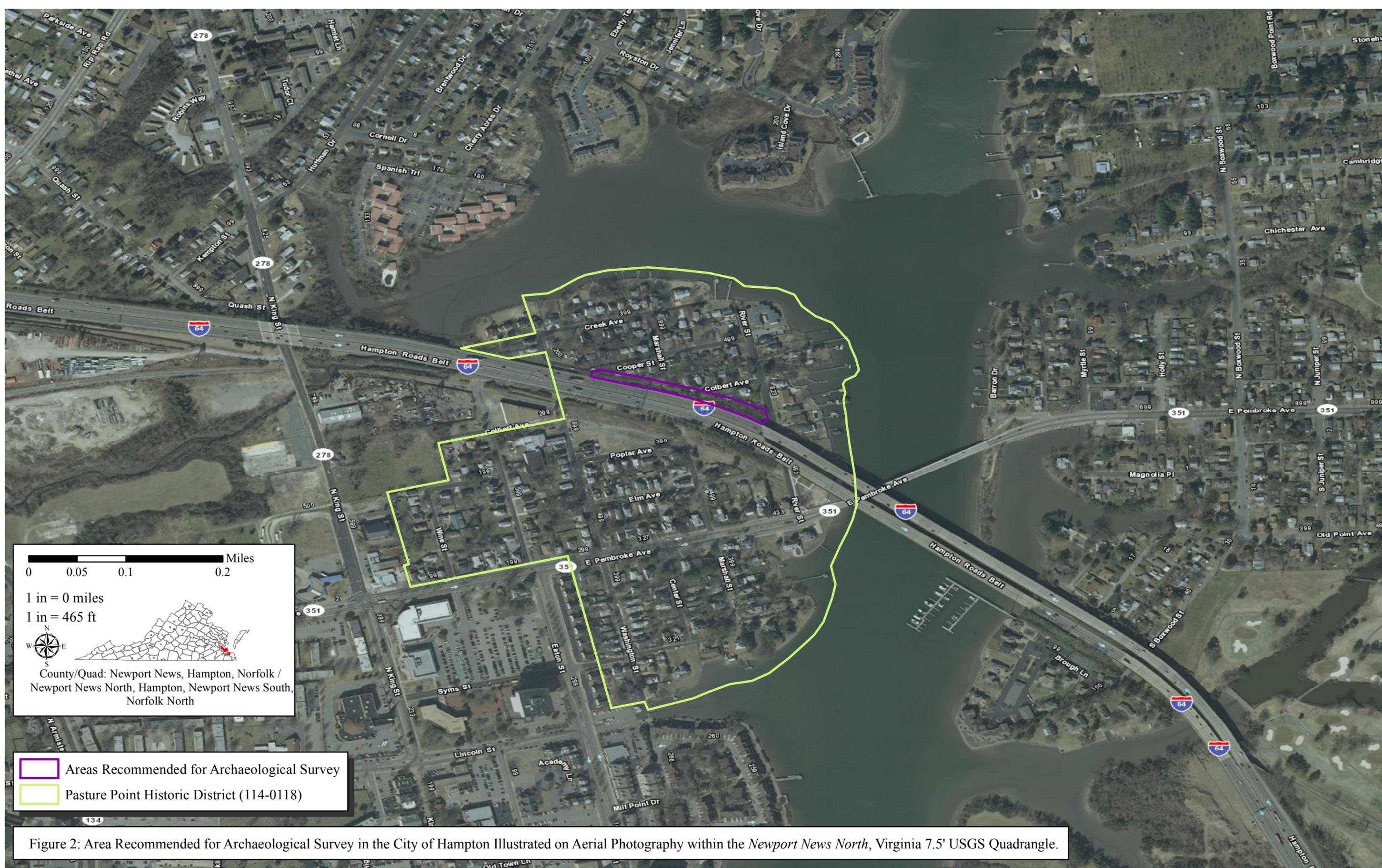
Limited additional survey is recommended for the portion of the study window on the north side of I-64 within Pasture Point Historic District, west of Pembroke Avenue (Figure 2). The south side of I-64 in this area has been largely disturbed by an existing power line easement, a historic railroad corridor as well as road construction and the construction of River Street Park. It appears likely from a review of aerial photography that this area has been disturbed by the construction of I-64, but it was not surveyed during the 1999 efforts. Subsurface verification of potential disturbances or areas of potentially intact stratigraphy in this vicinity is recommended.

Additional Phase I survey is also recommended for a small section of open land on the east side of the intersection of I-64/I-564 in Norfolk (Figure 3). This section of lightly wooded green space is located adjacent to I-64 and Granby Street west of the Forest Lawn Cemetery. This small section was not included in the 1999 survey efforts. Survey was conducted on the west side of I-64 on Naval Station Norfolk and revealed small pockets of intact soils intermixed with areas of disturbance. It is likely that the area has been disturbed by the construction of I-64 and Granby Street however subsurface verification is recommended.

Two sites, 44HT0009 (also recorded as 44HT0089 in 1999) and 44HT0090 were recommended as potentially eligible for listing on the NRHP and appear to have suffered little additional disturbance since the 1999 survey. Site 44HT0009 was recommended potentially eligible for listing in both 1994 and 1999. Phase I investigations at this site have been limited to 50-foot interval shovel testing. A Phase II level investigation, including close-interval shovel testing as well as larger test units within potential impact areas, is recommended for this site to determine the current condition of the site as well as to determine if intact deposits are located within the limits of construction once identified.

Site 44HT0090 was recommended potentially eligible for listing on the NRHP under Criterion A and D for its association with Hampton University and for research potential. The site was identified during a Phase I survey through 50-foot interval shovel testing. A Phase II level investigation, including close-interval shovel testing as well as larger test units within potential impact areas, is recommended for this site to determine the current condition of the site as well as to determine if intact deposits are located within the limits of construction once identified.

Investigation of the 12 underwater targets located within the HRBT study window and identified during the 1999 survey is also recommended (Figure 5). Additional survey work related to these 12 targets has not yet been conducted. It is likely that these targets may be related to the dredging of the Hampton Roads Channel and ultimately construction associated with the Hampton Roads Bridge Tunnel, however the information gleaned at the Phase I level was inconclusive.



0 0.05 0.1 0.2 Miles

1 in = 0 miles  
1 in = 465 ft

County/Quad: Newport News, Hampton, Norfolk /  
Newport News North, Hampton, Newport News South,  
Norfolk North

- Areas Recommended for Archaeological Survey
- Pasture Point Historic District (114-0118)

Figure 2: Area Recommended for Archaeological Survey in the City of Hampton Illustrated on Aerial Photography within the *Newport News North*, Virginia 7.5' USGS Quadrangle.

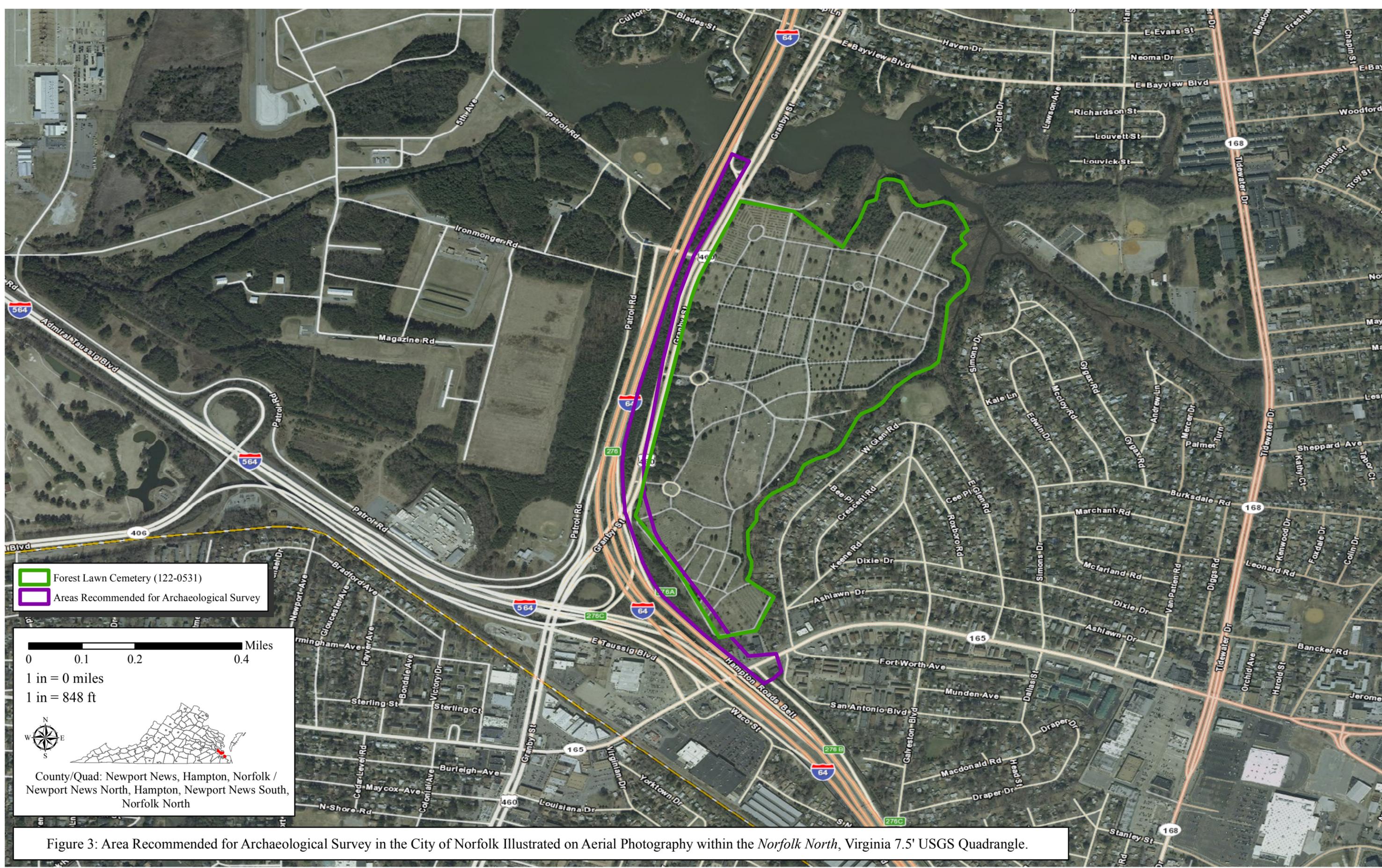


Figure 3: Area Recommended for Archaeological Survey in the City of Norfolk Illustrated on Aerial Photography within the *Norfolk North*, Virginia 7.5' USGS Quadrangle.

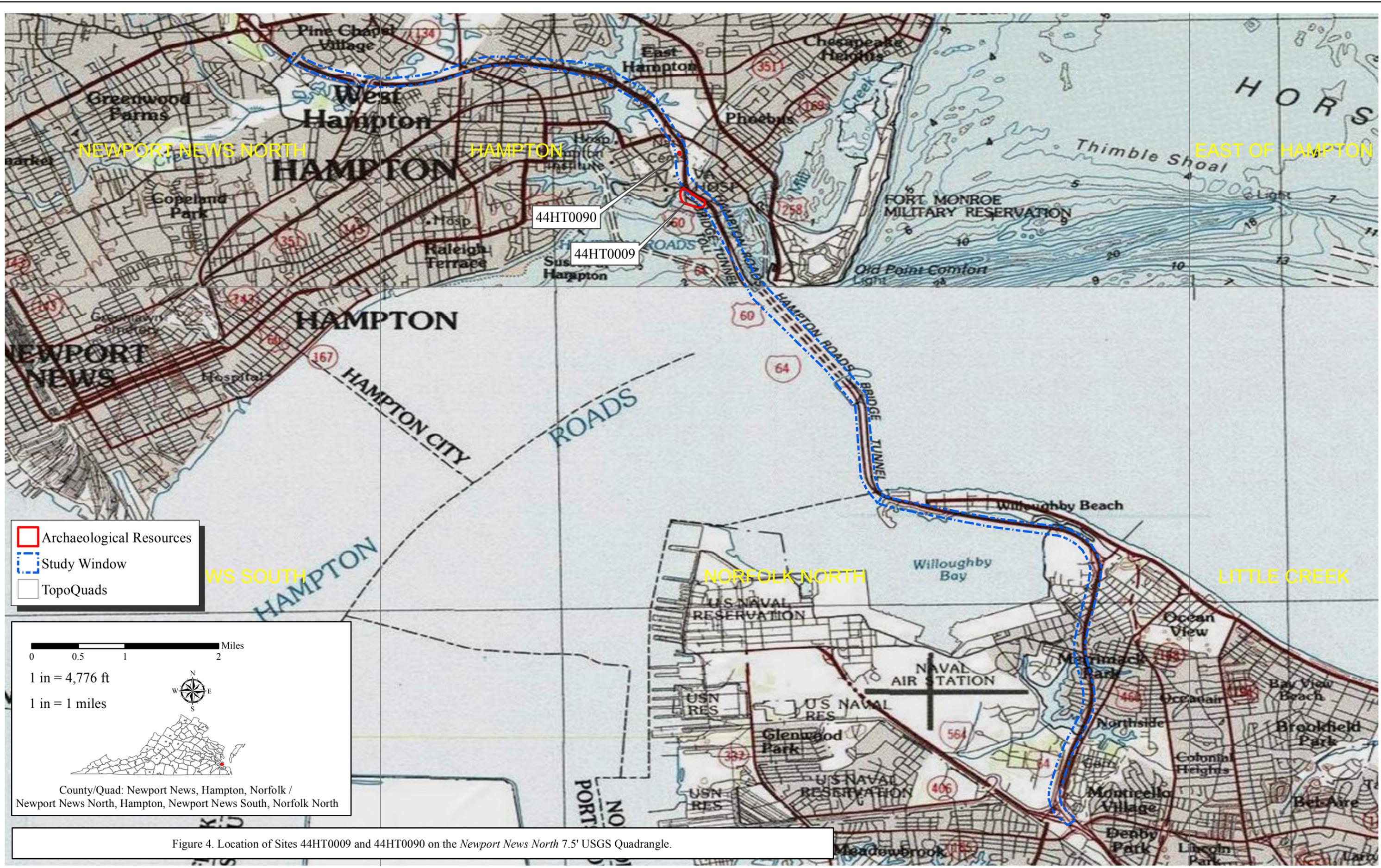


Figure 4. Location of Sites 44HT0090 and 44HT0090 on the *Newport News North* 7.5' USGS Quadrangle.

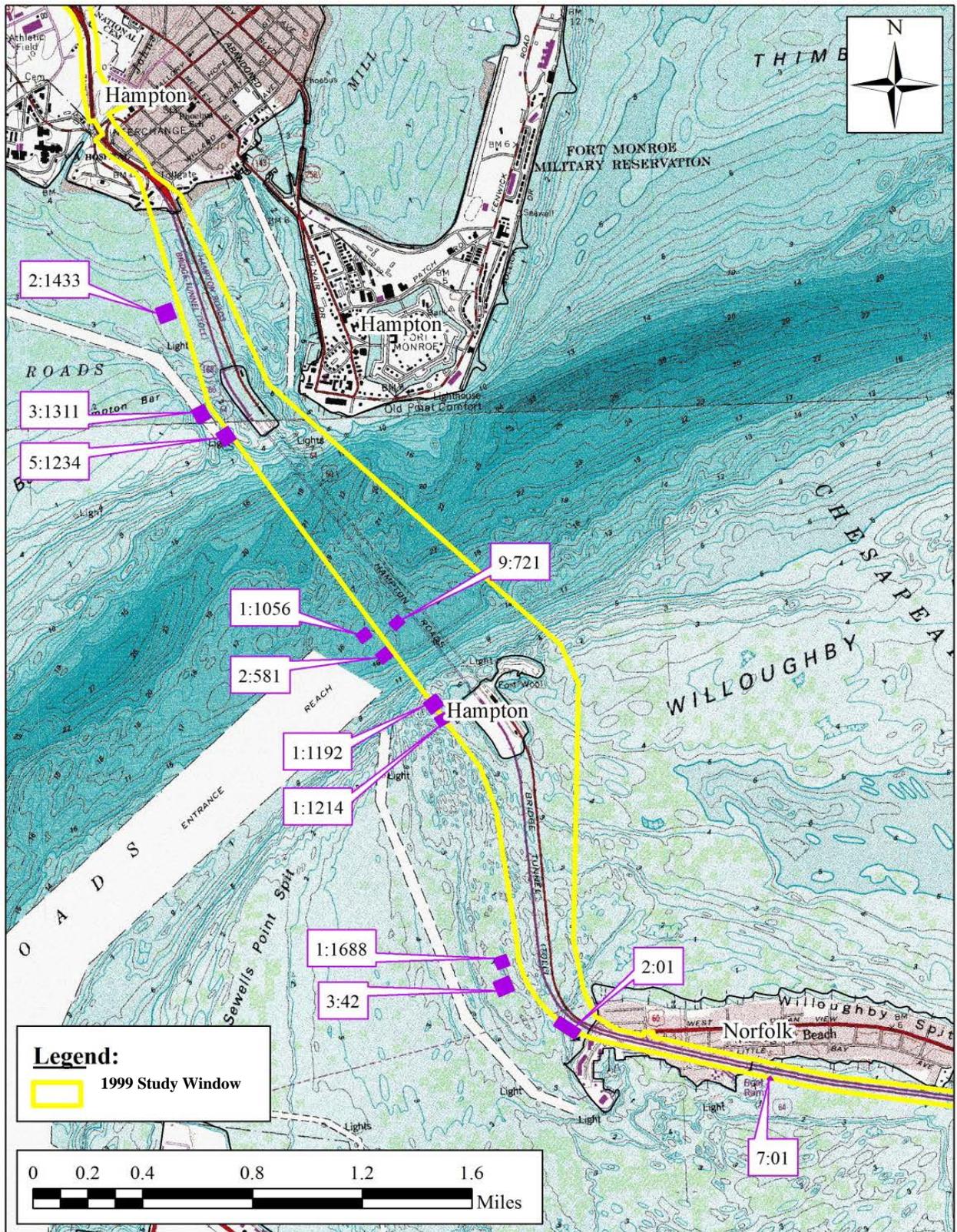


Figure 5. Locations of Underwater Targets Recommended for Additional Investigation.

### **Objective 3: Potential for Archaeological Sites Important Chiefly for Reasons Other than Information Potential**

The results of the background research and an assessment of current conditions within the study window suggest that there is a low potential for the identification of new archaeological sites that would be considered important chiefly for reasons other than information potential. The survey conducted in 1999 investigated nearly 100 percent of the area suitable for subsurface testing and identified only two sites for additional evaluation. Both sites, 44HT0009 (44HT0089) and 44HT0090, were recommended for further work based upon their information potential. Neither site was recommended as chiefly important for reasons other than information potential. Although portions of the newly listed Phoebus and Pasture Point historic districts are now associated with the study window, it is unlikely that archaeological resources associated within these districts would be chiefly important for anything other than information potential.

While not a historic district, the Hampton National Cemetery (VDHR File 114-1048) is within the archaeological study window on the north side of I-64. The boundary of the 1891 Phoebus Section of the Hampton National Cemetery intersects the existing easement associated with the roadway as noted on the 1977 I-64 highway plans and the VDHR's DSS system. The Phoebus Section of the Cemetery was purchased in 1891 and demarcated by a substantial 5-foot high brick wall combined with wrought iron finishes. Portions of the gates and wall were replaced with chain link fencing in the mid-20th century. Because the 1891 section was built as an enclosed cemetery area, it seems unlikely that additional burials would be located outside the current limits of the resource. There is a low potential that archaeological resources chiefly important for reasons other than information potential and associated with this resource would be identified.

In some instances, archaeological resources located within a larger, significant battlefield resource may be considered important chiefly for reasons other than information potential; however, this situation is rare. In the case of the current study window and battlefield resources located within it, it is unlikely that such archaeological resources exist within the current study window. The ABPP-defined Core Areas associated with the two Civil War battlefields are located over a mile to the west of the study window, and the potential for identifying archaeological sites associated with either engagement within the study window is recommended as extremely low. The potential for identifying intact archaeological deposits associated with the 1813 Battle of Hampton is also recommended as extremely low. In general, the land portions of the study window have been heavily disturbed and exhibit a low potential for containing intact, previously unidentified archaeological deposits, and the underwater portions of the study window are too far from the military engagement areas to contain any battlefield resources. None of the HRBT study window is located within a Core Area defined by the ABPP for a Civil War battlefield resource.

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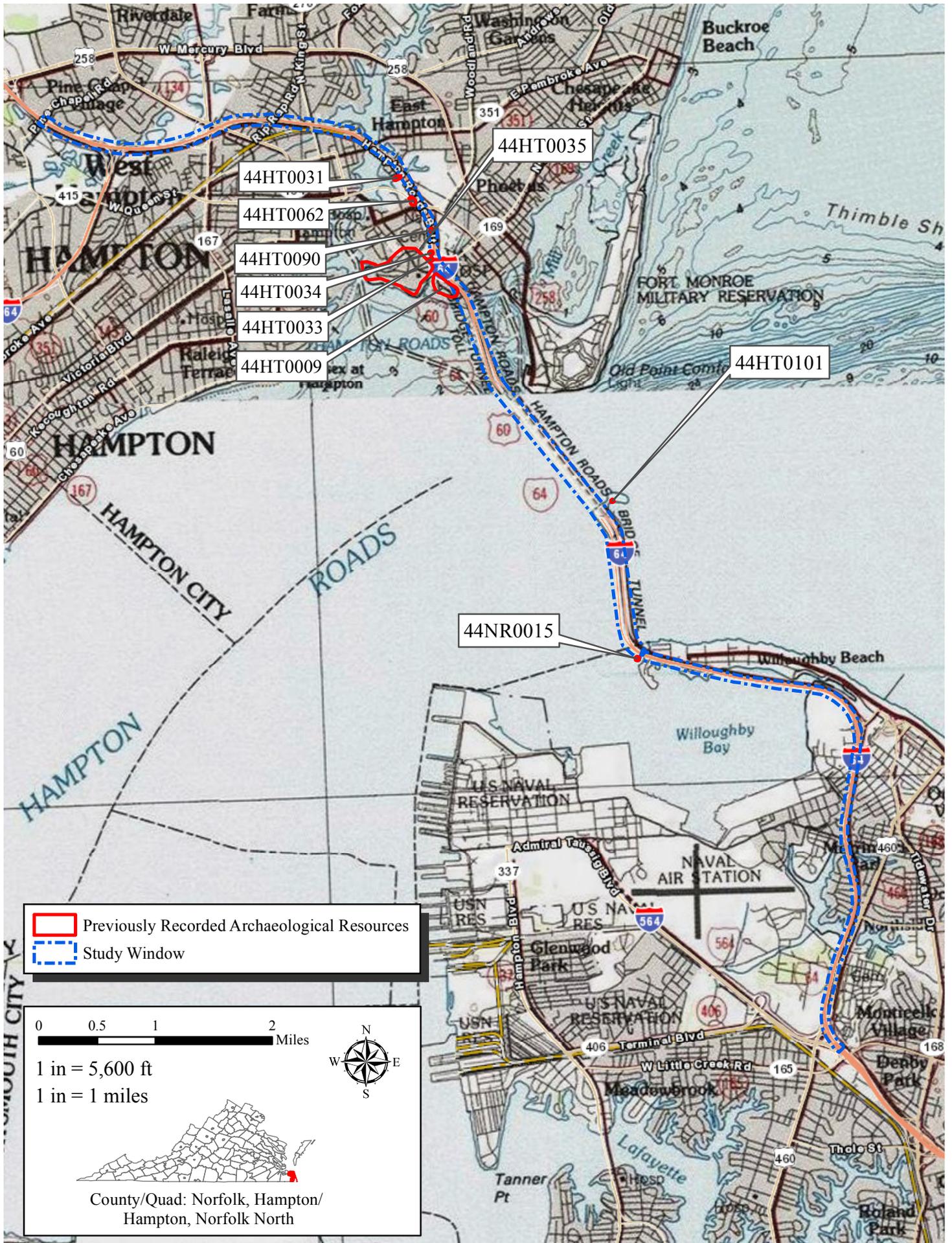
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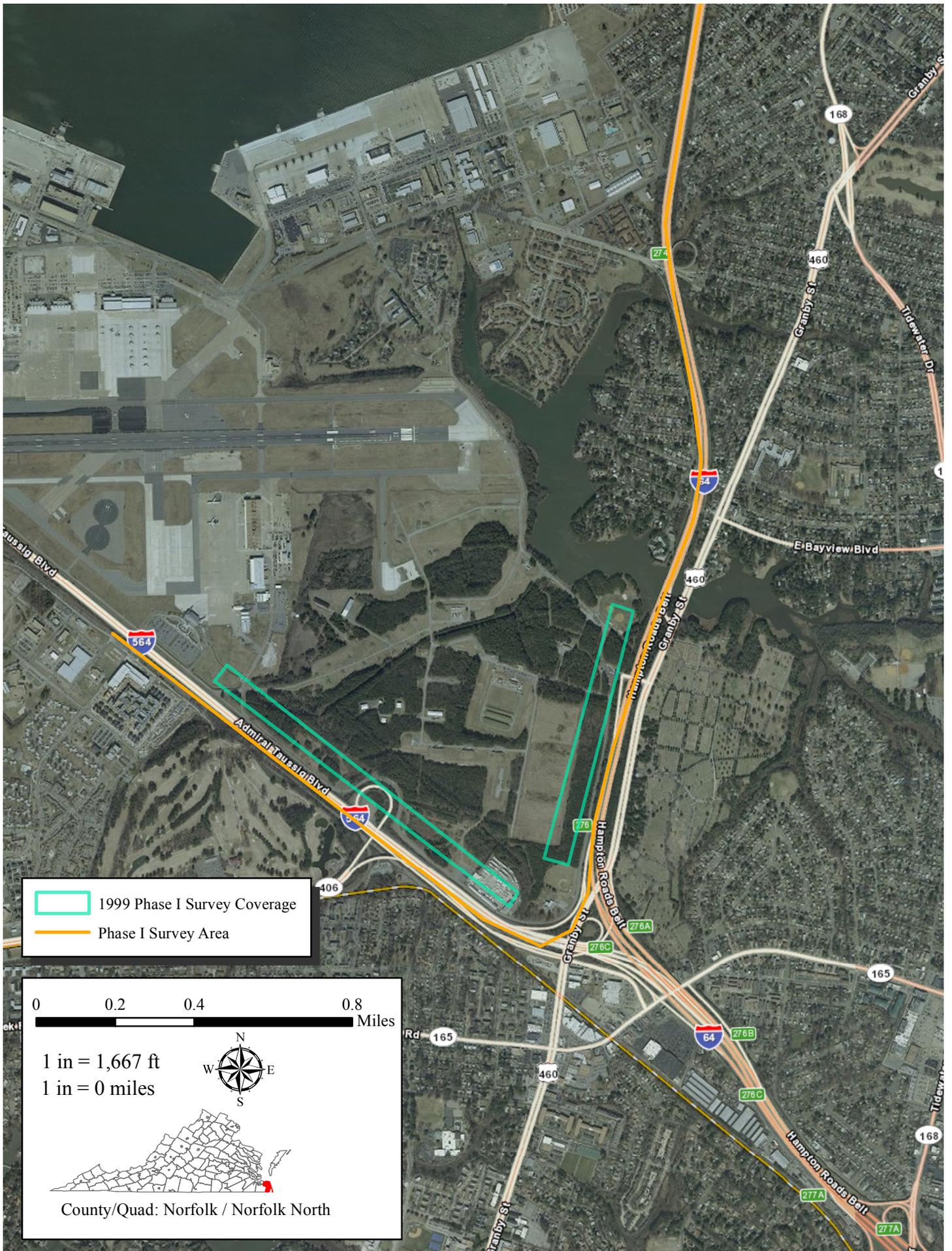
**APPENDIX A: PREVIOUS ARCHAEOLOGICAL SURVEY AND HISTORIC  
DISTRICTS IN THE STUDY WINDOW**



Appendix A: Map 1



Appendix A: Map 2



Appendix A: Map 3



Appendix A: Map 4



1999 Phase I Survey Coverage  
 VDHR Phase I Survey Coverage Data  
 Study Window

0 0.1 0.2 0.4 Miles  
 1 in = 0 miles  
 1 in = 1,045 ft

County/Quad: Hampton / Newport News North,  
 Hampton, Newport News South



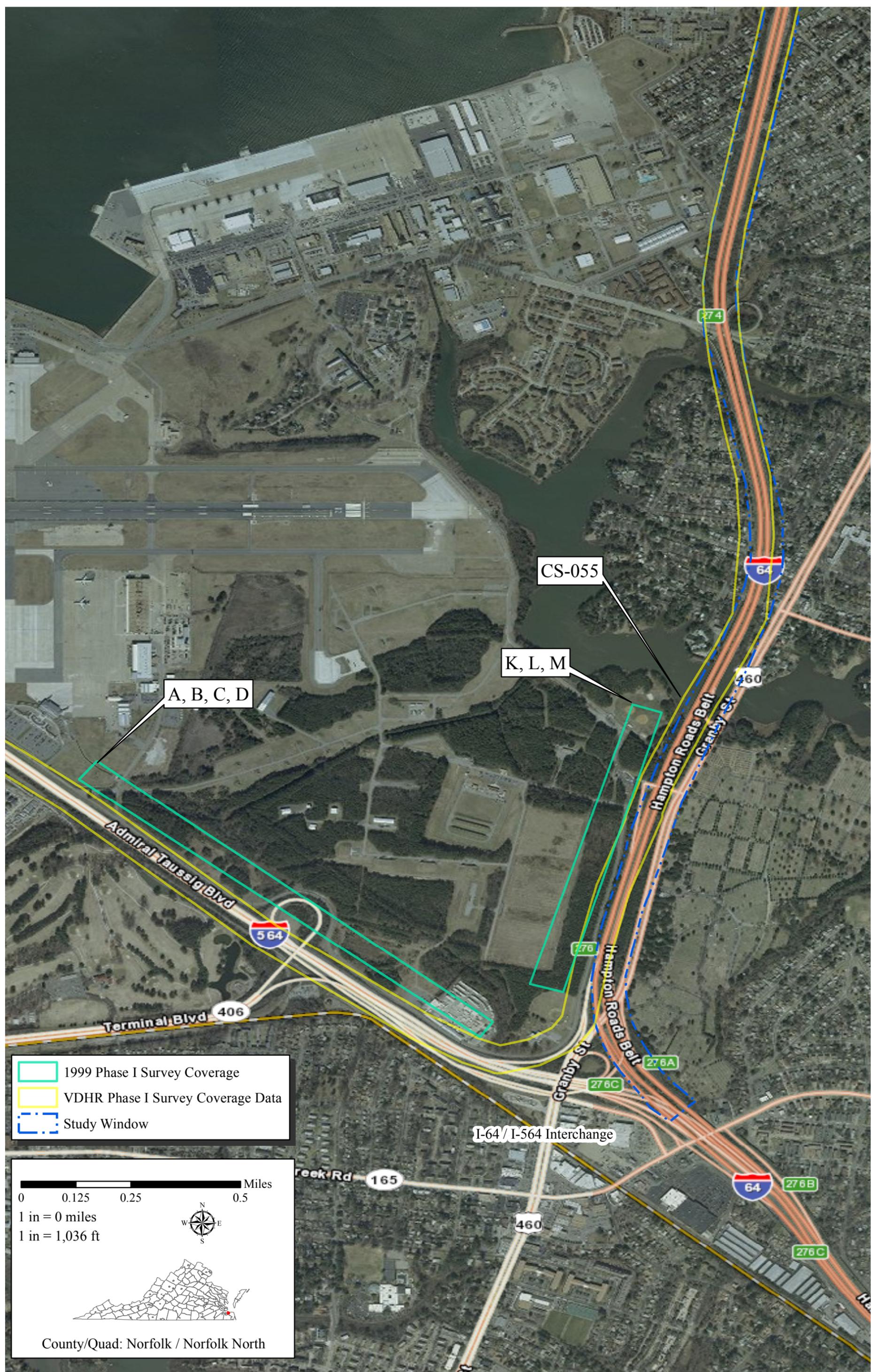
- 1999 Phase I Survey Coverage
- VDHR Phase I Survey Coverage Data
- Study Window

Miles  
 0    0.125    0.25    0.5

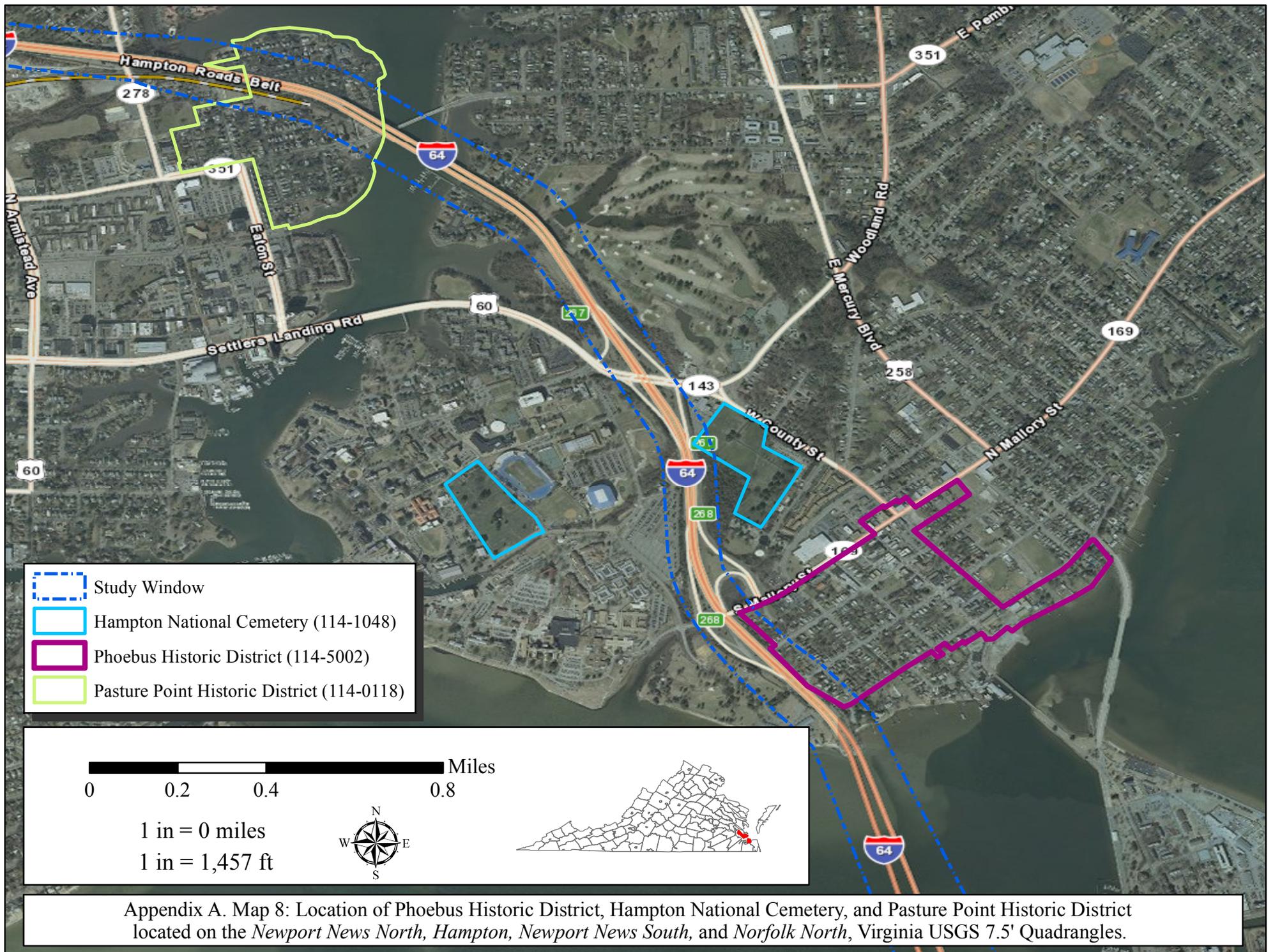
1 in = 0 miles  
 1 in = 1,036 ft




County/Quad: Norfolk / Norfolk North

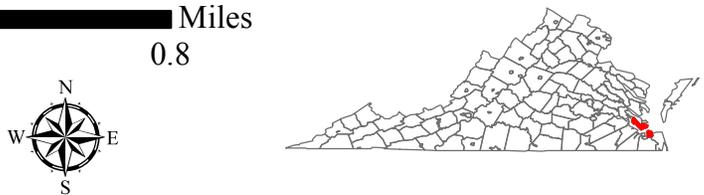


Appendix A: Map 7



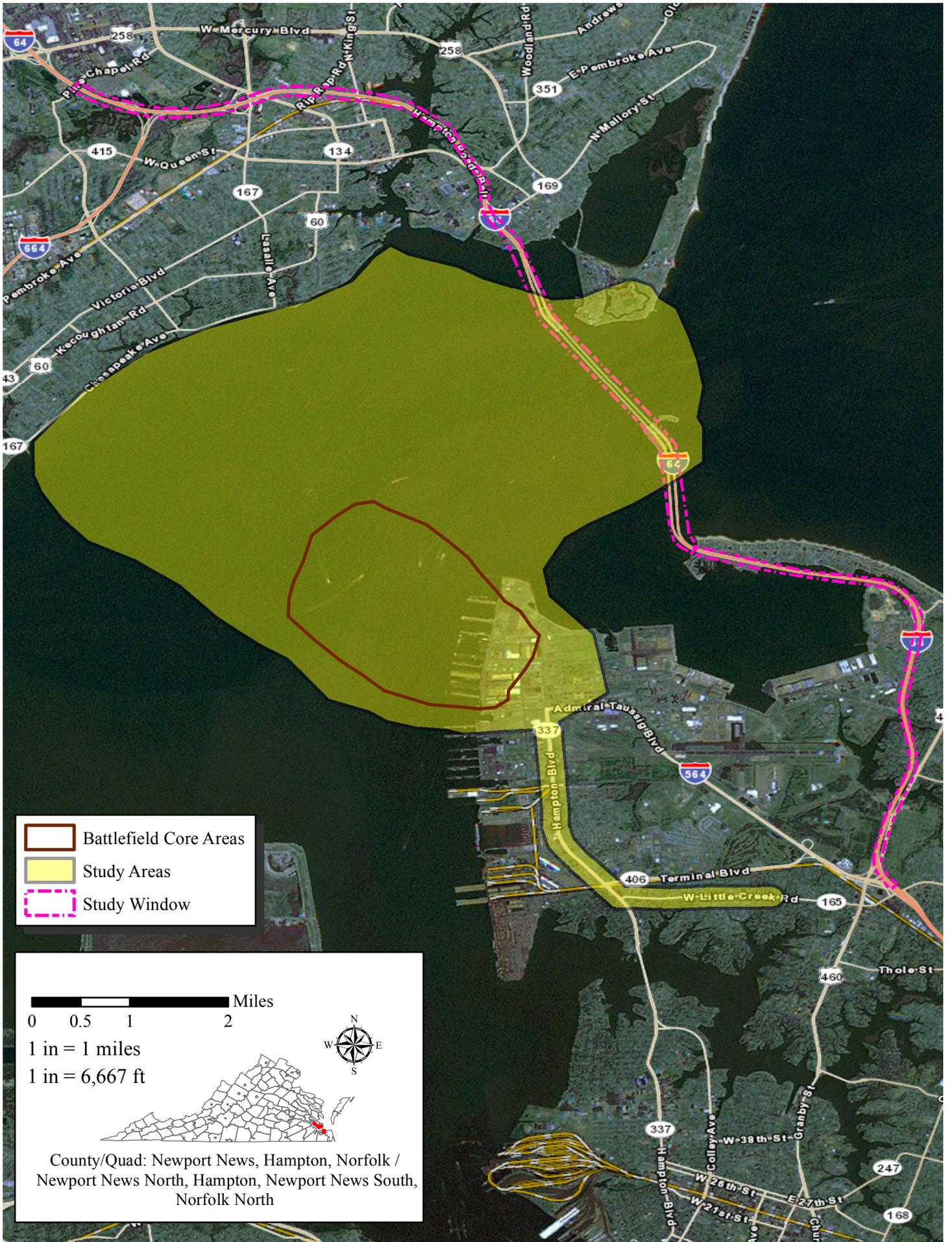
-  Study Window
-  Hampton National Cemetery (114-1048)
-  Phoebus Historic District (114-5002)
-  Pasture Point Historic District (114-0118)

0      0.2      0.4      0.8      Miles  
 1 in = 0 miles  
 1 in = 1,457 ft

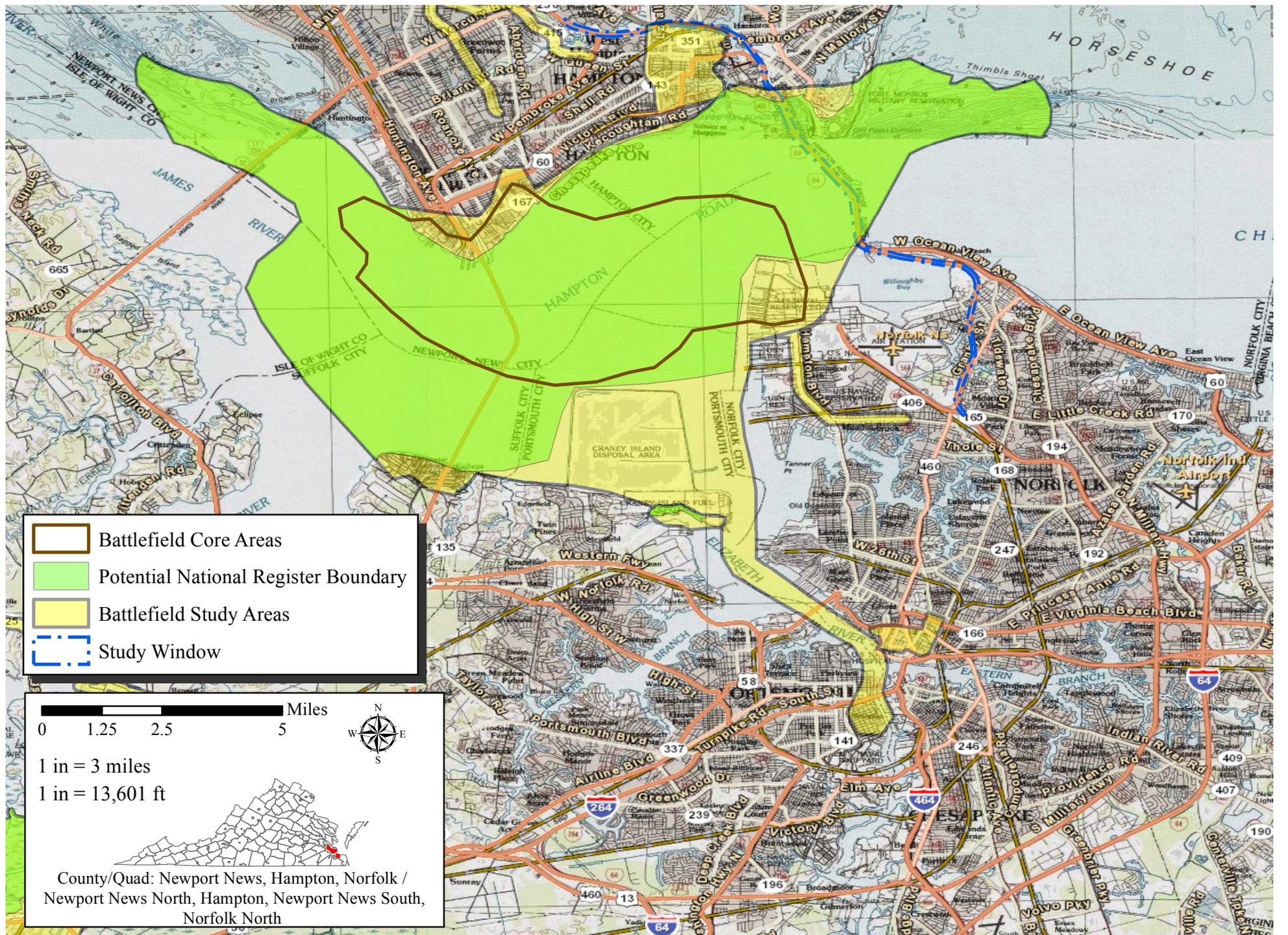


Appendix A. Map 8: Location of Phoebus Historic District, Hampton National Cemetery, and Pasture Point Historic District located on the *Newport News North*, *Hampton*, *Newport News South*, and *Norfolk North*, Virginia USGS 7.5' Quadrangles.

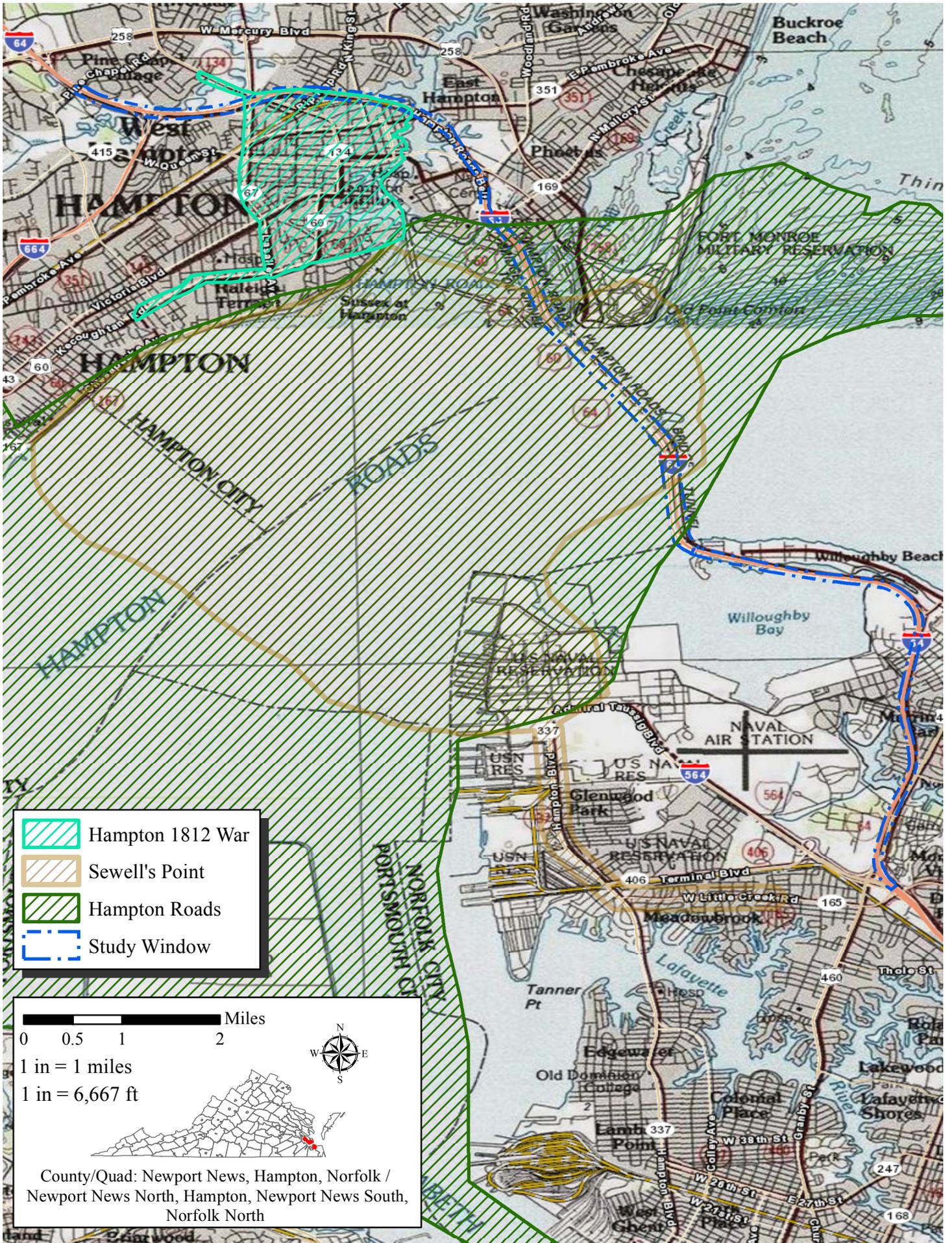
## **APPENDIX B: CIVIL WAR RESOURCES MAPS**



Appendix B: Map 9

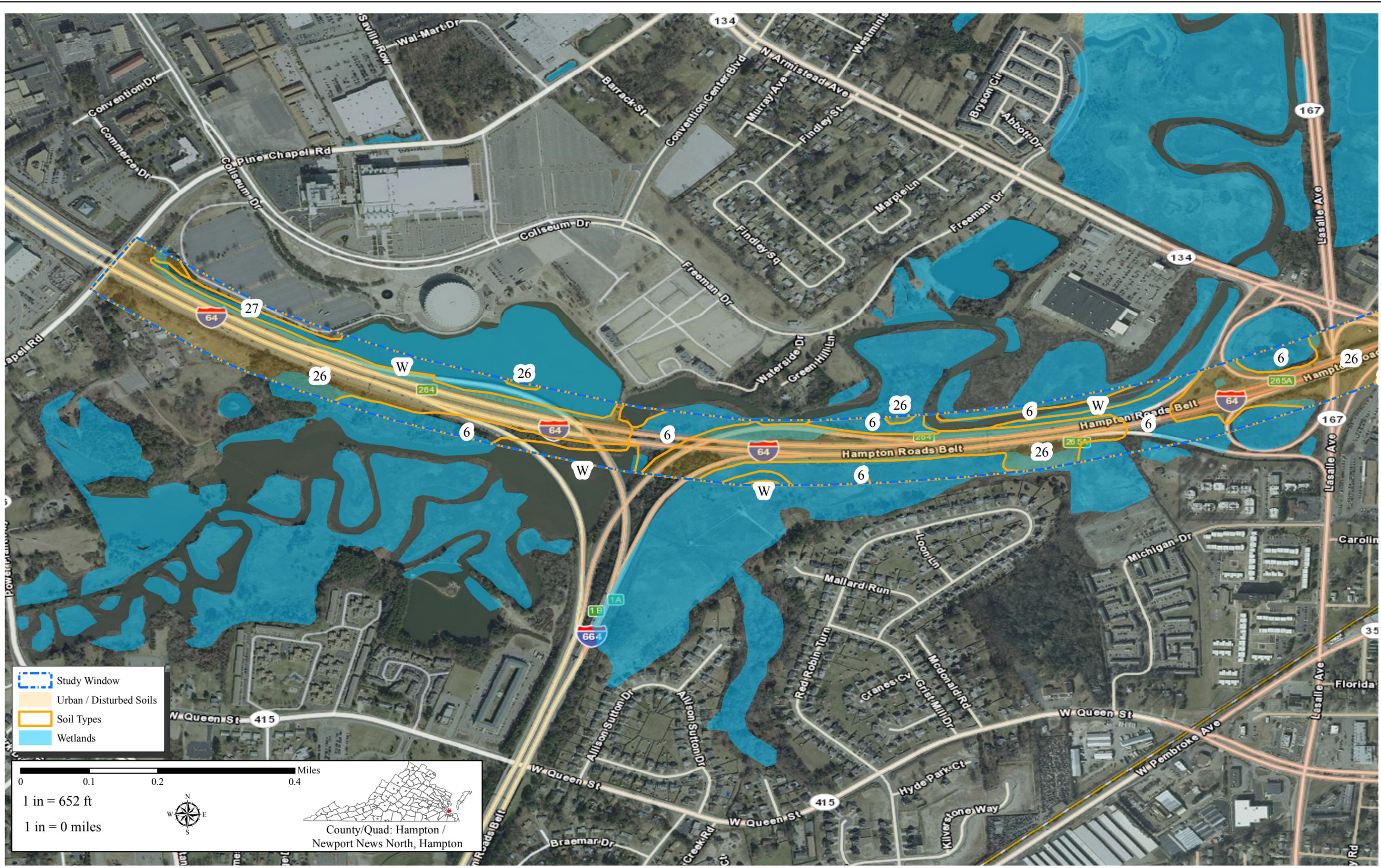


Appendix B: Map 10



Appendix B: Map 11

## **APPENDIX C: CURRENT CONDITIONS EXHIBITS**



- Study Window
- Urban / Disturbed Soils
- Soil Types
- Wetlands

0 0.1 0.2 0.4 Miles

1 in = 652 ft

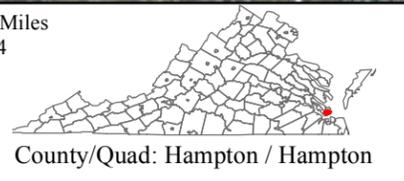
1 in = 0 miles

County/Quad: Hampton /  
Newport News North, Hampton



- Study Window
- Urban / Disturbed Soils
- Soil Types
- Wetlands

0 0.1 0.2 0.4 Miles  
 1 in = 652 ft  
 1 in = 0 miles



Appendix C: Map 13



Appendix C: Map 14



Appendix C: Map 15



	Study Window
	Urban / Disturbed Soils
	Soil Types
	Wetlands

0 0.15 0.3 0.6 Miles

1 in = 1,177 ft

1 in = 0 miles

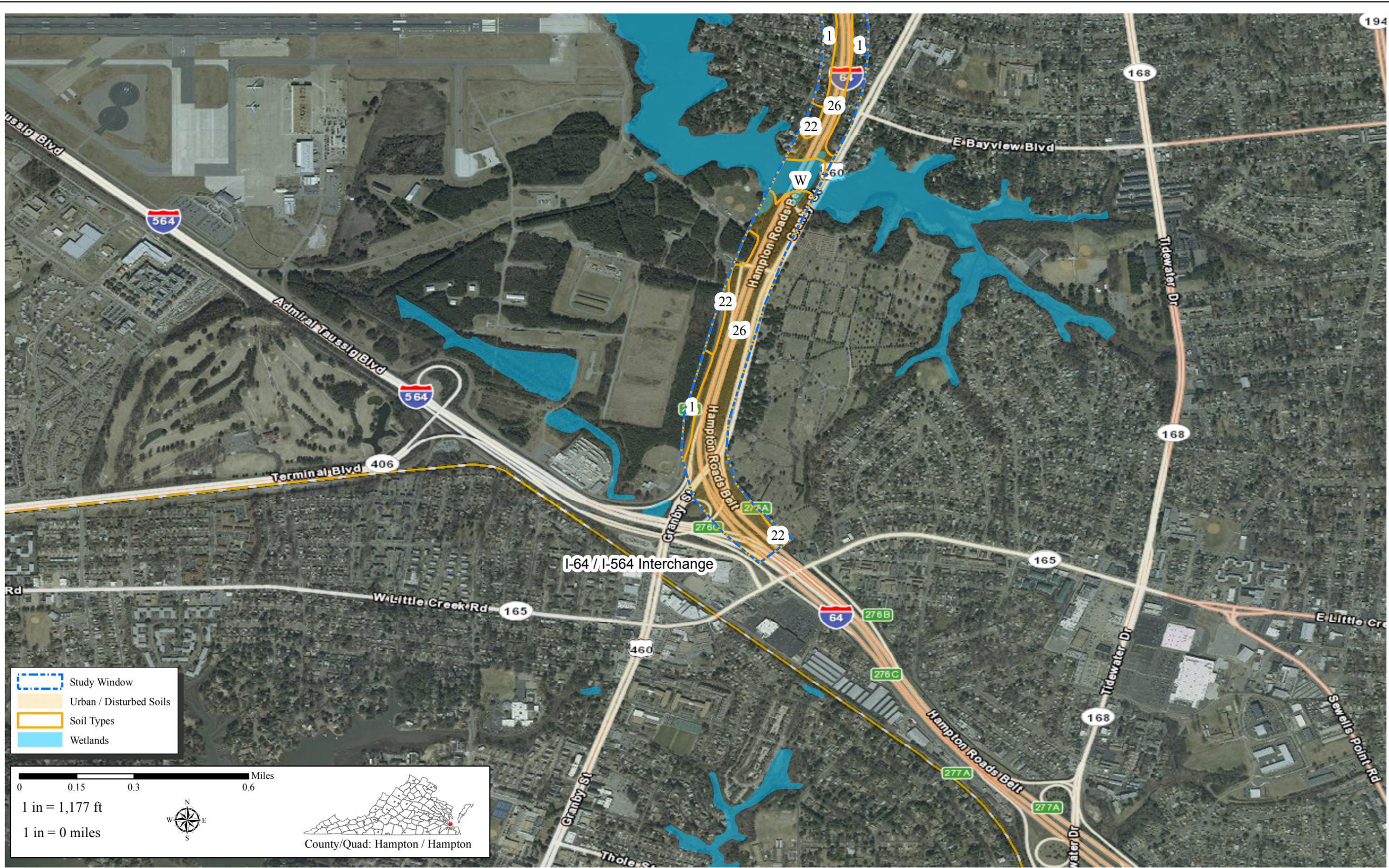



County/Quad: Hampton / Hampton

Appendix C: Map 16



Appendix C: Map 17



Appendix C: Map 18