

US Department of Transportation - Federal Highway Administration
and
Virginia Department of Transportation

ENVIRONMENTAL ASSESSMENT

Reevaluation of Hampton Roads Crossing Study (HRCS) FEIS:
Candidate Build Alternative CBA 9 – Segments 1 & 3

Locally Referred to as Patriot's Crossing

Cities of Norfolk and Portsmouth

State Project: 0064-114-F12, PE-102; UPC 99587

From: I-664/Monitor-Merrimac Memorial Bridge Tunnel in Hampton Roads, VA
To: I-564 Intermodal Connector at Naval Station Norfolk in Norfolk, VA and to SR 164 in Portsmouth, VA

Submitted Pursuant to 42 U.S.C. 4332(2)(C); 23 C.F.R. 771

Approved for Public Availability:

11/30/11

John Jimkins

Date

for: Division Administrator

CHAPTER 1: PURPOSE AND NEED

1.1 Study Area

The Virginia Department of Transportation (VDOT) and the Federal Highway Administration (FHWA) are reevaluating the Hampton Roads Crossing Study (HRCS) Environmental Impact Statement (EIS) for the purpose of establishing whether the findings of the EIS remain valid. On July 20, 2000, the CTB voted to identify Candidate Build Alternative 9 (CBA 9) as the approved location. FHWA approved the Final EIS (FEIS) on March 1, 2001 and issued a Record of Decision (ROD) on June 4, 2001. The selected alternative is made up of five independent segments and, as stated in the 2001 FEIS, can be constructed in segments with each segment contributing to project purpose and need and each segment having logical termini and independent utility.¹ VDOT is reevaluating two segments of the selected alternative, as described below and illustrated in Figure 1. This project is locally referred to as Patriot's Crossing.

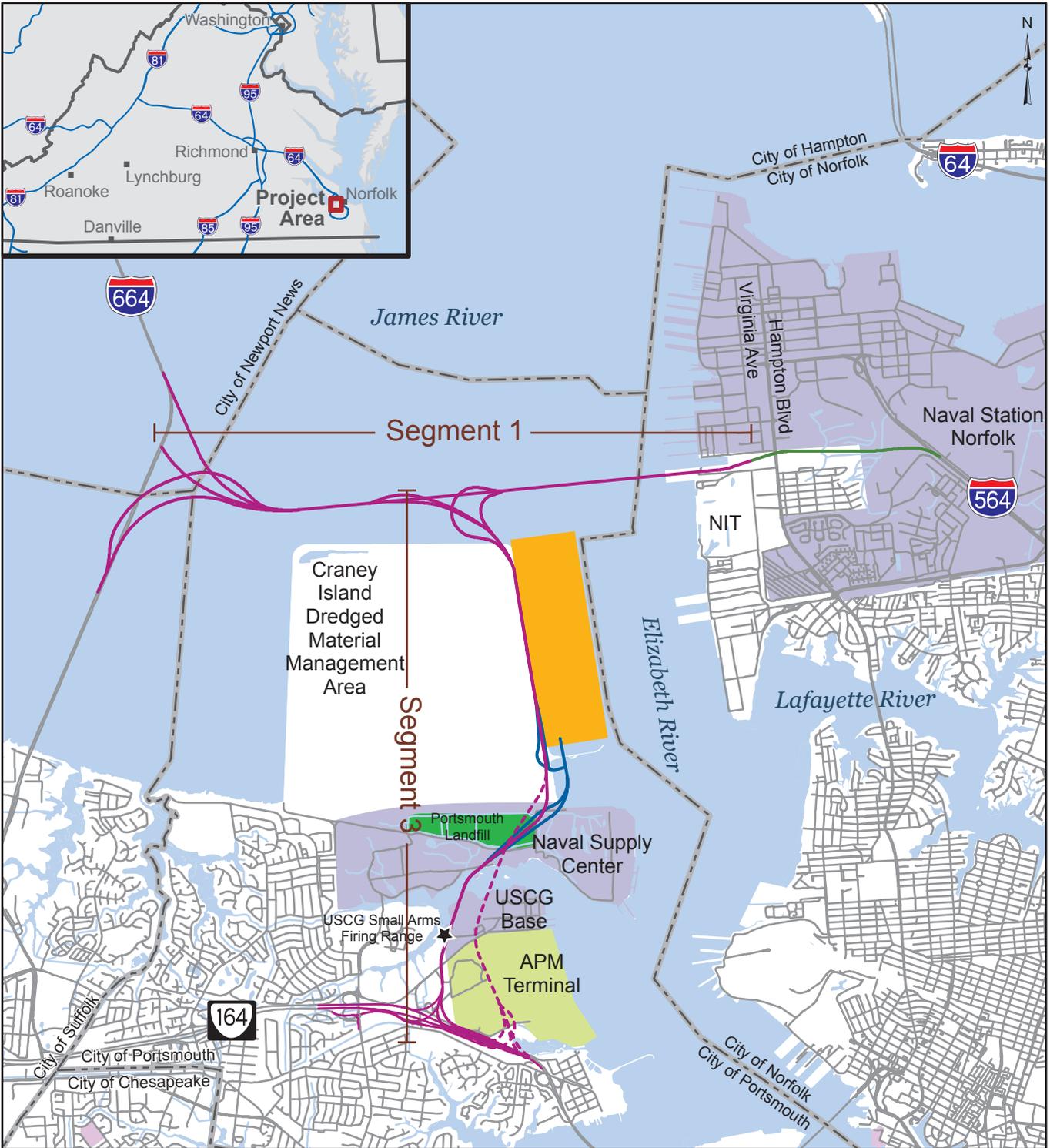
The segments of the selected alternative being reevaluated consist of HRCS Segment 1 and Segment 3 for a combined length of 12.4 miles.

- **Segment 1:** Extends on new alignment from the I-664/Monitor-Merrimac Memorial Bridge Tunnel in Hampton Roads, Virginia to its connection with the planned I-564 Intermodal Connector at Virginia Avenue near Naval Station Norfolk in Norfolk, Virginia. Segment 1 would have four lanes (two in each direction) along the new roadway, bridge, and tunnel. The length of Segment 1 is approximately 6.3 miles.
- **Segment 3:** Extends on new alignment from Segment 1 to a new connection to VA 164 in Portsmouth, Virginia. Segment 3 would have four lanes (two in each direction) along the new roadway. The length of Segment 3 is approximately 6.1 miles.

The eastern study limit for Segment 1 was shortened because it would now connect with the planned I-564 Intermodal Connector; a fully funded, committed project and currently under development². The widening of I-664 on the Peninsula and the Southside, including the Monitor-Merrimac Memorial Bridge Tunnel multimodal component of the selected alternative, are not included in this reevaluation because they are not part of this phase of construction. In the years following the completion of the HRCS FEIS in 2001, the 576-acre A.P. Moller-Maersk Container Terminal (APM Terminal) was constructed along the Elizabeth River in Portsmouth. A portion of this facility is now located within the original alignment of Segment 3, thereby necessitating a westward shift of the alignment to avoid impacting this port facility. This reevaluation addresses this change in the local condition, as well as

¹ Federal Highway Administration and the Virginia Department of Transportation. *Hampton Roads Crossing Study: Final Environmental Impact Study and Section 4(f) Evaluation*. March 2001. Page S-14.

² Hampton Roads Transportation Planning Organization. *Hampton Roads Transportation Project Priorities for the 2034 Long-Range Transportation Plan*. June 16, 2011. Page 2.
http://www.hrtpo.org/MTG_AGNDS/HRTPO/2011/06162011/E12B1%20-%20LRTP%20Handout.pdf.
Accessed 10/03/11.



Legend

- HRCS CBA 9 - Segments 1 & 3
- VA Port Authority Craney Island Interchange
- Planned I-564 Connector
- Craney Island Expansion Area
- Original Alignment of Segment 3
No Longer Under Consideration

Figure 1: Project Location Map



changes in the project limits, and also regulatory changes that have occurred since the FEIS. This reevaluation takes the form of an Environmental Assessment (EA), in accordance with 23 CFR 771.129 & 130.

1.2 Project History

The FEIS contains a description of project history up until the completion of that document. Project-related milestones that have occurred since the 2001 FEIS and ROD are summarized below.

- Nov. 2003 FHWA approved a Reevaluation of the HRCS FEIS. The Reevaluation concluded that there were no changes to the project or the surrounding environment that resulted in significant environmental impacts not already evaluated in the FEIS.
- Jan. 2011 VDOT requested the Hampton Roads Transportation Planning Organization (HRTPO) amend the Fiscal Year 2009 – 2012 Transportation Improvement Program (TIP) to add the “Patriot’s Crossing Study” for study. The Patriot’s Crossing Study is the combination of Segments 1 and 3 from the HRCS CBA 9.

1.3 Purpose and Need

The project’s purpose and need³, as documented in the 2001 HRCS FEIS, remain valid. The major findings then that still apply today are as follows:

- Congestion at the Hampton Roads Bridge Tunnel: The need to reduce congestion at the Hampton Roads Bridge Tunnel in order to reduce the peak rush hour traffic and improve safety still exists. Traffic volumes and future projections have been analyzed as part of this EA and results are presented below that substantiate this need.
- Accessibility: Access between the Southside and the Peninsula is currently limited to three crossings, and congestion at two of these crossings (Hampton Roads Bridge Tunnel and the James River Bridge) affect commuting and goods movement. Current access is not sufficient to accommodate new growth areas. This need still exists.
- Population and Employment: New population and employment growth in all areas of the region will increase the pressure on the transportation system to provide connections to jobs and services. As documented in this EA, population and employment continue to expand overall in the region so this need still exists.
- Military Facilities: The transportation network must support the movement of supplies and people to and from the military bases located throughout the study area. This need still exists.
- Tourism: The tourism industry generates an estimated 4 million visitors each year that use the regional transportation network (Virginia Business, 1993). The transportation network needs to

³ Virginia Department of Transportation. *Hampton Roads Crossing Study: Final Purpose and Need Statement and Technical Appendix*. November 1994.

continue to support the region’s growing tourism industry. Tourism continues to be a major economic component of the economy, so this need still exists.

- **Port and Shipbuilding Facilities:** The port and shipbuilding industry has a large presence in Hampton Roads. Expected increases in tonnage will continue to increase the volumes of freight moving to and from the local ports via freight rail, highways, and waterways. Linking port facilities to the transportation network is required to improve the efficient transfer of goods and to maintain the economic growth and vitality of the port facilities. Therefore the transportation network must grow to support this growing component of the Hampton Roads region's economic base. Several of these initiatives for goods movement, such as the Craney Island Eastward Expansion and the construction of the APM Terminal, are evidence that this need still exists in the study area.

1.3.1 Changes in Existing and Future Conditions In Comparison to FEIS

In the following section, the six elements of purpose and need identified above and as documented in the FEIS are compared to current trends and future conditions using updated information. Each of the six elements of need continues to be valid.

1.3.1.1 Hampton Roads Bridge Tunnel Congestion

Existing conditions for the 2001 HRCS FEIS were based on year 1994 traffic data. Data for 2000, which is the base year for this EA, shows that traffic volumes have increased substantially since 1994 on the I-64 Hampton Roads Bridge Tunnel, as well as on the I-664 Monitor-Merrimac Memorial Bridge Tunnel and the US 17 James River Bridge (Table 1). As shown in the table, volumes on the Monitor-Merrimac Memorial Bridge Tunnel have increased 105 percent since 1994, the largest increase in volumes since the FEIS was approved.

TABLE 1: COMPARISON OF 2001 HRCS FEIS AND 2011 EA BASE YEAR AVERAGE DAILY TRAFFIC VOLUMES

| Facility | No-Build, Base Year Scenarios | | |
|---|-------------------------------|----------------------|----------|
| | FEIS: Year 1994 ADT | EA: Year 2000 ADT | % Change |
| I-64 Hampton Roads Bridge Tunnel | 77,000 | 86,200 | 11.9% |
| I-664 Monitor-Merrimac Memorial Bridge Tunnel | 29,400 | 60,400 | 105.4% |
| US 17 James River Bridge | 23,000 | 28,600 | 24.3% |

Source: Michael Baker Jr., Inc.

Traffic data presented in the 2001 HRCS FEIS were updated using the Hampton Roads Regional Travel Demand Model for the intermediate year (2018) and the design year (2034). The findings are

documented in the Traffic Technical Memo completed for this study and available from VDOT.⁴ The updated traffic analysis provided comparisons of the future No-Build ADT volumes and volume-to-capacity (V/C) ratios from the 2001 HRCS FEIS and this study (Table 2). A Volume-to-Capacity (V/C) ratio is a measure of the amount of traffic on a given roadway in relation to the amount of traffic the roadway was designed to handle. Simply put, the V/C ratio represents the percentage of capacity used on the roadway. For example, a V/C ratio of 0.50 indicates a roadway is at 50 percent capacity. Generally a V/C ratio of 0.69 indicates congestion on a freeway facility and a V/C ratio of over 1.0 represents severe congestion.

TABLE 2: COMPARISON OF FUTURE NO-BUILD ADT VOLUMES

| Document | Future No-Build Traffic Data | I-64 Hampton Roads Bridge Tunnel | I-664 Monitor-Merrimac Memorial Bridge Tunnel | US 17 James River Bridge |
|----------------|------------------------------|----------------------------------|---|--------------------------|
| 2001 HRCS FEIS | Year 2018 ADT | 118,000 | 76,000 | 49,000 |
| | V/C Ratio | 1.74 | 1.09 | 0.72 |
| 2011 EA | Year 2018 ADT | 98,900 | 81,100 | 49,200 |
| | V/C Ratio | 1.45 | 1.16 | 0.72 |
| | Year 2034 ADT | 113,800 | 98,100 | 65,400 |
| | V/C Ratio | 1.68 | 1.40 | 0.96 |

Source: Michael Baker Jr., Inc.

Current projections for the Hampton Roads Bridge Tunnel, indicate that 2018 and 2034 volumes would be less than originally predicted in the FEIS for 2018 and the corresponding V/C ratios would be lower overall. However, the updated data shown in Table 2 still indicates a V/C ratio of over 1.0 in both 2018 and 2034 for the Hampton Roads Bridge Tunnel, indicating severe congestion is projected. The current projections and V/C ratios for the I-664 and US 17 Tunnels in 2018 are similar to those documented in the FEIS. This data supports the 2001 HRCS FEIS findings that congestion on the Hampton Roads Bridge Tunnel remains severe and that the other two crossings are approaching similar levels of congestion.

1.3.1.2 Accessibility

Access between the Southside and the Peninsula remains limited to the existing three crossings identified in the FEIS: I-64 Hampton Roads Bridge Tunnel, I-664 Monitor-Merrimac Memorial Bridge Tunnel, and US 17 James River Bridge. Access remains constrained due to the limited number of crossings and also due to the increasing congestion on all three crossings.

Future improvements to transportation facilities are planned by VDOT and documented in the Hampton Roads Transportation Planning Organization’s *Hampton Roads Transportation Project Priorities for the*

⁴ Michael Baker Jr., Inc. for the Virginia Department of Transportation. *Traffic Technical Memo*. 9/15/11.

2034 Long-Range Transportation Plan. While improvements in the transportation network are planned, no new Hampton Roads crossing, other than this project, are under consideration. The need for additional accessibility as documented in the FEIS remains.

1.3.1.3 Population and Employment

As stated in the FEIS, new population and employment growth in the region increases the pressure on the transportation system to provide connections to jobs and services. Updated data for the region show that both population and employment have increased as projected from 2000 - 2010 (Table 3).

TABLE 3: CHANGE IN POPULATION AND EMPLOYMENT - 2000 TO 2010

| Locality | Population | | | Total Employment (# full- & part-time jobs) | | |
|------------------------|-------------|-------------|----------|--|-----------|----------|
| | 2000 Census | 2010 Census | % Change | 2000 Census | 2009 | % Change |
| Virginia | 7,078,515 | 8,001,024 | 13.0% | 4,373,557 | 4,741,530 | 8.4% |
| City of Chesapeake | 199,984 | 222,209 | 11.1% | 101,451 | 120,009 | 18.3% |
| City of Hampton | 146,437 | 137,436 | -6.1% | 82,306 | 77,986 | -5.2% |
| City of Newport News | 180,150 | 180,719 | 0.3% | 113,946 | 116,034 | 1.8% |
| City of Norfolk | 234,403 | 242,803 | 3.6% | 222,688 | 212,974 | -4.4% |
| City of Portsmouth | 100,565 | 95,535 | -5.0% | 52,174 | 56,778 | 8.8% |
| City of Suffolk | 63,677 | 84,585 | 32.8% | 25,883 | 33,222 | 28.4% |
| City of Virginia Beach | 425,257 | 437,994 | 3.0% | 232,622 | 242,119 | 4.1% |

Source: U.S. Census Bureau, 2000 Census, 2010 Census and U.S. Department of Commerce – Bureau of Economic Analysis.

The 2001 HRCS FEIS stated that population in the Hampton Roads area would experience an increase of 13 percent from 1994 to 2018. Based on current, updated regional projections for 2000 to 2020, population is anticipated to increase 16.5 percent. Looking towards the design year, population is anticipated to grow 18 percent between 2010 and 2030.⁵ This demonstrates an even greater population demand on transportation facilities in the Hampton Roads region and confirms the growth data presented in the FEIS.

⁵ Virginia Employment Commission, Economic Information Services Division, Labor Market Information. *PDC 23 (Hampton Roads): Community Profile*. Updated 10/01/11. Page 7.
<http://www.alex.vec.virginia.gov/lmi/pdfs/communityprofiles/5109000323.pdf>. Accessed 10/03/11

The 2001 HRCS FEIS stated that, during the period of 1970 to 1994, the Hampton Roads region added jobs at an annual rate of 2.6 percent. Current projections for the period of 2008 to 2018 indicate a slightly slower annual employment growth rate of 1.4 percent due to the recent recession.⁶ This decline relative to the rate included in the FEIS reflects the national economic recession that began in 2008. However, employment growth is anticipated to rebound by 2017 to pre-recession rates and the overall regional increase in employment in the future will continue to add pressure to the transportation system, as documented in the FEIS.⁷

1.3.1.4 Military Facilities

The 2001 HRCS FEIS stated that military personnel comprised 14 percent of total employment in the Hampton Roads area. Today, this number has grown to almost 20 percent of the area's total employment.⁸ The 2001 HRCS FEIS stated that Department of Defense expenditures and obligations in Hampton Roads totaled \$4.67 billion. In fiscal year 2010, the military's total direct economic impact to the Hampton Roads region was approximately \$13.5 billion.⁹ Based on the growing role and presence of the military in the Hampton Roads region, the FEIS's statement that the transportation network must support the movement of military supplies and people remains valid.

Since the release of the 2001 HRCS FEIS, the Hampton Roads Transportation Planning Organization (HRTPO) completed a study of the future military transportation needs in the Hampton Roads region.¹⁰ One of the HRTPO's recommendations was the military's need for the third crossing approved in the 2001 HRCS FEIS.

1.3.1.5 Tourism

The 2001 HRCS FEIS reported that the tourism industry generated an estimated 4 million visitors each year that use the transportation network. It also stated that, according to a 1992 Virginia Beach Overnight Visitor profile, the primary mode of transportation for tourists is the automobile. The 2010 data from this same source states that over 95 percent of tourists visit the region via private vehicle.¹¹ From 2003 to

⁶ Ibid. Page 27.

⁷ Hampton Roads Planning District Commission. *Regional Forecast 2011: Hampton Roads Employment Loss and Time Until Employment Returns*. January 20, 2011. Page 21.

⁸ Hampton Roads Transportation Planning Organization. *Hampton Roads Military Transportation Needs Study: Highway Network Analysis*. September 2011. Page 1.
<http://www.hrtpo.org/Documents/Military%20Transportation%20Needs/Military%20Transportation%20Needs%20%20Highway%20Network%20Analysis%20DRAFT.pdf>. Accessed 10/03/11.

⁹ Department of the Navy, Navy Region Mid-Atlantic Public Affairs Office. *Navy Releases New Economic Impact Report for Hampton Roads Area*. 9/15/11.
http://www.cnrc.navy.mil/navycni/groups/public/@cnrma/documents/document/cnicp_a269332.pdf. Accessed 10/03/11.

¹⁰ Hampton Roads Transportation Planning Organization. *Hampton Roads Military Transportation Needs Study: Highway Network Analysis. DRAFT*. July 2011.

¹¹ Gilbert R. Yochum, PhD and Vinod B. Agarwal, PhD, Old Dominion University, College of Business and Public Administration, for The Virginia Beach Convention & Visitors Bureau. *Summer 2010 Virginia Beach Overnight Visitor Profile*. November 2010. Page 18.
<http://www.vbcvb.com/media/12329/2010%20vb%20overnight%20visitor%20profile.pdf>. Accessed 10/03/11.

2009, tourist expenditures in the Hampton Roads region increased by 25.8 percent.¹² These new findings are consistent with the 2001 HRCS FEIS that the tourism industry is growing in the Hampton Roads area. The transportation network needs to continue to support the region's growing tourism industry.

1.3.1.6 Port and Shipbuilding Facilities

The 2001 HRCS FEIS stated that the port and shipbuilding industry has a large presence in Hampton Roads and that increases in tonnage will continue to increase the volumes of freight moving to and from the local ports via freight rail, highways, and waterways. In 1995, the Virginia Port generated 120,000 jobs in Virginia and \$3.0 billion in wages for Virginians. In 2010, the Port of Virginia generated 343,000 jobs, \$13.5 billion in employee compensation, and \$41 billion in total revenue for Virginia.¹³ As the updated data indicate, the findings of the 2001 HRCS FEIS remain valid. Linking port facilities to the transportation network is required to improve the efficient transfer of goods and to maintain the economic growth and vitality of the port facilities.

¹² Virginia Tourism Corporation. *Domestic Traveler Expenditures by Region: 2003 – 2009*. <http://www.vatc.org/research/2009ExpendituresByRegion.xls>. Accessed 10/03/11.

¹³ The Port of Virginia. *Economic Development*. <http://www.portofvirginia.com/development/economic-development.aspx>. Accessed 10/03/11.

CHAPTER 2: ALTERNATIVES CONSIDERED

2.1 Introduction

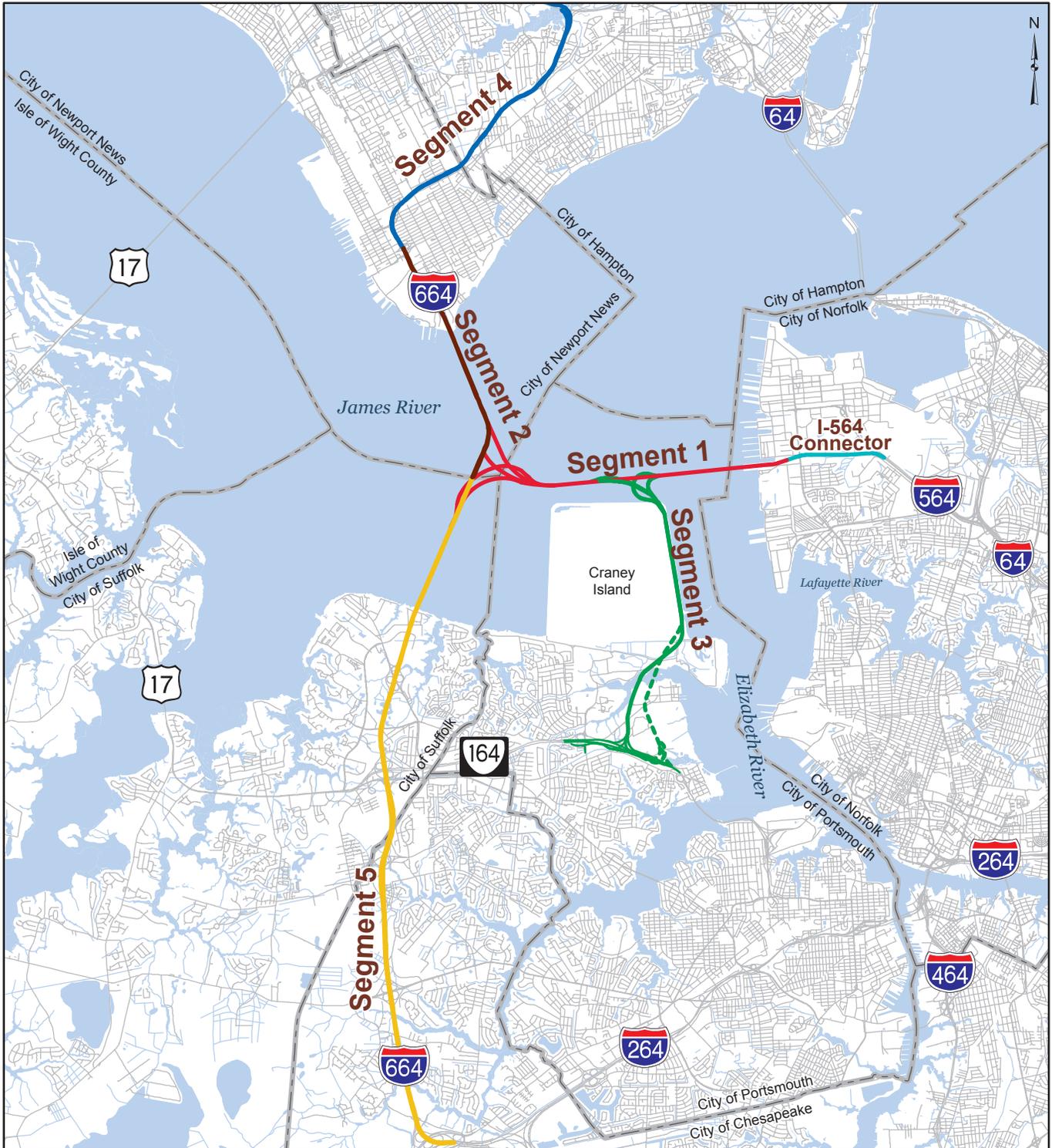
This section describes the alternative being reevaluated, Segments 1 and 3 of the HRCS adopted Candidate Build Alternative 9 (CBA 9). This section also describes the proposed alignment shift for Segment 3 to avoid impacts to the recently constructed APM Terminal in Portsmouth. The no action or No-Build Alternative is also discussed and serves as a baseline for comparison.

2.2 Alternatives Development and Screening

Because this EA addresses revisions to an alternative already approved with a Record of Decision (ROD), a detailed alternatives analysis for the entire CBA 9 alignment was not conducted. Alternatives evaluated in the FEIS consisted of the No-Build, Transportation System Management (TSM), Candidate Build Alternatives considered but not selected, and the Candidate Build Alternative approved by the Commonwealth Transportation Board (CTB) and FHWA. As illustrated in Figure 2, CBA 9 is made up of five separate segments.

- **Segment 1:** A new bridge tunnel and roadway from existing Monitor-Merrimac Memorial Bridge Tunnel to I-564 in Norfolk with four conventional travel lanes and two lanes for multimodal use. Widen I-564 in Norfolk to eight conventional travel lanes and 2 multimodal use lanes. The new crossing for Segment 1 was originally referred to as the Hampton Roads Third Crossing.
- **Segment 2:** A new bridge tunnel parallel to existing I-664 Monitor-Merrimac Memorial Bridge Tunnel with two tubes of the tunnel carrying four conventional travel lanes and one tube carrying two multimodal use lanes.
- **Segment 3:** A four lane connection from the new facility, just east of Craney Island, running south to VA 164 in Portsmouth. The southern portion of this segment, from the future Craney Island Marine Terminal southward to VA 164, is referred to as the Craney Island Connector.
- **Segment 4:** Widen I-664 on the Peninsula to eight conventional travel lanes and two additional lanes for multimodal use.
- **Segment 5:** Widen I-664 on the Southside to six conventional travel lanes.

The 2001 HRCS FEIS stated that CBA 9 can also be constructed in usable segments with: 1) each segment contributing to project purpose and need and 2) each segment having logical termini and independent utility.



Candidate Build Alternative 9 (CBA 9)

- Segment 1
- Segment 2
- Segment 3 Old Alignment
- Segment 3 New Alignment
- Segment 4
- Segment 5
- Planned I-564 Connector

Figure 2: Candidate Build Alternative 9 (CBA 9)



2.3 Build Alternative

Segment 1 would be on new alignment from the I-664 Monitor-Merrimac Memorial Bridge Tunnel in Hampton Roads, Virginia to its connection with the planned I-564 Intermodal Connector at Virginia Avenue near Naval Station Norfolk in Norfolk, Virginia. Segment 1 includes a new interchange near the south approach structure of the Monitor-Merrimac Memorial Bridge Tunnel that would connect to a new roadway and bridge tunnel extending from I-664 to the planned I-564 Intermodal Connector in Norfolk. This interchange would provide access to the existing Monitor-Merrimac Memorial Bridge Tunnel and would provide a connection along the east side of Craney Island to VA 164 in Portsmouth. Since the completion of the 2001 HRCS FEIS, the eastern terminus for Segment 1 has been shortened to Virginia Avenue because it would now connect with the planned I-564 Intermodal Connector rather than I-564 farther to the east. The length of Segment 1 is approximately 6.3 miles. Segment 1 includes a tunnel under the Elizabeth River so as not to impede shipping traffic. Two tunnels would be required to accommodate two lanes for eastbound traffic and two lanes for westbound traffic.

Segment 3 would be on new alignment and would extend from its connection with Segment 1 north of Craney Island southward to its connection with VA 164. The length of Segment 3 is approximately 5.7 miles. The southern portion of Segment 3, from the Craney Island Marine Terminal southward to VA 164, is locally referred to as the Craney Island Connector Road.

Segments 1 and 3 would provide five new points of access:

- At its western terminus, Segment 1 would provide a new interchange near the south approach structure of the Monitor-Merrimac Memorial Bridge Tunnel and would include a new roadway and bridge tunnel extending from I-664 to the I-564 Intermodal Connector in Norfolk. This new interchange would provide Segment 1 access to the existing I-664 Monitor-Merrimac Memorial Bridge Tunnel.
- At its eastern terminus, Segment 1 would provide a through-travel connection to the planned I-564 Intermodal Connector near Virginia Avenue in Norfolk. In addition, restricted access would be provided in the vicinity of Virginia Avenue for traffic accessing the Naval Station Norfolk. This restricted access would be gated and would be limited to authorized Naval Station Norfolk traffic and to authorized Norfolk International Terminal (NIT) traffic.
- A new interchange would be provided where Segment 1 and Segment 3 connect to the north of Craney Island.
- For Segment 3, a new interchange would be provided on Craney Island to provide additional access to the Virginia Port Authority's Craney Island Marine Terminal, the U.S. Navy Fuel Depot, the U.S. Coast Guard Support Center, and the APM Container Terminal port facility in Portsmouth.
- For Segment 3, at its southern terminus, a new interchange would be provided where Segment 3 connects to VA 164.

Segment 1 and Segment 3 would have four lanes (two in each direction) along the new roadway, bridge, and tunnel. While the HRCS FEIS stated that Segment 1 would include a three-tube tunnel typical

section to cross the Elizabeth River and connect to Norfolk, only two of the three tubes are being reevaluated as part of this EA: one tube for two lanes of eastbound vehicular traffic and one tube for two lanes of westbound vehicular traffic. The third tube for multimodal travel could be constructed at a future date and would not be precluded by construction of two tubes; it is not part of this phase of the project. Similarly, the widening of I-664 on the Peninsula and the Southside, including the Monitor-Merrimac Memorial Bridge Tunnel multimodal component of CBA 9, are not currently being studied as part of this reevaluation because they are not part of this phase of construction. However, construction of Segment 1 and Segment 3 would not preclude the future implementation of the multimodal elements of CBA 9.

2.3.1 Proposed Shift of CBA 9 - Segment 3

Following the CTB's selection of CBA 9 in 2001, regional transportation plans accounted for the future construction of a dedicated corridor for Segment 3, from the Craney Island Marine Terminal (CIMT) to VA 164. The corridor alignment was included in the Hampton Roads Planning District Commission's 2030 Long-Range Transportation Plan and the 2001 HRCS FEIS. However, after the original alignment for Segment 3 was adopted, the privately-owned APM Terminal was constructed within the limits of Segment 3. Construction of the APM Terminal necessitates shifting a portion of Segment 3 to the west to avoid potential impacts to the terminal.

In a subsequent, separate study led by the Virginia Port Authority (VPA), the VPA worked with VDOT to design a road and rail connection between VA 164 and Craney Island (i.e., the Craney Island Road and Rail Connector). For the VPA, the Craney Island Road and Rail Connector is essential for providing additional transportation capacity needed to handle the increasing cargo demands with the opening of the Craney Island Marine Terminal. The VPA indicated that the shifted alignment of the southern portion of Segment 3 would still provide a successful and efficient connection to the northern portion of Segment 3 and Segment 1. In 2010, the Craney Island Marine Terminal interchange modification request received approval from VDOT and the Federal Highway Administration (FHWA) with respect to the proposed conceptual geometric design of the Craney Island interchange with VA 164 and the shifted alignment of Segment 3.¹⁴

The original Segment 3 alignment and the shifted alignment of Segment 3 are illustrated on Figure 1. The shifted alignment of Segment 3 is the alignment that is evaluated in this document.

2.3.2 Roadway Design Components

Design criteria were established to meet all applicable VDOT, FHWA, and AASHTO criteria. The overall design for CBA 9 is a limited access urban freeway at 65 mph. The roadway design components have not changed since the original CBA 9 was endorsed by the CTB in 2001.

¹⁴ Kimley-Horn and Associates, Inc. for the Virginia Port Authority. *Craney Island Marine Terminal: Interchange Modification Report Executive Summary*. March 2010. Page 1.

2.3.3 Tunnel Design Components

The tunnel design components have not changed since the original CBA 9 was endorsed by the CTB in 2001. The exception to this is the delayed consideration and construction of the proposed third tunnel that would accommodate the multimodal component of Segment 1.

2.3.4 Island Design Components

The island design components have not changed since the original CBA 9 was endorsed by the CTB. The tunnel would originate on artificial islands built on either side of the shipping channel. Segment 1 would require one island on the west side of the Norfolk Harbor Channel. The island would measure about 285 feet wide at its top.¹⁵

¹⁵ Ibid. Pages 37 – 40.

CHAPTER 3: ENVIRONMENTAL CONSEQUENCES

3.1 Overview of Environmental Issues

This section describes the changes in the environmental consequences of the Build Alternative (CBA 9 – Segments 1 and 3) from the approved EIS to the current proposed project. It identifies changes in land use, regulatory requirements, or conditions that are substantively different than the conditions at the time of the 2001 HRCS FEIS. For the purposes of the environmental analyses, impacts have been evaluated using similar methodologies to those used in the 2001 HRCS FEIS. The environmental consequences are reported assuming a project “footprint” corridor of 500 feet (250 feet on either side of the alignment’s proposed centerline).

Where possible, direct comparisons have been provided distinguishing between impacts of the 2011 shifted CBA 9 (Segments 1 and 3) and the original 2001 CBA 9 (Segments 1 and 3). In such instances the new, shifted alignment is referred to as the “Build Alternative” whereas the original alignment is referred to as “Original CBA 9”.

Table 4 quantifies and compares the impacts between the Build Alternative and the Original CBA 9. In the text that follows, additional detail is provided for those environmental issues that have changed or for which new information has been provided in this reevaluation. Where there is no substantive change between the Build Alternative and the Original CBA 9, a simple statement that the original findings of the 2001 HRCS FEIS are still valid is provided.

3.2 Traffic and Transportation

3.2.1 Average Daily Traffic Volumes

Table 5 provides a comparison of traffic volumes as presented in the 2001 HRCS FEIS to the most recent projections for this EA. For this EA, volumes are presented for 2018 and 2034. As presented in the 2001 HRCS FEIS, CBA 9 would be effective in reducing congestion and traffic volumes on the Hampton Roads Bridge Tunnel. Based on updated traffic projections for this EA, the Build Alternative would also reduce volumes at this crossing. The Monitor-Merrimac Bridge Tunnel Crossing would see an increase in traffic volumes as a result of the new crossing in both the 2001 HRCS FEIS analysis and this analysis. The reason for the increase in volume at the Monitor-Merrimac crossing is because the Build Alternative connects to this crossing in both cases. The primary difference between the FEIS and the EA is that the 2001 HRCS FEIS travel demand model projected greater traffic volumes than does the current model.

For both 2018 and 2034, traffic volumes on Segment 1 are slightly lower than projected for the 2001 HRCS FEIS. This is likely due to the differences in the models used for the projections. For both 2018 and 2034, traffic volumes on Segment 3 are greater than those projected for the 2001 HRCS FEIS. This is likely attributable to the additional traffic generated by the new Craney Island Marine Terminal and the APM Terminal which were only in planning stages at the time of the 2001 HRCS FEIS.

TABLE 4: SUMMARY OF IMPACTS

| Category | Impacts* | |
|--|--|--|
| | Original CBA 9 Segments 1 & 3 | Build Alternative CBA 9 Segments 1 & 3 |
| Total Area within Corridor (acres) | 933 acres | 1,134 acres |
| Length (miles) | 11.3 miles | 12.4 miles |
| Interchanges | 4 | 5 |
| # Homes Displaced | 3 | 16 |
| # Businesses Displaced | 0 | 1 |
| # Schools Displaced | 0 | 0 |
| # Churches Displaced | 0 | 0 |
| # Cemeteries Displaced | 0 | 0 |
| # Other Community Facilities Displaced (rescue squads, fire stations, hospitals, libraries, military facilities) | 3 military facilities (2 USCG buildings/parking lots & DGPS Tower) | 1 military facility (USCG small arms firing range) |
| # Cultural Resource Properties Affected (NRHP Listed or Eligible) | 0 | 0 |
| Section 4(f) Property Used | 0 | 0 |
| Hazardous Materials Sites | 2 | 3 |
| Length of Streams Disturbed | 74,069 linear feet (14.0 miles) | 73,819 linear feet (13.98 miles) |
| Wetlands Displaced | 15.7 acres | 35.0 acres |
| Floodplains Crossed | 91 acres | 146 acres |
| Threatened / Endangered Species | 0 | 0 |
| Forest Land Displaced | 14 acres | 32 acres |
| Violations of National Ambient Air Quality Standards (NAAQS) | 0 | 0 |
| Sensitive Noise Receptors Impacted | N/A | 26 residences |

Source: Michael Baker Jr., Inc.

* Impacts are based on 500' wide corridor of the Build Alternative. Impacts will likely be further reduced during final design.

TABLE 5: COMPARISON OF FUTURE BUILD TRAFFIC VOLUMES

| Facility | 2001 HRCS FEIS | | | 2011 EA | | | | |
|---|--------------------|-----------------|---------------------------------|--------------------|---------------------|---------------------------------|----------------------|--|
| | No-Build Year 2018 | CBA 9 Year 2018 | % Change from No-Build to Build | No-Build Year 2018 | Build Alt Year 2018 | % Change from No-Build to Build | Build Alt. Year 2034 | % Change from 2018 Build to 2034 Build |
| I-64 Hampton Roads Bridge Tunnel | 118,000 | 98,000 | -17% | 98,900 | 87,400 | -12% | 100,400 | 15% |
| I-664 Monitor Merrimac Memorial Bridge Tunnel | 76,000 | 143,000 | 88% | 81,100 | 113,800 | 40% | 134,700 | 18% |
| Segment 3 (Segment 1 - VA 164) | - | 39,000 | - | - | 45,300 | - | 53,600 | 18% |
| Segment 1 (West of Segment 3) | - | 75,000 | - | - | 61,200 | - | 74,100 | 21% |
| Segment 1 (East of Segment 3) | - | 89,000 | - | - | 78,800 | - | 90,400 | 15% |
| US 17 James River Bridge | 49,000 | 44,000 | -10% | 49,200 | 52,100 | 6% | 70,600 | 36% |
| I-64 (I-664 – Mercury Blvd.) | 153,000 | 163,000 | 7% | 173,500 | 173,100 | 0% | 192,600 | 11% |
| I-664 (I-64 – Downtown Newport News) | 77,000 | 136,000 | 77% | 82,200 | 91,100 | 11% | 107,600 | 18% |
| VA 143 Jefferson Avenue (I-664 – Mercury Blvd.) | 34,000 | 33,000 | -3% | 31,600 | 35,500 | 12% | 40,300 | 14% |
| VA 337 Hampton Blvd. (Lafayette River–Midtown Tunnel) | 56,000 | 35,000 | -38% | 42,500 | 40,800 | -4% | 43,700 | 7% |
| I-64 (I-564 – I-264) | 158,000 | 171,000 | 8% | 156,200 | 160,100 | 2% | 173,300 | 8% |
| I-64 (I-464 – I-664) | 117,000 | 107,000 | -9% | 84,700 | 82,900 | -2% | 94,300 | 14% |
| I-264 Downtown Tunnel | 104,000 | 93,000 | -11% | 108,500 | 103,700 | -4% | 119,000 | 15% |
| US 58 Midtown Tunnel | 55,000 | 41,000 | -25% | 60,500 | 49,100 | -19% | 57,600 | 17% |
| VA 164 Western Freeway (I-664 – Midtown Tunnel) | 63,000 | 63,000 | 0% | 70,600 | 63,100 | -11% | 74,900 | 19% |

Source: Michael Baker Jr., Inc.

3.2.2 Vehicle Miles Traveled (VMT)

As presented in Table 6, information for VMT shows that the 2001 HRCS FEIS had a slight reduction in VMT for CBA 9 whereas the new projections show a slight increase overall in Hampton Roads region due to the Build Alternative. This result is most likely due to the assessment of constructing only a portion of the overall CBA 9 as documented in the 2001 HRCS FEIS.

TABLE 6: COMPARISON OF FUTURE VEHICLE MILES TRAVELED

| 2001 HRCS FEIS | | | 2011 EA | | | | | |
|----------------|------------|---------------------------------|------------|------------|---------------------------------|------------|------------|--|
| No-Build | CBA 9 | % Change from No-Build to Build | No-Build | Build Alt | % Change from No-Build to Build | No-Build | Build Alt. | % Change from EA 2018 Build to EA 2030 Build |
| EIS 2018 | EIS 2018 | | EA 2018 | EA 2018 | | EA 2030 | EA 2030 | |
| 35,634,196 | 35,082,445 | -2% | 41,136,041 | 41,642,790 | 1% | 46,805,789 | 47,261,080 | 1% |

Source: Michael Baker Jr., Inc.

3.2.3 Travel Time

The 2001 HRCS FEIS reported a total, peak hour travel time savings of 174 minutes within 10 key origin-destinations for CBA 9 for year 2018. Based on the new model projections, the Build Alternative would provide 236 minutes of peak hour travel time savings using the same origins and destinations. This shows an overall improvement in travel times under the Build Alternative compared to the 2001 HRCS FEIS’s CBA 9.

3.3 Land Use

3.3.1 Consistency with Comprehensive Plans

The project is included in regional plans for Hampton Roads. In January 2011, the study of CBA 9 - Segments 1 and 3 was included in the Hampton Roads Transportation Planning Organization’s (HRTPO) Transportation Improvement Plan (TIP) for fiscal years 2009 to 2012. The project is also included for study in the HRTPO’s fiscally constrained 2030 Long-Range Transportation Plan. The HRTPO’s *Hampton Roads Transportation Project Priorities for the 2034 Long-Range Transportation Plan* indicates that the Craney Island Connector (southern portion of Segment 3) is the #1 construction priority

for intermodal projects.¹⁶ Patriot’s Crossing, as this project is called locally, is listed as a priority project currently funded for transportation study only.

The City of Portsmouth, Virginia’s comprehensive plan, *Destination 2025: Setting a Bold New Course*, cites “a third crossing of the James River north from Western Freeway” as a transportation priority for the city and the region.¹⁷ The City of Norfolk’s comprehensive plan, *PlaNorfolk 2030* is in the initial stages of development. However, comments received from Paul Fraim, Mayor, on 6/15/11 stated that the city strongly supports the advancement of Patriot’s Crossing and that impacts to city resources are expected to be minimal.

3.3.2 Land Use

The Build Alternative is consistent with local land use plans. Since the release of the 2001 HRCS FEIS, land use in Norfolk remains industrial with no change from the FEIS. Land use in Portsmouth has changed since the FEIS was completed. The ongoing construction of the 580 acre Craney Island Eastward Expansion and the Craney Island Marine Terminal, as well as the development of the 579 acre APM Terminal are changes in land use overall.

3.3.3 Land Cover

For the Build Alternative, land cover within 500-foot wide corridor was compared to the findings of the FEIS. In comparison to the FEIS, less Open Water is affected due to the Craney Island Eastward Expansion project (53% compared to 62%), more forested land is affected due to the shift westward (8% compared to 2%), and generally more developed areas including developed open space and urban uses are affected than documented in the FEIS. This is consistent with the changes in land use that occurred since the 2001 HRCS FEIS was completed.

3.4 Socioeconomics

3.4.1 Population

Updated population figures were presented in Table 3. Population trends are the same as documented in the HRCS FEIS, although the rate of population growth is slightly higher in the updated trends.

3.4.2 Right-of-Way and Relocations

A comparison of potential relocations and right-of-way (ROW) acquisitions within the Build Alternative compared to Original CBA 9 are identified in Table 7. The Build Alternative has the potential to require the acquisition of 13 more residences than the Original CBA 9 and require partial acquisitions from 6 more residences. It also has the potential to require the acquisition of one more business and would

¹⁶ Hampton Roads Transportation Planning Organization. *Hampton Roads Transportation Project Priorities for the 2034 Long-Range Transportation Plan* June 16, 2011. Page 4.

¹⁷ City of Portsmouth, Virginia. *Destination 2025: Setting a Bold New Course. City of Portsmouth Virginia Comprehensive Plan 2005*. Adopted April 26, 2005. Page 63.

require one less partial acquisition from a business than documented in the FEIS. No farms or nonprofit organizations would be displaced under either. This difference in the number of residential relocations between the Build Alternative and the Original CBA 9 is due to the larger Segment 3/VA 164 interchange footprint for the Build Alternative.

TABLE 7: ROW AND RELOCATIONS

| ROW or Relocation Type | Impacts | |
|---|---|--|
| | Original CBA 9 | Build Alternative |
| # Residences | 3 Total Acquisition 16 Partial Acquisition | 16 Total Acquisition 22 Partial Acquisition |
| # Businesses | 0 Total Acquisition 2 Partial Acquisition | 1 Total Acquisition 1 Partial Acquisition |
| # Farms | 0 | 0 |
| # Non-Profits | 0 | 0 |
| Area within VPA’s Norfolk International Terminal (NIT) | 25.7 acres | 25.7 acres |
| Area within Norfolk Southern Railroad Property (adjacent to NIT) | 19.3 acres | 19.3 acres |
| Area within U.S. Naval Station Norfolk | 0 acres | 0 acres |
| Area within U.S. ACOE’s Craney Island Dredged Material Management Area (CIDMMA) / Naval Supply Center | 175.8 acres | 175.8 acres |
| Area within U.S. Coast Guard Base | 23.1 acres | 26.9 acres |
| Area within VPA’s APM Container Terminal | 53.4 acres | 53.5 acres |
| Area within City of Portsmouth Landfill | 122.6 acres | 122.6 acres |

Source: Michael Baker Jr., Inc.

The Build Alternative has slightly more impact on U.S. Coast Guard acreage than documented in the FEIS and it would require the relocation of the small arms firing range facility on U.S. Coast Guard property (Figure 1). Replacement property for the small arms firing range will take into account the explosive arc danger area requirements (Appendix B).¹⁸ A suitable relocation site has been identified to the south of the existing facility. Coordination for the acquisition of that site is underway with the Virginia Port Authority. Where Segment 3 traverses Coast Guard property, the Coast Guard requested a

¹⁸ Letter from United States Coast Guard, Captain R. D. Gibson letter to Jeffery C. Cutright, VDOT regarding potential impacts from alignment shift of Segment 3. April 16, 2002.

concrete security barricade along the eastern side of the roadway, as well as black-out screening to block the view of the base from the roadway. This request would be addressed during final design.

Shifting Segment 3 to the west avoids recent land use changes in the study area. The Build Alternative now would avoid the relocation of two U.S. Coast Guard administrative facilities and parking lots, as well as the Short Range Aids to Navigation (SRAN) equipment baseline for marine navigation; the Differential Global Positioning System (DGPS) tower and signal radiation pattern. It would also avoid the relocation of the headquarters building, entry gate, and parking/storage area for the APM Terminal. All of these facilities would have been affected by Original CBA 9 in the location identified in the FEIS.

Consistent with the 2001 HRCS FEIS, ROW would be needed from five government entities: City of Portsmouth Landfill, Virginia Port Authority – Norfolk International Terminal (NIT), Navy Fuel Depot, Coast Guard Support Center, and the Corps of Engineer’s Craney Island. However, since the release of the FEIS, ROW acquisition from two large land owners has changed. The Coast Guard indicated it would sell the ROW rather than allow an easement on its property. The APM Terminal, built after the release of the FEIS, is privately owned but is currently under a 20-year lease to the Virginia Port Authority; ROW negotiations would be with the private property owner and not the Port Authority.

Jurisdictional wetlands on the APM Terminal property would be within the ROW for the Build Alternative and are currently protected by a restrictive covenant. Coordination with the APM Terminal property owners and appropriate regulatory agencies will be necessary to lift the deed restriction and secure the necessary wetland permits to encroach upon these areas.

3.4.3 Environmental Justice

Similar to the findings of the FEIS, the Build Alternative is consistent with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*. There are no minority or low-income populations along the Build Alternative corridor that would suffer disproportionately high and adverse environmental effects from the proposed project. The minority portion of the population for the Norfolk and Portsmouth census block groups traversed by the Build Alternative is calculated to be 42.2 percent and 28.6 percent, respectively. This is below the city-wide values reported for Norfolk and Portsmouth of 51.4 percent and 55.9 percent, respectively. This is also below what was reported in the 2001 HRCS FEIS for the 1990 Census (43.3 percent Norfolk and 48.6 percent Portsmouth).

The percentage of low-income population is 5.9 percent and 2.1 percent for the respective Norfolk and Portsmouth census block groups. This too is below the city-wide values reported for Norfolk (17 percent) and Portsmouth (15.2 percent). Based on 1990 Census data, the 2001 HRCS FEIS reported a low-income population of 16.5 percent in Norfolk and 16.7 percent in Portsmouth.

3.4.4 Community Cohesion

Consistent with what was reported in the 2001 HRCS FEIS, economic opportunities would result from the new connections and/or increased accessibility to the neighborhoods and economic centers located in the vicinity of the Build Alternative. These findings are similar to those reported in the 2001 HRCS FEIS. No community cohesion impacts are anticipated, as documented in 2001.

3.4.5 Economic Impacts

As reported in the 2001 HRCS FEIS, Original CBA 9 would have broad, region-wide impacts but localized impacts could vary. Based on the information presented in the 2001 HRCS FEIS, the economic impacts of the Build Alternative on tourism, the value of time lost, job opportunities, and the cost of living remain valid. The economic impacts to these areas are discussed below. They are all considered to be beneficial, as noted in the 2001 HRCS FEIS.

3.4.5.1 Port of Virginia

Since the release of the 2001 HRCS FEIS, there have been several major changes in port facilities in the Hampton Roads region. One of the Virginia Port Authority's (VPA) general cargo facilities, the Norfolk International Terminal (NIT), has undergone an expansion. It is now a 648 acre facility and is the Port of Virginia's largest terminal. The privately-owned, 576 acre APM Terminal was constructed and is now under a 20-year lease to the VPA, effective in 2010. The new Craney Island Marine Terminal (CIMT), currently under construction, will be the VPA's fourth state-owned marine terminal and will help meet long-term cargo capacity needs in Hampton Roads. The first phase of this new terminal is expected to be operational by 2020. Dependence upon the region's highway and tunnel system will only increase in future years as cargo demands for the Port continue to grow. Consistent with the findings in the 2001 HRCS FEIS, the Build Alternative would help meet the growing needs of the Port.

3.4.5.2 Military

The 2001 HRCS FEIS identified the need to support the movement of people and goods to and from the region's military bases. The ability of the Build Alternative to do this remains unchanged. Naval Station Norfolk is the world's largest navy base with the largest number of military and civilian employees, totaling more than 71,000.¹⁹

3.4.5.3 Tourism

The findings of the 2001 HRCS FEIS remain valid regarding tourism and the Build Alternative.

¹⁹ The Associated Press. NavyTimes, A Gannett Company. *Navy News: Navy Economic Impact on Hampton Roads Grows*. <http://www.navytimes.com/news/2011/01/ap-navy-economic-impact-on-hampton-roads-grows-010511/>. 1/05/11. Accessed 9/27/11.

3.5 Prime Farmlands and Agricultural and Forestal Districts

A Farmland Conversion Impact Rating Form was completed for the 2001 HRCS FEIS and impacts to farmlands were determined insufficient to warrant mitigation. The Farmland Protection Policy Act (FPPA) specifies that activities not subject to the FPPA include “projects on land already in urban development or used for water storage” (7 U.S.C. 4201). Urban development includes those lands designated by the U.S. Census as “Urban Area”. Because the entire project area is in an area designated by the US Census as "Urban Area" or is a water body, the requirements of the Farmlands Protection Policy Act no longer apply to the project.

There are no designated agricultural or forestal districts in the cities of Norfolk or Portsmouth.

3.6 Parks and Recreation Resources

The results of the FEIS still apply for these segments. There are no parks or recreation resources located within or adjacent to the Build Alternative.

3.7 Historic Properties

The findings of the 2001 HRCS FEIS remain valid for the Build Alternative in that it is anticipated that the Build Alternative would have no effect on historic resources currently listed or eligible for listing on the National Register of Historic Places (NRHP). For historic properties where NRHP eligibility has yet to be determined, it is anticipated that the Build Alternative would have either no effect or no adverse effect.

For the area of Segment 3 shifted to the west of its original alignment, two sets of Phase I-level architectural surveys and Phase IA archaeological surveys were conducted; one in 2009²⁰ and one in 2011²¹. The purpose of the surveys was to identify and record all resources more than 50 years old and assess their potential for NRHP eligibility. The results of both surveys are recorded in the Virginia Department of Historic Resources (DHR) File # 2008-1125. For both the 2009 and 2011 surveys, the Area of Potential Effects (APE) for the historic architectural survey was the 500-foot wide corridor along the centerline of the proposed Build Alternative and included resources adjacent to or visible from the corridor. Based on the background review associated with the 2009 and 2011 surveys, there are no historic resources currently listed or eligible for listing on the NRHP within the APE of the shifted alignment of Segment 3 of the Build Alternative.

²⁰ Coastal Carolina Research, Inc. for Kimley Horn & Associates and the Virginia Port Authority. *Cultural Resources Identification Survey: Craney Island Road and Rail Connector, City of Portsmouth, Virginia. VDHR File # 2008-1125. CEU Cleveland ARPA Permit 2009-1. June 2009.*

²¹ Dovetail Cultural Resource Group I, Inc. for Michael Baker Jr., Inc. and the Virginia Department of Transportation. *Cultural Resource Reevaluation of Candidate Build Alternative 9 (CBA 9) – Segments 1 & 3 of the Hampton Roads Crossing Study, Portsmouth, Virginia. DHR # 2008-1125. September 2011.*

For the 2009 survey, the DHR, also referred to as the Virginia State Historic Preservation Officer (SHPO), concurred that none of the three archaeological sites and none of the 19 architectural resources assessed in the 2009 surveys within the APE are eligible for the NRHP (see Appendix A for 2009 Concurrence Letters). Accordingly, no architectural or archaeological resources identified in the 2009 survey would be affected by the Build Alternative.

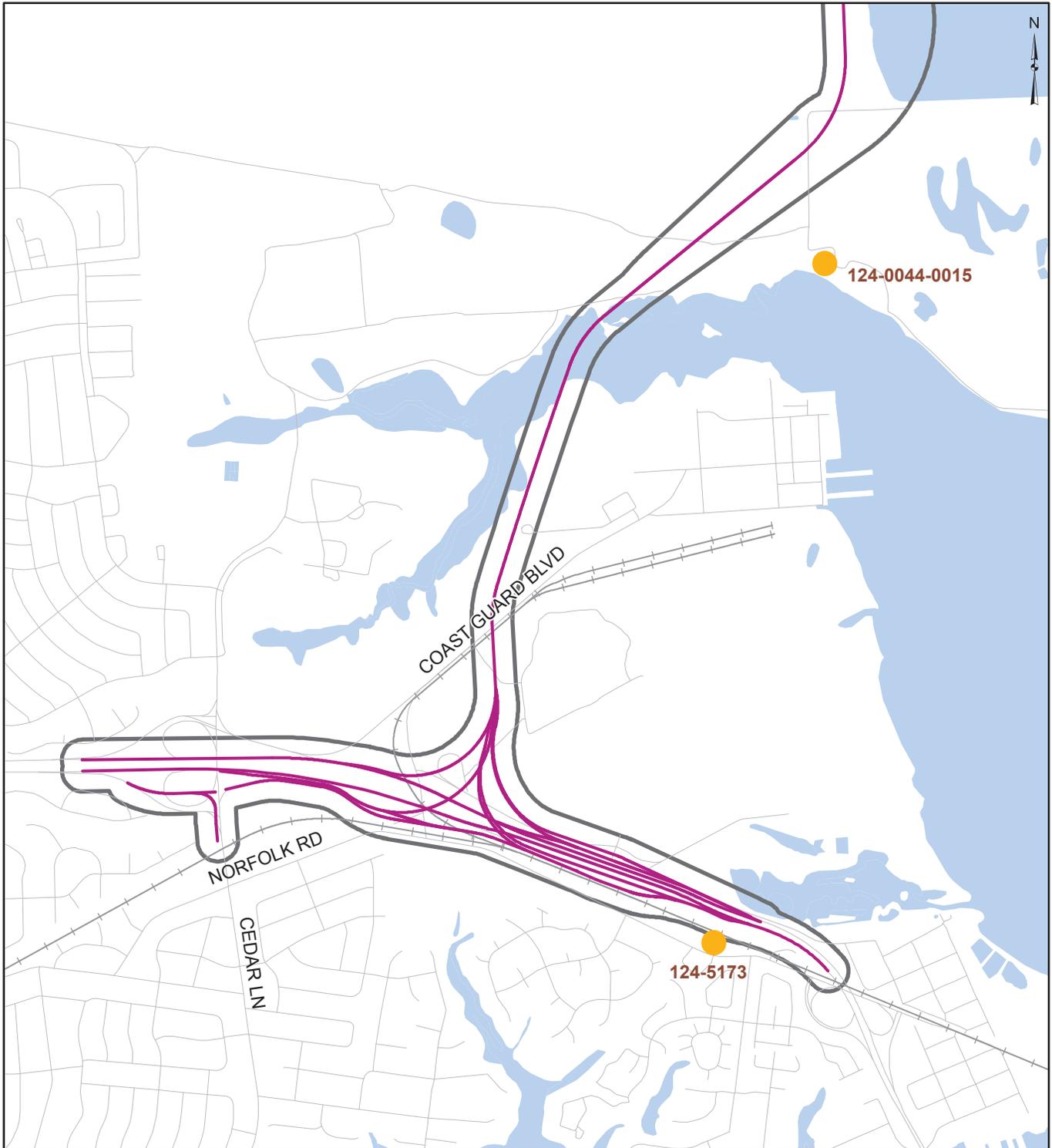
For the 2011 survey, two previously recorded resources and 24 newly recorded resources were identified that were not included in the 2009 survey due to the alignment shift of Segment 3. The two previously recorded resources have been recommended for additional study to determine NRHP eligibility. Of the 24 newly recorded sites, 23 are recommended not eligible for the NRHP and one is recommended for additional study. The three resources recommended for additional study are identified below and illustrated on Figure 3.

- Administration Building / Naval Supply Center on Craney Island (124-0044-0015)
DHR “Potentially Eligible”
- Hampton Roads Battlefield / Battle of the Ironclads (114-5471)
DHR “Not Evaluated”
- School (Gas Station, 4408 W. Norfolk Rd) (124-5173)
DHR – not yet reviewed by DHR staff

While within the APE of Segment 3, two of the three resources would not be physically affected by the project. At its closest point, the Administration Building (124-0044-0015) is 780 feet outside the 500-foot-wide corridor of the Build Alternative. While the School / Gas Station (124-5173) is within the 500-foot wide APE, it is separated from the Build Alternative by Commonwealth Railway, south of VA 164. To avoid this resource, VDOT will keep all construction activities to the north of the railroad right-of-way at this location. A determination of no effect is anticipated for these two historic properties.

As shown on Figure 3, the Hampton Roads Battlefield / Battle of the Ironclads (114-5471) encompasses a large area through which the Build Alternative would pass. This battlefield is currently awaiting an intensive survey to determine NRHP eligibility. For the purposes of this evaluation, it is anticipated that the Battlefield will be determined eligible for the NRHP. It is also anticipated that the Build Alternative would have no adverse effect on the battlefield. The area of the battlefield through which the Build Alternative passes is substantially altered. While located within the preliminary battlefield boundaries, developments such as the man-made Craney Island, the construction of the Craney Island Marine Terminal, and the intensive development of other port facilities within the battlefield alter the battlefield's historic integrity. For the Original CBA 9, the battlefield was not identified as a historic resource. However, it too would have impacted the battlefield should the battlefield be determined to warrant NRHP designation and would have likely been determined to have no adverse effect on the historic property for the same reasons.

Coordination with DHR is ongoing and determinations of eligibility and effect are in progress.



● Architectural Resources - VDHR Site #

□ APE Boundary

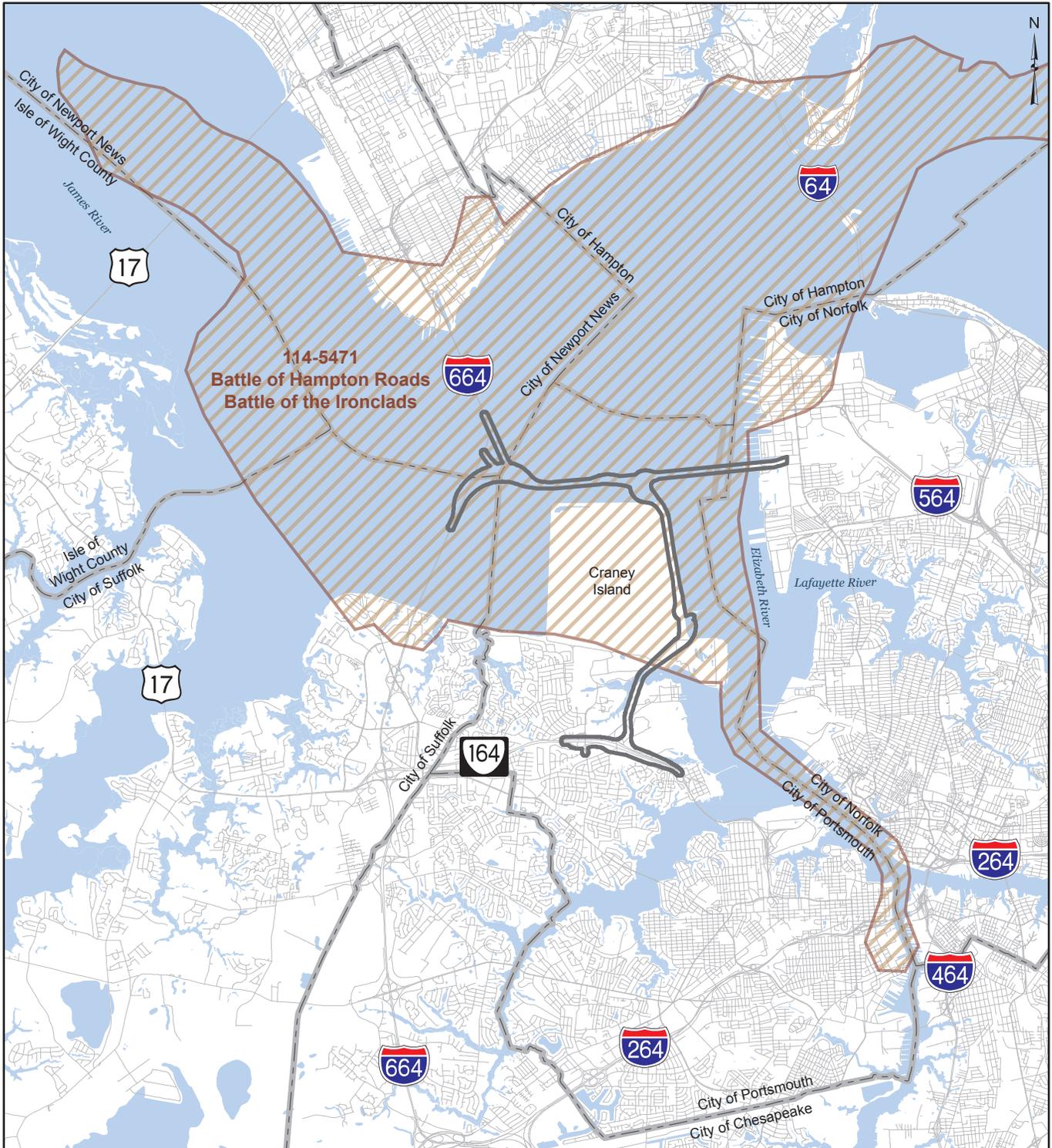
— Build Alternative CBA 9 - Segment 3

—+— Commonwealth Railroad

Figure 3a: Potentially Eligible Historic Properties



HRCS EA



-  Hampton Roads Battlefield/
Battle of the Ironclad
-  APE Boundary for Build Alternative

**Figure 3b: Potentially Eligible
Historic Properties**



For the 2011 archaeological surveys, four areas not included in the 2009 survey were identified as being within the shifted APE of Segment 3. Area 1 (Cedar Lane/VA 164 overpass) and Area 2 (along Coast Guard Boulevard) have been modified by development and road construction. There appears to be no intact soils in these parcels. However, Area 3 (southern side of VA 164) and Area 4 (northern side of VA 164, north of Wyatt Drive) are wooded. No large-scale modifications were noted during the pedestrian survey and, as such, these two areas have the potential for intact soils, although it is anticipated that there would not be archaeological resources discovered. Surveys for these sites are in progress and would be completed before final approval by the FHWA of the modification made to Segment 3 of the previously approved Build Alternative. Such a phased approach is consistent with 36 CFR 800.4(b)(2), which provides for the phased identification of historic properties on projects “where alternatives under consideration consist of corridors or large land areas”.

3.8 Section 4(f) Resources

The results of the FEIS are still valid. No publicly owned parks, recreation areas, or wildlife or waterfowl refuges would be used by the Build Alternative. The Build Alternative would not use any currently listed or eligible NRHP properties. It is anticipated that the Hampton Roads Battlefield / Battle of the Ironclads will be found eligible for listing on the NRHP and this determination is in progress. If this resource is confirmed to be eligible for the NRHP, a Section 4(f) analysis finding of de minimis impact is likely.

3.9 Hazardous Materials

Based on available data, three hazardous materials sites regulated by DEQ are located within the 500-foot wide corridor of the Build Alternative under re-evaluation. Two sites are petroleum releases and one is the active Craney Island Landfill. The City of Portsmouth stated that the alignment of CBA 9 – Segment 3 is east of the active portion of the landfill (Appendix B). Of these three regulated sites, only one is new since the release of the 2001 HRCS FEIS. This site is a petroleum release from an old pipeline on Craney Island. Remediation at this site is ongoing.

3.10 Visual and Aesthetic Resources

Visual and aesthetic impacts under the Build Alternative would remain unchanged from those reported in the 2001 HRCS FEIS. Impacts under the Build Alternative would be minimal due to the presence of existing roadway, port, and military facilities in the viewshed of existing views, as well as the visually eclectic nature of the study area.

3.11 Water Resources

Water resource impacts were assessed and are similar to the water resource impacts and proposed mitigation reported in the 2001 HRCS FEIS, although there are some variations as noted below. Items unchanged include water body crossings (James River and Elizabeth River), dredging, hydrodynamic and sedimentation modeling, public water supplies, and mitigation.

Due to the alignment shift of Segment 3, the crossing of Craney Island Creek has changed. The original alignment of Segment 3 required crossing approximately 1,100 linear feet of the tidally-influenced Craney Island Creek that feeds the Elizabeth River. The new, westward shift of Segment 3 would reduce the length of this crossing to approximately 700 linear feet. This would remain a bridged crossing. While the shifted Segment 3 would minimize the crossing of this creek, it would bring it closer to the easternmost, unnamed tributary of Craney Island Creek. The shifted Segment 3 now runs parallel to and approximately 450 feet away from the unnamed tributary whereas the original alignment of Segment 3 was approximately 1,400 feet away. Shifting CBA 9 – Segment 3 closer to the creek and wetlands was necessary to avoid the U.S. Coast Guard's Differential Global Positioning System (DGPS) tower and signal radiation pattern. A stand-off distance of approximately 500 feet is necessary to protect vehicles and personnel on the Build Alternative and outside of the DGPS tower's frequency range; hence, the unavoidable encroachment on wetlands and water resources.

At the eastern terminus of the Segment 3 interchange with VA 164, the alignment shift of Segment 3 would now minimize impacts to Kingman Lake and its associated wetlands. Impacts to this lake may be completely avoided during the final design process for the Build Alternative.

3.11.1 Aquatic Resources

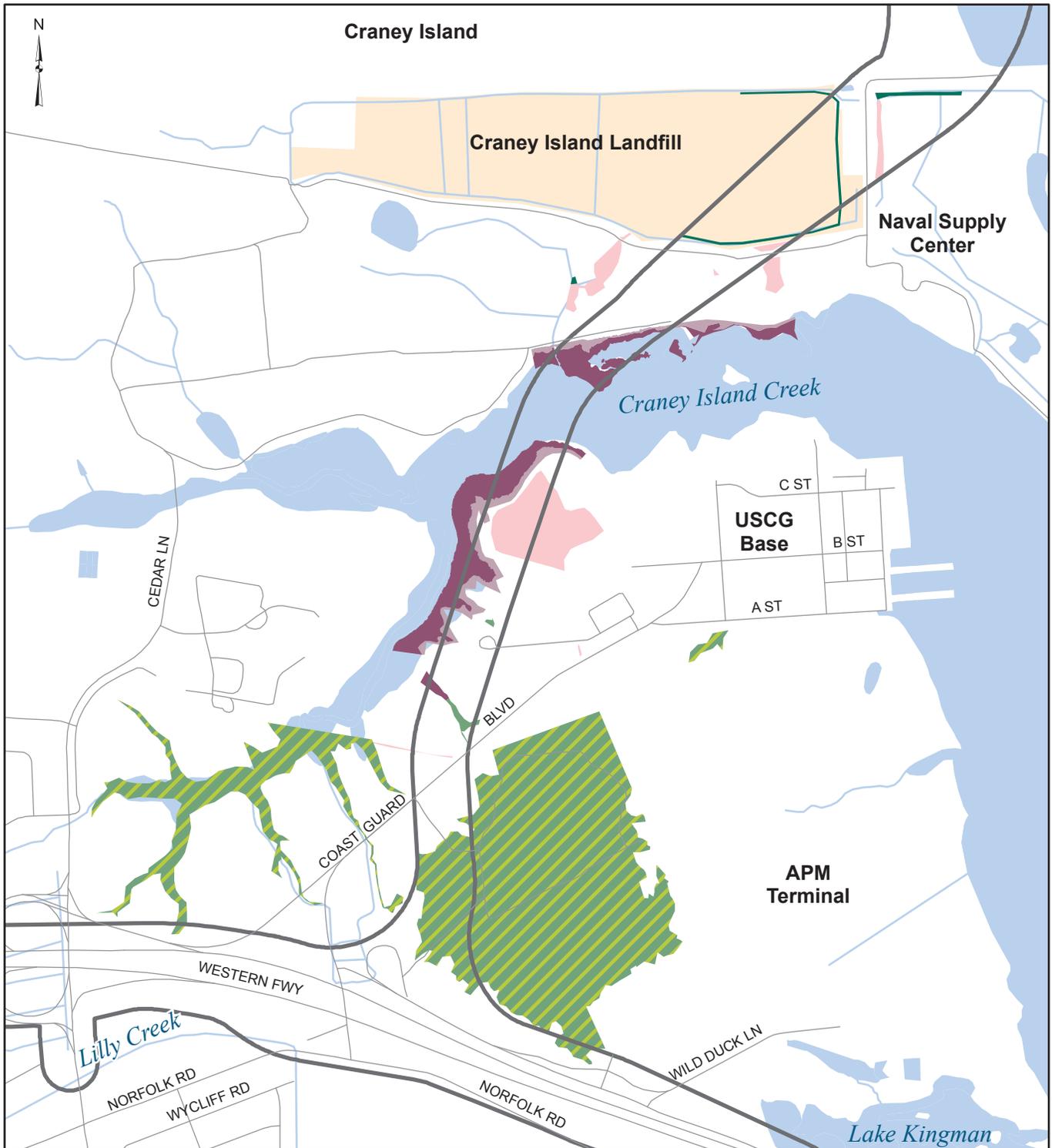
The potential project impacts to aquatic resources and mitigation commitments reported in the 2001 HRCS FEIS remain valid and unchanged for the following: potential impacts to fish, anadromous fish, shellfish, submerged aquatic vegetation (SAV), benthos, other flora and fauna, and mitigation.

3.11.2 Wetlands and Streams

There are some changes in effects to wetlands and streams due to the westward shift of Segment 3 of the CBA as approved in the FEIS. Changes in federal wetland regulations since the 2001 HRCS FEIS include modifications to wetland jurisdictional status (e.g., 2001 SWANCC Case, 2006 *Rapanos-Carabell* Decision, and recent publication of Regional Supplements to the Corps' *1987 Wetland Delineation Manual*) and permitting/mitigation procedures (e.g., 2008 Corps and EPA Mitigation Rule).

As part of the VPA's Craney Island Road and Rail Connector Study, wetlands within the shifted alignment of Segment 3 were evaluated in 2009 in accordance with current federal wetland regulations. In a letter dated March 27, 2009, the Corps provided Preliminary Jurisdictional Determinations²² establishing the boundaries and types of wetlands within the shifted alignment of Segment 3. The locations of potentially impacted wetlands within the shifted alignment of Segment 3 are illustrated in Figure 4. Potential wetland impacts resulting from the shifted alignment of Segment 3 are presented in Table 8. These impacts are based on a 500-foot wide corridor but efforts to further minimize impacts would be included during final design. Of the 35 acres of potential wetland impacts, 14 acres are located within property owned by APM Terminals. The wetlands within the APM Terminal parcels are currently

²² U.S. Army Corps of Engineers, Norfolk District. Letter to Peter Crum, Kimley-Horn and Associates, Inc. for the Virginia Port Authority's Craney Island Road and Rail Connector Study. *Preliminary Jurisdictional Determination*. March 27, 2009. File Number 08-2222-prk.



Wetland Type

-  Tidal - Emergent
-  Tidal - Scrub/Shrub
-  Palustrine - Emergent
-  Palustrine - Forested
-  Waters of the U.S. (WOUS)(Ditch)

-  CBA 9: 500' Wide Corridor
-  Deed Restricted Wetlands

Figure 4: Wetlands



protected by a restrictive covenant. Coordination with the APM Terminal property owners and appropriate regulatory agencies will be necessary to lift the deed restriction and secure the necessary wetland permits to encroach upon these areas.

TABLE 8: POTENTIAL WETLAND IMPACTS

| Wetland Type | Impacts of Original CBA 9 | Impacts of Build Alternative |
|-----------------------------|---------------------------|------------------------------|
| | Acres | Acres |
| Non-Tidal WOUS (Ditch) | 0.6 | 1.6 |
| Tidal Emergent (E2EM) | 5.5 | 7.9 |
| Non-Tidal Emergent (PEM) | 0.3 | 6.7 |
| Tidal Scrub-Shrub (E2SS) | 0.8 | 7.1 |
| Non-Tidal Scrub Shrub (PSS) | 0.6 | 0 |
| Non-Tidal Forested (PFO) | 7.9 | 14.5 |
| TOTAL (ALL CLASSES) | 15.7 | 35.0 |

Source: Kimley-Horn for Virginia Port Authority's 2009 Craney Island Road and Rail Connector Study and Michael Baker Jr., Inc.

Based on a current assessment of wetlands, the Original CBA 9 would impact approximately 15.7 acres of wetlands compared to the 35 acres of wetlands under the Build Alternative. While shifting the Build Alternative to the west avoided the Coast Guard DGPS Tower, two Coast Guard Facilities, and the APM Terminal facilities, the end result was a greater impact to wetlands and water resources. The 2001 HRCS FEIS reported a potential wetland mitigation site in the area of wetlands on the APM Terminal. These wetlands are no longer available as a compensatory mitigation site because they are under a deed restriction as a result of construction of the APM Terminal.

It is possible that wetlands and waters of the U.S. are located in the vicinity of the 500-foot wide corridor of the Build Alternative on Craney Island. The 2001 HRCS FEIS did not identify wetlands in this area but, since the release of the FEIS, wetlands have been identified in the project area. In a separate project, the Corps established the wetland boundaries and types for the 2008 Environmental Assessment supplement to the Craney Island Eastward Expansion FEIS²³, within which the alignment of Segment 3 is also located. The Corps is providing compensatory mitigation for wetland impacts resulting from the Craney Island Eastward Expansion, much of which includes the 500-foot wide corridor of Segment 3.

²³ U.S. Army Corps of Engineers, Norfolk District. *Environmental Assessment. Supplemental Information to the Environmental Impact Statement for the Craney Island Eastward Expansion, Norfolk Harbor and Channels, Hampton Roads, Virginia.* 2008.

Field confirmation of the absence or presence of wetlands within this portion of CBA 9 – Segment 1 and Segment 3 area was not possible because access to Craney Island and the Norfolk International Terminal was restricted for national security reasons.

While field confirmation was not possible, reviews of the two previous studies, current aerial images, Fish and Wildlife Service (FWS) wetlands mapping, and Natural Resources Conservation Service (NRCS) soils mapping was conducted. While it appears wetlands are located along the eastern shoreline of Craney Island, it is assumed that the Build Alternative of CBA 9 – Segment 3 would not impact wetlands within the Craney Island Eastward Expansion project area because the Corps is already providing compensatory mitigation for those wetlands. However, a final assessment of wetland impacts will be made throughout the entire project footprint of the Build Alternative as part of the permitting process. Unavoidable impacts to jurisdictional wetland functions and values will be minimized to the extent practicable and a final impact analysis will be determined during the Joint Permit Application (JPA) process pursuant to Sections 404 and 401 of the Federal Clean Water Act. Mitigation for such unavoidable impacts will be determined at the permitting phase of the project, consistent with the 2008 Mitigation Rule.

3.11.3 Floodplains

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, approximately 12.8 percent of the Build Alternative is within designated 100-year floodplains, as shown in Figure 5. Approximately 145.5 acres of the 100-year floodplain lie within the 500-foot wide corridor of the Build Alternative. For the Original CBA 9, approximately 90.5 acres lie within its 500-foot wide corridor. In accordance with Executive Order 11988, *Floodplain Management*, floodplain encroachments would be avoided or minimized to the maximum extent practicable. Crossings will be designed such that the project would not appreciably increase, directly or indirectly, flood levels or the risks of flooding. No substantial effects on natural or beneficial floodplain values are expected to result from the proposed project.

3.11.4 Public Water Supplies

Findings from the 2001 HRCS FEIS remain valid. There would be no direct public water supply impacts associated with the Build Alternative. There are no groundwater aquifers used for public drinking water supplies that would be affected by the Build Alternative.

3.11.5 Wild and Scenic / State Scenic Rivers

Findings from the 2001 HRCS FEIS remain valid. There are no federally-designated Wild & Scenic Rivers or state-designated State Scenic Rivers within the project area.



Legend

-  CBA9: 500' Wide Corridor
-  100-Year Flood Zone

Figure 5: 100-Year Floodplains



3.12 Ecosystems

The findings of the 2001 HRCS FEIS remain valid regarding terrestrial and aquatic habitat and wildlife. No substantive changes to potential impacts or proposed mitigation measures are anticipated.

Since 2007, the United States Fish and Wildlife Service (USFWS) has provided Information, Planning, and Conservation (IPaC) system to determine project effects to federally threatened and endangered species at <http://ecos.fws.gov/ipac/>. Similarly, the Virginia Fish and Wildlife Information Service (VaFWIS), maintained by the Virginia Department of Game and Inland Fisheries (DGIF), provides current and comprehensive information about Virginia's wildlife resources at <http://vafwis.org/fwis/>. Both of these databases were searched using the current project study area and both agencies received requests from VDOT for additional, project-specific information. Results of the coordination indicate that there is the potential for four federally protected species within the 500-foot wide corridor; three were previously identified in the 2001 HRCS FEIS and one was not. These four species are addressed below.

3.12.1 Threatened and Endangered Species

The Piping Plover (*Charadrius melodus*) is federally listed as threatened. Piping plovers nest on coastal beaches above the high tide line or other sandy areas. In the project area, they nest on Craney Island and are found in Virginia from mid-March through late July, at which time they migrate southward. Potential impacts to the piping plover remain as described for CBA 9 - Segments 1 and 3 in the 2001 HRCS FEIS. Pursuant to Section 7 of the Endangered Species Act, a Biological Assessment for the piping plover was completed as part of the 2001 HRCS FEIS. The Biological Assessment concluded that CBA 9 is not likely to adversely affect the piping plover. Due to habitat preferences, piping plover only nest on Craney Island west of the project area. Therefore, it is anticipated that the shifted alignment of Segment 3 would have no adverse impacts on this federally protected species.

The Loggerhead Sea Turtle (*Caretta caretta*) and the Kemp's Ridley Sea Turtle (*Lepidochelys kempii*) are federally listed as threatened and endangered, respectively. Potential impacts to these turtle species remain as described for CBA 9 - Segments 1 and 3 in the 2001 HRCS FEIS. A Biological Assessment for the Loggerhead and Kemp's Ridley Sea Turtles was completed as part of the 2001 HRCS EIS process. Pursuant to Section 7 of the Endangered Species Act, the National Marine Fisheries Service concurred that CBA 9 is not likely to adversely affect endangered or threatened sea turtles. Because the water body crossing of the James and Elizabeth Rivers remains the same and because time of year restrictions would remain in effect, it is anticipated that the Build Alternative would have no adverse impact on these two protected turtle species.

The Sensitive joint-vetch (*Aeschynomene virginica*) is federally listed as threatened. This was not a federally-listed species at the time of the 2001 HRCS FEIS. It occurs in fresh to slightly brackish tidal river systems, within the intertidal zone where populations are flooded twice daily. It typically occurs at the outer fringe of marshes or shores; its presence in marsh interiors may be a result of nutrient deficiencies, ice scouring, or muskrat feeding. The sensitive joint-vetch is found in localities where plant diversity is high and annual species are prevalent. Bare to sparsely vegetated substrates appear to be a

habitat feature of critical importance for establishment and growth of this species. Based on the recent map review, there appears to be no suitable habitat for this species within the project study area.

Additional coordination pursuant to Section 7 of the Endangered Species Act would occur with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service during the Section 404 and 401 (of the Clean Water Act) permitting process for the Build Alternative.

3.12.2 Wildlife and Waterfowl Refuges

No National Wildlife or Waterfowl Refuges are traversed by the 500-foot wide corridor of the Build Alternative. This is consistent with the 2001 FEIS.

3.12.3 Invasive Species

Invasive species were not addressed in the 2001 HRCS FEIS. In accordance with Executive Order 13112, *Invasive Species*, the potential for the establishment of invasive terrestrial or aquatic animal or plant species during construction of the project would be minimized by following provisions in VDOT's *Road and Bridge Specifications*. These provisions require prompt seeding of disturbed areas with mixes that are tested in accordance with the Virginia Seed Law and VDOT's standards and specifications to ensure that seed mixes are free of noxious species. While the proposed ROW is vulnerable to the colonization of invasive plant species from other portions of the site and from adjacent properties, implementation of the stated provisions would reduce the potential for the establishment and proliferation of invasive species.

3.13 Coastal Resources

The findings of the 2001 HRCS FEIS remain valid for the Build Alternative regarding adherence to the requirements of the Chesapeake Bay Preservation Act and the Coastal Zone Management Act.

3.14 Geology and Soils

The findings of the 2001 HRCS FEIS remain valid for the Build Alternative.

3.15 Air Quality

The Build Alternative has been reassessed for potential air quality impacts and conformity with current, applicable air quality regulations and requirements that have changed since 2001. The findings and additional details of the air quality reevaluation are incorporated as part of a separate *Air Quality Analysis Technical Report* prepared for this study and available from VDOT.²⁴ The region is classified as a maintenance area for the 8-hour ozone standard. The region is in attainment for all other NAAQS criteria pollutants.

²⁴ Michael Baker Jr., Inc. for the Virginia Department of Transportation. *Reevaluation of Hampton Roads Crossing Study: Selected Alternative CBA 9 – Segment 1 & Segment 3. Air Quality Analysis Technical Report*. September 2011.

- **Ozone:** The project is listed as “PE only” in the current 2030 Long-Range Transportation Plan (LRTP) and 2034 LRTP (conformity approval pending). As a result, it is currently exempt from regional conformity requirements. The project will eventually need to be fiscally constrained through construction and included in a conforming and approved Transportation Improvement Program (TIP) and LRTP.
- **Carbon Monoxide:** The Build Alternative would not result in any predicted exceedances of the National Ambient Air Quality Standards (NAAQS).
- **Particulate Matter:** The Build Alternative is in an attainment area for PM_{2.5} and PM₁₀, is not a project of air quality concern; therefore, no further analysis is required.
- **Mobile Source Air Toxics (MSATs):** The Build Alternative did not meet the criteria for a quantitative analysis. The qualitative analysis results indicated that regional MSATs will be reduced as a result of EPA's national control programs.

Based on guidance from FHWA (*Memorandum: Revised Guidelines for the Control of Carbon Monoxide (CO) in Tunnels*), the Build Alternative is not expected to have project-level impacts in the proposed tunnel under the Elizabeth River channel. The tunnel will be designed to be compliant with maximum possible CO levels, as recommended by FHWA and the EPA. Point source CO dispersion modeling is not required.

Under the Build Alternative, construction emissions will be controlled using standard measures according to VDOT's *Road and Bridge Specifications*. The Build Alternative is not expected to interfere with the attainment and/or maintenance of the applicable NAAQS, LRTP and/or TIP conformity requirements. Before FHWA can complete the NEPA process, this project must be part of the MPO's LRTP that is found to conform to air quality standards.

3.16 Noise

Noise impacts have been assessed due to changes in regulations and due to updated traffic information available to assess this project, as well as additional potential impacts due to the shift in Segment 3. Details of the noise analysis performed for this project are included in a separate technical report available from VDOT²⁵. For purposes of this noise analysis, the VDOT *Highway Traffic Noise Impact Analysis Guidance Manual* was followed.²⁶ The TNM2.5 computer model was used to predict the sound levels for all conditions.

Noise monitoring was completed at one site in the area of Segment 3 shifted to the west to update the 2001 HRCS FEIS noise monitoring analysis. Modeling was performed for 23 sites that represent

²⁵ Michael Baker Jr., Inc. for Virginia Department of Transportation. *Noise Analysis Technical Report. Reevaluation of Hampton Roads Crossing Study: Selected Alternative CBA 9 – Segment 1 & Segment 3.* September 2011.

²⁶ Virginia Department of Transportation. *Highway Traffic Noise Impact Analysis Guidance Manual.* July, 2011, updated September, 2011.

approximately 110 single family and multi-family residences. If noise levels “approach” or “exceed” noise abatement criteria (NAC) for the design year of the Build Alternative, then an impact occurs and abatement measures are to be considered. Noise-sensitive land uses potentially affected by this project are in NAC Category B, which consists of residences. There are industrial land uses in the project area (NAC Category F) but these land use types do not have a noise criteria and are not analyzed. No other NAC category land uses are represented in the reevaluation area and/or are within 500 feet of VA 164.

Noise impact was based on the updated existing noise measurements, the updated traffic volumes prepared for this study, and the percent change in traffic volume’s effect on the predicted sound levels. Noise contours were not used to identify impacts. Substantial increase impacts were also analyzed, as applicable.

VDOT defines “approach” as being within 1 dBA of the NAC; therefore, the criterion is considered to be 67 dBA for Category B land uses. A noise impact is also deemed to occur if design year build noise levels are substantially higher than existing levels, even though the levels may not reach the NAC. The State Noise Abatement Policy, based on FHWA noise regulations (23 CFR 772), defines a substantial increase as 10 dBA or more.

There are no sensitive noise receptors located near Segment 1 as it is primarily located within the boundaries of the James and Elizabeth Rivers, either on structure or under the water. Additionally, the eastern portion of CBA 9 - Segment 1 on land traverses through an industrial land use (Norfolk International Terminal and Norfolk Southern Railroad). For CBA 9 - Segment 3, there is one Common Noise Environment (CNE): the residences south of the Segment 3/VA 164 interchange in the general vicinity of West Norfolk Road, Wycliff Road, Linnet Lane, Mallard Crescent, and Goose Bay Drive (Figure 6 and Figure 7).

For the design year 2034 Build Alternative, there are a total of 26 receptors predicted to approach or exceed 67 dBA for category B receivers, as shown in Table 9. There are industrial land uses in the project area (NAC F) but these land use types do not have a noise criteria and were not analyzed. Given how the 2001 HRCS FEIS reported noise impacts, it is not possible to make a direct comparison between specific numbers of receptors impacted. However, in the CNE (residential area around Avocet Court, near the Segment 3 / VA 164 interchange), the existing noise modeled in 2011 (56 dBA) is higher than the existing noise modeled in 2001 (53 dBA). While ambient noise has increased during this period, the predicted noise impacts are relatively the same with both the original and the shifted Segment 3 experiencing a 2 dBA increase over the existing condition. This demonstrates that the 2034 noise impacts would be relatively similar under the Build Alternative.

VDOT guidelines recommend a variety of mitigation measures that should be considered in response to transportation-related noise impacts. While noise barriers and/or earth berms are generally the most effective form of noise mitigation, additional mitigation measures exist that have the potential to provide considerable noise reductions, under certain circumstances. The following abatement measures were considered for receptors with predicted impacts in the design year build condition: traffic management

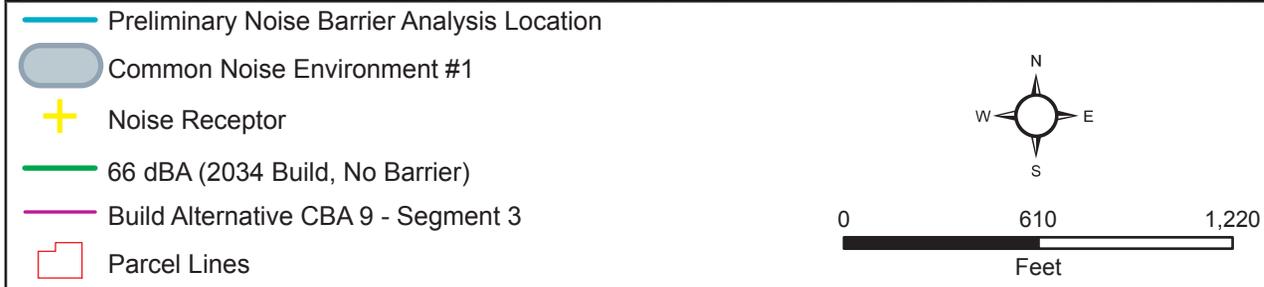
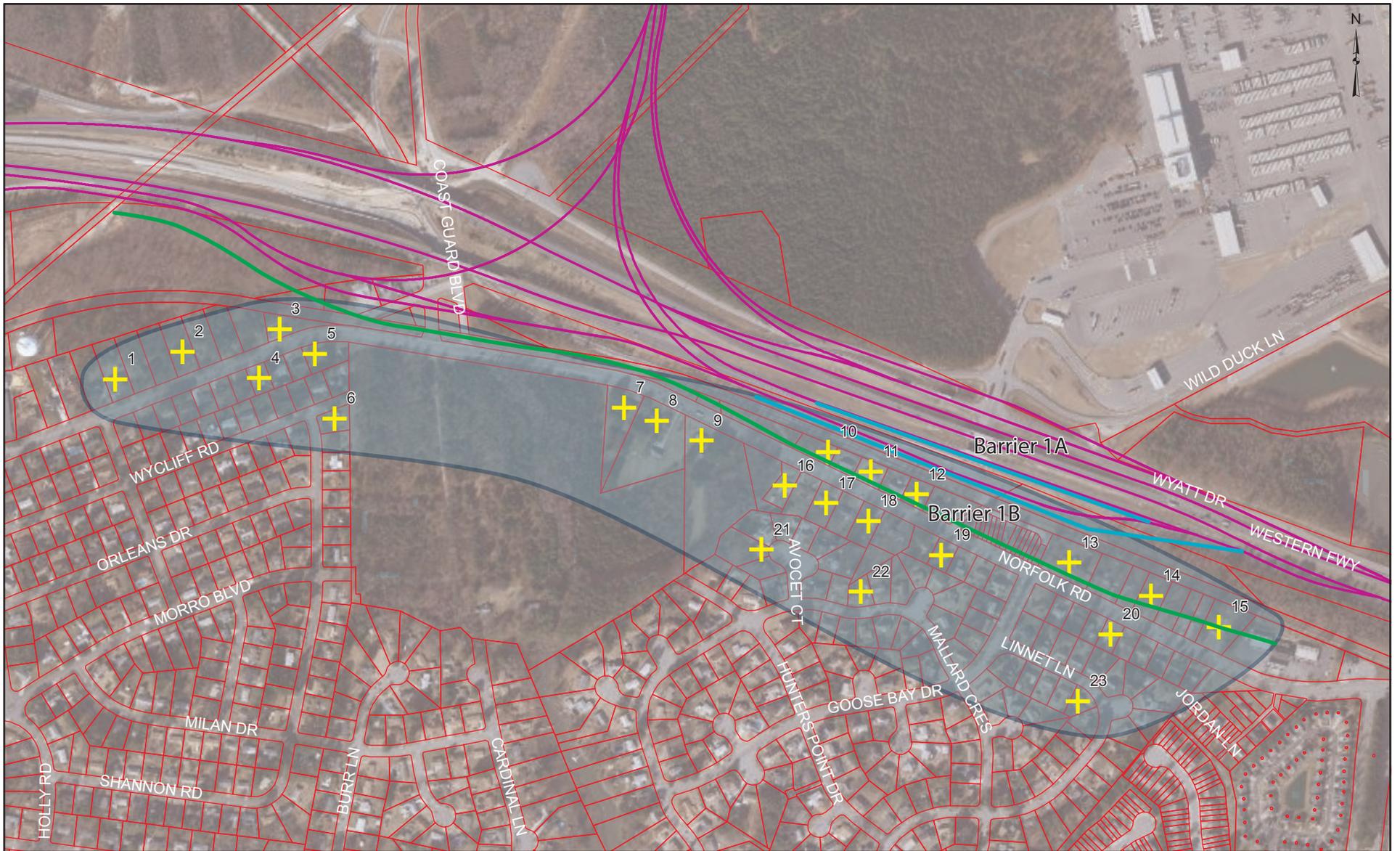


Figure 6: Noise Receptors and Preliminary Noise Barrier Analysis Location VA 164 Interchange



-  Existing Noise Barrier
-  Common Noise Environment
-  Noise Receptor
-  66 dBA (2034 Build)
-  Proposed VDOT Craney Island Road Connector
-  Parcel Lines

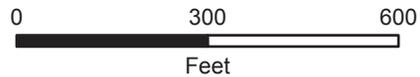


Figure 7: Noise Receptors and Existing Noise Barrier Location Cedar Lane Interchange

TABLE 9: EXISTING AND DESIGN YEAR MODELED SOUND LEVELS

| Receptor ID / Number | Number of Receptors | NAC | Existing Leq | Year 2034 Build Leq | Sound Level Increase | Substantial Increase Impact? | NAC Impact? |
|---------------------------------|---------------------|-----|--------------|---------------------|----------------------|------------------------------|-------------|
| 1 | 3 | B | 56 | 58 | 2 | N | N |
| 2 | 3 | B | 58 | 60 | 2 | N | N |
| 3 | 4 | B | 60 | 63 | 3 | N | N |
| 4 | 3 | B | 57 | 58 | 1 | N | N |
| 5 (also a measurement Site) | 6 | B | 59 | 62 | 3 | N | N |
| 6 | 3 | B | 55 | 57 | 2 | N | N |
| 7 | 1 | B | 64 | 64 | 0 | N | N |
| 8 | 1 | B | 64 | 64 | 0 | N | N |
| 9 | 1 | B | 63 | 63 | 1 | N | N |
| 10 | 2 | B | 66 | 68 | 2 | N | Y |
| 11 | 2 | B | 66 | 67 | 1 | N | Y |
| 12 (also a measurement site) | 2 | B | 66 | 67 | 1 | N | Y |
| 13 | 16 | B | 67 | 67 | 0 | N | Y |
| 14 | 4 | B | 66 | 66 | 0 | N | Y |
| 15 | 4 | B | 66 | 65 | -1 | N | N |
| 16 | 3 | B | 62 | 63 | 1 | N | N |
| 17 | 2 | B | 63 | 63 | 0 | N | N |
| 18 | 3 | B | 63 | 63 | 0 | N | N |
| 19 | 4 | B | 63 | 62 | -1 | N | N |
| 20 | 5 | B | 61 | 61 | 0 | N | N |
| 21 | 7 | B | 56 | 58 | 1 | N | N |
| 22 | 10 | B | 57 | 57 | 0 | N | N |
| 23 | 11 | B | 55 | 55 | 0 | N | N |

Source: Michael Baker Jr., Inc.

measures, alteration of horizontal and/or vertical alignments, acquisition of real property to serve as a buffer zone (Type I projects only), noise insulation for NAC D land uses, and noise barriers.

A preliminary barrier analysis was performed for the 26 impacted residences in CNE #1 at the VA 164 interchange area. At this time, a set of 2 overlapping barriers would be required because of the existing APM Terminal Boulevard interchange (Figure 6). This barrier set was found to be reasonable and feasible in the preliminary analysis according to VDOT noise policy.

The noise evaluation is preliminary and a more detailed review will be completed during the final design stage. As such, the noise barrier that was found to be feasible and reasonable during this preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis. Once the alternative has received design approval, a final design study will determine site-specific noise impacts, barrier cost estimates, feasibility, and reasonableness of proposed noise abatement according to VDOT's 2011 noise policy.

Construction activity as part of this project may cause intermittent fluctuations in noise levels. During the construction phase of the project, all reasonable measures will be taken to minimize noise impacts from these activities. Construction noise provisions are contained in Section 107.16(b)3 Noise of the 2007 *VDOT Road and Bridge Specifications*.

3.17 Indirect and Cumulative Effects

The only changes that have occurred since the completion of the 2001 FEIS for indirect and cumulative effects are construction of some of the facilities identified as pending in the analysis. All other findings remain valid. The 2001 HRCS FEIS identified several major projects that, at the time, were in the preliminary planning stages; thus, their impacts were not reasonably foreseeable to include in the indirect and cumulative effects analysis. These projects included the Craney Island Eastward Expansion (CIEE) and the related Craney Island Marine Terminal (CIMT). Since that time, a final NEPA document was prepared for the CIEE and CIMT and construction of both is currently underway.^{27,28} In addition, the 576-acre A.P. Moller-Maersk Container Terminal (APM Terminal) was constructed along the Elizabeth River in Portsmouth.

3.17.1 Socioeconomic Impacts

As stated in the 2001 HRCS FEIS, all communities within the study area have developed and adopted comprehensive and zoning plans and this remains valid. Induced development pressures are regulated by these communities under their zoning and land use plans. Therefore, development, and any induced (secondary) development pressures from new facilities like the Hampton Roads Crossing, will be regulated by these communities under their zoning and land use plans. The current Build Alternative under reevaluation does not change the findings of the FEIS, as it does not promote development.

3.17.2 Natural Resource Impacts

Indirect impacts to natural resources (e.g., wetlands, water quality) would occur under the Build Alternative and are similar to those noted in the 2001 HRCS FEIS. Examples include natural resource impacts resulting from relocating the Coast Guard's displaced small arms firing range and as a result of

²⁷ U.S. Army Corps of Engineers, Norfolk District. *Final Environmental Impact Statement: Craney Island Expansion, Norfolk Harbor and Channels, Virginia*. January 2006.

²⁸ U.S. Army Corps of Engineers, Norfolk District. *Environmental Assessment: Supplemental Information to the Final Environmental Impact Statement for the Craney Island Eastward Expansion, Norfolk Harbor and Channels, Hampton Roads, Virginia*. 2008.

implementing compensatory mitigation wetland and water quality for the project. Construction of a new small arms firing range would impact natural resources if the site chosen is currently undisturbed. Compensatory mitigation may require the construction of new, additional wetlands to offset the loss of existing wetlands. This action would result in a net increase of wetlands within the regional watershed. Cumulative impacts resulting from other past and reasonably foreseeable future plans may affect water quality, wildlife habitat and other natural (e.g., wetlands) and physical resources (e.g., air quality, groundwater quantity). However, enforcement of environmental regulations (e.g., Section 404 of Clean Water Act, stormwater management) can minimize the impacts of these activities to natural and physical resources.

CHAPTER 4: COORDINATION AND COMMENTS

4.1 Agency Coordination

As part of the original HRCS Location Study, federal, state, and local agencies were contacted to obtain substantive information and to identify key issues regarding potential environmental impacts for the project (see Chapter 8 of the DEIS). The DEIS was then distributed for review and comment and the FEIS addressed the comments received (see Chapter 8 and Appendices A, B, and C of the FEIS for the full list of agencies, comments, and responses).

Given that this EA is reevaluating the HRCS selected alternative of CBA 9 – Segments 1 and 3, as well as the alignment shift of Segment 3, and given that the proposed westward alignment shift of Segment 3 is wholly contained within the City of Portsmouth and located from 0.18 to 0.52 mile from the original alignment of Segment 3, additional coordination included the following affected federal, state, and local agencies:

- U.S. Army Corps of Engineers – Norfolk District (Corps)
- U.S. Fish and Wildlife Service (FWS)
- U.S. Environmental Protection Agency, Region III (EPA)
- U.S. Navy Region, Mid-Atlantic and Naval Support Activity Center – Norfolk (Navy)
- U.S. Coast Guard, Fifth District (OAN)
- U.S. National Oceanic and Atmospheric Administration, Habitat Conservation Division (NOAA)
- U.S. Department of the Interior, Office of Environmental Policy and Compliance (DOI)
- Virginia Marine Resources Commission (VMRC)
- Virginia Department of Conservation and Recreation (DCR)
- Virginia Department of Environmental Quality (DEQ)
- Virginia Department of Game and Inland Fisheries (DGIF)
- Virginia Department of Agriculture and Consumer Services (VDACS)
- Virginia Department of Mines, Minerals, and Energy (DMME)
- Virginia Department of Historic Resources (DHR)
- Virginia Institute of Marine Science (VIMS)

- Virginia Port Authority (VPA)
- Hampton Roads Planning District Commission (HRPDC)
- Hampton Roads Transit (HRT)
- Mayor, City of Norfolk
- Mayor, City of Portsmouth
- Hampton Roads Maritime Association
- Norfolk Southern Corporation

Copies of scoping responses received are included in Appendix B.

A review copy of this EA will be distributed to these agencies when it is made available for public review.

4.2 Public Involvement

A Location Public Hearing will be held to present information, including this Environmental Assessment, about project changes that have occurred since the release of the 2001 HRCS FEIS. This includes the westward alignment shift of CBA 9 – Segment 3, as well as regulatory and land use changes that affected potential impacts associated with the Build Alternative. The Location Public Hearing will provide an opportunity for VDOT to obtain input and comments from the community on the Build Alternative and this Environmental Assessment. Comments received will be considered prior to making a final decision about the Build Alternative.

APPENDIX A: SECTION 106 COORDINATION



Kimley-Horn & Associates, Inc.
Chesapeake

OCT - 7 2009

COMMONWEALTH of VIRGINIA

L. Preston Bryant, Jr.
Secretary of Natural Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221-0311

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

5 October 2009

Mr. Jeffrey A. Florin
Virginia Port Authority
600 World Trade Center
Norfolk, Virginia 23510-1679

Re: Craney Island Road and Rail Construction (CIRRC)
City of Portsmouth
DHR File # 2008-1125

Dear Mr. Florin:

The Department of Historic Resources (DHR) has received for our review and comment the report *Cultural Resources Identification Survey Craney Island Road and Rail Connector, City of Portsmouth, Virginia* (Gosser et al: 2009). Based upon information presented in the report, the level of effort appears to be sufficient to have identified any historic properties within the area investigated. Unfortunately, the report does not meet DHR's archaeological survey guidelines because of certain survey methodologies chosen. However, due to the level of disturbance in the area, extensive wetlands, and portions of created land, it is our opinion that the aforementioned survey represents a reasonable and good faith effort to locate historic properties within the area investigated.

The proposed project involves modifications to the existing APM Terminals interchange with Route 164, and the northward extension of a two-lane major arterial roadway within proposed right-of-way acquisitions that will accommodate both the road and rail lines, and will be able to accommodate two additional roadway lanes in the future. It will consist of approximately 10,000 linear feet of collector/distributor roads and about 12,800 linear feet of a new two-lane roadway. There will also be approximately 6,500 linear feet of double railroad track. The road and rail alignments will cross over a large tract of undeveloped forest land, some of which is owned by the United States Coast Guard (USCG) and United States Navy. We request that the Virginia Port Authority, if it has not already done so, contact these two federal agencies and solicit comments from them on the effect of this undertaking on historic properties within their respective jurisdictions. Please provide the DHR with any comments that you may receive from the Navy or the USCG for our consideration. We

Administrative Services
10 Courthouse Avenue
Petersburg, VA 23803
Tel: (804) 862-6416
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way, 2nd Floor
Newport News, VA 23608
Tel: (757) 886-2807
Fax: (757) 886-2808

Roanoke Region Office
1030 Penmar Ave., SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

Page 2
5 October 2009
Mr. Jeffrey A. Florin

also recommend contacting the Portsmouth Historical Association who has demonstrated an interest in the history of Craney Island previously. Again, please provide the DHR any comments that you may received from the historical association.

With respect to the results of the archaeological survey, we concur with your recommendation that three (3) archaeological sites (44PM0031, 44PM0065, and 44PM0066) lie within the Area of Potential Effect (APE) and are *Not Eligible* for listing in the National Register of Historic Places (NRHP). Based upon survey results we concur with your determination that there are no known archaeological sites located within the project area and that further archaeological survey is not needed within the area studied.

The cultural resources report also documented several architectural or historic resources within the APE. Two properties, the Craney Island Fuel Terminal (DHR Survey No. 124-0044) and the McCotter House (DHR Survey No. 124-0049), were previously recorded. The consultants also identified seventeen newly documented properties (DHR Survey Nos. 124-5135 through 124-5151). Both previously recorded resources are recommended not eligible for listing in the National Register. We concur with this recommendation. Additionally, the newly identified properties are also not considered worthy of inclusion in the National Register. We also agree with this assessment.

Before the DHR can determine the overall impact that the proposed road construction will have to historic properties we first want those parties mentioned above to have the opportunity to provide comment and to articulate any issues that they may have. Please ensure that these entities are contact and any comments that the Virginia Port Authority receives from them are provided to the DHR for our consideration.

If you have any questions about our comments, please call me at (804) 367-2323, Ext. 114

Sincerely,



Marc Holma, Architectural Historian
Office of Review and Compliance

- C: Mr. Kenneth A. Dierks, Kimley-Horn
Ms Pam Anderson, Navy
Mr. Bill Brazier, USCG
Ms Alice C. Hanes, President, Portsmouth Historical Association

Per the DHR's request of October 5, 2009, letters of inquiry were sent to the Navy, the US Coast Guard, and the Portsmouth Historical Association, and the African-American Historical Society of Portsmouth, Virginia on November 30, 2009. Of those inquiries, one response was received from the Navy, a copy of which is provided below.

NAVFAC_MIDLANT_Response

From: Wright, Kelly D CIV NAVFAC [kelly.wright@navy.mil]
Sent: Monday, December 07, 2009 1:14 PM
To: Dierks, Ken
Cc: Anderson, Pamela P CIV NAVFAC MIDLANT EV; Holma, Marc (DHR)
Subject: Craney Island Road and Rail Connector report

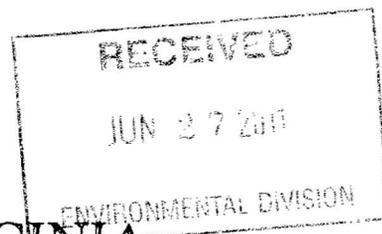
Mr. Dierks,

Pam Anderson requested that I review the subject report as it relates to the Naval property portions of the project. The information contained in the report is, to the best of my knowledge, accurate and sufficiently described the status of archaeological investigations and resources. Thank you for the opportunity to review this report.

V/R,

K. Dean Wright
Cultural Resources Management Program
NAVFAC, MIDLANT Core, Environmental, EV2
(757) 445-2393

APPENDIX B: AGENCY COORDINATION



COMMONWEALTH of VIRGINIA

Department of Agriculture and Consumer Services

PO Box 1163, Richmond, Virginia 23218

Phone: 804/786-3501 • fax: 804/371-2945 • Hearing Impaired: 800/828-1120

www.vdacs.virginia.gov

Matthew J. Lohr
Commissioner

June 8, 2011

Mr. Chris Collins
VDOT Project Studies Manager
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219-2000

Dear Mr. Collins:

This is in response to your letter of June 2, 2011, concerning the reevaluation of the Hampton Roads Crossing Study Environmental Impact Statement.

VDACS has responsibility for farmland preservation and the protection of endangered and threatened plant and insect species. Regarding the first matter, Section 3.2-204 of the Code of Virginia requires that in preparing its report on each major state project, each state agency shall demonstrate that it has considered the impact the project would have on farm and forest lands as required in Section 3.2-205, and has adequately considered alternatives and mitigating measures. Therefore VDACS encourages those involved in planning this project to minimize the loss of farm and forest land to the highest degree possible. In addition, VDACS strongly suggests that VDOT contact the localities affected by this project to determine whether those localities have established Agricultural and Forestal Districts that may be impacted. Should such districts exist, additional project review by each impacted locality is required as per Section 15.2-4313 of the Code of Virginia.

Regarding endangered and threatened species, we would encourage your agency to follow the State Environmental Review Process (SERP) policies to formally consult with the state and federal agencies involved in protection of natural and historic resources. The Department of Conservation and Recreation (DCR) will conduct an initial review of the study area regarding natural resources, including endangered plant and insect species. DCR will then report their findings to VDOT and VDACS.

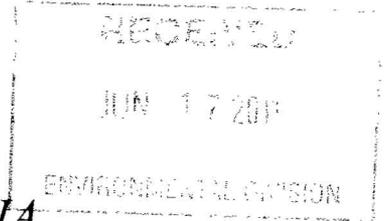
We appreciate this opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew J. Loh". The signature is fluid and cursive, with the first name "Matthew" being the most prominent part.

Matthew J. Loh
Commissioner

cc: Sandra J. Adams, Deputy Commissioner
Andy Alvarez, Director, Division of Consumer Protection
Charles Green, Director, Division of Marketing
Roy Seward, Director, Office of Policy, Planning and Research



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

June 13, 2011

Mr. Chris Collins
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219-2000

RE: Scoping, Virginia Department of Transportation, Reevaluation of Hampton Roads Crossing Study, Final Environmental Impact Statement, Hampton Roads/Portsmouth, Virginia

Dear Mr. Collins:

This correspondence is in response to your June 2, 2011, letter. The letter requests scoping comments for the potential environmental impacts from the proposed construction of a selected alternative discussed in the Hampton Roads Crossing Study Environmental Impact Statement (EIS) and the modification of study limits. The attached letter includes an error message in the last sentence of the first paragraph. Based on a discussion (phone conversation, C.Collins/J.Wellman, June 13, 2011), we understand that the sentence should have referenced the attached map.

Project Description

According to the letter (attached), the Virginia Department of Transportation (VDOT) and the Federal Highway Administration (FHWA) are reevaluating the EIS for the Hampton Roads Crossing Study. The selected alternative consists of five independent segments. The study limits for Segment 1 have been shortened because it co-locates with the Interstate 564 Intermodal Connector study. The Interstate 664 widening on the Peninsula and the Southside, including the Monitor-Merrimac Memorial Bridge Tunnel multimodal component of the selected alternative, will not be included in the reevaluation. The Craney Island Eastward Expansion Project necessitated the shift of the approved alignment to the west. The reevaluation, in the form of an environmental assessment (EA), will address changes in the study area and project.

Coordination of Environmental Reviews

The roles of the Virginia Department of Environmental Quality (DEQ) in relation to the project under consideration are as follows. First, DEQ's Office of Environmental Impact Review will coordinate Virginia's review of any environmental documents prepared pursuant to the National Environmental Policy Act (NEPA) and comment to the FHWA on behalf of the Commonwealth. A similar review process will pertain to the federal consistency certification (FCC) that must be provided pursuant to the Coastal Zone Management Act (CZMA). If the FCC is included as part of the EA, there can be a single review.

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities (federally licensed/permitted or federally funded activities) affecting Virginia's coastal resources or coastal uses must be consistent, to the maximum extent practicable, with the Virginia Coastal Zone Management Program (VCP) (see section 307(c)(1) of the Act and the *Federal Consistency Regulations* at 15 CFR Part 930, sub-part D). The FHWA must ensure that VDOT provide a consistency certification which involves an analysis of the proposed activities in light of the Enforceable Policies of the VCP (first enclosure) and a commitment to carry out the proposed activities consistently with the Enforceable Policies. In addition, we invite your attention to the Advisory Policies of the VCP (second enclosure). As stated above, the FCC may be provided as part of the NEPA documentation or separately, depending on FHWA and VDOT preference. Although not required, we recommend, in the interests of efficiency for all concerned, that the FCC be provided together with the NEPA document and at least 60 days be allowed for review, in keeping with the *Federal Consistency Regulations* (see section 930.62 (allows up to 6 months). Section 930.58 of the *Federal Consistency Regulations* and Virginia's *Federal Consistency Information Package* (available at www.deq.virginia.gov/eirfederal.html) give content requirements for the consistency certification.

Scoping and Environmental Review

While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments concerning the preparation of the NEPA document for the proposed project. Therefore, we are sharing your letter with selected state and local Virginia agencies; these are likely to include the following (note: starred (*) agencies administer one or more of the Enforceable Policies of the Virginia Coastal Zone Management Program; see "Federal Consistency," above):

- Department of Environmental Quality:
 - Tidewater Regional Office *
 - Air Division*
 - Division of Land Protection and Revitalization
- Department of Game and Inland Fisheries*
- Department of Conservation and Recreation:
 - Division of Soil and Water Conservation*
 - Division of Natural Heritage
 - Division of Planning and Recreation Resources

- Division of Chesapeake Bay Local Assistance*
 - Marine Resources Commission*
 - Department of Historic Resources
 - Department of Health*
 - Department of Rail and Public Transportation
 - Virginia Institute of Marine Science
 - City of Portsmouth
 - City of Newport News
 - City of Chesapeake
 - City of Norfolk
 - City of Hampton
 - City of Suffolk
 - Hampton Roads Planning District Commission

In order to ensure an effective coordinated review of the EA, we will require 24 copies of the document when it is published. The submission may include 4 hard copies and 20 CDs or 4 hard copies and an electronic copy available for download at a web or ftp site. We recommend that project details unfamiliar to people outside of VDOT and the FHWA be adequately described.

While this office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments concerning the preparation of the NEPA document for the proposed project.

If you have questions about the environmental review process, please feel free to call me at (804) 698-4325 or Julia Wellman, Environmental Impact Review Coordinator, at (804) 698-4326.

I hope this information is helpful to you.

Sincerely,



Ellie Irons, Manager
Office of Environmental Impact Review

Enclosures

cc: Paul D. Holt, City of Portsmouth
Neil A. Morgan, City of Newport News
William E. Harrell, City of Chesapeake
Marcus Jones, City of Norfolk
Mary Bunting, City of Hampton
Selena Cuffee-Glenn, City of Suffolk
John Carlock, Hampton Roads Planning District Commission

ec: Chris Collins, VDOT
Cindy Keltner, DEQ TRO
Richard Criqui, DEQ ORP
Kotur S. Narasimhan, DEQ DAPC
Amy Ewing, DGIF
Robbie Rhur, DCR
Tony Watkinson, VMRC
Pam Mason, VIMS
Roger Kirchen, DHR
Barry Matthews, VDH
Ben McFarlane, HRPDC



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

TDD (804) 698-4021

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

Attachment 1

Enforceable Regulatory Programs comprising Virginia's Coastal Zone Management Program (VCP)

- a. **Fisheries Management** - The program stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities. This program is administered by the Marine Resources Commission (VMRC); Virginia Code 28.2-200 to 28.2-713 and the Department of Game and Inland Fisheries (DGIF); Virginia Code 29.1-100 to 29.1-570.

The State Tributyltin (TBT) Regulatory Program has been added to the Fisheries Management program. The General Assembly amended the Virginia Pesticide Use and Application Act as it related to the possession, sale, or use of marine antifoulant paints containing TBT. The use of TBT in boat paint constitutes a serious threat to important marine animal species. The TBT program monitors boating activities and boat painting activities to ensure compliance with TBT regulations promulgated pursuant to the amendment. The VMRC, DGIF, and Virginia Department of Agriculture Consumer Services (VDACS) share enforcement responsibilities; Virginia Code 3.1-249.59 to 3.1-249.62.

- b. **Subaqueous Lands Management** - The management program for subaqueous lands establishes conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, tidal wetlands, adjacent or nearby properties, anticipated public and private benefits, and water quality standards established by the Department of Environmental Quality (DEQ). The program is administered by the Marine Resources Commission; Virginia Code 28.2-1200 to 28.2-1213.
- c. **Wetlands Management** - The purpose of the wetlands management program is to preserve wetlands, prevent their despoliation, and accommodate economic development in a manner consistent with wetlands preservation.
- (1) The tidal wetlands program is administered by the Marine Resources Commission; Virginia Code 28.2-1301 through 28.2-1320.
- (2) The Virginia Water Protection Permit program administered by DEQ includes protection of wetlands --both tidal and non-tidal; Virginia Code §62.1-44.15:5 and Water Quality Certification pursuant to Section 401 of the Clean Water Act.

Attachment 1 continued

Page 2

- d. Dunes Management - Dune protection is carried out pursuant to The Coastal Primary Sand Dune Protection Act and is intended to prevent destruction or alteration of primary dunes. This program is administered by the Marine Resources Commission; Virginia Code 28.2-1400 through 28.2-1420.
- e. Non-point Source Pollution Control – (1) Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by the Department of Conservation and Recreation; Virginia Code 10.1-560 et.seq.

(2) Coastal Lands Management is a state-local cooperative program administered by the DCR's Division of Chesapeake Bay Local Assistance and 84 localities in Tidewater (see i) Virginia; Virginia Code §10.1-2100 –10.1-2114 and 9 VAC10-20 et seq.
- f. Point Source Pollution Control - The point source program is administered by the State Water Control Board (DEQ) pursuant to Virginia Code 62.1-44.15. Point source pollution control is accomplished through the implementation of:
 - (1) the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered in Virginia as the Virginia Pollutant Discharge Elimination System (VPDES) permit program.
 - (2) The Virginia Water Protection Permit (VWPP) program administered by DEQ; Virginia Code §62.1-44.15:5 and Water Quality Certification pursuant to Section 401 of the Clean Water Act.
- g. Shoreline Sanitation - The purpose of this program is to regulate the installation of septic tanks, set standards concerning soil types suitable for septic tanks, and specify minimum distances that tanks must be placed away from streams, rivers, and other waters of the Commonwealth. This program is administered by the Department of Health (Virginia Code 32.1-164 through 32.1-165).
- h. Air Pollution Control - The program implements the federal Clean Air Act to provide a legally enforceable State Implementation Plan for the attainment and maintenance of the National Ambient Air Quality Standards. This program is administered by the State Air Pollution Control Board (Virginia Code 10-1.1300 through §10.1-1320).
- (i) Coastal Lands Management is a state-local cooperative program administered by the DCR's Division of Chesapeake Bay Local Assistance and 84 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act; Virginia Code §10.1-2100 –10.1-2114 and Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative Code 9 VAC10-20 et seq.

Attachment 2

Advisory Policies for Geographic Areas of Particular Concern

- a. Coastal Natural Resource Areas - These areas are vital to estuarine and marine ecosystems and/or are of great importance to areas immediately inland of the shoreline. Such areas receive special attention from the Commonwealth because of their conservation, recreational, ecological, and aesthetic values. These areas are worthy of special consideration in any planning or resources management process and include the following resources:
 - a) Wetlands
 - b) Aquatic Spawning, Nursery, and Feeding Grounds
 - c) Coastal Primary Sand Dunes
 - d) Barrier Islands
 - e) Significant Wildlife Habitat Areas
 - f) Public Recreation Areas
 - g) Sand and Gravel Resources
 - h) Underwater Historic Sites.

- b. Coastal Natural Hazard Areas - This policy covers areas vulnerable to continuing and severe erosion and areas susceptible to potential damage from wind, tidal, and storm related events including flooding. New buildings and other structures should be designed and sited to minimize the potential for property damage due to storms or shoreline erosion. The areas of concern are as follows:
 - i) Highly Erodible Areas
 - ii) Coastal High Hazard Areas, including flood plains.

- c. Waterfront Development Areas - These areas are vital to the Commonwealth because of the limited number of areas suitable for waterfront activities. The areas of concern are as follows:
 - i) Commercial Ports
 - ii) Commercial Fishing Piers
 - iii) Community Waterfronts

Although the management of such areas is the responsibility of local government and some regional authorities, designation of these areas as Waterfront Development Areas of Particular Concern (APC) under the VCRMP is encouraged. Designation will allow the use of federal CZMA funds to be used to assist planning for such areas and the implementation of such plans. The VCRMP recognizes two broad classes of priority uses for waterfront development APC:

- i) water access dependent activities:
- ii) activities significantly enhanced by the waterfront location and complementary to other existing and/or planned activities in a given waterfront area.



CITY of NORFOLK
Office of the Mayor

RECEIVED

JUN 21 2011

ENVIRONMENTAL DIVISION

Paul D. Fraim
Mayor

June 15, 2011

Mr. Chris Collins
Project Studies Manager
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219-2000

RE: Reevaluation: Hampton Roads Crossing Study FEIS
From: I-664/Monitor Merrimac Bridge Tunnel in Hampton Roads
To: I-564 at Naval Station Norfolk in Norfolk, VA and SR 164 in Portsmouth, VA

Dear Mr. Collins:

In response to your June 2, 2011 letter on the above subject, the City of Norfolk strongly supports the advancement of the Patriot's Crossing improvements on the fastest possible time schedule as the first phase implementation of the larger Hampton Roads Third Crossing. Clearly, the Patriot's Crossing project has strong independent utility since it will both relieve regional congestion while also improving connections and travel to some of the largest economic centers in Hampton Roads.

Only a small section of the Segment 1 of the Patriot's Crossing project is located in Norfolk, so its impacts on City resources are expected to be minimal. During the reevaluation process, the primary focus for Norfolk will be on the forecast traffic impacts on connecting local roadways to and from the project area.

The City of Norfolk is ready to assist with this study in any way needed. Please let us know if there are any questions or if we can be of further assistance at this time.

With best wishes, I am

Sincerely,

Paul D. Fraim
Mayor

VIRGINIA MARITIME ASSOCIATION

P.O. Box 3487
Norfolk, Virginia 23514
757-622-2639
FAX 757-622-6302
vma@portofhamptonroads.com
www.vamaritime.com

June 15, 2011

Mr. Chris Collins
Project Studies Manager
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219-2000

RE: Reevaluation: Hampton Roads Crossing Study FEIS
From: I-664/Monitor-Merrimack Memorial Bridge Tunnel in Hampton Roads, VA
To: I-564 at Naval Station Norfolk in Norfolk, VA and to SR 164 in Portsmouth, VA

Dear Mr. Collins,

Thank you for the opportunity to comment on the subject project. The Virginia Maritime Association (VMA) represents over 400 businesses directly and indirectly engaged in the flow of waterborne commerce through the Port of Virginia. As the "Voice of the Port", representing these interested parties, we write to express our support for moving forward with the project known as the Patriot's Crossing.

The results of an economic impact study published by the Mason School of Business at the College of William and Mary conclude in 2006 the Port of Virginia contributed over \$41 billion in revenues, \$13.5 billion in employee compensation, and \$1.2 billion in state and local taxes to economic activity in Virginia. The Port of Virginia employs or facilitates the employment of over 343,000 Virginians, or 9% of Virginia's resident workforce.

Changes are occurring in international shipping, such as the expansion of the Panama Canal, and public and private investments are being made in Virginia that will position the Port of Virginia to become the largest port on the east coast. All of Virginia stands to gain from the Port's growth and continued Port related economic activity. However, the surface transportation infrastructure must be in place to support this growth if the citizens of the Commonwealth are to reap the benefits.

The Patriot's Crossing, segments 1 and 3 of the Hampton Roads Crossing Study FEIS selected alternative, will add needed capacity to Hampton Roads' highway system. It will support the pillars of the region's economy; the military facilities, the Port and tourism. It will offer another route for evacuation in times of disaster and provide much needed relief to congestion experienced daily at the Hampton Roads Bridge Tunnel, Hampton Boulevard in Norfolk, and the Midtown Tunnel.

Therefore, the VMA considers the Patriot's Crossing to be a critical component of the necessary transportation system and supports the Virginia Department of Transportation's plans to pursue this project.

Very truly yours,

A handwritten signature in black ink, appearing to read "Arthur W. Moye, Jr.", written in a cursive style.

Arthur W. Moye, Jr.
Executive Vice President

P.S. Please update your records to reflect our name change from Hampton Roads Maritime Association to Virginia Maritime Association.

From: [Mobley, Ken](#)
To: [Manes, Susan](#)
Subject: FW: VMA Support Letter - FEIS Reevaluation for Patriots Crossing
Date: Thursday, June 30, 2011 11:52:29 AM
Attachments: [20110615141108744.pdf](#)

From: Collins, C. G. 'Chris' [mailto:CG.Collins@VDOT.Virginia.gov]
Sent: Wednesday, June 15, 2011 2:18 PM
To: Mobley, Ken
Subject: FW: VMA Support Letter - FEIS Reevaluation for Patriots Crossing

From: David White [mailto:david@portofhamptonroads.com]
Sent: Wednesday, June 15, 2011 2:16 PM
To: Collins, C. G. 'Chris'
Subject: VMA Support Letter - FEIS Reevaluation for Patriots Crossing

Mr. Collins,

Thank you for returning my call and I'm sorry I missed you. Attached please find a copy of a letter we are mailing to you today expressing our support for the Patriots Crossing and the FEIS reevaluation work. We appreciate the opportunity to comment.

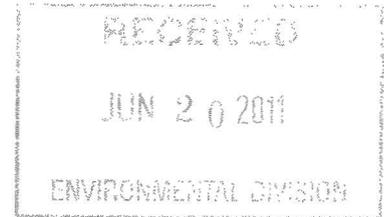
Best regards,
David

Sincerely,
David White
Vice President
Virginia Maritime Association
757-622-2639
david@portofhamptonroads.com

 Before printing this email, please assess if it is really needed

VIRGINIA MARITIME ASSOCIATION

P.O. Box 3487
Norfolk, Virginia 23514
757-622-2639
FAX 757-622-6302
vma@portofhamptonroads.com
www.vamaritime.com



June 15, 2011

Mr. Chris Collins
Project Studies Manager
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219-2000

RE: Reevaluation: Hampton Roads Crossing Study FEIS
 From: I-664/Monitor-Merrimack Memorial Bridge Tunnel in Hampton Roads, VA
 To: I-564 at Naval Station Norfolk in Norfolk, VA and to SR 164 in Portsmouth, VA

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Very truly yours,

A handwritten signature in black ink, appearing to read "Arthur W. Moye, Jr.", written in a cursive style.

Arthur W. Moye, Jr.
Executive Vice President

jsk

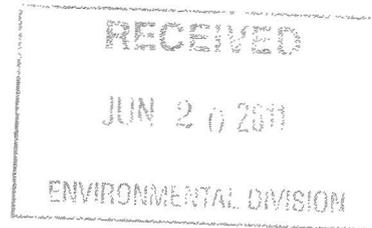
P.S. Please update your records to reflect our name change from Hampton Roads Maritime Association to Virginia Maritime Association.



3400 Victoria Boulevard, Hampton, Virginia 23661
Phone: 757-222-6000 ~ Southside Fax: 757-222-6103
Peninsula Fax: 757-222-6195 ~ www.hrtransit.org

June 16, 2011

Mr. Chris Collins
VDOT Project Studies Manager
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219



Re: HRT Comments regarding - Reevaluation: Hampton Roads Crossing Study FEIS
From: I-664/Monitor-Merrimac Bridge Tunnel in Hampton Roads, VA
To: I-564 at Naval Station Norfolk in Norfolk, VA and to SR 164 in Portsmouth, VA

Dear Mr. Collins:

I am responding to your letter dated June 2, 2011 to Mr. Philip Shucet regarding the reevaluation by VDOT of the Hampton Roads Crossing Study Environmental Impact Statement. Thank you for the opportunity for Hampton Roads Transit to submit comments regarding how the reevaluation of the proposed project might affect resources under the jurisdiction of HRT.

In reviewing the material you sent us, we understand that the construction of the Craney Island Eastward Expansion Project results in the need to shift the approved alignment slightly to the west of its original planned location. This shift will have no impact to HRT bus operations and therefore does not appear to negatively affect future HRT operations. We also concur that the study limits for Segment 1 can be shortened since it is co-located with the I-564 Intermodal Connector Study that is currently ongoing.

While the I-664 widening on the Peninsula and the Southside, which includes the Monitor-Merrimac Memorial Bridge Tunnel multimodal component of the selected alternative, will not be included in this reevaluation; HRT would like to remind VDOT that the multimodal component is a key to sustaining and improving transit connections between the north and south sides of Hampton Roads. Improving access for public transportation vehicles through the addition of new links creates opportunities for HRT to provide improved transit services throughout our service district.

Thank you for the opportunity to provide comments on how the reevaluation of the proposed project might affect the resources of Hampton Roads Transit. If you have any questions or require any additional information, please feel free to call me at 757-222-6000 ext 6133.

Sincerely;

Ray Amoruso
Chief Planning and Development Officer

Cc: Philip A. Shucet, President & CEO, HRT

Document Control: EX440-GS-19 10037



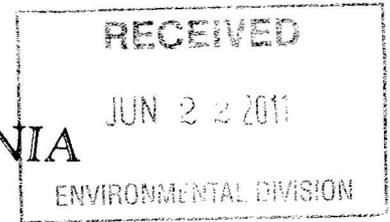
COMMONWEALTH of VIRGINIA

Marine Resources Commission

2600 Washington Avenue
Third Floor
Newport News, Virginia 23607

Douglas W. Domenech
Secretary of Natural Resources

Steven G. Bowman
Commissioner



June 17, 2011

Mr. Chris Collins
Department of Transportation
1401 East Broad Street
Richmond, Virginia 23607

Dear Mr. Collins:

This will acknowledge receipt of your June 2, 2011 letter regarding the above-referenced project. At this time, we have no additional comments beyond those outlined in our July 26, 1999 letter. Please be advised that additional comments will be offered after our review of the supplemental Environmental Assessment and the required Joint Permit Application should this project move forward.

Should you have any questions regarding this letter please contact me at (757) 247-2251.

Sincerely,

A handwritten signature in black ink, appearing to be "R D Owen".

Randal D. Owen
Environmental Engineer

HM
RDO/lra

An Agency of the Natural Resources Secretariat

www.mrc.virginia.gov

Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD



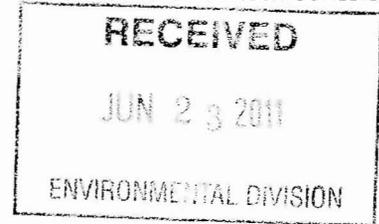
**HAMPTON ROADS
PDC**

PLANNING DISTRICT COMMISSION

STAN D. CLARK, CHAIRMAN • THOMAS G. SHEPPERD, JR., VICE CHAIR • JAMES O. McREYNOLDS, TREASURER

DWIGHT L. FARMER, EXECUTIVE DIRECTOR SECRETARY

June 20, 2011



MEMBER JURISDICTIONS

Mr. Chris Collins
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219-2000

CHESAPEAKE

Re: Scoping, Virginia Department of Transportation, Reevaluation of Hampton Roads Crossing Study, Final Environmental Impact Statement, Hampton Roads/Portsmouth, Virginia (ENV:GEN)

FRANKLIN

GLOUCESTER

Dear Mr. Collins:

HAMPTON

This correspondence is in response to your June 2, 2011 letter to Mr. David Paylor at the Virginia Department of Environmental Quality. The letter requested scoping comments for the potential environmental impacts from the proposed construction of a selected alternative discussed in the Hampton Roads Crossing Study Environmental Impact Statement (EIS) and the modification of study limits. In response we offer the following:

ISLE OF WIGHT

JAMES CITY

NEWPORT NEWS

➤ The Hampton Roads Planning District Commission approved a Regional Green Infrastructure Plan in February 2010, with the intent of identifying and prioritizing a network of valuable conservation lands for habitat protection, water quality protection, stormwater management, and recreation. The report is available online at:

NORFOLK

POQUOSON

<http://www.hrpdcva.gov/Documents/Phys%20Planning/2010/HRGreenInfrastructure2010.pdf>.

PORTSMOUTH

➤ The Hampton Roads Planning District Commission is working with the Commonwealth and local governments to address the Chesapeake Bay TMDL and Virginia Stormwater Management Program Permit Regulations. Projects resulting in increased impervious surface should address the requirements of these two programs.

SOUTHAMPTON

SUFFOLK

SURRY

We appreciate the opportunity to comment on your efforts. If you have any questions, please do not hesitate to call.

VIRGINIA BEACH

Sincerely,

WILLIAMSBURG

YORK

Dwight L. Farmer
Executive Director/Secretary

BJM/fh

Copy: Ellie Irons, DEQ

From: [Mobley, Ken](#)
To: [Manes, Susan](#)
Subject: FW: VDOT Hampton Crossing Scoping
Date: Thursday, June 30, 2011 11:52:22 AM

From: Collins, C. G. 'Chris' [mailto:CG.Collins@VDOT.Virginia.gov]
Sent: Monday, June 27, 2011 7:21 AM
To: Mobley, Ken
Subject: FW: VDOT Hampton Crossing Scoping

From: Lyle M Varnell [mailto:lyle@vims.edu]
Sent: Monday, June 20, 2011 3:22 PM
To: Collins, C. G. 'Chris'; Irons, Ellie (DEQ)
Cc: Owen, Randy (MRC)
Subject: VDOT Hampton Crossing Scoping

Mr. Collins and Ms. Irons:

I am in receipt of the request for scoping comments on the Reevaluation of Hampton Roads Crossing Study, Hampton Roads/Portsmouth. At this time, VIMS has no additional comments on this project.

Please include me as your point of contact for this project in all future correspondences. Thank you.

Lyle Varnell

Lyle M. Varnell (804) 684-7764 (office)
Assistant Director for Advisory Services (804) 684-7097 (fax)
Virginia Institute of Marine Science lyle@vims.edu
College of William and Mary
1208 Greate Road
Gloucester Point, VA 23062



MEMORANDUM

TO: Chris Collins, VDOT Project Studies Manager
Virginia Dept. of Transportation
1401 East Broad Street
Richmond, VA 23219

CG.Collins@VDOT.Virginia.gov

FROM: Richard J. Criqui, Jr., C.P.S.S., DLPR Review Coordinator

DATE: June 20, 2011

COPIES: Leslie A. Romanchik, Hazardous Waste Program Manager
EIR File

SUBJECT: Scoping Request – VDOT – Reevaluation of Hampton Roads Crossing Study, Final Environmental Impact Statement – Hampton Roads – Portsmouth, VA - Review Comments

The Division of Land Protection and Revitalization (DLPR) (former Waste Division) of the Department of Environmental Quality (DEQ) has completed its review of the scoping request letter, dated June 2, 2011, from the Virginia Department of Transportation (VDOT), regarding the Project entitled: *VDOT – Reevaluation of Hampton Roads Crossing Study, Final Environmental Impact Statement (FEIS) – Hampton Roads – Portsmouth..* The project is being evaluated by the VDOT and the U.S. Federal Highway Administration (FHWA).

The VDOT letter indicated that the Craney Island Eastward Expansion Project necessitated the shift of the approved alignment slightly to the west. The re-evaluation, in the form of an environmental assessment (EA), will address changes in the study area and project. The VDOT letter indicated that Interstate 664 widening on the Peninsula and the Southside, including the Monitor-Merrimac Memorial Bridge Tunnel multimodal component of the selected alternative, will not be included in the re-evaluation. The scoping comments will be used in the preparation of the National Environmental Policy Act (NEPA) document for the proposed project.

The project site is located in zip codes 23607, 23511, and 23703.

We have provided comments below concerning the scoping request letter for the DEQ to provide information regarding potential waste issues and environmental resources that could be affected and/or which may be impacted by this proposed project.

The VDOT Letter did not address potential solid and/or hazardous waste issues. The Letter did not include a search of waste-related databases.

The DLPR staff has conducted a cursory review of its database files under zip codes 23607, 23511, and 23703, including a GIS database search (either 0.25 mile or 0.5 mile radius) of the project site and determined the information below.

Facility waste sites of concern were located within the zip codes 23607, 23511, and 23703, and/or within the 0.25 mile to 0.5 mile radius from the project site. However, the proximity of identified waste sites to the project site and/or potential impact to the project should be further evaluated.

The staff's summary comments are as follows:

Hazardous Waste Facilities

The search of the RCRAInfo database under zip codes 23607, 23511, 23703, and/or within 0.5 miles of the project site found the following large quantity generators (LQGs) and permitted treatment, storage, disposal (TSD) facility under the RCRA:

- Naval Station Norfolk, 1510 Gilbert Street, Norfolk, VA, 23511, EPA ID No. VA6170061463, Listed as a Full Enforcement Facility under RCRA, and a TSD (Active) Facility, a Large Quantity Generator (LQG).

Facility contact is listed as Crystal St. Clair-Canaii (757-444-2911).

Also See:

http://oaspub.epa.gov/enviro/fii_query_dtl_disp_program_facility?pgm_sys_id_in=VA6170061463&pgm_sys_acrmm_in=BR

- Huntington Ingalls Incorporated, Washington Avenue, Newport News, VA, 23607, EPA ID No. VAD001307495, Listed as a Full Enforcement Facility under RCRA, and a TSD (Active) Facility, a Large Quantity Generator (LQG), Facility Subject to RCRA Corrective Action (CA).

EPA Contact is Mike Jacobi, EPA Region 3 (215-814-3435).

Facility contacts are listed as Louis Lee (804-380-4375) and Erin Magee (757-688-4477).

Also See:

http://iaspub.epa.gov/apex/cimc/f?p=255:48:23115644845488:::P48_REGISTRY_ID:110020673378,

http://iaspub.epa.gov/apex/cimc/f?p=255:48:23115644845488:::P48_REGISTRY_ID:110020673378.

- U.S. Navy, Supervisor of Shipbuilding, 35th Street Newport News, VA, 23607, EPA ID No. 088186110, Facility is a Large Quantity Generator (LQG), Facility Contact is John Starcher (757-380-4107) .
- U.S. Amines (Portsmouth) LLC, West Norfolk Road, Portsmouth, VA, 23703, EPA ID No. VAR000502203, Facility is a Large Quantity Generator (LQG), Facility Contact is Bruce Moody (757-638-2617) .
- U.S. Coast Guard Base Portsmouth, Portsmouth, VA, 23703, EPA ID No. VA4690320235, Facility is a Large Quantity Generator (LQG), Facility Contact is Chris Dunn (757-483-8593).

Solid Waste Facilities

Search of the DEQ's Solid Waste Sites Inventory under zip codes 23607, 23511, and 23703, and within 0.5 miles of the project site found the following solid waste sites:

- U.S. Navy – Naval Station Norfolk, 1510 Gilbert Street, Norfolk, VA, 23511, SWP 286, Closed Industrial Landfill - CDD, Solid Waste Unit Status – Post-Closure, Solid Waste Permit Status - Permitted.
- U.S. Navy – Naval Station Norfolk, 1510 Gilbert Street, Norfolk, VA, 23511, SWP 311, Closed Industrial Landfill, Solid Waste Unit Status – Closed, Solid Waste Permit Status - Permitted.
- U.S. Navy – Naval Station Norfolk, 1510 Gilbert Street, Norfolk, VA, 23511, SWP 408, Transfer Station – Salvage Fuel, Solid Waste Unit Status – Clean-Closed, Solid Waste Permit Status - Revoked.
- Portsmouth City – Craney Island Landfill, Craney Island, Portsmouth, VA, 23703, SWP 041, CDD Landfill, Solid Waste Unit Status – Active, Solid Waste Permit Status - Permitted.
- PBR 095, RMW Alternate Treatment, U.S. Navy Norfolk Naval Base, Sewells Point, 6500 Hampton Blvd, Norfolk, VA 23511, Solid Waste Unit Status – Closed, Solid Waste Permit Status – Revoked.
- PBR 109, Materials Recovery Facility, U.S. Navy Norfolk Naval Base, Sewells Point, 6500 Hampton Blvd, Norfolk, VA 23511, Solid Waste Unit Status – Clean Closed, Solid Waste Permit Status – Revoked.
- PBR 315, RMW Storage Facility, U.S. Navy Norfolk Naval Base, Sewells Point, 6500 Hampton Blvd, Norfolk, VA 23511, Solid Waste Unit Status – Closed, Solid Waste Permit Status – Revoked.
- PBR 320, RMW Storage Facility, U.S. Navy Norfolk Naval Base, Sewells Point, 6500 Hampton Blvd, Norfolk, VA 23511, Solid Waste Unit Status – Closed, Solid Waste Permit Status – Revoked.
- PBR 323, RMW Storage Facility, U.S. Navy Norfolk Naval Base, Sewells Point, 6500 Hampton Blvd, Norfolk, VA 23511, Solid Waste Unit Status – Closed, Solid Waste Permit Status – Revoked.

PBR – Permit by Rule

SWP – Solid Waste Permit

RMW – Regulated Medical Waste

Contact the DEQ's Tidewater Regional Office for further information regarding any of the above facilities at: <http://www.deq.virginia.gov/regions/tidewater.html>.)

CERCLA Sites

Search of CERCLA facility sites on the CERCLIS database under zip codes 23607, 23511, and 23703, and/or within 0.5 miles of the project site found the following sites:

- U.S. Navy - Norfolk Naval Base (Sewells Point Naval Complex), Helmick St., Norfolk, VA, 23511, EPA ID No. VA6170061463, Facility is a Federal Facility on the EPA's Final NPL. EPA's Remedial Project Manager – Steven R. Hirsh (215-814-3352.)

See: <http://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=0302858#CleanupProgress>

- U.S. Navy Craney Island Fuel Terminal, Craney Island, Portsmouth, VA, 23703, EPA ID No. VA7170022472, Facility is a Federal Facility, Not on NPL. Preliminary Assessment Review Start Needed.

If the above identified sites are found to be in close proximity to the proposed project, then further information regarding the above identified sites may be in order. For further information concerning Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) obligations with the above identified sites, the DEQ recommends that the project manager or engineer contact OSWER at the following: <http://www.epa.gov/aboutepa/oswer.html#OSRTI>.)

FUDs Sites

The following FUDS facility sites were found on DEQ's FUDs Sites Inventory under zip codes 23607, 23511, 23703, and/or within 0.5 miles of the project site:

- Camp Alexander, Newport News, VA, 23607, FUDs No. C3VA0070, FFID No. VA9799F8242.
- Q.M. Depot, Newport News, VA, 23607, FUDS No. C03VA0074, FFID No. VA9799F7808.
- W. H. Group No. 2 & 3, Newport News, VA, 23607, FUDS No. C03VA0076, FFID No. VA9700F7809.
- Port Medical Supply, Newport News, VA, 23607, FUDS No. C03VA1061, FFID No. VA9799F8784.
- NAVSTA, Norfolk, VA, 23511, FUDS No. C03VA0266, FFID No. VA9799F1685.
- Norfolk NAS, Norfolk, VA, 23511, FUDS No. C03VA0277, FFID No. VA9799F1691

For the location and further information regarding the above FUDs sites, please contact Karen Sismour, Federal Facilities Program Manager, Office of Remediation Programs (ORP), DEQ (804-698-4421).

VRP Sites

The following DEQ Voluntary Remediation Program (VRP) facility sites were found on DEQ's VRP Sites Inventory under zip codes 23607, 23511, and 23703, and/or within 0.5 miles of the project site :

- Market Place Square Shopping Center, Portsmouth, VA, 23703, VRP No. VRP00311, Case Status - VRP Certificate Issued.
- BASF Portsmouth (Hoechst Celanese Corp.), Portsmouth, VA, 23703, VRP No. VRP00173, Case Status - Enrolled in Program.
- Plaza Shopping Center, Portsmouth, VA, 23703, VRP No. VRP00427, Case Status – Enrolled in Program.
- USCG Small Arms Firing Range storm Sewer Outfall, Portsmouth, VA, 23703, VRP No. VRP00376, Case Status – Certificate Issued.

Please note that the DEQ's VRP Nos. and VRP case files within the above zip codes and/or within 0.5 miles of the proposed project are identified above and these VRP cases should be further evaluated by the

project engineer or manager to establish the exact location of the release and the nature and extent of the release and the potential to impact the proposed project. The facility representative should contact the DEQ's VRP Program and/or the DEQ's Tidewater Regional Office (TRO) for further information and the administrative records of the VRP cases and to establish the nature and extent of contamination which are in close proximity to the proposed project.

(See: <http://www.deq.virginia.gov/vrp/contactus.html>, and <http://www.deq.virginia.gov/regions/tidewater.html>.)

Petroleum Release Sites

The following petroleum release sites were found on the DEQ's Inventory under zip codes 23607, 23511, and 23703, and within 0.25 miles of the project site:

- Naval Air Station, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19901796, 7/11/2006, Status – Case Closed.
- Naval Air Station, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19910298, 7/13/2006, Status – Case Closed.
- Naval Air Station, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19921089, 8/15/2006, Status – Case Closed.
- Naval Aviation Depot, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19920332, 8/01/2006, Status – Case Closed.
- Naval Air Station, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19911284, 7/21/2006, Status – Case Closed.
- Naval Air Station, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19901780, 8/10/2006, Status – Case Closed.
- Naval Air Station, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19901856, 7/12/2006, Status – Case Closed.
- Naval Air Station, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19962345, 2/12/2007, Status – Case Closed.
- Naval Air Station, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19952406, 1/24/2007, Status – Case Closed.
- Norfolk Naval Base, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19921332, 8/08/2007, Status – Case Closed.
- Norfolk Naval Base – Dewatering Project, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 20055000, 2/08/2006, Status – Case Closed.
- Norfolk Naval Base – Dewatering Project, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19942573, 8/09/2007, Status – Case Closed.
- Norfolk Naval Base, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No. 19943865, 12/07/2006, Status – Case Closed.

- Norfolk Naval Base, 9900 Hampton Blvd., Norfolk, VA, 23505, DEQ PC No.19962376
2/21/2007, Status – Case Closed.
- Craney Island – Wastewater Treatment Plant, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ
PC No. 20015017, 6/22/2007, Status – Case Closed.
- Craney Island Fuel Terminal, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC. No.
19890220, 6/20/2006, Status – Case Closed.
- Craney Island Fuel Terminal, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC. No.
19982210, 4/02/2007, Status – Case Closed.
- Craney Island Fuel Terminal – Tanks 1 – 20, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ
PC No. 20035152, 1/27/2006, Status – Case Open.
- Craney Island – Transfer Pump Station, Butler Road, Portsmouth 23703, DEQ PC No. 20015132,
5/28/2008, Status – Case Closed.
- Craney Island Fuel Terminal – Corner by Tank 10, 4501 Cedar Lane, Portsmouth, VA, 23703,
DEQ PC No. 20085127, 6/04/2008, Status – Case Open.
- Craney Island Fuel Terminal, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC No. 19890220
6/20/2006, Status – Case Closed.
- Craney Island Fuel Terminal, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC No. 19972317
8/30/2006, Status – Case Closed
- Craney Island Fuel Terminal, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC No. 19982210
4/02/2007, Status – Case Closed.
- Craney Island Fuel Terminal – Building 251, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ
PC No. 20055079, 6/02/2006, Status – Case Closed.
- Craney Island Fuel Terminal –Pier D P835 Pipeline, 4501 Cedar Lane, Portsmouth, VA, 23703,
DEQ PC No. 20065031, 10/13/2006, Status – Case Closed.
- Craney Island Fuel Terminal - Transfer Pump house, 4501 Cedar Lane, Portsmouth, VA, 23703,
DEQ PC No. 20035043, 5/16/2007, Status – Case Open.
- U.S. Coast Guard Support Center, 4000 Coast Guard Boulevard, Portsmouth, VA, 23703, DEQ
PC No. 19890939, 6/22/2006, Status – Case Closed.
- U.S. Coast Guard Support Center, 4000 Coast Guard Boulevard, Portsmouth, VA, 23703, DEQ
PC No. 19930637, 9/15/2006, Status – Case Closed.
- U.S. Coast Guard Support Center, 4000 Coast Guard Boulevard, Portsmouth, VA, 23703, DEQ
PC No. 19922356, 2/01/2006, Status – Case Closed.
- Craney Island Fuel Terminal, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC No.
19962324, 2/12/2007, Status – Case Closed.
- Craney Island Fuel Terminal – Pump house 95, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ
PC No. 20075061, 12/21/2006, Status – Case Closed.

- Craney Island Fuel Terminal – Tank 272, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC No. 20005225, 2/02/2006, Status – Case Open.
- Craney Island Fuel Terminal – Tank 275, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC No. 19880664, 2/02/2006, Status – Case Open.
- Craney Island Fuel Terminal, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC No. 19941004, 8/21/2007, Status – Case Closed.
- Craney Island Fuel Terminal, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC No. 19931182, 9/29/2006, Status – Case Open.
- Craney Island Fuel Terminal – Pipeline Release, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC No. 20005234, 6/18/2007, Status – Case Closed.
- Craney Island Fuel Terminal – UST Tank 125, 4501 Cedar Lane, Portsmouth, VA, 23703, DEQ PC No. 19940101, 2/02/2006, Status – Case Open.
- Railroad ROW - APM Terminals, 1000 APM Terminals Blvd., Portsmouth, VA, 23703, DEQ PC No. 20105082, 2/9/2010, Case Closed.
- Churchland High School, 4301 Cedar Lane, Portsmouth, VA 23703, DEQ PC No. 20005223, 6/18/2007, Status – Case Closed.
- City of Portsmouth, 4699 Hedgerow Lane, Portsmouth, VA, 23703, DEQ PC No. 19922088, 8/28/2006, Status – Case Closed.

(Note: Dates above are the latest PC Database edit dates of the specific PC Case Nos.)

Please note that the DEQ's PC case files of the PC Case Nos., within 0.25 miles of the proposed project are identified above and these petroleum releases should be evaluated by the project engineer or manager to establish the exact location of the release and the nature and extent of the petroleum release and the potential to impact the proposed project. The facility representative should contact the DEQ's Tidewater Regional Office for further information and the administrative records of the PC cases which are in close proximity to the proposed project.

(See: <http://www.deq.virginia.gov/regions/tidewater.html>.)

GENERAL COMMENTS

Soil, Sediment, and Waste Management

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Asbestos and/or Lead-based Paint

All structures being demolished/renovated/removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP must be followed.

Pollution Prevention – Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Richard J. Criqui, Jr., C.P.S.S., Environmental Engineer Senior at (804) 698-4013.

From: [Mobley, Ken](#)
To: [Manes, Susan](#)
Subject: FW: Scoping Request - VDOT Project - Hampton Roads Crossing Study - Hampton Roads - Portsmouth - Review Comments
Date: Thursday, June 30, 2011 11:51:57 AM
Attachments: [2011-06-20-VDOT-Hampton Crossing-ScopingReview-letter-Final.docx](#)
[2011-06-20-VDOT-Hampton Crossing-ScopingReview-letter-Final.pdf](#)

From: Collins, C. G. 'Chris' [mailto:CG.Collins@VDOT.Virginia.gov]
Sent: Monday, June 27, 2011 7:19 AM
To: Mobley, Ken
Subject: FW: Scoping Request - VDOT Project - Hampton Roads Crossing Study - Hampton Roads - Portsmouth - Review Comments

From: Criqui, Richard (DEQ) [mailto:Richard.Criqui@deq.virginia.gov]
Sent: Monday, June 20, 2011 2:40 PM
To: Collins, C. G. 'Chris'
Cc: Romanchik, Leslie (DEQ); Irons, Ellie (DEQ); Harmon, Tracey E.
Subject: Scoping Request - VDOT Project - Hampton Roads Crossing Study - Hampton Roads - Portsmouth - Review Comments

6/20/11

Chris,

Please find attached our Scoping Request Review Comments for the subject project.

I received the project review request on 6/14/11.

If you have any comments or questions, please contact me.

Sincerely,

Richard
Richard J. Criqui, Jr., C.P.S.S.
Environmental Engineer Senior
Hazardous Waste Program
Office of Waste Permitting and Compliance, DEQ
Phone: (804) 698-4013
Richard.Criqui@deq.virginia.gov

From: [Manes, Susan](#)
To: [Manes, Susan](#)
Subject: FW: Hampton Roads Crossing Study FEIS Reevaluation Coordination Letter
Date: Thursday, July 21, 2011 10:57:34 AM

FYI

-----Original Message-----

From: Collins, C. G. 'Chris' [<mailto:CG.Collins@VDOT.Virginia.gov>]
Sent: Monday, July 18, 2011 11:33 AM
To: Mobley, Ken
Subject: FW: Hampton Roads Crossing Study FEIS Reevaluation Coordination Letter

-----Original Message-----

From: Vachet, Wendy L CIV NAVFAC MIDLANT, AM
[<mailto:wendy.vachet@navy.mil>]
Sent: Monday, July 18, 2011 11:31 AM
To: Collins, C. G. 'Chris'
Cc: Siegel, Jonathan B CIV NAVFAC MIDLANT, AM; Cooperman, Mitchell B CIV NAVFAC MIDLANT, AM BLC; Allison, Kevin M CIV CNRMA OGC, N00; Jack, Adam J. PE
Subject: Hampton Roads Crossing Study FEIS Reevaluation Coordination Letter

Good Morning Chris,

Thank you for preparing the coordination letter we discussed at our June 15, 2011 meeting. Unfortunately, I did not actually receive your letter until July 11th- therefore, I will not be able to formally respond to your letter before July 30th (as you requested). We are committed to working through the coordination elements, questions and concerns raised in the letter (and at our meeting) but we'll need more time. My goal is to be able to respond to you sometime in August. I hope that is acceptable.

If you have any questions or concerns, please feel to contact me.

Thank you for your time and consideration,

Wendy

Ms. Wendy L. Vachet, AICP
Community Plans and Liaison Officer (CPLO) Mid-Lant
9742 Maryland Avenue
Norfolk, Virginia 23511
(757) 341-0263

"Planning is great but doing is better."

Well behaved women rarely make history:)



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT CORPS OF ENGINEERS
FORT NORFOLK 803 FRONT STREET
NORFOLK, VIRGINIA 23510-1096

September 19, 2011

Eastern Virginia Regulatory Section
NAO-1994-01166

Ms. Irene Rico, Division Administrator
Federal Highway Administration
400 North 8th Street, Room 750
Richmond, Virginia 23219

Mr. Chris Collins
Project Studies Manager
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219-2000

Dear Ms. Rico and Mr. Collins:

This letter is in response to your letter requesting comments on a Re-Evaluation you are conducting for the Hampton Roads Crossing Study, locally referred to as the Patriot's Crossing (and previously as the Third Crossing) located in the vicinity of I-664, I-564, Craney Island, and the Norfolk International Terminals. You prepared an Environmental Impact Statement (EIS) in 2001 for this project. Due to workload, we have been unable to comment prior to this time.

The project will impact waters and/or wetlands regulated by the Norfolk District Army Corps of Engineers (Norfolk District) under Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act (33 U.S.C 403), and a permit or permits will likely be required for the improvements. The Norfolk District will participate as a cooperating agency in the development of further documents in accordance with the National Environmental Policy Act (NEPA). We request regular coordination with the appropriate state and Federal agencies prior to making any substantial decisions regarding the re-evaluation, and in particular any segmentation of the project. We further encourage the use of a collaborative process for the study of this project, documenting concurrence of the pertinent Federal agencies at important steps, to provide the local governments and the public with a more dependable framework for planning decisions.

Our regulations require that we consider a full range of public interest factors and conduct an alternatives analysis in order to identify the least environmentally damaging practicable alternative (LEDPA), which is the only alternative we can authorize. In addition to wetland and waters impacts, we must consider factors such as land use (including displacements of homes and businesses), floodplain hazards and values, water supply and conservation, water quality, safety, cost, economics, threatened and endangered species, historic and cultural resources, and environmental justice. In addition navigation will be a primary consideration for this project.

We recommend that your range of alternatives includes transit options and ferries, particularly since train systems/improvements are being evaluated along both the Route 460 corridor and the I-64 corridor, which may more readily support transit options than when the project was evaluated in 2001. These alternative modes are generally less impactful to aquatic resources than major roadways and may offer at least a partial solution to the problems you are addressing. You should thoroughly document the independent utility of any segments of the project you intend to evaluate or construct separately. Any decisions regarding Craney Island, including any location along or close to Craney Island, should be coordinated with the Norfolk District Corps of Engineers Operations Branch.

The project may affect historic and cultural resources. As per 36 CFR 800.2(a)(2), the Federal Highway Administration (FHWA) is hereby designated as the lead federal agency to fulfill the collective federal responsibilities under Section 106 of the National Historic Preservation Act for the undertaking. We authorize your agency to conduct Section 106 coordination on our behalf. Any Memorandum of Agreement prepared by your agency under 36 CFR 800.6 should include the following clause in the introductory text:

“WHEREAS, pursuant to Section 10 and/or Section 404 of the Clean Water Act, a Department of the Army permit will likely be required from the Corps of Engineers for this project, and the Corps has designated FHWA as the lead federal agency to fulfill federal responsibilities under Section 106;”

Thank you for the opportunity to participate in the development of the EIS. If you have questions, you may contact Alice Allen-Grimes at (757) 201-7219, or alice.w.allen-grimes@usace.army.mil.

Sincerely,



Kimberly A. Prisco-Baggett
Chief, Eastern Virginia
Regulatory Section

Copies Furnished:

Environmental Protection Agency, Philadelphia
U. S. Fish and Wildlife Service, Gloucester
NOAA Fisheries Service, Gloucester Point

U.S. Department
of Transportation

United States
Coast Guard



Commanding Officer
United States Coast Guard
Integrated Support Command

4000 Coast Guard Blvd
Portsmouth, VA 23703
Staff Symbol:
Phone: (757)483-8500
FAX: (757)483-8454

April 16, 2002

Mr. Jeffery C. Cutright
Virginia Department of Transportation
Location and Design Division
1401 East Broad Street
Richmond, VA 23219

Dear Mr. Cutright:

Since our meeting on December 14, 2001, I have been working with my staff and tenant units on the Integrated Support Command (ISC) Portsmouth campus to determine what impacts the proposed "Third Crossing" highway, as shown in the December 2001 USCG Craney Island drawing, will have on our operations. As discussed during our previous meetings, several items caused us concern. In particular, the proposed structure has potential impacts our small arms range facility, the Command, Control and Engineering Center (C2CEN) operations and the overall level of security of the base.

In any of the conceptual scenarios drawn, the structure will encroach on danger areas imposed for the small arms range. According to Naval Ammunition Manuals, the normal explosive arc surrounding the small arms range magazines is 200 feet and increases to 400 feet for some high explosives which are stored in our magazines from time to time. Also, the bullet projection limits from the point where weapons are fired approaches 9000 feet for some types of weapons fired at our range.

When the C2CEN modeled the effects that the structure would have on their antennas and equipment, they discovered an error in the placement of the Differential Global Positioning/Short Range Aids to Navigation (DGPS/SRAN) sites on the drawing. They determined that the correct placement was 500 ft east and 100 ft south of the placement currently shown, which puts the DGPS tower approximately 800-ft east of the proposed roadway. This is cause for concern because the quarter wavelength for the antenna is 784 ft. When large structures, such as the proposed elevated roadway, are placed in or near the field of the antenna's quarter wavelength area, they tend to act as antennas themselves and cause distortions to the DGPS signal. A route further west (such as directly on the property line) would place the roadway out of the quarter wavelength area and significantly reduce the distortion to the DGPS signal.

Another concern is that the structure will pose several security risks. An elevated roadway over the ISC would allow persons in transiting vehicles to plainly see the activities taking place on the base. Bringing a large traffic flow over the ISC gives greater opportunity for unauthorized personnel to trespass on the grounds and offers access to potential terrorist activities. Wherever the structure is built, we would request a barrier be constructed to prevent easy access to the base. We would also request some sort of visual barrier on any portion of the roadway that is elevated to make surveillance from it or from a vehicle using it impossible.