REGIONAL CONNECTORS STUDY

PHASE 3: QUALITATIVE ANALYSIS (STEP 1)

RCS Qualitative Analysis Report – April 15, 2022 draft

Comment responses from stakeholders to the RCS report

Matrix of stakeholder comments with replies from RCS team

REGIONAL CONNECTORS STUDY

Phase 3
Summary of Qualitative Analysis (Step 1)

DRAFT APRIL 15, 2022

RCS Phase 3 – Summary of Qualitative Analysis

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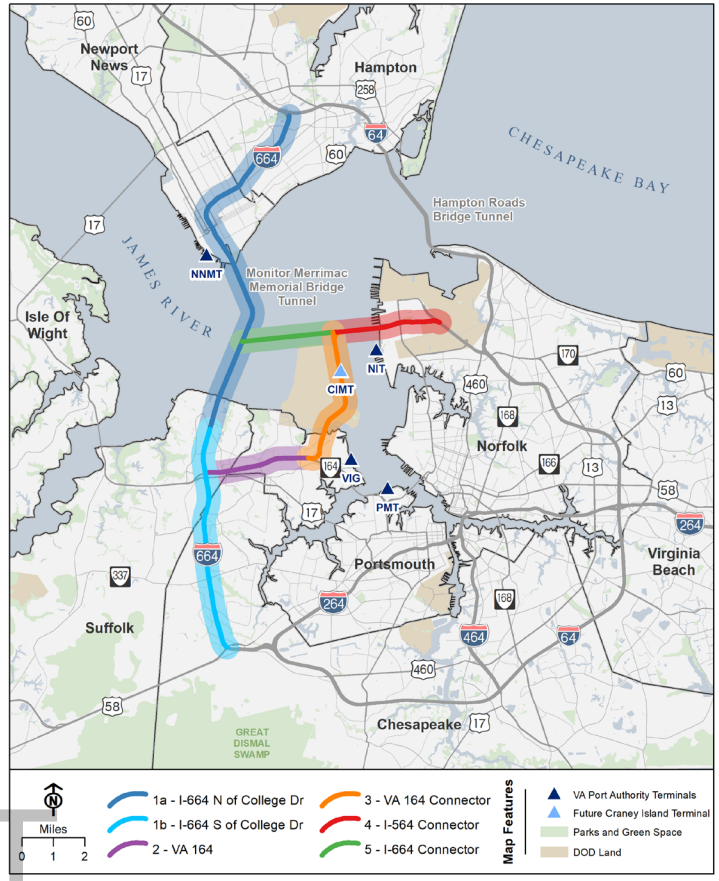
Mandated Segments



List of Abbreviations

Abbreviations	Meaning
AC	Acres
ACOE	Army Corps of Engineers
APE	Area of Potential Effects
BMP	Best Management Practices
CC	Collection Concern
CFR	Code of Federal Regulations
CGP	Construction General Permit
CIDMA	Centre for Intelligent Multidimensional Data Analysis Limited.
CIFD	Craney Island Fuel Terminal
Conn	Connector
COSS	Corridor of Statewide Significance
CWA	Clear Water Act
DOD	Department of Defense
DON	Department of the Navy
E&S	Erosion Sediment
ERC	Elizabeth River Crossings
ESA	Environmental Site Assessment
FESE	Federal Endangered, State Endangered
FHWA	Federal Highway Administration
FIRMs	Flood Insurance Rate maps
FTSE	Federal Threatened, State Endangered
FTST	Federal Threatened, State Threatened
GWMA	Groundwater Management Areas
HOT	High Occupancy Toll
HRBT	Hampton Road Bridge Tunnel
HREL	Hampton Roads Express Lanes
HRSD	Hampton Roads Sanitation District
HRTAC	Hampton Roads Transportation Accountability Commission
HRTPO	Hampton Roads Transportation Planning Organization

Abbreviations	Meaning
IIJA	Infrastructure Investment and Job Act
IMR	Interchange Modification Report
LEDPA	Least Environmental Damaging Practicable Alternative
LOD	Limits of Disturbance
LRTP	Long Range Transportation Plan
LWCF	Land and Water Conservation Fund
MMBT	Monitor-Merrimac Bridge Tunnel
MMMBT	Monitor-Merrimac Memorial Bridge-Tunnel
N/A	Not Applicable
NAS	Naval Station
NAVSTA	Naval Station in Norfolk
NEPA	National Environmental Policy Act
NIT	Norfolk International Terminals
N-MMBT	Northern - Monitor-Merrimac Bridge Tunnel
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NRHP	National Register of Historic Places
NSA	Naval Support Activity
PCB	Polychlorinated biphenyls
RCRA	Resource Conservation and Recovery Act
RCSII	Regional Connectors Study Phase II
ROW	Right-of-way
SE	State Endangered
SEIS	Supplemental Environmental Impact Statement
SMART SCALE	System for the Management and Allocation of Resources for Transportation – Safety, Congestion Mitigation, Accessibility, Land Use, and Economic Development and environment
SPUI	Single Point Urban Interchange
ST	State Threatened
SWPPP	Stormwater Pollution Prevention Plan
TBD	To-Be-Determined

List of Abbreviations (continued)

Abbreviation	Meaning
TMDL	Total Maximum Daily Load
US	United States
USACE	United State Army Corps of Engineers
USACOE	United States Army Corps of Engineers
USCG	United States Coast Guard
USFWS	United State Fish and Wildlife Service
USS	United States Ship
VA	Virginia
VAC	Virginia Administration Code
VaFWIS	Virginia Fish and Wildlife Information Service
VDACS	Virginia Department of Agriculture and Consumer Services
VDEQ	Virginia Department of Environmental Quality

Abbreviation	Meaning
VDGIF	Virginia Department of Game and Inland Fisheries
VDOT	Virginia Department of Transportation
VESCH	Virginia Erosion and sediment Control Handbook
VIG	Virginia International Gateway
VIMS SAV	Virginia Institute of Marine Science - Submerged
VLR	Virginia Landmark Register
VMRC	Virginia Marine Resources Commission
VPA	Virginia Port Authority
VSMP	Virginia Storm Water Program
VTrans	Virginia's Statewide Transportation Plan
VWPP	Virginia Water Protection Permit
W-RNHT	Washington-Rochambeau Revolutionary Route National Historic Trail

Segments Analyzed

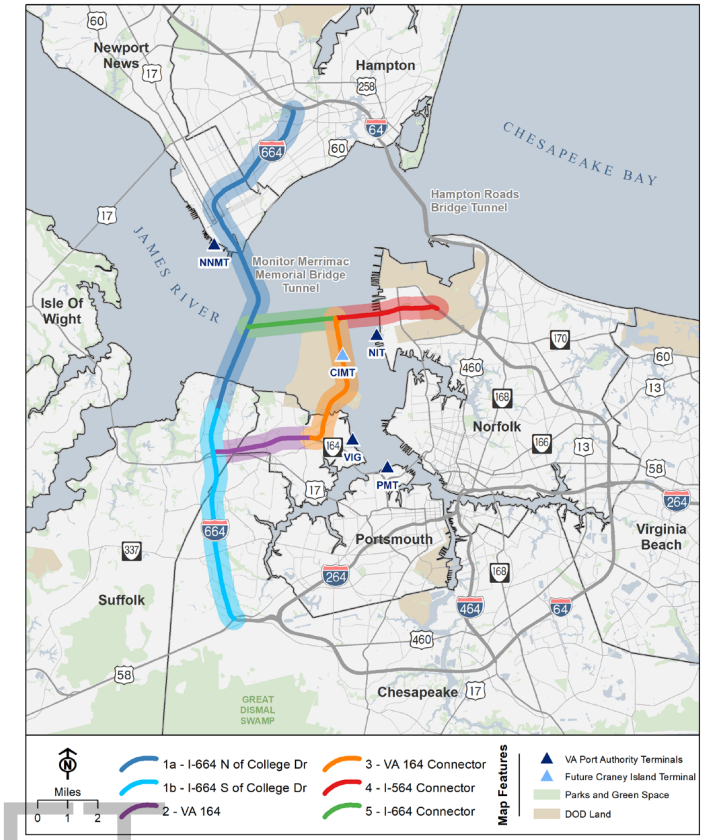
- 1a I-664 North of College Drive – Starting with general alignment of SEIS Alternative D – *adapted lane configuration* to 8 lanes with 4 GP lanes and 4 managed lanes.
- 1b I-664 South of College Drive – Using Bowers Hill Interchange Study Alternative C.
- 2 VA 164 – Widen toward the median to 6 GP lanes per SEIS (adding one in each direction) – *expanded corridor by 20' each side as a cautionary measure to allow for inside crash wall depth for freight rail.*
- 3 VA 164 Connector – SEIS alignment (4 GP lanes)
- 4 I-564 Connector – SEIS Alternative D (4 GP lanes)
- 5 I-664 Connector – SEIS Alternative D (4 GP lanes)

For EJ analysis, also considered demographics of surrounding 500' corridor

Final SEIS available at the HRBT Resources Page at https://www.hrbtexpansion.org/resources-and-documents/default.asp

Segment drawings showing limits of disturbance (LOD) available upon request by contacting the project team via email: connectorstudy@prr.biz

Mandated Segments



REGIONAL CONNECTORS STUDY

the heartbeat of HAMPTON ROADS TPO Transportation Planning Organization

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Evaluation Summary Tables and Map

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Step 1 Evaluation Measures – Segment Comparison

Range of Complexity
High
Moderate
Minimal

Construction Complexity

Construction Complexity	*Segment 1a: I-664 N of College Dr.*	*Segment 1b: I-664 S of College Dr.*	*Segment 2: VA 164*	*Segment 3: VA 164 Connector*	*Segment 4: I-564 Connector*	*Segment 5: I-664 Connector*
	1a	*1b*	*2*	*3*	*4*	*5*
Design & Construction						
Bridges						
Tunnels		N/A	N/A	N/A		N/A
Constrained Work Areas						
Constraints of:						
Local Government or Agency						
State Agency						
Regional Entity						
Federal Entity		TBD				
Design Dependency of Other Mandated Segments						
Traffic Disruptions						
Cost Considerations						
Right-of-Way Acquisitions						N/A
Mitigation of Environmental Factors						
Noise				N/A	N/A	N/A
Wetlands					N/A	

Definitions of Evaluation Framework:

Impact on Constructability –
This measure will capture the anticipated impact on a segment's feasibility to be constructed given the circumstance as they are understood at this time. Measures that may change over time will include additional notation. The following categories will be used in evaluating a segment's design and construction issues:

- **Design complexity**: To include but not limited to the need for tunnels, large structures and limitations presented by constrained work areas.
- **Constraints of local, state and federal activities**: An evaluation of whether a segment would conflict with or limit current or future operations of local, state and federal activities. Examples of this would be regional utilities, landfills, military installations, and Army Corps of Engineers activities.
- **Dependency of other mandated segments**: Each segment will be reviewed against the other mandated segments to determine if that segment will impact the design of another segment or if another segment will impose constraints on that segment. For example, what limitations does the location of the tunnel island for an I-564 Connector have on I-664 and the VA 164 Connector.
- **Significant disruptions to traffic**: This category will evaluate to what extent it is anticipated construction will have a significant impact on existing travel patterns and travel times.
- **Right-of-Way Acquisition:** This will be a measure of the number of impacted parcels and area impacted for each segment.
- **Mitigation of environmental factors**: This will assess the challenges each segment possesses in mitigating environmental factors like noise, water quality and wetlands.

A segment's constructability will have a direct impact on its ability to be implemented in a successful manner to benefit the region. Using the ratings below, the mandated segments will be evaluated with respect to their level of constructability and drivers of cost to differentiate the segments for draft tiering.

- *Minimal: No or very minor impacts that should be easily resolved as the project progresses*
- *Moderate: Impacts that are consistent with significant projects of this scale with a reasonable degree of confidence it can be resolved. Probable adverse impact to outside entity (i.e., local/state/federal agency, major business operation).*
- *High: Significant impact to the constructability of the segment that will require significant efforts or resources to resolve. Likely to result in an adverse impact to outside entity and impacts may be significant.*

Timing Considerations – It is important that such regionally significant projects can be reliably scheduled so that funding pipelines and adjacent projects are not disrupted by setbacks from the constructability issues being evaluated. While these considerations will be presented as notes for each category, below is a general range of how the timing impacts will be view:

- *Minimal: No likelihood of timing or schedule impacts*
- *Moderate: Timing and schedule likely to be impacted by the constructability issue but significant impacts are likely mitigated. There may be some uncertainty in the timing and schedule of the segment's implementation.*
- *High: Significant challenges are foreseen with additional resources needed to overcome the issue. Project likely limited in its implementation due to factors associated with the segments itself or limitations from outside factors beyond the project's control.*

REGIONAL CONNECTORS STUDY

Step 1 Evaluation Measures – Segment Comparison

Range of Impact
High
Moderate
Minimal

Permitting Issues and Key Environmental Impacts

Permitting Issues	*Segment 1a: I-664 N of College Dr.*	*Segment 1b: I-664 S of College Dr.*	*Segment 2: VA 164*	*Segment 3: VA 164 Connector*	*Segment 4: I-564 Connector*	*Segment 5: I-664 Connector*
	1a	*1b*	*2*	*3*	*4*	*5*
Social Environment						
Community impacts (right-of-way, consistency with local plans)						
Sensitive property impacts (noise, community facilities, cultural)						
Environmental Justice (low income and minority communities)						
Federal Permits						
USACOE Section 404 Permit Issues						
USACOE Section 408 Permit Issues						
USACOE Section 10 permit						
USCG Bridge Permit						
NOAA Incidental Harassment Authorization						
State Permits						
VDEQ Section 401 Virginia Water Protection Permit						
VMRC Subaqueous Bottomlands Permit						
VDEQ Virginia Construction General Permit						
Local Permits						
Local Wetlands Board Permit Issues						
Additional Factors						
Mitigation Complexity and Cost						

REGIONAL CONNECTORS STUDY

Step 1 Evaluation Measures – Segment Comparison

Range of Impact
High
Moderate
Minimal

Permitting Issues	*Segment 1a: I-664 N of College Dr.*	*Segment 1b: I-664 S of College Dr.*	*Segment 2: VA 164*	*Segment 3: VA 164 Connector*	*Segment 4: I-564 Connector*	*Segment 5: I-664 Connector*
	1a	*1b*	*2*	*3*	*4*	*5*
Permit Stakeholder Coordination (i.e. Maritime Stakeholders)						
Effect on other Federal Navigation Projects						
Potential Future Changes in Policy Issues						

Definitions of Evaluation Framework:

Impact Rating Concern – This evaluation category captures the potential effect of the project and its construction on the natural and social environment. Some of the most common environmental impacts are:

- social and community environment
- noise impacts
- water resources and wetlands
- protected species
- damage to ecosystems and loss of biodiversity
- historic resources
- regulatory requirements and complexity
- mitigation cost and complexity
- interdependence or conflict with other projects

Human well-being depends directly on biodiversity and ecosystems. It is therefore vital to try to measure, plan and minimize any segment activity that might alter the ecological balance.

- *Minimal: No or Minimal impacts to ecosystems (including social and natural)*
- *Moderate: Impacts that have reasonable solutions to ecosystems (including social and natural)*
- *High: Challenging or Unknown impacts to ecosystems (including social and natural)*

Feasibility Concern - Resource feasibility concerns indicate whether the segment will interfere with the socioeconomic activities within the corridor and identify potential issues and problems that could arise from pursuing the project.

- *Minimal: No or Minimal impacts to existing operations or other transportation projects occurring within the segment*
- *Moderate: Impacts that have reasonable solutions to existing operations or other transportation projects occurring within the segment*
- *High: Challenging or Unknown impacts to existing operations or other transportation projects occurring within the segment*

Timing Implications - It is important that such regionally significant projects can be reliably scheduled so that funding pipelines and adjacent projects are not disrupted by setbacks from the permitting issues being evaluated. While these considerations will be presented as notes for each category, below is a general range of how the timing impacts will be viewed:

- *Minimal: No or Minimal likelihood of timing issues or schedule impacts*

- *Moderate: Impacts that have reasonable solutions of timing issues or schedule impacts*
- *High: Challenging or Unknown (i.e. likelihood of future changes in policies related to permitting) impacts of timing issues or schedule impacts*

Resource Impacts – Reference to the HRTPO Corridor Evaluation Technical Memorandum Table of Resources for a detailed overview of resources potentially present within the segment.

- *Minimal: No or Minimal impacts to resources*
- *Moderate: Impacts that have reasonable solutions to resources*
- *High: Challenging or Unknown impacts to resources*

Range of Readiness

Least
Moderate
Most

Project Readiness

Readiness Issues	*Segment 1a: I-664 N of College Dr.*	*Segment 1b: I-664 S of College Dr.*	*Segment 2: VA 164*	*Segment 3: VA 164 Connector*	*Segment 4: I-564 Connector*	*Segment 5: I-664 Connector*
	1a	*1b*	*2*	*3*	*4*	*5*
Project Independence						
Independence from other segments to achieve operational benefits						
Phasing Potential						
Integration with HREL						
Project Development						
Adopted by a regional agency						
Stakeholder / Review Agency Engagement						
Advancement of Project Study						
Funding Opportunities Eligibility						
HRTAC						
SMART Scale High Priority Project						
Infrastructure Investment and Jobs Act (IIJA) Grant Funding						

Definitions of Evaluation Framework:

Readiness – This evaluation category captures the effort required to move a project through development, to identify the independent nature of each segment, the ability to move through the regional planning and prioritization process, as well as the project's ability to obtain funding.

Level of Project Independence – Each segment of the RCSII will improve the overall regional network. However, benefits are more easily achieved if a segment function has independent benefits or functions as an extension of an ongoing project. Additionally, some segments can be phased to provide interim benefits in a cost-effective manner or extend the region's express lanes project (HREL) which has been identified as a regional priority project.

Operational Independence/Benefits

- *High Readiness:* *Segment provides operational benefits with existing logical termini currently under construction*
- *Moderate Readiness:* *Segment provides operational benefits with programmed improvements*
- *Low Readiness:* *Project operationally dependent on completion of adjacent project*
- *Unknown*

Phasing Potential

- *High Readiness:* *Project segments/phases provide operational benefits and are easily expanded for ultimate build out*
- *Moderate Readiness:* *Project segments/phases result in minor operational benefits but are easily expanded for ultimate build out*
- *Low Readiness:* *Project segments/phases do not result in operational benefits and/or create challenges for ultimate build out*
- *Unknown*

Integration with HREL

- *High Readiness:* *Project segments/phases will extend the HREL that is currently underway*
- *Moderate Readiness:* *Project segments/phases will create a future connection to the HREL network*
- *Low Readiness:* *Project segments/phases will not include HREL*
- *Unknown*

Level of Project Development – A key step in project development process is gaining consensus in the planning process which involves prioritizing projects and ranking based on cost and benefits. In order to increase projects rankings, independent efforts may have taken place or are underway that provide more detailed information that enhance a project ranking. Stakeholder engagements are included in every step of the project development, but input or concerns vary based on where a project is in the overall process.

Adopted by a regional agency (In the existing LRTP)

- *High Readiness:* *Included in more than one Long Range Transportation Plan (LRTP) and within the constrained model*
- *Moderate Readiness:* *Included in the LRTP vision plan*
- *Low Readiness:* *Not included in long-range planning*
- *Unknown*

Stakeholder / Review Agency Engagement (Excluding SEIS effort)

- *High Readiness:* *Documentation of support by local, state, and federal agencies*
- *Moderate Readiness:* *Neither support nor opposition documented*
- *Low Readiness:* *Documentation of opposition by local, state, and federal agencies*
- *Unknown*

Advancement of Project Study

- *High Readiness:* *Project segment or phase is independently being studied or standalone study has been completed within last 3-5 years*

- *Moderate Readiness:* *Project segment or phase has been previously studied or is part of another study such as an interchange modification report*
- *Low Readiness:* *No activity has occurred beyond the SEIS*
- *Unknown*

Funding Opportunities Eligibility – All of the segments included in the RCSII will have significant costs and the current regional needs far exceed available funding for traditional financial sources. Therefore, it is important to identify projects that may be able to take advantage of federal, state, or future earmark funding sources.

HRTAC – Congestion Benefit (Transit not an option)

- *High Readiness:* *Eligible; capacity improvements provide significant level of congestion relief*
- *Moderate Readiness:* *Unknown*
- *Low Readiness:* *Non-Eligible; capacity improvements provide non-congestion benefits*
- *Unknown* *N/A*

SMART Scale High Priority Project

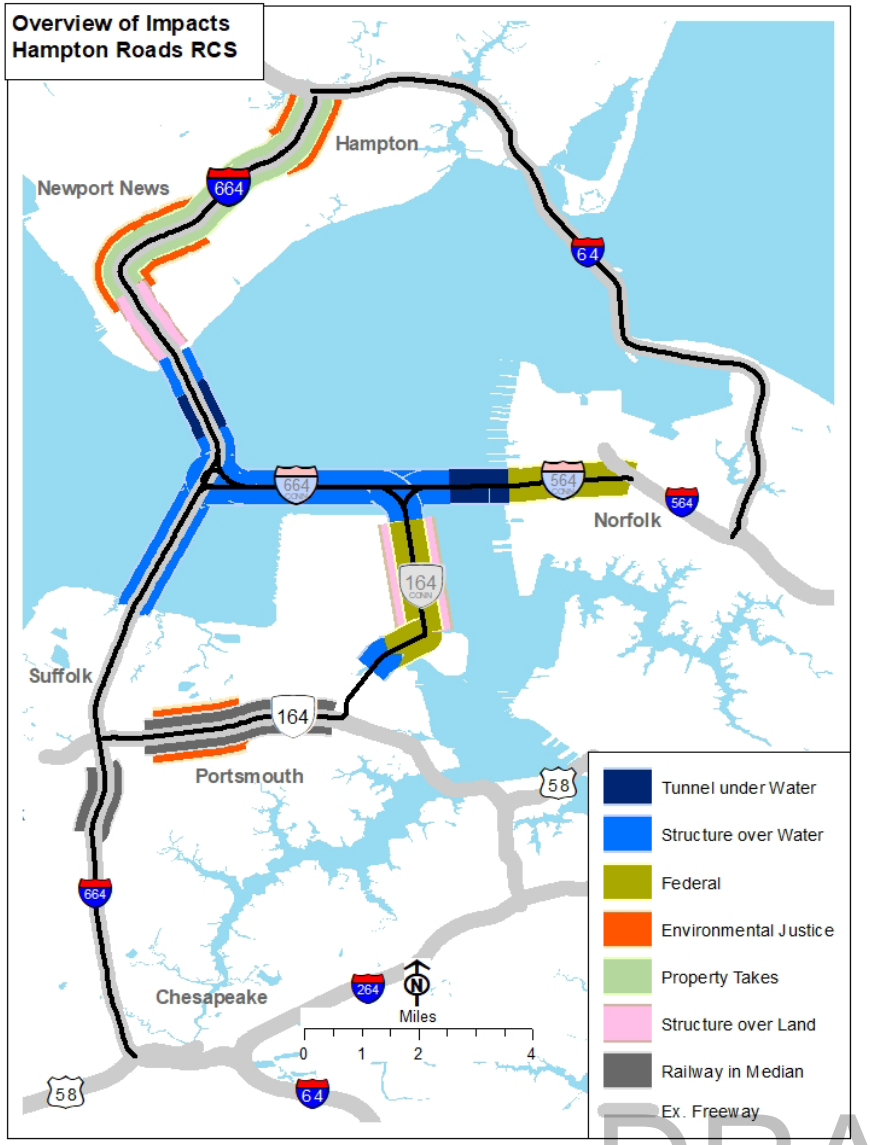
- *High Readiness:* *Meets VTrans and is a High Priority Need*
- *Moderate Readiness:* *Meets VTrans need*
- *Low Readiness:* *Does not meet VTrans need*
- *Unknown*

Infrastructure Investment and Jobs Act (IIJA) Grant Funding – to be further defined as funding opportunities are documented

Funding not clearly defined at this time; preliminary criteria identified the following objectives

- *Freight Funding – Rail Crossing (requires additional research)*
- *Transit Funding (requires additional research)*

- *High Readiness:* *N/A – not defined at this time*
- *Moderate Readiness:* *Priority – direct benefit to currently identified objectives*
- *Low Readiness:* *Non-Priority – no or indirect benefit to currently identified objectives*
- *Unknown*



Step 1 Evaluation Highlights - Key Features

REGIONAL CONNECTORS STUDY

Construction Complexity Technical Evaluation

SEGMENT: *1a: I-664 North of College Dr.*

1a: I-664 North of College Dr. **Resource**	**Impact Rating**	**Constructability Impact**	**Timing Consideration or Comments**
Design & Construction			
Design Complexity			
Bridges	High	It is anticipated that 19 overpass bridges will need to be widened/modified. The portion of I-664 just south of the 25th/26th/27th street interchange is entirely on structure until the MMMBT and will need to be widened. Modifications to existing bridges over I-664 would be necessary to accommodate access to I-664 HOT lanes pending determination of access locations. A new bridge will be needed from the new eastbound tunnel to Suffolk.	Widening of the structures south of 25th St. likely to be complex and have adverse impacts on the project cost and duration.
Tunnels	High	A new tunnel will be required for the eastbound lanes. The existing tunnel of the MMMBT will require modifications to accommodate the westbound HOT lanes. The existing approach and departures of the MMMBT will require modifications.	It is anticipated the HRBT tunnel boring machine will be utilized for this project.
Constrained Work Areas	High	Construction adjacent to the Dominion Terminal Associated coal shipping facility will be constrained due to the proximity of rail lines to the existing and proposed alignment of I-664. From 0.75 mi east of Aberdeen Rd. to the Aberdeen Rd. interchange, the work area will be constrained by the surrounding businesses.	Special consideration for access and work areas will be needed for these areas. Those considerations are likely to negatively impact construction schedule and budget.
Constraints of:			
Local Government or Agency	Moderate	The ramps to/from 34th St. will impact the property for the Newport News police department with some access impacts anticipated.	

1a: I-664 North of College Dr. **Resource**	**Impact Rating**	**Constructability Impact**	**Timing Consideration or Comments**
State Agency	Minimal	No impacts for state entities have been identified at this time.	
Regional Entity	High	At the time of this writing, there is an upcoming project for a new HRSD pipeline from Hampton to Suffolk. The proposed alignment viewed by the team conflicts with the proposed HRSD pipeline alignment. Potential mitigation measures have yet to be discussed.	Relocation of the HRSD line would create a significant expenditure for the project.
Federal Entity	Minimal	No impacts for federal entities have been identified at this time.	
Design Dependency of Other Mandated Segments	Minimal	Currently none as I-664 on the Hampton side does not connect to other mandated segments.	
Traffic Disruptions	Moderate	The majority of widening is anticipated to take place to the outside of the existing roadway, limiting traffic disruptions. However, construction from Jefferson Avenue to the tunnels will be more complex and require lane shifts and closures, resulting in more traffic disruptions. This is because a large portion of I-664 is on structures for this section of the highway and the alignment needs to be altered to accommodate the proposed widening.	Construction between Jefferson Avenue and MMMBT will require multiple stages which will extend the construction duration. While capacity would not be affected by the staging of the MMMBT expansion, complex changes in traffic patterns through the stages of construction will be necessary
Cost Consideration			
Right of Way Acquisitions	High	Approximately 71 parcels are projected to require right-of-way acquisition of some manner. Approximately 9 acres of property are impacted.	

1a: I-664 North of College Dr. **Resource**	**Impact Rating**	**Constructability Impact**	**Timing Consideration or Comments**
Mitigation of environmental factors:			
Noise	Moderate	Approximately 3,330' of existing noise wall will need to be replaced. Changes in the surrounding area, due to construction or in noise abatement requirements may require additional noise walls to be included in the project.	Detailed analysis to determine the extent of addition noise abatement measures.
Wetland	Minimal	No wetlands identified within the limits of disturbance.	

SEGMENT: *1b: I-664 South of College Dr.*

1b: I-664 South of College Dr. **Resource**	**Impact Rating**	**Constructability Impact**	**Timing Consideration or Comments**
Design & Construction			
Design Complexity			
Bridges	High	It is anticipated that 14 bridges will require widening, modification or replacement as a result of the widening. Additionally, 6 new bridges are anticipated for the interchange with VA-164. Modifications to existing bridges over I-664 would be necessary to accommodate access to I-664 HOT lanes pending determination of access locations.	All bridges either on I-664 or over I-664 are anticipated to be impacted. This will be a significant challenge to schedule and constructability. It is anticipated that significant resources will be dedicated to addressing the bridge impacts for this segment
Tunnels	N/A		
Constrained Work Areas	Minimal	The widening will predominantly occur to the inside of the roadway with variations needed based on site specific conditions. It is anticipated the construction area will not be constrained by surrounding parcels. The majority of the corridor.	
Constraints of:			
Local Government or Agency	Minimal	No impacts for local entities have been identified at this time.	
State Agency	Minimal	No impacts for state entities have been identified at this time.	
Regional Entity	Minimal	No impacts for regional entities have been identified at this time.	
Federal Entity	TBD	No impacts for regional entities have been identified at this time.	
Design Dependency of Other Mandated Segments	Minimal	Design considerations will need to be made for the I-664 Connector and any potential knock-on effects that may have from its connection to the I-564 Connector and VA-164 Connector. However, the primary constraint of the I-664 widening will be the existing alignment of I-664 and where the new lanes, tunnel and bridge can be located.	

1b: I-664 South of College Dr. **Resource**	**Impact Rating**	**Constructability Impact**	**Timing Consideration or Comments**
Traffic Disruptions	Moderate	The majority of widening is anticipated to take place to the inside of the existing roadway, limiting traffic disruptions. However, extensive bridge construction will impact traffic.	Although there will likely be an impact to the construction duration, it's unlikely to impact the ability to implement the project.
Cost Consideration			
Right of Way Acquisitions	Minimal	Approximately 5 parcels are projected to require right-of-way acquisition of some manner. Approximately 0.2 acres of property are impacted.	
Mitigation of environmental factors:			
Noise	Minimal	No noise walls are present on this section of I-664. Changes in the surrounding area, due to construction or in noise abatement requirements may require additional noise walls to be included in the project.	Detailed analysis to determine the extent of addition noise abatement measures.
Wetland	Minimal	0.15 AC of wetlands were identified within the limits of disturbance.	

SEGMENT: *2: VA 164*

2: VA 164 **Resource**	**Impact Rating**	**Constructability Impact**	**Timing Consideration or Comments**
Design & Construction			
Design Complexity			
Bridges	Minimal	One bridge crossed over VA-164 for the subject segments, and up to 10 bridges require modifications including interchange ramps. The totality of impacts are uncertain at this time but likely can be mitigated without significant impact to the bridge or widening project.	
Tunnels	N/A		
Constrained Work Areas	High	The widening shown in the SEIS is proposed to be into the median that includes two Commonwealth Railway railroad tracks. This poses a significant challenge to construction the widening and likely crash wall between the tracks and VA-164. Furthermore, should any widening occur along the outside shoulder to mitigate conflicts with the railroad, the corridor is constrained by adjacent residential and commercial parcels.	Resolving the challenges involved with constructing toward either the railroad or adjacent residential and commercial properties will incur a significant impact to the timing of the project.
Constraints of:			
Local Government or Agency	Minimal	No impacts for local entities have been identified at this time.	
State Agency	Minimal	No impacts for state entities have been identified at this time.	
Regional Entity	Minimal	No impacts for regional entities have been identified at this time.	
Federal Entity	Minimal	No impacts for federal entities have been identified at this time.	
Design Dependency of Other Mandated Segments	Moderate	The proposed widening from I-664 to Cedar Ln. would connect to the proposed VA-164 Connector the eastern termini of the VA-164 widening may be constrained by the design needs of the VA-164 Connector. Additionally, the capacity needs from implementation of the VA-164 Connector may also impact the design of the widening for VA-164.	Independent utility may need to be demonstrated for the widening of VA-164 to not be dependent on the implementation of the VA-164 Connector. Should the widening be dependent on the Connector, then the project will face implementation challenges due the constraints associated with the VA-164 Connector.

2: VA 164 Resource	Impact Rating	Constructability Impact	Timing Consideration or Comments
Traffic Disruptions	High	Given the constrained environment, it is anticipated that traffic will be severely and adversely impacted regardless of whether the widening is toward the median or shoulder. Single lane closures for extended periods may be likely.	
Cost Consideration			
Right of Way Acquisitions	Moderate	Approximately 14 parcels are projected to require right-of-way acquisition of some manner. Approximately 1 acre of property is directly impacted.	
Mitigation of environmental factors:			
Noise	Moderate	Noise walls are present on both sides of VA-164 for the length of the proposed widening. Should any widening need to occur to the outside, these noise walls would need to be replaced.	
Wetland	Minimal	0.5 AC of wetlands identified within the limits of disturbance.	

SEGMENT: *3: VA 164 Connector*

3: VA 164 Connector **Resource**	**Impact Rating**	**Constructability Impact**	**Timing Consideration or Comments**
Design & Construction			
Design Complexity			
Bridges	High	The overwhelming majority of the VA-164 Connector is projected to be on structure. The exception being the southern terminus and portions of the interchange ramps with VA-164 may be on grade. The use of structures is necessary given the alignment of the low-lying wetland areas between VIG and Churchland High School, traversing a tributary of the Elizabeth River and the uncertain material that deposited into the CIDMA facility.	Determining the suitability of construction over/through the CIDMA facility at the end of it's lifecycle will be a significant challenge and will require significant resources to resolve.
Tunnels	N/A		
Constrained Work Areas	High	The SEIS alignment bisect the current Portsmouth landfill and passes to the east of a significant Navy fuel depot and proposed port expansion at Craney Island. Each of these pose a significant constraint in where construction can take place, how construction be done and the timing of such construction.	Resolving the construction challenges associated with the location of the SEIS alignment for VA-164 Connector are anticipated to require significant resources.
Constraints of:			
Local Government or Agency	High	The proposed alignment bisects the Portsmouth landfill and would have a significant impact of the operations and expansion ability of the facility.	This challenge will require either significant time for the landfill to no longer be needed or resources to resolve the conflict with the landfill.
State Agency	High	The alignment show for VA-164 Connector is directly adjacent to the expansion of the Port of Virginia at Craney Island. The alignment poses challenges in ensuring access to the expanded facility given its proximity. There is a desire to connect the Port to VA-164 Connector to access the regional network but that connection's feasibility remains unclear.	
Regional Entity	Minimal	No impacts for regional entities have been identified at this time.	
Federal Entity	High	The proposed alignment runs to the east of the existing Navy fuel depot and it future expansion	The proposed location of the Connector is untenable for the Dept. of Defense and will

3: VA 164 Connector Resource	Impact Rating	Constructability Impact	Timing Consideration or Comments
		location. The proximity of the roadway would pose a challenge that is unacceptable to the Department of Defense and it's mission for the facility. The alignment also runs along the east side of CIDMA which is still a current project for the USACE. It has been expressed by the Corps that VA-164 Connector would interfere with the operations of the dredge disposal site.	require additional resources and time to resolve the challenge. It is likely that the only feasible time for the VA-164 Connector to be constructed is following the end of the USACE's project at CIDMA. The latest approximate projection for that is 2050. However, this may be extended by technological advances at the site.
Design Dependency of Other Mandated Segments	High	VA-164 Connector will be constrained by the elevation and location of I-564 and I-664 Connectors. Likely the most impactful is the location of the western island for the tunnel on the I-564 Connector.	The timing and design of the VA-164 Connector is entirely dependent on the construction of the I-564 Connector and design constraints of that segment.
Traffic Disruptions	Minimal	No traffic is present for this corridor today and limited impacts to traffic on VA-164 would be expected for the construction of the interchange between VA-164 and VA-164 Connector.	
Cost Consideration			
Right of Way Acquisitions	High	Approximately 29 parcels are projected to require right-of-way acquisition of some manner. Approximately 167 acres of property are impacted	
Mitigation of environmental factors:			
Noise	N/A	.	
Wetland	High	The segment is projected to impact 31.3Ac of wetlands. This will require either the purchase of credits or remediation.	

SEGMENT: 4: *I-564 Connector*

4: *I-564 Connector* **Resource**	**Impact Rating**	**Constructability Impact**	**Timing Consideration or Comments**
Design & Construction			
Design Complexity			
Bridges	High	The landside portion of the I-564 Connector will need to bridge over Hampton Blvd. and include a Single Point Urban Interchange (SPUI) for access to the port and Navy facilities. Both will be in constrained areas making construction more difficult. The proximity of the SPUI to the proposed tunnel opening will also be a challenge. The interchange ramps between I-664 Connector and VA-164 Connector will be entirely on structures since they are over water.	The proposed SPUI for access to the port and Navy facilities is likely going to require significant coordination to design and implement.
Tunnels	High	The I-564 Connector requires a new tunnel.	It is anticipated the HRBT tunnel boring machine will be utilized for this project. The deeper profile requires adjustments to the approaches. To the west this may affect placement of the island connecting to I-664 Connector and/or VA-164 Connector. To the east, this may alter impacts to Norfolk International Terminal.
Constrained Work Areas	High	The landside portion of the I-564 Connector needs to connect to the Intermodal Connector and goes in between port and Navy facility access locations. Additionally, the eastern tunnel opening is proposed to be constructed in the location of an existing Navy pier. These pose significant challenges to the constructability of the segment.	The proximity of the segment to the Navy and port facilities and crossing under the Elizabeth River will be considerable challenges in implementing this segment. The Navy will likely have security concerns and concerns over the loss of a pier and how that will impact its mission. The port is likely to have concerns over access for its facility.
Constraints of:			
Local Government or Agency	Minimal	No impacts for local entities have been identified at this time.	

4: *I-564 Connector* Resource	Impact Rating	Constructability Impact	Timing Consideration or Comments
State Agency	High	Pier 4 at the Port of Virginia will need to be removed to accommodate the eastern opening of the tunnel for I-564. The tunnel is needed to go under the Elizabeth River to maintain the channel for access to the Port and federal facilities.	Resolving the conflict with the pier will require significant resources and it's resolution is uncertain.
Regional Entity	Minimal	No impacts for regional entities have been identified at this time.	
Federal Entity	High	The alignment is directly adjacent to Navy piers that support various vessels. It is unclear at this time what impacts and limitations this alignment will incur in addressing the Navy's needs.	Resolving the conflicts with the Navy facility will require significant resources and coordination. It is unclear if these challenges can ultimately be resolved.
Design Dependency of Other Mandated Segments	High	I-564 Connector will need to be constructed with the I-664 Connector and/or VA-164 Connector. I-564 Connector will need to make considerations for the VA-164 Connector to ensure the two segments can be connected and constructed safely. Additionally, the required height of I-664 Connector over the water will directly impact the design constraints of the I-564 Connector.	I-564 Connector cannot be constructed by itself and must be constructed with either or both I-664 Connector or VA-164 Connector so that it is connected to the regional network.
Traffic Disruptions	Minimal	No traffic is present for this corridor today.	
Cost Consideration			
Right of Way Acquisitions	Moderate	Approximately 8 parcels are projected to require right-of-way acquisition of some manner. Approximately 73 acres of property are impacted	
Mitigation of environmental factors:			
Noise	N/A	No noise barriers have been identified for this corridor.	
Wetland	N/A	No wetlands identified within the limits of disturbance	

SEGMENT: *5: I-664 Connector*

5: I-664 Connector **Resource**	**Impact Rating**	**Constructability Impact**	**Timing Consideration or Comments**
Design & Construction			
Design Complexity			
Bridges	High	The entirety of the I-664 Connector will be on structures since it is over water. This includes the interchange ramps with I-664, I-540 Connector and VA-164 Connector.	
Tunnels	N/A		
Constrained Work Areas	Moderate	The proximity to CIDMA may restrict some of the working area. Additionally, the interchange ramps with I-664 may be challenging as consideration will need to be given to working adjacent to the active roadway.	
Constraints of			
Local Government or Agency	Minimal	No impacts for local entities have been identified at this time.	
State Agency	Minimal	No impacts for state entities have been identified at this time.	
Regional Entity	Minimal	No impacts for regional entities have been identified at this time.	
Federal Entity	High	Access to the CIDMA site will need to be maintained as long as the site is open. Design considerations will need to be made for this.	
Design Dependency of Other Mandated Segments	High	I-664 Connector will need to be constructed with the I-564 Connector.	I-664 Connector cannot be constructed by itself and must be constructed with I-564 Connector so that it is connected to the regional network.
Traffic Disruptions	Minimal	No traffic is present for this corridor today.	
Cost Consideration			
Right of Way Acquisitions	N/A	There are no parcels impacted	
Mitigation of environmental factors:			
Noise	N/A	No noise walls anticipated.	
Wetland	Minimal	No wetlands identified within the limits of disturbance.	

Impact on Constructability –
This measure will capture the anticipated impact on a segment's feasibility to be constructed given the circumstance as they are understood at this time. Measures that may change over time will include additional notation. The following categories will be used in evaluating a segment's design and construction issues:

- **Design complexity**: To include but not limited to the need for tunnels, large structures and limitations presented by constrained work areas.
- **Constraints of local, state and federal activities**: An evaluation of whether a segment would conflict with or limit current or future operations of local, state and federal activities. Examples of this would be regional utilities, landfills, military installations, and Army Corps of Engineers activities.
- **Dependency of other mandated segments**: Each segment will be reviewed against the other mandated segments to determine if that segment will impact the design of another segment or if another segment will impose constraints on that segment. For example, what limitations does the location of the tunnel island for an I-564 Connector have on I-664 and the VA 164 Connector.
- **Significant disruptions to traffic**: This category will evaluate to what extent it is anticipated construction will have a significant impact on existing travel patterns and travel times.
- **Right-of-Way Acquisition:** This will be a measure of the number of impacted parcels and area impacted for each segment.
- **Mitigation of environmental factors**: This will assess the challenges each segment possesses in mitigating environmental factors like noise, water quality and wetlands.

A segment's constructability will have a direct impact on its ability to be implemented in a successful manner to benefit the region. Using the ratings below, the mandated segments will be evaluated with respect to their level of constructability and drivers of cost to differentiate the segments for draft tiering.

- *Minimal: No or very minor impacts that should be easily resolved as the project progresses*
- *Moderate: Impacts that are consistent with significant projects of this scale with a reasonable degree of confidence it can be resolved. Probable adverse impact to outside entity (i.e., local/state/federal agency, major business operation).*
- *High: Significant impact to the constructability of the segment that will require significant efforts or resources to resolve. Likely to result in an adverse impact to outside entity and impacts may be significant.*

Timing Considerations – It is important that such regionally significant projects can be reliably scheduled so that funding pipelines and adjacent projects are not disrupted by setbacks from the constructability issues being evaluated. While these considerations will be presented as notes for each category, below is a general range of how the timing impacts will be view:

- *Minimal: No likelihood of timing or schedule impacts*
- *Moderate: Timing and schedule likely to be impacted by the constructability issue but significant impacts are likely mitigated. There may be some uncertainty in the timing and schedule of the segment's implementation.*
- *High: Significant challenges are foreseen with additional resources needed to overcome the issue. Project likely limited in its implementation due to factors associated with the segments itself or limitations from outside factors beyond the project's control.*

REGIONAL CONNECTORS STUDY

Permitting Issues Technical Evaluation

SEGMENT: *1a: I-664 North of College Dr.*

1a: I-664 North of College Dr. **Resource**	**Impact Rating**	**Comments on Resource Impacts or Timing Implications**
Social Environment		
Community impacts (right-of-way, consistency with local plans)	Moderate	Most resources are adjacent to the LOD; however, final LOD requirements may show that minor right-of-way acquisitions will be needed and further detailed design may avoid and/or minimize potential impacts. Construction activities would result in temporary interruptions to vehicular traffic patterns, including the potential temporary closure of roads and temporary interruptions to vehicular traffic patterns. Construction activities would cause intermittent fluctuations in noise levels throughout the construction area. The degree of noise impact would vary, as it is directly related to the types of equipment used and the proximity to the noise-sensitive land uses within the project area. Based on a review of the project area, no considerable, long-term construction-related noise impacts are anticipated.
Sensitive property impacts (noise, community facilities, cultural)	Moderate	Most sensitive resources are located outside the LOD; however, final LOD requirements may show that minor right-of-way acquisitions will be needed. Some sensitive properties immediately adjacent to the limits of disturbance may be impacted including Park Place Playground and Kingdom Hall of Jehovah's Witnesses.
Environmental Justice (low income and minority communities)	Moderate	Widening of the existing corridor in an urban environment provides limited adjacent land for construction. Identified Environmental Justice impacts anticipated within the LOD; however, further detailed design may avoid and/or minimize potential impacts. All communities within 500 feet of the proposed construction to the north and south of the corridor are majority minority, with most over 75% minority. All communities in Newport News within 500 feet of the proposed edge of the corridor have over 25% poverty, and many have 75-100% poverty. There are 3 apartment buildings, 11 apartment blocks, and 45 houses within 500 feet of the corridor in Newport News. In Hampton, poverty is less severe, though the communities next to I-664 are also majority minority. In the indirectly impacted areas of Hampton that have over 25% poverty, there are 144 homes and a senior living facility, as well as a High School.

1a: I-664 North of College Dr. Resource	Impact Rating	Comments on Resource Impacts or Timing Implications
Federal Permits		
USACOE Section 404 Permit Issues	Moderate	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with Federal Regulatory Agencies; however, the segment will be widening of the existing corridor. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
USACOE Section 408 Permit Issues	Moderate	Section 408 is the process that allows alteration to a federally authorized project. The proposed project cannot pose a risk to the public interest and will not impair the usefulness of the federally authorized project. Construction activities requiring access to the James River (Newport News Channel) maintained channel for potential barge work zones and safe harbor sites will most likely be required.
USACOE Section 10 permit	Moderate	Maintenance of operations and traffic will be required for all identified Maintained Federal Channels and the existing I664 Monitor Merrimack transportation corridor.
USCG Bridge Permit	Moderate	The segment does cross the James River (Newport News Channel), construction activities requiring access to potential barge work zones and safe harbor sites in or adjacent to the James River (Newport News Channel) will most likely be required.
NOAA Incidental Harassment Authorization	Moderate	There is moderate potential for incidental harassment within this segment.
State Permits		
VDEQ Section 401 Virginia Water Protection Permit	Moderate	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with State Regulatory Agencies; however, the segment will be widening of the existing corridor. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
VMRC Subaqueous Bottomlands Permit	Moderate	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with State Regulatory Agencies; however, the segment will be widening of the existing corridor. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
VDEQ Virginia Construction General Permit	Minimal	Assumption that all required stormwater controls and requirements pursuant to this permit will be obtained and adhered to. It is assumed for this segment that all additional stormwater controls would be located within the boundaries of the LOD.

1a: I-664 North of College Dr. Resource	Impact Rating	Comments on Resource Impacts or Timing Implications
Local Permits		
Local Wetlands Board Permit Issues	Moderate	Tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with Local Wetlands Boards; however, the segment will be widening of the existing corridor. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Additional Factors		
Mitigation Complexity and Cost	High	This segment does contain bridge and roadway structures within water and landside to Federal Navigation Projects along the James River (Newport News Channel), Elizabeth River, and current operations at the Newport News Marine Terminals. Moderate to extensive mitigation costs would be required for wetland and US waters impacts; however, field surveys and additional detailed design may avoid and/or minimize impacts to further reduce potential mitigation costs.
Permit Stakeholder Coordination (i.e. Maritime Stakeholders)	High	Extensive stakeholder coordination with Federal Navigation Projects along the James River (Newport News Channel), Elizabeth River, rail facilities, and current operations at the Newport News Marine Terminals will be required and may pose design and/or construction schedule risk.
Effect on other Federal Navigation Projects	Moderate	This segment does contain bridge and roadway structures within water and landside to Federal Navigation Projects along the James River (Newport News Channel), Elizabeth River, and current operations at the Newport News Marine Terminals; however, the segment is the widening of the existing corridor.
Potential Future Changes in Policy Issues	Minimal	No major regulatory policy changes are anticipated at this time.

SEGMENT: *1b: I-664 South of College Dr.*

1b: I-664 South of College Dr. **Resource**	**Impact Rating**	**Comments on Resource Impacts or Timing Implications**
Social Environment		
Community impacts (right-of-way, consistency with local plans)	Minimal	Construction activities would result in temporary interruptions to vehicular traffic patterns, including the potential temporary closure of roads and temporary interruptions to vehicular traffic patterns. Construction activities would cause intermittent fluctuations in noise levels throughout the construction area. The degree of noise impact would vary, as it is directly related to the types of equipment used and the proximity to the noise-sensitive land uses within the project area. Based on a review of the project area, no considerable, long-term construction-related noise impacts are anticipated.
Sensitive property impacts (noise, community facilities, cultural)	Minimal	Most sensitive resources are located outside the LOD; however, final LOD requirements may show that minor right-of-way acquisitions will be needed. It does not appear that the LOD will exceed the ROW parcel edge along this segment; therefore, there will be no impact to existing businesses, schools, residences, places of worship, or cemeteries.
Environmental Justice (low income and minority communities)	Minimal	Widening of the existing corridor in an urban environment provides limited adjacent land for construction. Based on review of the LOD, no residents or neighboring communities would be relocated; however, final LOD requirements may show that minor right-of-way acquisitions will be needed.
Federal Permits		
USACOE Section 404 Permit Issues	Minimal	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Coordination would be required with Federal Regulatory Agencies; however, the segment will be widening of the existing corridor. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
USACOE Section 408 Permit Issues	Minimal	No rivers or harbors are located within the boundaries of the LOD evaluated.
USACOE Section 10 permit	Minimal	This segment does not contain bridge structures over or adjacent to Federal Navigation Projects nor does this segment cross any maintained Federal Channels.
USCG Bridge Permit	Minimal	This segment does not contain bridge structures over or adjacent to Federal Navigation Projects or mat.
NOAA Incidental Harassment Authorization	Minimal	There is no potential for incidental harassment within this segment.

1b: I-664 South of College Dr. Resource	Impact Rating	Comments on Resource Impacts or Timing Implications
State Permits		
VDEQ Section 401 Virginia Water Protection Permit	Minimal	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Coordination would be required with State Regulatory Agencies; however, the segment will be widening of the existing corridor. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
VMRC Subaqueous Bottomlands Permit	Minimal	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Coordination would be required with State Regulatory Agencies; however, the segment will be widening of the existing corridor. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
VDEQ Virginia Construction General Permit	Minimal	Assumption that all required stormwater controls and requirements pursuant to this permit will be obtained and adhered to. It is assumed for this segment that all additional stormwater controls would be located within the boundaries of the LOD.
Local Permits		
Local Wetlands Board Permit Issues	Minimal	Tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Coordination would be required with Local Wetlands Boards; however, the segment will be widening of the existing corridor. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Additional Factors		
Mitigation Complexity and Cost	Minimal	No business impacts are anticipated within the segment corridor. Minimal anticipated mitigation costs would be required for wetland and US waters; however, field surveys and additional detailed design may avoid and/or minimize impacts to further reduce potential mitigation costs.
Permit Stakeholder Coordination (i.e. Maritime Stakeholders)	Moderate	Transportation facilities identified within the LOD; however, it is the assumption that all transportation facilities will remain at existing or improved functionality. Stakeholder coordination with railroad facilities elevates this segment to Moderate status since coordination will be required and may pose design and/or construction schedule risk.
Effect on other Federal Navigation Projects	Minimal	This segment does not contain bridge structures over or adjacent to Federal Navigation Projects.
Potential Future Changes in Policy Issues	Minimal	No major regulatory policy changes are anticipated at this time.

SEGMENT: *2: VA 164*

2: VA 164 **Resource**	**Impact Rating**	**Comments on Resource Impacts or Timing Implications**
Social Environment		
Community impacts (right-of-way, consistency with local plans)	Minimal	Construction activities would result in temporary interruptions to vehicular traffic patterns, including the potential temporary closure of roads and temporary interruptions to vehicular traffic patterns. Construction activities would cause intermittent fluctuations in noise levels throughout the construction area. The degree of noise impact would vary, as it is directly related to the types of equipment used and the proximity to the noise-sensitive land uses within the project area. Based on a review of the project area, no considerable, long-term construction-related noise impacts are anticipated.
Sensitive property impacts (noise, community facilities, cultural)	Minimal	Many sensitive property identified resources are located outside of the limits of disturbance. It does not appear that the LOD will exceed the ROW parcel edge along this segment; therefore, there will be no impact to existing businesses, schools, residences, places of worship, or cemeteries. Expansion to the eastbound side of VA-164 may require a portion of easement from Ebony Heights Park; however, further detailed design may avoid and/or minimize any potential impacts.
Environmental Justice (low income and minority communities)	Moderate	Expansion to the eastbound side of VA-164 may require a portion of easement from Ebony Heights Park; however, further detailed design may avoid and/or minimize any potential impacts. No residents or neighboring communities would be relocated. Communities within 500 feet of the proposed construction to the north and south of the corridor are majority minority with over 25% of households in poverty. 102 houses 58 2-story apartments, 44 garden apartment blocks, and 3 churches.
Federal Permits		
USACOE Section 404 Permit Issues	Minimal	Non-tidal US Waters and wetlands were identified within the segment; however, however, field surveys and additional detailed design may avoid and/or minimize impacts to further reduce potential impacts.
USACOE Section 408 Permit Issues	Minimal	No rivers or harbors are located within the boundaries of the LOD evaluated.
USACOE Section 10 permit	Minimal	This segment does not contain bridge structures over or adjacent to Federal Navigation Projects nor does this segment cross any maintained Federal Channels.

2: VA 164 Resource	Impact Rating	Comments on Resource Impacts or Timing Implications
USCG Bridge Permit	Minimal	This segment does not contain bridge structures over or adjacent to Federal Navigation Projects or mat.
NOAA Incidental Harassment Authorization	Minimal	There is no potential for incidental harassment within this segment.
State Permits		
VDEQ Section 401 Virginia Water Protection Permit	Minimal	Non-tidal US Waters and wetlands were identified within the segment; however, however, field surveys and additional detailed design may avoid and/or minimize impacts to further reduce potential impacts.
VMRC Subaqueous Bottomlands Permit	Minimal	No subaqueous bottomlands were identified within the boundaries of the evaluated LOD.
VDEQ Virginia Construction General Permit	Minimal	Assumption that all required stormwater controls and requirements pursuant to this permit will be obtained and adhered to. It is assumed for this segment that all additional stormwater controls would be located within the boundaries of the LOD.
Local Permits		
Local Wetlands Board Permit Issues	Minimal	No tidal US Waters or wetlands were identified within the boundaries of the LOD of this segment. Limited coordination would be required with Local Wetlands Boards.
Additional Factors		
Mitigation Complexity and Cost	Minimal	No business impacts are anticipated within the segment corridor. Minimal anticipated mitigation costs would be required for wetland and US waters; however, field surveys and additional detailed design may avoid and/or minimize impacts to further reduce potential mitigation costs.
Permit Stakeholder Coordination (i.e. Maritime Stakeholders)	Moderate	Transportation facilities identified within the LOD; however, it is the assumption that all transportation facilities will remain at existing or improved functionality. Stakeholder coordination with railroad facilities elevates this segment to Moderate status since coordination will be required and may pose design and/or construction schedule risk.
Effect on other Federal Navigation Projects	Minimal	This segment does not contain bridge structures over or adjacent to Federal Navigation Projects.
Potential Future Changes in Policy Issues	Minimal	No major regulatory policy changes are anticipated at this time.

SEGMENT: *3: VA 164 Connector*

3: VA 164 Connector **Resource**	**Impact Rating**	**Comments on Resource Impacts or Timing Implications**
Social Environment		
Community impacts (right-of-way, consistency with local plans)	High	Construction activities would result in temporary interruptions to vehicular traffic patterns, including the potential temporary closure of roads and temporary interruptions to vehicular traffic patterns. Construction activities would cause intermittent fluctuations in noise levels throughout the construction area. The degree of noise impact would vary, as it is directly related to the types of equipment used and the proximity to the noise-sensitive land uses within the project area. Based on a review of the project area, no considerable, long-term construction-related noise impacts are anticipated. Segment traverses through a host of Military/DOD/USACOE facilities. Setback requirements for Anti-Terrorism Force Protection, Security Requirements, and Gate Access for all noted facilities.
Sensitive property impacts (noise, community facilities, cultural)	Minimal	Many sensitive property identified resources are located outside of the limits of disturbance. It does not appear that the LOD will exceed the ROW parcel edge along this segment; therefore, there will be no impact to existing schools, residences, places of worship, or cemeteries. Current design has 2 total business takes required. Identified Businesses and/or Business Access impacts anticipated within the LOD; however, further detailed design may avoid and/or minimize potential impacts. Additional detailed design and analysis required.
Environmental Justice (low income and minority communities)	Minimal	Past and present growth and development - expansion of controlled access roadways have separated neighboring communities No residents or neighboring communities would be relocated.
Federal Permits		
USACOE Section 404 Permit Issues	Moderate	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with Federal Regulatory Agencies. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.

3: VA 164 Connector Resource	Impact Rating	Comments on Resource Impacts or Timing Implications
USACOE Section 408 Permit Issues	Moderate	Section 408 is the process that allows alteration to a federally authorized project. The proposed project cannot pose a risk to the public interest and will not impair the usefulness of the federally authorized project. Although the segment does not cross the Elizabeth River, construction activities requiring access to potential barge work zones and safe harbor sites in or adjacent to the Elizabeth River will most likely be required.
USACOE Section 10 permit	Moderate	This segment does contain a bridge structures over Craney Island Creek which is a tributary of the adjacent Elizabeth River, a maintained Federal Channel. Although the segment does not cross the Elizabeth River, construction activities requiring access to potential barge work zones and safe harbor sites in or adjacent to the Elizabeth River will most likely be required.
USCG Bridge Permit	Moderate	This segment does contain a bridge structures over Craney Island Creek.
NOAA Incidental Harassment Authorization	Minimal	There is limited potential for incidental harassment within this segment.
State Permits		
VDEQ Section 401 Virginia Water Protection Permit	Moderate	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with State Regulatory Agencies. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
VMRC Subaqueous Bottomlands Permit	Moderate	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with State Regulatory Agencies. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
VDEQ Virginia Construction General Permit	Minimal	Assumption that all required stormwater controls and requirements pursuant to this permit will be obtained and adhered to. It is assumed for this segment that all additional stormwater controls would be located within the boundaries of the LOD.
Local Permits		
Local Wetlands Board Permit Issues	Moderate	Tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with Local Wetlands Boards. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.

3: VA 164 Connector **Resource**	**Impact Rating**	**Comments on Resource Impacts or Timing Implications**
Additional Factors		
Mitigation Complexity and Cost	Moderate	Current design has total business take required. Identified Businesses and/or Business Access impacts anticipated within the LOD. Moderate to Extensive anticipated mitigation costs would be required for wetland and US waters impacts; however, field surveys and additional detailed design may avoid and/or minimize impacts to further reduce potential mitigation costs.
Permit Stakeholder Coordination (i.e. Maritime Stakeholders)	High	Extensive stakeholder coordination with Military/DOD/USACOE facilities, the City of Portsmouth Landfill, and railroad facilities will be required and may pose design and/or construction schedule risk.
Effect on other Federal Navigation Projects	High	This segment does contain roadway structures landside to Federal Navigation Projects along the Elizabeth River and current operations at the US Army Corps of Engineers Craney Island Disposal Area. At the present time, the affect would be considered High; however, the status would change to Moderate once the US Army Corps of Engineers Craney Island Disposal Area were identified as end of operational life.
Potential Future Changes in Policy Issues	Minimal	No major regulatory policy changes are anticipated at this time.

SEGMENT: *4: I-564 Connector*

4: I-564 Connector **Resource**	**Impact Rating**	**Comments on Resource Impacts or Timing Implications**
Social Environment		
Community impacts (right-of-way, consistency with local plans)	High	Construction activities would result in temporary interruptions to vehicular traffic patterns, including the potential temporary closure of roads and temporary interruptions to vehicular traffic patterns. Construction activities would cause intermittent fluctuations in noise levels throughout the construction area. The degree of noise impact would vary, as it is directly related to the types of equipment used and the proximity to the noise-sensitive land uses within the project area. Based on a review of the project area, no considerable, long-term construction-related noise impacts are anticipated. Segment traverses through the DON and NIT properties. Need additional information regarding potential anti-terrorism force protection requirements.
Sensitive property impacts (noise, community facilities, cultural)	Minimal	Sensitive property resources are located outside of the limits of disturbance. It does not appear that the LOD will exceed the ROW parcel edge along this segment; therefore, there will be no impact to existing businesses, schools, residences, places of worship, or cemeteries. May have disturbance within the LOD for Fleet Recreation Park (park access/maintenance roads); however, further detailed design may avoid and/or minimize any potential impacts.
Environmental Justice (low income and minority communities)	Minimal	Past and present growth and development - expansion of controlled access facilities such as military installations like NAVSTA Norfolk have separated neighboring communities. No residents or neighboring communities would be relocated.
Federal Permits		
USACOE Section 404 Permit Issues	High	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with Federal Regulatory Agencies. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.

4: I-564 Connector Resource	Impact Rating	Comments on Resource Impacts or Timing Implications
USACOE Section 408 Permit Issues	High	Section 408 is the process that allows alteration to a federally authorized project. The proposed project cannot pose a risk to the public interest and will not impair the usefulness of the federally authorized project. The segment does cross the Elizabeth River and is adjacent to the James River (Newport News Channel), construction activities requiring access to potential barge work zones and safe harbor sites in or adjacent to the Elizabeth River and the James River (Newport News Channel) will most likely be required.
USACOE Section 10 permit	High	The loss of operational use at the Lineage Logistics at Talon Marine Terminals, NIT Pier 3 needs more information in order to determine all of the factors to be considered.
USCG Bridge Permit	High	The segment does cross the Elizabeth River and is adjacent to the James River (Newport News Channel), construction activities requiring access to potential barge work zones and safe harbor sites in or adjacent to the Elizabeth River and the James River (Newport News Channel) will most likely be required.
NOAA Incidental Harassment Authorization	High	There is moderate/high potential for incidental harassment within this segment.
State Permits		
VDEQ Section 401 Virginia Water Protection Permit	High	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with State Regulatory Agencies. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
VMRC Subaqueous Bottomlands Permit	High	Tidal and non-tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with State Regulatory Agencies. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
VDEQ Virginia Construction General Permit	Minimal	Assumption that all required stormwater controls and requirements pursuant to this permit will be obtained and adhered to. It is assumed for this segment that all additional stormwater controls would be located within the boundaries of the LOD.

4: I-564 Connector Resource	Impact Rating	Comments on Resource Impacts or Timing Implications
Local Permits		
Local Wetlands Board Permit Issues	High	Tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with Local Wetlands Boards. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Additional Factors		
Mitigation Complexity and Cost	High	No business impacts are anticipated within the segment corridor. High anticipated mitigation costs would be required for wetland and US waters impacts due to construction of the new island required for the tunnel segment.
Permit Stakeholder Coordination (i.e. Maritime Stakeholders)	High	Extensive stakeholder coordination with Military/DOD/USACOE facilities, transportation facilities, Lineage Logistics at Talon Marine Terminals, NIT Pier 3, and railroad facilities will be required and may pose design and/or construction schedule risk.
Effect on other Federal Navigation Projects	Moderate	No impacts to Federal Navigational Channels and Civil Works Projects are anticipated. All Maintained Navigational Channels will be avoided by the tunnel design.
Potential Future Changes in Policy Issues	Minimal	No major regulatory policy changes are anticipated at this time.

SEGMENT: *5: I-664 Connector*

5: I-664 Connector **Resource**	**Impact Rating**	**Comments on Resource Impacts or Timing Implications**
Social Environment		
Community impacts (right-of-way, consistency with local plans)	High	This segment does contain bridge and roadway structures within water and landside to Federal Navigation Projects along the James River (Newport News Channel), Elizabeth River, and current operations at the US Army Corps of Engineers Craney Island Disposal Area. At the present time, the affect would be considered High; however, the status would change to Moderate once the US Army Corps of Engineers Craney Island Disposal Area were identified as end of operational life.
Sensitive property impacts (noise, community facilities, cultural)	Minimal	No sensitive properties are located within the limits of disturbance.
Environmental Justice (low income and minority communities)	Minimal	No residents or neighboring communities would be relocated.
Federal Permits		
USACOE Section 404 Permit Issues	High	Tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with Federal Regulatory Agencies. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
USACOE Section 408 Permit Issues	High	Section 408 is the process that allows alteration to a federally authorized project. The proposed project cannot pose a risk to the public interest and will not impair the usefulness of the federally authorized project. Construction activities requiring access to the Elizabeth River and James River (Newport News Channel) maintained channels for potential barge work zones and safe harbor sites will most likely be required.
USACOE Section 10 permit	High	This segment does contain bridge and roadway structures within water and landside to Federal Navigation Projects along the James River, Elizabeth River, and current operations at the US Army Corps of Engineers Craney Island Disposal Area. Need more information on the US Army Corps of Engineers Craney Island Disposal Area anticipated end of operational life.
USCG Bridge Permit	High	The segment does cross the Elizabeth River and James River (Newport News Channel), construction activities requiring access to potential barge work zones and safe harbor sites in or adjacent to the Elizabeth River and the James River (Newport News Channel) will most likely be required.

5: I-664 Connector Resource	Impact Rating	Comments on Resource Impacts or Timing Implications
NOAA Incidental Harassment Authorization	High	There is moderate/high potential for incidental harassment within this segment.
State Permits		
VDEQ Section 401 Virginia Water Protection Permit	High	Tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with State Regulatory Agencies. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
VMRC Subaqueous Bottomlands Permit	High	Tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with State Regulatory Agencies. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
VDEQ Virginia Construction General Permit	Minimal	Assumption that all required stormwater controls and requirements pursuant to this permit will be obtained and adhered to. It is assumed for this segment that all additional stormwater controls would be located within the boundaries of the LOD.
Local Permits		
Local Wetlands Board Permit Issues	High	Tidal US Waters and wetlands were identified within the boundaries of the LOD of this segment. Extensive coordination would be required with Local Wetlands Boards. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Additional Factors		
Mitigation Complexity and Cost	High	This segment does contain bridge and roadway structures within water and landside to Federal Navigation Projects along the James River (Newport News Channel), Elizabeth River, and current operations at the US Army Corps of Engineers Craney Island Disposal Area. Moderate to extensive mitigation costs would be required for wetland and US waters impacts; however, field surveys and additional detailed design may avoid and/or minimize impacts to further reduce potential mitigation costs.
Permit Stakeholder Coordination (i.e. Maritime Stakeholders)	High	Extensive stakeholder coordination with Military/DOD/USACOE facilities will be required and may pose design and/or construction schedule risk.

5: I-664 Connector Resource	Impact Rating	Comments on Resource Impacts or Timing Implications
Effect on other Federal Navigation Projects	High	This segment does contain bridge and roadway structures within water and landside to Federal Navigation Projects along the James River, Elizabeth River, and current operations at the US Army Corps of Engineers Craney Island Disposal Area. Need more information on the US Army Corps of Engineers Craney Island Disposal Area anticipated end of operational life.
Potential Future Changes in Policy Issues	Minimal	No major regulatory policy changes are anticipated at this time.

Note that detailed resource evaluations are documented in the Technical Resource Memos for Permitting

Definitions of Tiering Framework:

Impact Rating Concern – This evaluation category captures the potential effect of the project and its construction on the natural and social environment. Some of the most common environmental impacts are:

- social and community environment
- noise impacts
- water resources and wetlands
- protected species
- damage to ecosystems and loss of biodiversity
- historic resources
- regulatory requirements and complexity
- mitigation cost and complexity
- interdependence or conflict with other projects

Human well-being depends directly on biodiversity and ecosystems. It is therefore vital to try to measure, plan and minimize any segment activity that might alter the ecological balance.

- *Minimal: No or Minimal impacts to ecosystems (including social and natural)*
- *Moderate: Impacts that have reasonable solutions to ecosystems (including social and natural)*
- *High: Challenging or Unknown impacts to ecosystems (including social and natural)*

Feasibility Concern - Resource feasibility concerns indicate whether the segment will interfere with the socioeconomic activities within the corridor and identify potential issues and problems that could arise from pursuing the project.

- *Minimal: No or Minimal impacts to existing operations or other transportation projects occurring within the segment*
- *Moderate: Impacts that have reasonable solutions to existing operations or other transportation projects occurring within the segment*
- *High: Challenging or Unknown impacts to existing operations or other transportation projects occurring within the segment*

Timing Implications - It is important that such regionally significant projects can be reliably scheduled so that funding pipelines and adjacent projects are not disrupted by setbacks from the permitting issues being evaluated. While these considerations will be presented as notes for each category, below is a general range of how the timing impacts will be viewed:

- *Minimal: No or Minimal likelihood of timing issues or schedule impacts*
- *Moderate: Impacts that have reasonable solutions of timing issues or schedule impacts*

- *High: Challenging or Unknown (i.e. likelihood of future changes in policies related to permitting) impacts of timing issues or schedule impacts*

Resource Impacts – Reference to the HRTPO Corridor Evaluation Technical Memorandum Table of Resources for a detailed overview of resources potentially present within the segment.

- *Minimal: No or Minimal impacts to resources*
- *Moderate: Impacts that have reasonable solutions to resources*
- *High: Challenging or Unknown impacts to resources*

REGIONAL CONNECTORS STUDY

Readiness Technical Evaluation

Range of Readiness
Least
Moderate
Most

SEGMENT: *1a: I-664 North of College Dr.*

Readiness Criteria	Rating	Description of Readiness
Project Independence		
Independence from other segments to achieve operational benefits	Moderate	Segment adds capacity. Consistent mainline cross section with northeastern termini at I-664/I-64 interchange, which is part of HRBT expansion (currently under construction). Capacity improvements fully realized upon completion of I-664 S widening to Bowers Hill.
Phasing Potential	Moderate	Capacity improvements would have incremental benefits if phasing occurred between interchanges. Interim solutions may create interim bottlenecks at termini. Ability to phase HREL system expansion depends on points of entry to system within segment. MMMBT Project would be standalone project if adjacent land projects completed first; would be last phased segment;
Integration with HREL	Most	HREL included in adjacent expansion Ph 4A/4B
Project Development		
Adopted by a regional agency	Moderate	Included in 2045 Vision Plan, not fiscally constrained plan
Stakeholder / Review Agency Engagement	Moderate	No documented support nor opposition from stakeholders
Advancement of Project Study	Least	No effort has occurred beyond SEIS
Funding Opportunities Eligibility		
HRTAC	Moderate	Level of congestion benefit unknown
SMART Scale High Priority Project	Most	VTrans High Priority – Corridor of Statewide Significance (COSS)
Infrastructure Investment and Jobs Act (IIJA) Grant Funding	Least	No direct benefits to freight/transit (associated with VPA)

SEGMENT: *1b: I-664 South of College Dr.*

Readiness Criteria	Rating	Description of Readiness
Project Independence		
Independence from other segments to achieve operational benefits	Most	Segment adds capacity. Consistent mainline cross section with Bowers Hill interchange, which is part of High-Rise bridge (currently under construction)
Phasing Potential	Most	Capacity improvements would have significant benefits from VA-164 south to Bowers Hill interchange Interim solutions would create interim bottlenecks at termini. Inclusion of HREL depends on access points to system within segment.
Integration with HREL	Most	Project has potential to expand express lane network (segment 2) to Bowers Hill interchange
Project Development		
Adopted by a regional agency	Most	Included in 2045 Fiscally Constrained plan
Stakeholder / Review Agency Engagement	Most	Documented support and approval from stakeholders (FHWA NEPA Ph1)
Advancement of Project Study	Most	"On February 18, 2022, the Federal Highway Administration (FHWA) issued the Notice of Intent (NOI) for the Bowers Hill Interchange Improvements Study, formally initiating the National Environmental Policy Act (NEPA) process." [VDOT]
Funding Opportunities Eligibility		
HRTAC	Most	Recent VDOT study identified congestion levels to meet HRTAC funding criteria
SMART Scale High Priority Project	Most	664 COSS, meets need
Infrastructure Investment and Jobs Act (IIJA) Grant Funding	Moderate	Currently Unknown as no specific criteria has been published

Range of Readiness
Least
Moderate
Most

SEGMENT: *2: VA 164*

Readiness Criteria	Rating	Description of Readiness
Project Independence		
Independence from other segments to achieve operational benefits	Moderate	Segment adds capacity. *Inconsistent* mainline cross section with eastern and western termini. Potential bottlenecks created until 164 Connector and 664 widening projects completed.
Phasing Potential	Moderate	Capacity improvements would have incremental benefits if phasing occurred between interchanges. Interim solutions would create interim bottlenecks at termini.
Integration with HREL	Least	HREL not included along VA-164
Project Development		
Adopted by a regional agency	Most	Included in 2045 Fiscally Constrained Plan
Stakeholder / Review Agency Engagement	Least	Documented opposition from stakeholders (Portsmouth)
Advancement of Project Study	Moderate	Previous IMR completed by Port of Virginia
Funding Opportunities Eligibility		
HRTAC	Most	Included in the HRTAC Plan of Finance
SMART Scale High Priority Project	Moderate	VTrans Priority, not COSS; benefits to VA-164 assist port/truck travel therefore promoting VTrans goals of economic prosperity and connected places
Infrastructure Investment and Jobs Act (IIJA) Grant Funding	Moderate	Currently Unknown as no specific criteria has been published

Range of Readiness
Least
Moderate
Most

SEGMENT: *3: VA 164 Connector*

Readiness Criteria	Rating	Description of Readiness
Project Independence		
Independence from other segments to achieve operational benefits	Least	Requires either I-664 connector or I-564 connector for interstate connection
Phasing Potential	Least	Capacity improvements contingent on VA-164 widening and I-564 connector project.
Integration with HREL	Least	HREL not included along VA-164
Project Development		
Adopted by a regional agency	Moderate	Included in 2045 Vision Plan, not Fiscally Constrained Plan
Stakeholder / Review Agency Engagement	Least	Noted challenges from ACOE, DOD
Advancement of Project Study	Moderate	Craney Island Access Road Study funded (LRTP proj. 2045-604)
Funding Opportunities Eligibility		
HRTAC	Least	New roadway facilities do not have existing congestion and therefore are not eligible for HRTAC funding.
SMART Scale High Priority Project	Least	New roadway facilities do not have existing congestion, therefore do not achieve high scores within SMARTSCALE Criteria
Infrastructure Investment and Jobs Act (IIJA) Grant Funding	Moderate	Currently Unknown as no specific criteria has been published

Range of Readiness
Least
Moderate
Most

SEGMENT: *4: I-564 Connector*

Readiness Criteria	Rating	Description of Readiness
Project Independence		
Independence from other segments to achieve operational benefits	Least	Requires either VA-164 connector or I-664 connector for interstate connection
Phasing Potential	Least	Phases not feasible based on water crossing
Integration with HREL	Least	Project not adjacent to existing or proposed HREL expansion and would trigger an ERC compensation event
Project Development		
Adopted by a regional agency	Moderate	Included in 2045 Vision Plan, not Fiscally Constrained Plan
Stakeholder / Review Agency Engagement	Least	Noted challenges from ACOE, DOD
Advancement of Project Study	Least	No effort has occurred beyond SEIS
Funding Opportunities Eligibility		
HRTAC	Least	New roadway facilities do not have existing congestion and therefore are not eligible for HRTAC funding.
SMART Scale High Priority Project	Least	New roadway facilities do not have existing congestion, therefore do not achieve high scores within SMARTSCALE Criteria
Infrastructure Investment and Jobs Act (IIJA) Grant Funding	Moderate	Currently Unknown as no specific criteria has been published

Range of Readiness
Least
Moderate
Most

SEGMENT: *5: I-664 Connector*

Readiness Criteria	Rating	Description of Readiness
Project Independence		
Independence from other segments to achieve operational benefits	Least	Requires either VA-164 connector or I-564 connector for interstate connection
Phasing Potential	Least	Phases not feasible based on water crossing
Integration with HREL	Least	HREL not included along VA-164 connector and would trigger an ERC compensation event
Project Development		
Adopted by a regional agency	Moderate	Included in 2045 Vision Plan, not Fiscally Constrained Plan
Stakeholder / Review Agency Engagement	Least	Noted challenges from ACOE
Advancement of Project Study	Least	No effort has occurred beyond SEIS
Funding Opportunities Eligibility		
HRTAC	Least	New roadway facilities do not have existing congestion and therefore are not eligible for HRTAC funding.
SMART Scale High Priority Project	Least	New roadway facilities do not have existing congestion, therefore do not achieve high scores within SMARTSCALE Criteria
Infrastructure Investment and Jobs Act (IIJA) Grant Funding	Least	Currently Unknown as no specific criteria has been published

Definitions of Tiering Framework:

Readiness – This evaluation category captures the effort required to move a project through development, to identify the independent nature of each segment, the ability to move through the regional planning and prioritization process, as well as the project's ability to obtain funding.

Level of Project Independence – Each segment of the RCSII will improve the overall regional network. However, benefits are more easily achieved if a segment function has independent benefits or functions as an extension of an ongoing project. Additionally, some segments can be phased to provide interim benefits in a cost-effective manner or extend the region's express lanes project (HREL) which has been identified as a regional priority project.

Operational Independence/Benefits

- *High Readiness:* *Segment provides operational benefits with existing logical termini currently under construction*
- *Moderate Readiness:* *Segment provides operational benefits with programmed improvements*
- *Low Readiness:* *Project operationally dependent on completion of adjacent project*
- *Unknown*

Phasing Potential

- *High Readiness:* *Project segments/phases provide operational benefits and are easily expanded for ultimate build out*
- *Moderate Readiness:* *Project segments/phases result in minor operational benefits but are easily expanded for ultimate build out*
- *Low Readiness:* *Project segments/phases do not result in operational benefits and/or create challenges for ultimate build out*
- *Unknown*

Integration with HREL

- *High Readiness:* *Project segments/phases will extend the HREL that is currently underway*
- *Moderate Readiness:* *Project segments/phases will create a future connection to the HREL network*
- *Low Readiness:* *Project segments/phases will not include HREL*
- *Unknown*

Level of Project Development – A key step in project development process is gaining consensus in the planning process which involves prioritizing projects and ranking based on cost and benefits. In order to increase projects rankings, independent efforts may have taken place or are underway that provide more detailed information that enhance a project ranking. Stakeholder engagements are included in every step of the project development, but input or concerns vary based on where a project is in the overall process.

Adopted by a regional agency (In the existing LRTP)

- *High Readiness:* *Included in more than one Long Range Transportation Plan (LRTP) and within the constrained model*
- *Moderate Readiness:* *Included in the LRTP vision plan*
- *Low Readiness:* *Not included in long-range planning*
- *Unknown*

Stakeholder / Review Agency Engagement (Excluding SEIS effort)

- *High Readiness:* *Documentation of support by local, state, and federal agencies*
- *Moderate Readiness:* *Neither support nor opposition documented*
- *Low Readiness:* *Documentation of opposition by local, state, and federal agencies*
- *Unknown*

Advancement of Project Study

- *High Readiness:* *Project segment or phase is independently being studied or standalone study has been completed within last 3-5 years*

- *Moderate Readiness:* *Project segment or phase has been previously studied or is part of another study such as an interchange modification report*
- *Low Readiness:* *No activity has occurred beyond the SEIS*
- *Unknown*

Funding Opportunities Eligibility – All of the segments included in the RCSII will have significant costs and the current regional needs far exceed available funding for traditional financial sources. Therefore, it is important to identify projects that may be able to take advantage of federal, state, or future earmark funding sources.

HRTAC – Congestion Benefit (Transit not an option)

- *High Readiness:* *Eligible; capacity improvements provide significant level of congestion relief*
- *Moderate Readiness:* *Unknown*
- *Low Readiness:* *Non-Eligible; capacity improvements provide non-congestion benefits*
- *Unknown* *N/A*

SMART Scale High Priority Project

- *High Readiness:* *Meets VTrans and is a High Priority Need*
- *Moderate Readiness:* *Meets VTrans need*
- *Low Readiness:* *Does not meet VTrans need*
- *Unknown*

Infrastructure Investment and Jobs Act (IIJA) Grant Funding – to be further defined as funding opportunities are documented

Funding not clearly defined at this time; preliminary criteria identified the following objectives

- *Freight Funding – Rail Crossing (requires additional research)*
- *Transit Funding (requires additional research)*

- *High Readiness:* *N/A – not defined at this time*
- *Moderate Readiness:* *Priority – direct benefit to currently identified objectives*
- *Low Readiness:* *Non-Priority – no or indirect benefit to currently identified objectives*
- *Unknown*

REGIONAL CONNECTORS STUDY

Permitting Issues Technical Resource Memos

SEGMENT: *1a: I-664 North of College Dr.*

1a: I-664 N of College Dr. **Resource**	**Resources Identified**	**Comments**
Social Environment		
Community Resources		
Military/DOD/USACOE	n/a	No resources within the LOD
Transportation Facilities	North Side: ▪ Overpass at W. Queen Street ▪ Braemer Drive ▪ Balmoral Drive ▪ Keswick Lane ▪ Interchange at Powhatan Parkway ▪ 50th Street ▪ Maxwell Drive ▪ Interchange at Aberdeen Road ▪ Overpass of Railway Line (near Greenlawn Avenue) ▪ Overpass at Chestnut Avenue ▪ Overpass at Roanoke Avenue ▪ Overpass at Marshall Avenue ▪ Overpass at 39th Street ▪ Overpass of Railway Lines (near Terminal Avenue) ▪ Terminal Avenue (several locations) ▪ Overpass at 35th Street ▪ Overpass at 36th Street ▪ Interchange at Route 60 ▪ Overpass at 28th Street ▪ Overpass at 27th Street ▪ Overpass at 26th Street ▪ Overpass at 25th Street ▪ Overpass at 21th Street ▪ 19th Street ▪ 17th Street ▪ 14th Street ▪ Harbor Road ▪ Commonwealth Road ▪ Club Drive ▪ Wagon Road ▪ Armstead Road ▪ College Drive (VA-135)	Transportation facilities identified within the LOD. Assumption that all transportation facilities will remain at existing or improved functionality. Stakeholder coordination with railroad facilities will be required and may pose construction schedule risk.
Virginia Port Authority (VPA)	Newport News Marine Terminals	May require right-of-way acquisition and/or construction easements. Maintenance of terminal operations and traffic will be required.

1a: I-664 N of College Dr. **Resource**	**Resources Identified**	**Comments**
Businesses/Business Access	North Side: ▪ 1 utility impact ▪ 2 telecom impacts ▪ 1 active and 1 inactive rail corridor impact ▪ 1 police impact 1 house of worship impact ▪ 12-13 commercial impacts, including ▪ 1 restaurant impact ▪ 1 grocery impact ▪ 1 probable Navy impact ▪ 3 core structure impacts ▪ 6 Driveway impacts	Identified Businesses and/or Business Access impacts anticipated within the LOD; however, further detailed design may avoid and/or minimize potential impacts.
Sensitive Resources		
Parks & Recreation	North Side: ▪ Superblock Park (2601 Washington Avenue) ▪ King Lincoln Park (600 Jefferson Ave) ▪ Park Place Playground (50th Street)	May have disturbance within the LOD for Park Place Playground; however, further detailed design may avoid and/or minimize potential impacts.
Section 4(f) Properties (publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing on the National Register of Historic Places)	Section 4(f) resources are identified within the segment corridor – refer to individual line items for each resource type. North Side: ▪ Park Place Playground (50th Street)	It is anticipated that all efforts to avoid any identified Section 4(f) resource will be evaluated. All impacts to Section 4(f) properties are anticipated to either not be considered a Section 4(f) use, or are considered a *de minimis* use, per 23 CFR 774 and the Section 4(f) Policy Paper.
Section 6(f) Properties	Any property that was planned, purchased, or improved with Land and Water Conservation Fund (LWCF) money **(**recreational lands that are also regulated under Section 4(f)	No resources within the LOD
Places of Worship	North Side: ▪ New Covenant Baptist Church ▪ Agape Hands Cathedral Church ▪ Kingdom Hall of Jehovah's Witnesses	Kingdom Hall of Jehovah's Witnesses – impacts within LOD; however, further detailed design may avoid and/or minimize potential impacts.
Cemetery	North Side: ▪ Pleasant Shade Cemetery ▪ Greenlawn Cemetery ▪ Greenlawn Memorial Park	No resources within the LOD
School/University	North Side: ▪ Hampton High School (adjacent to LOD) ▪ BT Washington Middle School (adjacent to LOD)	No resources within the LOD

1a: I-664 N of College Dr. **Resource**	**Resources Identified**	**Comments**
Apartment Complexes/Residences	North Side: ▪ Tidewater Senior Apartments ▪ Single family residences along Braemar Drive ▪ Single family residences along Azaela Drive ▪ Single family residences along Birch Avenue ▪ Single family residences along Byrd Street	Most resources are adjacent to the LOD; however, final LOD requirements may show that minor right-of-way acquisitions will be needed.
Children's Health & Safety	The most likely locations of potential effects on children (other than at residences abutting right-of-way) would be at schools where there are outdoor activity areas for children. ▪ Hampton High School (adjacent to LOD) ▪ BT Washington Middle School (adjacent to LOD)	No resources within the LOD
Environmental Justice		
Environmental Justice	North Side: ▪ 35 private residence impacts in the Jefferson neighborhood and Azalea Garden subdivision, including ▪ 1 driveway impact ▪ 9 structure (outbuilding) impacts ▪ There may be a catering business on the 1100 block of 41st street ▪ Concentration of poverty and population is on the west side of the corridor in East End, Marshall & Huntington. Populations in this area south of I-664 are predominately African American south of I-664, with an increasing minority Hispanic population north of I-664	Identified Environmental Justice impacts anticipated within the LOD; however, further detailed design may avoid and/or minimize potential impacts.
Federal State, and Local Permits		
Water Resources		
Tidal Waters/Tidal Streams/Subaqueous bottom	North Side: ▪ Newport News Creek (E1UBL) – adjacent but direct impact ▪ North Island Tunnel (24 acres) ▪ James River (E1UBL)(north bridge/trestle) (16 acres) ▪ South Island Tunnel (27 acres) ▪ James River (E1UBL)(south bridge/trestle) (43 acres)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Tidal Waters/Tidal Streams from Trestle construction: 59 acres Subaqueous bottom for island construction: 51 acres Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.

1a: I-664 N of College Dr. **Resource**	**Resources Identified**	**Comments**
Non-Tidal Waters	North Side: ▪ Freshwater roadway drainage ditch at Howmet Corporation (approx. 190 linear feet) ▪ Freshwater roadway drainage ditch W Pembroke Ave (approx. 1500 linear feet)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Non-Tidal Waters: 1,690 linear feet Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Maintained Navigational Channels and Civil Works Projects	▪ Newport News Creek (E1UBL) – adjacent but direct impact ▪ Newport News Channel	No impacts to Maintained Navigational Channels and Civil Works Projects is anticipated. All Maintained Navigational Channels will be avoided by the tunnel design.
Wetlands	n/a	No resources within the LOD
Waterfront Development Areas		
Commercial Ports	▪ River Port ▪ Blue Night Energy Partners ▪ Chesapeake Bay Fish Packing ▪ Seafood Industrial Park ▪ Davis Boat Works ▪ Boat Marina along Seawall	Impacts TBD when southern terminus with tunnel structure LOD alignment is complete; however anticipated to be outside limits of LOD.
Commercial Fishing Piers	▪ Green Mile Fishing Pier ▪ King-Lincoln Park Fishing Pier	No resources within the LOD
Wildlife Habitat		
Colonial Waterbird Nesting	▪ Urban, Newport News South, Newport News (outside LOD) ▪ 22nd Avenue (outside LOD) ▪ Peterson Yacht Basin (outside LOD) ▪ Salters Creek (outside LOD) ▪ Craney Island, Northwest (outside LOD)	No resources within the LOD Habitat is present for the Gull-billed tern, Piping plover, Red knot, and Wilson's plover.

1a: I-664 N of College Dr. **Resource**	**Resources Identified**	**Comments**
Benthic Species	▪ Hard Clam Habitat (571 acres) ▪ Hard Clam Habitat Tunnels (294 acres) ▪ Public Clamming Grounds (0 acres) ▪ Blue Crab (*Callinectes sapidus*) (0 acres) ▪ Oyster Reefs (*Crassostrea virginica*) (0 acres) ▪ Oyster Sanctuary (0 acres) ▪ Public Baylor Grounds (93 acres) ▪ Private Shellfish Leases (0 acres) The introduction of additional hard substrate such as pilings and riprap protection could provide beneficial habitat where it did not previously exist for oysters and other marine benthic organisms.	The entire footprint beneath each segment is considered potential hard clam habitat because the entire bottom is composed of sand, mud, or a combination suitable for hard clams. Construction BMPs, including conforming to the guidelines contained in the VESCH, would be employed to reduce turbidity and sediment disturbance. The time of year and length of dredging operations may need to be considered as prolonged dredging would result in disturbance to the benthos and adjacent water column over a longer period of time dependent upon the nature of the bottom substrate, tidal fluctuations, and estuarine dynamics. Strict adherence to erosion and sediment control measures and permit requirements would minimize water quality impacts due to sedimentation and turbidity during construction. Long-term effects to benthic communities due to changes in water quality would be minimized and avoided through implementation of stormwater management plans designed to minimize impacts from increases in impervious surfaces, mitigate increases in runoff volume, and satisfy requirements to reduce pollutant loads below existing baseline conditions, as required by the VSMP regulations and Chesapeake Bay TMDL.

1a: I-664 N of College Dr. **Resource**	**Resources Identified**	**Comments**
Historic Resources		
Architectural Resources / Historic Districts	North Side: ▪ 121-0032 (St. Vincent de Paul Catholic Church)(NRHP-Listed 2005) ▪ 121-0033 (Brown Manufacturing Coca-Cola Bottling Works, Daily Press Building)(Recommended Potentially Eligible 2016) ▪ 121-0157 (Peninsula Catholic High School/St. Vincent's School for Girls)(Recommended Potentially Eligible 2016) ▪ 121-0299 (Noland Company Building)(NRHP-Listed 2010) ▪ 121-5318 (Jefferson Avenue Commercial Historic District) ▪ 121-5277 (Jefferson Avenue Commercial Historic District) ▪ 121-0020 (Middle Ground Light Station)(NRHP Listing, VLR Listing)	The area of potential effects (APE) is the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. No direct APE impacts. No anticipated indirect APE (viewshed) impacts.
Archaeological Resources	North Side: ▪ Captain John Smith Chesapeake National Historic Trail (first water trail designated under the National Trails System Act) ▪ Washington-Rochambeau Revolutionary Route National Historic Trail (designated a National Historic Trail under the National Trails System Act)(The W-RNHT is located within what is now a highly industrialized and developed area in which few remnants of the historic landscape survive)	If any significant archaeological sites associated with the Captain John Smith Chesapeake National Historic Trail and Washington-Rochambeau Revolutionary Route National Historic Trail are eventually identified within the LOD, they likely would meet the regulatory exception to the requirements of Section 4(f) approval: the sites likely would be important chiefly for the information they contain, which can be retrieved through data recovery, and would have minimal value for preservation in place.
Additional Factors		
Mitigation Complexity and Cost	▪ Wetland, US waters, and subaqueous bottomlands impacts	High anticipated mitigation costs would be required for wetland and US waters impacts due to construction of the new island required for the tunnel segment.
Permit Stakeholder Coordination	▪ Transportation facilities identified within the LOD (north side). ▪ Newport News Marine Terminals identified within the LOD (north side).	Extensive stakeholder coordination with Federal Navigation Projects along the James River (Newport News Channel), Elizabeth River, rail facilities, and current operations at

1a: I-664 N of College Dr. **Resource**	**Resources Identified**	**Comments**
	▪ Railroad facilities identified within the LOD (north side). ▪ River Port LLC facilities identified within the LOD (north side). ▪ Blue Night Energy Partners facilities identified within the LOD (north side). ▪ Adjacent Property Owners (Residents and Businesses)	the Newport News Marine Terminals will be required and may pose design and/or construction schedule risk.
Effect on other Federal Navigation Projects	▪ Newport News Creek (E1UBL) – adjacent but direct impact ▪ Newport News Channel	This segment does contain bridge and roadway structures within water and landside to Federal Navigation Projects along the James River (Newport News Channel), Elizabeth River, and current operations at the Newport News Marine Terminals.
Potential Future Changes in Policy Issues		No major regulatory policy changes are anticipated at this time.

SEGMENT: *1b: I-664 South of College Dr.*

1b: I-664 S of College Dr. **Resource**	**Resources Identified**	**Comments**
Social Environment		
Community Resources		
Military/DOD/USACOE	▪ DOD Suffolk Complex ▪ Suffolk Base ▪ Naval Information Sources ▪ US Army Reserve Center - Suffolk	No resources within the LOD
Transportation Facilities	South Side: ▪ College Drive (VA-135) ▪ Hampton Roads Parkway ▪ Western Freeway (VA-164) ▪ Bridge Road ▪ Bridge over Rail line on NB lanes ▪ Old Pughsville Road ▪ Bridge over Rail lines on SB lanes ▪ Bridge over Rail-Trail on NB lanes ▪ Bridge over US 17 Western Branch Blvd ▪ Portsmouth Boulevard (VA-337) ▪ Dock Landing Road ▪ Jolliff Road ▪ West Military Highway ▪ Ridgeway Avenue ▪ Schaefer Avenue	Transportation facilities identified within the LOD. Assumption that all transportation facilities will remain at existing or improved functionality.
Businesses/Business Access	South Side: ▪ VDOT Storage Yard Access (near Dock Landing Road)	Identified VDOT Storage Yard access impacts anticipated within the LOD; however, further detailed design may avoid and/or minimize potential impacts.
Sensitive Resources		
Parks & Recreation	n/a	No resources within the LOD
Section 4(f) Properties	Publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing on the National Register of Historic Places. South Side: ▪ South Hampton Roads Trail – Chesapeake Segment ▪ Chesapeake Public Trail	It is anticipated that all efforts to avoid any identified Section 4(f) resource will be evaluated. All impacts to Section 4(f) properties are anticipated to either not be considered a Section 4(f) use, or are considered a *de minimis* use, per 23 CFR 774 and the Section 4(f) Policy Paper.
Section 6(f) Properties	Any property that was planned, purchased, or improved with Land and Water Conservation Fund (LWCF) money (recreational lands that are also regulated under Section 4(f). South Side: ▪ South Hampton Roads Trail – Chesapeake Segment ▪ Chesapeake Public Trail	It is anticipated that all efforts to avoid any identified Section 6(f) resource will be evaluated.
Places of Worship	n/a	No resources within the LOD
Cemeteries	South Side:	No resources within the LOD

1b: I-664 S of College Dr. **Resource**	**Resources Identified**	**Comments**
	▪ Triangle Cemetery	
School/University	South Side: ▪ Oak and Lily Academy ▪ Nansemond-Suffolk Academy Harbour View Campus ▪ Foundation Learning Center ▪ Gibson School ▪ Stonebridge School ▪ Jolliff Middle School	No resources within the LOD
Apartment Complexes/Residences	South Side: ▪ 4952 Old Pughsville Road	Most resources are located outside the LOD; however, final LOD requirements may show that minor right-of-way acquisitions will be needed.
Children's Health & Safety	The most likely locations of potential effects on children (other than at residences abutting right-of-way) would be at schools where there are outdoor activity areas for children.	No resources within the LOD
Environmental Justice		
Environmental Justice	South Side: ▪ LOD within ROW south of James River, no direct impacts	No residents or neighboring communities would be relocated.
Federal State, and Local Permits		
Water Resources		
Tidal Waters/Tidal Streams/Subaqueous bottom	South Side: ▪ Upper tributary of Sweeter Creek (approx. 500 linear feet) ▪ Bridge over Upper tributary of Bailey Creek (approx. 800 linear feet) ▪ Bridge over Goose Creek of Elizabeth River (approx. 215 linear feet)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Tidal Waters/Tidal Streams from Roadway construction: 1,515 linear feet Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.

1b: I-664 S of College Dr. **Resource**	**Resources Identified**	**Comments**
Non-Tidal Waters	South Side: ▪ Non-Tidal channel at Armstead Road (approx. 800 linear feet) ▪ Non-Tidal channel upper tributary of Sweeter Creek near Hampton Roads Parkway (approx. 300 linear feet) ▪ Non-Tidal channel upper tributary of Knotts Creek near 164 overpass (approx. 500 linear feet) ▪ Non-Tidal channel upper tributary of Drum Point Creek near Clifton Street (approx. 375 linear feet) ▪ Non-Tidal channel upper tributary of Drum Point Creek near Myrica Court (approx. 500 linear feet) ▪ Non-Tidal channel upper tributary of Western Branch North near Gum Court (approx. 300 linear feet) ▪ Non-Tidal channel upper tributary of Western Branch North near Deepspring Drive (approx. 250 linear feet) ▪ Non-Tidal channel upper tributary of Western Branch near Jolliff Road (approx. 220 linear feet) ▪ Non-Tidal channel upper tributary of Western Branch near Jolliff Road (approx. 275 linear feet) ▪ Non-Tidal channel near Dock Landing Road (approx. 650 linear feet) ▪ Non-Tidal channel of Goose Creek of Elizabeth River (approx. 575 linear feet) ▪ Non-Tidal channel of Goose Creek of Elizabeth River (approx. 375 linear feet) ▪ Non-Tidal channel of Goose Creek of Elizabeth River (approx. 160 linear feet)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Non-Tidal Waters: 5,280 linear feet Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Maintained Navigational Channels and Civil Works Projects	n/a	No resources within the LOD
Wetlands	Extensive wetland systems within the segment corridor are located outside the LOD. South Side: ▪ PFO at Drum Point Creek (0.15 acres) ▪ Estuarine and Marine Wetland at Bailey Creek (existing bridge) (2.0 acres) ▪ Estuarine and Marine Wetland at Goose Creek (existing bridge) (2.25 acres)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. PFO Wetlands: 0.15 acres Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.

1b: I-664 S of College Dr. **Resource**	**Resources Identified**	**Comments**
Waterfront Development Areas		
Commercial Ports	n/a	No resources within the LOD
Commercial Fishing Piers	n/a	No resources within the LOD
Wildlife Habitat		
Colonial Waterbird Nesting	▪ Salters Creek (outside LOD) ▪ Craney Island, Northwest (outside LOD) Habitat is present for the Gull-billed tern, Piping plover, Red knot, and Wilson's plover.	No resources within the LOD.
Benthic Species	n/a	No resources within the LOD
Historic Resources		
Architectural Resources / Historic Districts	South Side: ▪ 133-5038: Pig Point Ordnance Depot (historical) ▪ 133-5545, 133-5313, 133-5211, 133-5544; 133-5543: Huntersville Historic District ▪ 131-0389; Sunray Agricultural Historic District (NRHP Listed 2007)	The area of potential effects (APE) is the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. No direct APE impacts. No anticipated indirect APE (viewshed) impacts.
Archaeological Resources	n/a	No resources within LOD.
Additional Factors		
Mitigation Complexity and Cost	▪ Wetland, US waters, and subaqueous bottomlands impacts	Minimal anticipated mitigation costs would be required for wetland and US waters impacts due to construction of the new island required for the tunnel segment.
Permit Stakeholder Coordination	▪ Transportation facilities identified within the LOD south side). ▪ Railroad facilities identified within the LOD (south side). ▪ Adjacent Property Owners (Residents and Businesses)	Transportation facilities identified within the LOD; however, it is the assumption that all transportation facilities will remain at existing or improved functionality. Stakeholder coordination with railroad facilities elevates this segment to Moderate status since coordination will be required and may pose design and/or construction schedule risk.
Effect on other Federal Navigation Projects	n/a	No resources within the LOD
Potential Future Changes in Policy Issues		No major regulatory policy changes are anticipated at this time.

SEGMENT: *2: VA 164*

2: VA 164 **Resource**	**Resources Identified**	**Comments**
Social Environment		
Community Resources		
Military/DOD/USACOE	n/a	No resources within the LOD
Transportation Facilities	▪ VA-164 ▪ Western Branch Boulevard ▪ College Drive ▪ Town Point Road ▪ Cedar Lane ▪ Railway Facilities	Transportation facilities identified within the LOD. Assumption that all transportation facilities will remain at existing or improved functionality. Stakeholder coordination with railroad facilities will be required and may pose construction schedule risk.
Businesses/Business Access	Does not appear that the LOD will exceed the ROW parcel edge. No business impacts.	No resources within the LOD
Sensitive Resources		
Parks & Recreation	Ebony Heights Park	Expansion to the eastbound side of VA-164 may require a portion of easement from Ebony Heights Park; however, further detailed design may avoid and/or minimize any potential impacts.
Section 4(f) Properties	Publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing on the National Register of Historic Places. ▪ Ebony Heights Park	Expansion to the eastbound side of VA-164 may require a portion of easement from Ebony Heights Park; however, further detailed design may avoid and/or minimize any potential impacts.
Section 6(f) Properties	Any property that was planned, purchased, or improved with Land and Water Conservation Fund (LWCF) money **(**recreational lands that are also regulated under Section 4(f)	No resources within the LOD
Places of Worship	▪ New Beginning Cristian Center ▪ New Beginning Pentecostal Church	No resources within the LOD
Cemetery	▪ New Beginning Pentecostal Church Cemetery	No resources within the LOD
School/University	n/a	No resources within the LOD
Apartment Complexes/Residences	▪ Stonebridge Apartments ▪ Churchland Square Apartments ▪ Westwinds Apartments ▪ Preston Trails Apartments ▪ 3833 Old Farm Rd – appears to have cleared into the right of way	No resources within the LOD
Children's Health & Safety	n/a	No resources within the LOD

2: VA 164 **Resource**	**Resources Identified**	**Comments**
Environmental Justice		
Environmental Justice	Past and present growth and development - expansion of controlled access roadways have separated neighboring communities. ▪ Expansion to the EB side of VA-164 may require a portion of easement from Ebony Heights Park	No residents or neighboring communities would be relocated.
Federal State, and Local Permits		
Water Resources		
Tidal Waters/Tidal Streams/Subaqueous bottom	n/a	No resources within the LOD
Non-Tidal Waters	▪ Non-Tidal channel at Lilac Drive (approx. 500 linear feet)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Non-Tidal Waters: 500 linear feet Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Maintained Navigational Channels and Civil Works Projects	n/a	No resources within the LOD
Wetlands	Several wetland systems within the segment corridor are located outside the LOD. ▪ PFO at Harvey Street (0.06 acres) – adjacent to ROW ▪ PFO at Bowden Street (0.24 acres) – adjacent to ROW ▪ PFO at Pond Lane (0.18 acres) – adjacent to ROW	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. PFO Wetlands: 0.48 acres Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Waterfront Development Areas		
Commercial Ports	n/a	No resources within the LOD
Commercial Fishing Piers	n/a	No resources within the LOD
Wildlife Habitat		
Colonial Waterbird Nesting	▪ Urban, Newport News South, Suffolk (outside LOD) Habitat is present for the Gull-billed tern, Piping plover, Red knot, and Wilson's plover.	No resources within the LOD.
Benthic Species	n/a	No resources within the LOD

2: VA 164 **Resource**	**Resources Identified**	**Comments**
Historic Resources		
Architectural Resources / Historic Districts	▪ 133-5542: Camellia Historic District (adjacent to ROW) ▪ 124-5264: Churchland West Historic District (adjacent to ROW) ▪ 124-5265: Churchland West Historic District (adjacent to ROW) ▪ 124-5261: Churchland Square Apartments (adjacent to ROW)(not eligible) ▪ 124-5262: Preston Trails Apartments (adjacent to ROW) (not eligible) ▪ 124-5260: Stone Ridge Apartments (adjacent to ROW) (not eligible) ▪ 124-5266: Merrifields Historic District (adjacent to ROW)	The area of potential effects (APE) is the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. No direct APE impacts. No anticipated indirect APE (viewshed) impacts.
Archaeological Resources	n/a	No resources within the LOD
Additional Factors		
Mitigation Complexity and Cost	▪ Wetland, US waters, and subaqueous bottomlands impacts	Minimal anticipated mitigation costs would be required for wetland, US waters, and subaqueous bottomlands impacts throughout the corridor.
Permit Stakeholder Coordination	▪ Transportation facilities identified within the LOD. ▪ Railroad facilities identified within the LOD. ▪ Adjacent Property Owners (Residents and Businesses)	Assumption that all transportation facilities will remain at existing functionality. Stakeholder coordination with railroad facilities will be required and may pose construction schedule risk.
Effect on other Federal Navigation Projects	n/a	Resources outside the LOD.
Potential Future Changes in Policy Issues		No major regulatory policy changes are anticipated at this time.

SEGMENT: *3: VA 164 Connector*

3: VA 164 Connector **Resource**	**Resources Identified**	**Comments**
Social Environment		
Community Resources		
Military/DOD/USACOE	▪ US Army Corps of Engineers Craney Island Disposal Area ▪ Craney Island Naval Supply Center ▪ US Coast Guard Sector Virginia ▪ US Coast Guard Base Portsmouth ▪ US Navy Craney Island Fuel Depot (CIFD Terminal) ▪ US Navy	Segment traverses through all the facilities noted. Would require major right-of-way acquisition and/or construction easements. Setback requirements for Anti-Terrorism Force Protection, Security Requirements, and Gate Access for all noted facilities.
City of Portsmouth	▪ City of Portsmouth Landfill	Segment bisects the City of Portsmouth Landfill
Transportation Facilities	▪ Outer limit ring road of US Army Corps of Engineers Craney Island Disposal Area ▪ Waterfront Drive ▪ Oyster Shell Drive ▪ Main Road ▪ Main Drive ▪ South Perimeter Road ▪ Coast Guard Boulevard ▪ Access Road off Coast Guard Boulevard ▪ Railroad Facilities ▪ Old Coast Guard Boulevard ▪ Renfrow Road ▪ Wyatt Drive ▪ Wild Duck Lane ▪ Western Freeway (VA-164) ▪ Cedar Lane ▪ West Norfolk Road ▪ Virginia International Gateway Boulevard ▪ Sunnyside Avenue ▪ Gail Court	Transportation facilities identified within the LOD. Stakeholder coordination with railroad facilities will be required and may pose construction schedule risk.
Businesses/Business Access	▪ Driveway impact on Commercial Ready Mix off Coast Guard Boulevard ▪ Aire Serv HVAC Contractor on W. Norfolk Rd off of the Old Coast Guard Road	Current design has total business takes required. Identified Businesses and/or Business Access impacts anticipated within the LOD; however, further detailed design may avoid and/or minimize potential impacts.
Sensitive Resources		
Parks & Recreation	Hoffler Creek Wildlife Preserve (Lake Ballard)	No resources within the LOD
Section 4(f) Properties	Publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing on the National Register of Historic Places	No resources within the LOD
Section 6(f) Properties	Any property that was planned, purchased, or improved with Land and Water Conservation	No resources within the LOD

3: VA 164 Connector **Resource**	**Resources Identified**	**Comments**
	Fund (LWCF) money (recreational lands that are also regulated under Section 4(f)	
Places of Worship	Liberty Christian Fellowship Liberty New Testament Church West Norfolk Baptist	No resources within the LOD
Cemetery	n/a	No resources within the LOD
School/University	▪ Churchland High School	No resources within the LOD
Apartment Complexes/Residences	West Norfolk Road Apartments	No resources within the LOD
Children's Health & Safety	The most likely locations of potential effects on children (other than at residences abutting right-of-way) would be at schools where there are outdoor activity areas for children.	No resources within the LOD
Environmental Justice		
Environmental Justice	Past and present growth and development - expansion of controlled access roadways have separated neighboring communities.	No residents or neighboring communities would be relocated.
Federal State, and Local Permits		
Water Resources		
Tidal Waters/Tidal Streams/Subaqueous bottom	▪ Estuarine and Marine Wetland (E2USN) at Craney Island Creek (2.25 acres) ▪ Estuarine and Marine Deepwater at Craney Island Creek (0.4 acres) ▪ Estuarine and Marine Wetland (E2USN) at Craney Island Creek (3.01 acres) ▪ Estuarine and Marine Wetland (E2USN) at Craney Island Creek (0.41 acres)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Tidal Waters/Tidal Streams: 5.67 acres Subaqueous bottom: 0.4acres Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Non-Tidal Waters	▪ Non-Tidal channel (drainage ditch) on Craney Island (approx. 260 linear feet) ▪ Non-Tidal channel (drainage ditch) on Craney Island (approx. 1400 linear feet) ▪ Non-Tidal channel (drainage ditch) on Craney Island (approx. 650 linear feet) ▪ Non-Tidal channel (drainage ditch) south of Craney Island Creek (approx. 325 linear feet)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Non-Tidal Waters: 2.635 linear feet Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Maintained Navigational Channels and Civil Works Projects	▪ Newport News Channel ▪ Elizabeth River	No resources within the LOD

3: VA 164 Connector **Resource**	**Resources Identified**	**Comments**
Wetlands	▪ Craney Island Disposal Area is classified as Lake (L2UBFh) – (0 acres) ▪ PEM wetland near Oyster Shell Road (1.25 acres) ▪ PEM wetland south of Craney Island Creek (3.27 acres) ▪ PFO at Coast Guard Boulevard (0.04 acres) ▪ PFO at Coast Guard Boulevard (13 acres) ▪ PFO at Wild Duck Lane (12 acres) ▪ PFO at Western Freeway (1.75 acres)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. PFO Wetlands: 31.31 acres Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Waterfront Development Areas		
Commercial Ports	▪ VIG Portsmouth	Access to VIG Portsmouth
Commercial Fishing Piers	n/a	No resources within the LOD
Wildlife Habitat		
Colonial Waterbird Nesting	▪ Craney Island ▪ Urban, Norfolk North, Portsmouth ▪ Craney Island Northwest (outside LOD) ▪ Urban, Norfolk South, Portsmouth (outside LOD) ▪ Lovett Point (outside LOD) ▪ Pinehurst ▪ Winston Colony ▪ Winston	Colonial Waterbird Nesting sites located on the eastern terminus of the segment LOD. Habitat is present for the Gull-billed tern, Piping plover, Red knot, and Wilson's plover.
Benthic Species	▪ Hard Clam Habitat (0 acres) ▪ Hard Clam Habitat Tunnels (0 acres) ▪ Public Clamming Grounds (0 acres) ▪ Blue Crab (*Callinectes sapidus*) (0 acres) ▪ Oyster Reefs (*Crassostrea virginica*) (0 acres) ▪ Oyster Sanctuary (0 acres) ▪ Public Baylor Grounds (0 acres) ▪ Private Shellfish Leases (0 acres)	No resources within the LOD
Historic Resources		
Architectural Resources / Historic Districts	n/a	No resources within the LOD
Archaeological Resources	▪ Captain John Smith Chesapeake National Historic Trail (first water trail designated under the National Trails System Act) ▪ Washington-Rochambeau Revolutionary Route National Historic Trail (designated a National Historic Trail under the National Trails System Act)(The W-RNHT is located within what is now a highly industrialized and developed area in which few remnants of the historic landscape survive)	If any significant archaeological sites associated with the Captain John Smith Chesapeake National Historic Trail and Washington-Rochambeau Revolutionary Route National Historic Trail are eventually identified within the LOD, they likely would meet the regulatory exception to the requirements of Section 4(f) approval: the sites likely would be important chiefly for the information they contain, which can be retrieved through data recovery, and would have minimal value for preservation in place.

3: VA 164 Connector **Resource**	**Resources Identified**	**Comments**
Additional Factors		
Mitigation Complexity and Cost	▪ Wetland, US waters, and subaqueous bottomlands impacts ▪ Business Takes	Current design has total business take required. Identified Businesses and/or Business Access impacts anticipated within the LOD. Moderate to Extensive anticipated mitigation costs would be required for wetland and US waters impacts; however, field surveys and additional detailed design may avoid and/or minimize impacts to further reduce potential mitigation costs.
Permit Stakeholder Coordination	▪ Transportation facilities identified within the LOD. ▪ Railroad facilities identified within the LOD. ▪ Maritime Stakeholders ▪ US Army Corps of Engineers Craney Island Disposal Area ▪ Craney Island Naval Supply Center ▪ US Coast Guard Sector Virginia ▪ US Coast Guard Base Portsmouth ▪ US Navy Craney Island Fuel Depot (CIFD Terminal) ▪ US Navy ▪ City of Portsmouth ▪ Adjacent Property Owners (Residents/Businesses)	May require major right-of-way acquisition and/or construction easements. Maintenance of terminal operations and traffic will be required. Extensive setback requirements for Anti-Terrorism Force Protection, Security Requirements, and Gate Access for all noted facilities. Stakeholder coordination with facilities will be required and may pose construction schedule risk.
Effect on other Federal Navigation Projects	▪ Newport News Channel ▪ Elizabeth River ▪ US Army Corps of Engineers Craney Island Disposal Area	No anticipated impact to the Newport News Channel. This segment does contain roadway structures landside to Federal Navigation Projects along the Elizabeth River and to current operations at the US Army Corps of Engineers Craney Island Disposal Area.
Potential Future Changes in Policy Issues		No major regulatory policy changes are anticipated at this time.

SEGMENT: *4: I-564 Connector*

4: I-564 Connector **Resource**	**Resources Identified**	**Comments**
Social Environment		
Community Resources		
Military/DOD/USACOE	▪ NSA Hampton Roads ▪ Norfolk International Terminals ▪ Norfolk Naval Station ▪ Norfolk Naval Air Station ▪ US Marine Corps ▪ United States Department of the Navy ▪ Marine Corps Personnel Support ▪ Camp Elmore ▪ NAS Norfolk Air Passenger Terminal	Segment traverses through the DON and NIT properties. Need additional information regarding potential anti-terrorism force protection requirements.
Transportation Facilities	▪ Northgate Road ▪ Hampton Boulevard (337) ▪ Seabee Road ▪ Intermodal Connector ▪ Admiral Taussig Boulevard (564) ▪ Patrol Road ▪ VPA Rail Facilities	Transportation facilities identified within the LOD. Assumption that all transportation facilities will remain at existing or improved functionality. Stakeholder coordination with railroad facilities will be required and may pose construction schedule risk.
Norfolk International Terminals	Lineage Logistics at Talon Marine Terminals, NIT Pier 3	The loss of operational use at the Lineage Logistics at Talon Marine Terminals, NIT Pier 3 needs more information in order to determine all of the factors to be considered.
Businesses/Business Access	n/a	Resources outside the LOD.
Sensitive Resources		
Parks & Recreation	▪ Fleet Recreation Park (DON facility) ▪ Sewells Point Golf Course (DON facility) (adjacent only)	May have disturbance within the LOD for Fleet Recreation Park (park access/maintenance roads).
Section 4(f) Properties	Publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing on the National Register of Historic Places	Resources outside the LOD.
Section 6(f) Properties	Any property that was planned, purchased, or improved with Land and Water Conservation Fund (LWCF) money (recreational lands that are also regulated under Section 4(f)	Resources outside the LOD.
Places of Worship	n/a	Resources outside the LOD.
Cemetery	n/a	Resources outside the LOD.
School/University	n/a	Resources outside the LOD.
Apartment Complexes/Residences	n/a	Resources outside the LOD.
Children's Health & Safety	n/a	Resources outside the LOD.

4: I-564 Connector **Resource**	**Resources Identified**	**Comments**
Environmental Justice		
Environmental Justice	Past and present growth and development - expansion of controlled access facilities such as military installations like NAVSTA Norfolk have separated neighboring communities.	No residents or neighboring communities would be relocated.
Federal State, and Local Permits		
Water Resources		
Tidal Waters/Tidal Streams/Subaqueous bottom	▪ East tunnel (on upland) ▪ West tunnel (30 acres)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Subaqueous bottom for island construction: 30 acres Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Non-Tidal Waters	• Non-tidal channel along Intermodal Connector (approx. 200 linear feet) • Non-tidal channel near Patrol Road (approx. 190 linear feet)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Non-Tidal Waters: 390 linear feet Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Maintained Navigational Channels and Civil Works Projects	▪ Newport News Channel ▪ Elizabeth River Channel	No impacts to Maintained Navigational Channels and Civil Works Projects is anticipated. All Maintained Navigational Channels will be avoided by the tunnel design.
Wetlands	Wetlands are adjacent to portions of the corridor but none identified within the bounds of the LOD	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.

4: I-564 Connector Resource	Resources Identified	Comments
Waterfront Development Areas		
Commercial Ports	▪ Virginia Port Authority - Lineage Logistics at Talon Marine Terminals, NIT Pier 3	The loss of operational use at the Lineage Logistics at Talon Marine Terminals, NIT Pier 3 needs more information in order to determine all of the factors to be considered.
Commercial Fishing Piers	n/a	Resources outside the LOD.
Wildlife Habitat		
Colonial Waterbird Nesting	▪ Craney Island ▪ Urban, Norfolk North, Portsmouth ▪ Craney Island, Northwest ▪ Willoughby Spit ▪ Hermitage (outside LOD) ▪ Algonquin Park (outside LOD) ▪ Lochhaven (outside LOD)	Colonial Waterbird Nesting sites are located within the LOD. Proactive measures such as the sue of bird dogs could be employed during construction within the bird nesting season (April – September 1) so as to deter colonial bird nesting in these sites. Habitat is present for the Gull-billed tern, Piping plover, Red knot, and Wilson's plover.
Benthic Species	▪ Hard Clam Habitat Tunnels (30 acres) ▪ Public Clamming Grounds (0 acres) ▪ Blue Crab (*Callinectes sapidus*) (0 acres) ▪ Oyster Reefs (*Crassostrea virginica*) (0 acres) ▪ Oyster Sanctuary (0 acres) ▪ Public Baylor Grounds (0 acres) ▪ Private Shellfish Leases (0 acres) The introduction of additional hard substrate such as pilings and riprap protection could provide beneficial habitat where it did not previously exist for oysters and other marine benthic organisms.	The entire footprint beneath each segment is considered potential hard clam habitat because the entire bottom is composed of sand, mud, or a combination suitable for hard clams. Construction BMPs, including conforming to the guidelines contained in the VESCH, would be employed to reduce turbidity and sediment disturbance. The time of year and length of dredging operations may need to be considered as prolonged dredging would result in disturbance to the benthos and adjacent water column over a longer period of time dependent upon the nature of the bottom substrate, tidal fluctuations, and estuarine dynamics. Strict adherence to erosion and sediment control measures and permit requirements would minimize water quality impacts due to sedimentation and turbidity during construction. Long-term effects to benthic communities due to changes in water quality would be minimized and avoided through implementation of stormwater management plans designed to minimize impacts from

4: I-564 Connector **Resource**	**Resources Identified**	**Comments**
		increases in impervious surfaces, mitigate increases in runoff volume, and satisfy requirements to reduce pollutant loads below existing baseline conditions, as required by the VSMP regulations and Chesapeake Bay TMDL.
Historic Resources		
Architectural Resources / Historic Districts	▪ 121-0020 (Middle Ground Light Station)(NRHP Listing, VLR Listing) ▪ 122-0410 (Norfolk Naval Base Historic District) ▪ 122-5045 (Norfolk Naval Base Golf Historic District) ▪ 122-0334 (Sewells Point Docks (Historic); Virginia Port Authority (Current))	The area of potential effects (APE) is the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. Alignment segment does bisect the 122-0334 (Sewells Point Docks (Historic); Virginia Port Authority (Current)); however, the area is currently an operational facility for VPA and no direct APE impacts are anticipated. No anticipated indirect APE (viewshed) impacts are anticipated for the adjacent 122-5045 (Norfolk Naval Base Golf Historic District) since existing transportation facility exists in the corridor.
Archaeological Resources	▪ Captain John Smith Chesapeake National Historic Trail (first water trail designated under the National Trails System Act) ▪ Washington-Rochambeau Revolutionary Route National Historic Trail (designated a National Historic Trail under the National Trails System Act)(The W-RNHT is located within what is now a highly industrialized and developed area in which few remnants of the historic landscape survive)	If any significant archaeological sites associated with the Captain John Smith Chesapeake National Historic Trail and Washington-Rochambeau Revolutionary Route National Historic Trail are eventually identified within the LOD, they likely would meet the regulatory exception to the requirements of Section 4(f) approval: the sites likely would be important chiefly for the information they contain, which can be retrieved through data recovery, and would have minimal value for preservation in place.
Additional Factors		
Mitigation Complexity and Cost	▪ Wetland, US waters, and subaqueous bottomlands impacts	High anticipated mitigation costs would be required for wetland and US waters impacts due to construction of the new island required for the tunnel segment.

4: I-564 Connector **Resource**	**Resources Identified**	**Comments**
Permit Stakeholder Coordination	▪ Transportation facilities identified within the LOD. ▪ Railroad facilities identified within the LOD. ▪ Craney Island ▪ Lineage Logistics at Talon Marine Terminals, NIT Pier 3 ▪ NSA Hampton Roads ▪ Norfolk International Terminals ▪ Norfolk Naval Station ▪ Norfolk Naval Air Station ▪ US Marine Corps ▪ United States Department of the Navy ▪ Marine Corps Personnel Support ▪ Camp Elmore ▪ NAS Norfolk Air Passenger Terminal ▪ Maritime Stakeholders ▪ Adjacent Property Owners	Extensive stakeholder coordination with Military/DOD/USACOE facilities, transportation facilities, Lineage Logistics at Talon Marine Terminals, NIT Pier 3, and railroad facilities will be required and may pose design and/or construction schedule risk.
Effect on other Federal Navigation Projects	▪ Newport News Channel ▪ Elizabeth River Channel (Norfolk Harbor Reach)	No impacts to Federal Navigational Channels and Civil Works Projects are anticipated. All Maintained Navigational Channels will be avoided by the tunnel design.
Potential Future Changes in Policy Issues		No major regulatory policy changes are anticipated at this time.

SEGMENT: *5: I-664 Connector*

5: I-664 Connector **Resource**	**Resources Identified**	**Comments**
Social Environment		
Community Resources		
Military/DOD/USACOE	▪ US Army Corps of Engineers Craney Island Disposal Area	Maintenance of operations and traffic will be required for all identified Craney Island facilities, Maintained Federal Channels, and the connection to the existing I664 Monitor Merrimack transportation corridor. Need more information on the US Army Corps of Engineers Craney Island Disposal Area anticipated end of operational life.
Transportation Facilities	▪ I-664 (Monitor Merrimac Bridge Tunnel) ▪ US Army Corps of Engineers Craney Island Disposal Area North East Ring Road	Project is dependent on improvements to I664 (North MMMBT) segment.
Norfolk International Terminals	Lineage Logistics at Talon Marine Terminals, NIT Pier 3	No resource within the LOD
Businesses/Business Access	n/a	No resource within the LOD
Sensitive Resources		
Parks & Recreation	n/a	No resource within the LOD
Section 4(f) Properties	Publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing on the National Register of Historic Places	No resource within the LOD
Section 6(f) Properties	Any property that was planned, purchased, or improved with Land and Water Conservation Fund (LWCF) money (recreational lands that are also regulated under Section 4(f)	No resource within the LOD
Places of Worship	n/a	No resource within the LOD
Cemetery	n/a	No resource within the LOD
School/University	n/a	No resource within the LOD
Apartment Complexes/Residences	n/a	No resource within the LOD
Children's Health & Safety	n/a	No resource within the LOD
Environmental Justice		
Environmental Justice	n/a	No resource within the LOD

5: I-664 Connector **Resource**	**Resources Identified**	**Comments**
Federal State, and Local Permits		
Water Resources		
Tidal Waters/Tidal Streams/Subaqueous bottom	▪ Bridge/Trestle (144 acres)	Impacts are not based on surveyed field delineations but are meant to provide a conservative quantitative estimates. Tidal Waters/Tidal Streams from Trestle construction: 144 acres Field surveys and additional detailed detail to avoid and/or minimize impacts would be evaluated with more detailed design.
Non-Tidal Waters	n/a	No resource within the LOD
Maintained Navigational Channels and Civil Works Projects	▪ Newport News Channel ▪ Elizabeth River Channel	This segment does contain bridge and roadway structures within water and landside to Federal Navigation Projects along the James River, Elizabeth River, and current operations at the US Army Corps of Engineers Craney Island Disposal Area.
Wetlands	n/a	No resource within the LOD
Waterfront Development Areas		
Commercial Ports	n/a	No resource within the LOD
Commercial Fishing Piers	n/a	No resource within the LOD
Wildlife Habitat		
Colonial Waterbird Nesting	▪ Craney Island ▪ Urban, Norfolk North, Portsmouth ▪ Craney Island, Northwest ▪ Willoughby Spit ▪ Hermitage (outside LOD) ▪ Algonquin Park (outside LOD) ▪ Lochhaven (outside LOD)	Colonial Waterbird Nesting sites are located within the LOD. Proactive measures such as the sue of bird dogs could be employed during construction within the bird nesting season (April – September 1) so as to deter colonial bird nesting in these sites. Habitat is present for the Gull-billed tern, Piping plover, Red knot, and Wilson's plover.

5: I-664 Connector **Resource**	**Resources Identified**	**Comments**
Benthic Species	▪ Hard Clam Habitat (144 acres) ▪ Public Clamming Grounds (0 acres) ▪ Blue Crab (*Callinectes sapidus*) (0 acres) ▪ Oyster Reefs (*Crassostrea virginica*) (0 acres) ▪ Oyster Sanctuary (0 acres) ▪ Public Baylor Grounds (approx. 290 acres) ▪ Private Shellfish Leases (0 acres) The introduction of additional hard substrate such as pilings and riprap protection could provide beneficial habitat where it did not previously exist for oysters and other marine benthic organisms.	The entire footprint beneath the segment is considered potential hard clam habitat because the entire bottom is composed of sand, mud, or a combination suitable for hard clams. Construction BMPs, including conforming to the guidelines contained in the VESCH, would be employed to reduce turbidity and sediment disturbance. The time of year and length of dredging operations may need to be considered as prolonged dredging would result in disturbance to the benthos and adjacent water column over a longer period of time dependent upon the nature of the bottom substrate, tidal fluctuations, and estuarine dynamics. Strict adherence to erosion and sediment control measures and permit requirements would minimize water quality impacts due to sedimentation and turbidity during construction. Long-term effects to benthic communities due to changes in water quality would be minimized and avoided through implementation of stormwater management plans designed to minimize impacts from increases in impervious surfaces, mitigate increases in runoff volume, and satisfy requirements to reduce pollutant loads below existing baseline conditions, as required by the VSMP regulations and Chesapeake Bay TMDL.
Historic Resources		
Architectural Resources / Historic Districts	▪ 121-0020 (Middle Ground Light Station) (NRHP Listing, VLR Listing)	The area of potential effects (APE) is the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. No direct APE impacts are anticipated. No anticipated indirect APE (viewshed) impacts are anticipated.

5: I-664 Connector **Resource**	**Resources Identified**	**Comments**
Archaeological Resources	▪ Captain John Smith Chesapeake National Historic Trail (first water trail designated under the National Trails System Act) ▪ Washington-Rochambeau Revolutionary Route National Historic Trail (designated a National Historic Trail under the National Trails System Act) (The W-RNHT is located within what is now a highly industrialized and developed area in which few remnants of the historic landscape survive)	If any significant archaeological sites associated with the Captain John Smith Chesapeake National Historic Trail and Washington-Rochambeau Revolutionary Route National Historic Trail are eventually identified within the LOD, they likely would meet the regulatory exception to the requirements of Section 4(f) approval: the sites likely would be important chiefly for the information they contain, which can be retrieved through data recovery, and would have minimal value for preservation in place.
Additional Factors		
Mitigation Complexity and Cost	▪ Wetland, US waters, and subaqueous bottomlands impacts	This segment does contain bridge and roadway structures within water and landside to Federal Navigation Projects along the James River, Elizabeth River, and current operations at the US Army Corps of Engineers Craney Island Disposal Area. Moderate to extensive mitigation costs would be required for wetland and US waters impacts; however, field surveys and additional detailed design may avoid and/or minimize impacts to further reduce potential mitigation costs.
Permit Stakeholder Coordination	▪ Transportation facilities identified within the LOD. ▪ Maritime Stakeholders	Extensive stakeholder coordination with Military/DOD/USACOE facilities will be required and may pose design and/or construction schedule risk.
Effect on other Federal Navigation Projects	▪ Newport News Channel ▪ Elizabeth River Channel (Norfolk Harbor Reach)	This segment does contain bridge and roadway structures within water and landside to Federal Navigation Projects along the James River, Elizabeth River, and current operations at the US Army Corps of Engineers Craney Island Disposal Area. Need more information on the US Army Corps of Engineers Craney Island Disposal Area anticipated end of operational life.
Potential Future Changes in Policy Issues		No major regulatory policy changes are anticipated at this time.

Other Factors Evaluated and Considered

Resource	4: I-564 Connector	5: I-664 Connector	3: VA 164 Connector	1a: I-664 North of College Dr.	1b: I-664 South of College Dr.	2: VA 164
Utilities	Existing utilities are identified within the corridors; however, it is assumed that all required utility relocations would be properly coordinated prior to any construction activities. Utility relocations would need to be included in the schedule of construction for each of the segments evaluated.					
Water Quality	In compliance with Sections 303(d), 305(b), and 314 of the CWA and the Safe Drinking Water Act, VDEQ has developed a prioritized list of waterbodies that currently do not meet state water quality standards (impaired waters). ▪ James River – Hampton Roads (Aquatic Life & Fish Consumption) (Chlorophyll-a, Dissolved Oxygen; Aquatic Plants (Macrophytes); PCB in Fish Tissue) ▪ Elizabeth River Mainstem (Aquatic Life & Fish Consumption) (Estuarine Bioassessments (Benthics), Dissolved Oxygen)				No overwater components of the James River or Elizabeth River Mainstem.	
Floodplains	Flood Insurance Rate maps (FIRMs) depict the 100-year floodplain within the corridor and involve encroachment within regulatory floodplains. Segment would involve encroachment within regulatory floodplains but will not pose a significant flooding risk. Segment would be designed to be consistent with procedures for the location and hydraulic design of highway encroachments on floodplains contained in 23 CFR 650 Subpart A; therefore, the segment is not expected to increase flood elevations, the probability of flooding, or the potential for property loss and hazard to life.					
Sediment Transportation, Bank Erosion, Shoaling and Hydrodynamic Modeling	Not evaluated in detail at this time. Hydrodynamic Modeling evaluations is not included at this level of study.					
Dredging and Disposal of Dredged Material	Quantities of required dredge material have not been calculated at this level of evaluation. Not evaluated at this time. It is assumed that all regulatory requirements will be evaluated and adhered to at the appropriate time.					
Aquifers/Water Supply (ground water wells, surface water intakes, and springs)	The closest public ground-water well is approximately 4,000 feet south at the I-664 interchange with Route 460; there are no public surface water intakes, public springs, or reservoirs. The closest SSA is on the Eastern Shore of Virginia. Segment is within the Eastern Virginia Groundwater Management Areas (GWMA) which comprises all areas east of I-95. No project-related effect on public water supplies.					
Coastal Natural Resource Areas	Virginia's coastal zone encompasses the 29 counties, 17 cities, and 42 incorporated towns in Tidewater Virginia, as defined in the Code of Virginia 28.2-100 (VDEQ, 2016d). All segments are entirely located within Virginia's coastal zone. Anticipate the segment would be found to be consistent with the goals and objectives of the Virginia Coastal Resources Management Program. This process is completed during the design and permitting phase of a project with VDEQ as part of the Coastal Resources Management Consistency Certification.					

Resource	4: I-564 Connector	5: I-664 Connector	3: VA 164 Connector	1a: I-664 North of College Dr.	1b: I-664 South of College Dr.	2: VA 164
Aquatic Spawning, Nursery, and Feeding Grounds	▪ James River ▪ Elizabeth River Temporary increases in turbidity and releases of nutrients and potential contaminants from dredging activities are not expected to substantially impact juvenile or adult fish because of their mobility and because construction would be spread out over time and would occur within discrete areas. Spawning, eggs and larvae, however, would be more vulnerable to these impacts. Time-of-year restrictions would be implemented to avoid or minimize impacts on fish during early life stages. VDGIF typically recommends restrictions on all in-stream work within Anadromous Fish Use Areas and their tributaries between February 15 and June 30, though no time-of-year restrictions are recommended on the James River and its tributaries below the Route 17 Bridge or on the Elizabeth River unless the project spans the width of the River to an extent that it significantly impedes fish passage. Exact restrictions may vary depending on the species, type of work, and location.				No overwater components of the James River or Elizabeth River Mainstem.	
Coastal Primary Sand Dunes	No resources within the LOD					
Barrier Islands	No resources within the LOD					
Significant Wildlife Habitat Areas	No resources within the LOD					
Sand And Gravel Resources	No resources within the LOD					

Resource	4: I-564 Connector	5: I-664 Connector	3: VA 164 Connector	1a: I-664 North of College Dr.	1b: I-664 South of College Dr.	2: VA 164
Underwater Historic Sites	▪ 114-5471; Battle of Hampton Roads (no significant archaeological resources) ▪ 122-5426; Battle of Sewells Point ▪ 124-5267; Battle of Craney Island (NRHP-Eligible)(the battlefield is located within the bounds of the present day US Navy Fuel Depot) ▪ USS Cumberland (44NN0073) have been identified and are located roughly one mile northwest of the centerline of the proposed improvements to the west side of the existing MMMBT The APE is the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. If any significant underwater resources associated with the Battle of Hampton Roads are eventually identified within the HRCS LOD, they likely would meet the regulatory exception to the requirements of Section 4(f) approval: i.e., the sites likely would be important chiefly for the information they contain, which can be retrieved through data recovery, and would have minimal value for preservation in place [23 CFR §774.13(b)(1)].				No overwater components of the James River or Elizabeth River Mainstem.	
Highly Erodible Soils	No resources within the LOD					
Coastal High Hazard Areas, including floodplains	Flood Insurance Rate maps (FIRMs) depict the 100-year floodplain within the corridor and involve encroachment within regulatory floodplains. Segment would involve encroachment within regulatory floodplains but will not pose a significant flooding risk. Segment would be designed to be consistent with procedures for the location and hydraulic design of highway encroachments on floodplains contained in 23 CFR 650 Subpart A; therefore, the segment is not expected to increase flood elevations, the probability of flooding, or the potential for property loss and hazard to life.					
Community Waterfronts	No residential community waterfronts or industrial community's identified.					
Virginia Public Beaches	No resources within the LOD					
Virginia Outdoors Plan	No resources within the LOD					
Wildlife Management Areas	No resources within the LOD					
Waterfront Recreational Land Acquisition	No resources within the LOD					
Waterfront Recreational Facilities	No resources within the LOD					
Waterfront Historic Properties	No resources within the LOD					

Resource	4: I-564 Connector	5: I-664 Connector	3: VA 164 Connector	1a: I-664 North of College Dr.	1b: I-664 South of College Dr.	2: VA 164
Terrestrial Wildlife / Habitat	The majority of the existing land cover within the segment consists of developed lands, natural terrestrial communities, and open water. Expanses of terrestrial habitat are uncommon and fragmented as residential, commercial, industrial, government/military, and open water areas are common, resulting in predominantly low-quality edge habitat.					
Essential Fish Habitat	▪ James River (20 species) ▪ Elizabeth River (20 species) https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper It is assumed that all time of year restrictions and construction special conditions as identified in regulatory permits will be strictly adhered to an will not cause impacts to construction schedule.				No overwater components of the James River or Elizabeth River Mainstem.	
Anadromous Fish	▪ James River (7 species) ▪ Elizabeth River (3 species) ▪ alewife, American shad, Atlantic Sturgeon, striped bass, blueback herring, yellow perch, and hickory shad It is assumed that all time of year restrictions and construction special conditions as identified in regulatory permits will be strictly adhered to an will not cause impacts to construction schedule.				No overwater components of the James River or Elizabeth River Mainstem.	
Submerged Aquatic Vegetation	VIMS SAV Mapping (https://mobjack.vims.edu/sav/savwabmap/) – no SAVs identified					
Invasive Species	Construction equipment used in the study area could carry seeds or propagative plant parts from other construction projects or infested areas. Removal of sediment and soil to offsite locations could spread invasive species and placement of fill from borrow sites could introduce invasive species to the study area. Exposed soil also allows invasive species to spread, which could contribute to encroachment of invasive species on vegetation communities. The potential for the establishment of invasive animal or plant species during construction would be minimized by following provisions in VDOT's Road and Bridge Specifications.					
Section 106 Process	Coordination with VDHR for concurrence on project evaluation will be required.					
Farmlands	According to VDACS, there are no active farmlands within the Study Area Corridor.					
Forestal Districts	No land in the Study Area Corridor is currently zoned or used for agriculture.					

Resource	4: I-564 Connector	5: I-664 Connector	3: VA 164 Connector	1a: I-664 North of College Dr.	1b: I-664 South of College Dr.	2: VA 164
Energy	Qualitative comparison of energy consumption associated with the construction and maintenance of the evaluated segments and vehicle operation on the affected roadway network. Accurate construction energy costs cannot be determined given the uncertainty of field variables at this point in the study. An increase in capacity would consume more direct energy by roadway travelers; however, this consumption would be partially offset by reducing congestion over a larger area. Measures to mitigate the energy usage during construction may include limiting the idling of machinery and optimizing construction methods to lower overall fuel use.					
Traffic	Construction activities would result in temporary interruptions to vehicular traffic patterns, including the potential temporary closure of roads. Traffic modelling will be evaluated in Tier 2 of this study evaluation.					
Air Quality	The air quality analyses will be evaluated as part of the travel demand model to evaluate peak hour volumes will then be used to support the air analysis. Temporary air quality impacts from construction would consist primarily of emissions produced during the construction of this project by heavy equipment and vehicle travel to and from the construction areas. Earthmoving and ground-disturbing operations would also generate airborne dust. Construction emissions would be temporary in nature.					
Noise	FHWA Traffic Noise Model evaluations is not included at this level of study. To assess the degree of impact of highway traffic and noise on human activity within the corridor, more detailed information is required. Construction activities would cause intermittent fluctuations in noise levels throughout the construction area. The degree of noise impact would vary, as it is directly related to the types of equipment used and the proximity to the noise-sensitive land uses within the project area. Based on a review of the project area, no considerable, long-term construction-related noise impacts are anticipated.					
Soils & Erosion	Construction would result in soil disturbance, soil exposure and compaction that could cause potential adverse effects on shallow soil permeability, and soil erosion caused by water and wind. An Erosion and Sediment (E&S) Plan will be developed as part of the construction documents. The plan will identify measures to minimize impact to the construction sites and surrounding water bodies as a result of construction-related soil erosion.					
Water Quality	Construction would potentially result in short-term impacts to water quality such as increased sedimentation, increased turbidity from in-stream work, and possible spills or non-point source pollutants entering groundwater or surface water from stormwater runoff. To minimize these impacts, appropriate erosion and sediment control practices would be implemented in accordance with the Virginia Erosion and Sediment Control Regulations.					
Hazardous Materials	Sites containing hazardous or contaminated materials may exist within the Study Area Corridor. These include sites regulated by the Resource Conservation and Recovery Act (RCRA), petroleum release sites and facilities registered with the VDEQ, and sites that participate in the Virginia Voluntary Remediation Program. Prior to the acquisition of right-of-way and construction, a Phase I Environmental Site Assessment (ESA) as well as Phase II ESA (as needed) will be conducted to determine whether any of the sites are actually contaminated, and, if so, the nature and extent of that contamination. Any additional hazardous material sites discovered during construction will be removed and disposed of in compliance with all applicable federal, state, and local regulations. All necessary remediation would be conducted in compliance with applicable federal, state, and local environmental laws and would be coordinated with the EPA, VDEQ, and other federal or state agencies as necessary.					

Resource	4: I-564 Connector	5: I-664 Connector	3: VA 164 Connector	1a: I-664 North of College Dr.	1b: I-664 South of College Dr.	2: VA 164
Visual	Temporary changes to the visual quality throughout the Study Area Corridor would occur during construction. These changes would primarily occur in the form of large construction equipment such as cranes and barges, as well as and materials, storage and yarding areas, construction fences/barriers, traffic control devices, and changes to the landscape associated with land clearing and earth moving operations. These visual changes from construction equipment would occur only during the construction period and would be removed at the completion of construction.					
Protected Species	**VaFWIS Database Search**					
All segments contain similar potential habitat for the identified protected species. Section 7 consultation will be completed before any irreversible or irretrievable commitments of resources are made expressly for construction activities.						
Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)	FESE - Confirmed	FESE - Confirmed	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed
Woodpecker, red-cockaded (*Picoides borealis*)	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed
Atlantic Sturgeon (*Acipenser oxyrinchus*)	FESE - Confirmed	FESE - Confirmed	FESE - Confirmed	FESE - Confirmed	FESE - Confirmed	FESE - Not confirmed
Leatherback Sea Turtle (*Dermochelys coriacea*)	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed	n/a
Hawksbill Sea Turtle (*Eretmochelys imbricate*)	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed	FESE - Not confirmed	n/a
Loggerhead Sea Turtle (*Caretta caretta*)	FTST - Confirmed	FTST - Confirmed	FTST - Confirmed	FTST - Confirmed	FTST - Confirmed	FTST - Confirmed
Red Knot (*Calidris canutus rufa*)	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed
Rail, eastern black (*Laterallus jamaicensis jamaicensis*)	FTSE - Not confirmed	FTSE - Not confirmed	FTSE - Not confirmed	FTSE - Not confirmed	FTSE - Not confirmed	FTSE - Not confirmed
Northern Long-eared Bat (*Myotis septentrionalis*)	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed
Green Sea Turtle (*Chelonia mydas*)	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed	FTST - Not confirmed	n/a
Piping Plover (*Charadrius melodus*)	FTST - Confirmed	FTST - Confirmed	FTST - Confirmed	FTST - Confirmed	FTST - Confirmed	FTST - Potential
Manatee, West Indian (*Trichechus manatus*)	n/a	n/a	FTSE - Not confirmed	FTSE - Not confirmed	FTSE - Not confirmed	FTSE - Not confirmed
Wilson's Plover (*Charadrius wilsonia*)	SE - Potential	SE - Potential	SE - Potential	SE - Potential	SE - Potential	SE - Potential

Resource	4: I-564 Connector	5: I-664 Connector	3: VA 164 Connector	1a: I-664 North of College Dr.	1b: I-664 South of College Dr.	2: VA 164
Little Brown Bat (*Myotis lucifigus lucifigus*)	SE - Not confirmed	SE - Not confirmed	n/a	SE - Not confirmed	SE - Not confirmed	n/a
Bat, Rafinesque's eastern big-eared (*Corynorhinus rafinesquii macrotis*)	SE - Not confirmed	SE - Not confirmed	SE - Not confirmed	SE - Not confirmed	SE - Not confirmed	SE - Not confirmed
Tri-colored Bat (*Perimyotis subflavus*)	SE - Not confirmed	SE - Not confirmed	SE - Not confirmed	SE - Not confirmed	SE - Not confirmed	SE - Not confirmed
Canebrake Rattlesnake (*Crotalus horridus*)	SE - Potential	SE - Potential	SE - Potential	SE - Potential	SE - Potential	SE - Potential
Peregrine Falcon (*Falco peregrinus*)	ST - Confirmed	ST - Confirmed	ST - Confirmed	ST - Confirmed	ST - Confirmed	ST - Confirmed
Shrike, loggerhead (*Lanius ludovicianus*)	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed
Sparrow, Henslow's (*Centronyx henslowii*)	ST - Not confirmed	ST - Not confirmed	n/a	ST - Not confirmed	ST - Not confirmed	n/a
Gull-billed Tern (*Sterna nilotica*)	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed
Mabee's Salamander (*Ambystoma mabeei*)	ST - Potential	ST - Potential	ST - Potential	ST - Potential	ST - Potential	ST - Potential
Shrike, migrant loggerhead (*Lanius ludovicianus migrans*)	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed	ST - Not confirmed
Terrapin, northern diamond-backed (*Malaclemys terrapin terrapin*)	CC - Confirmed	CC - Confirmed	CC - Confirmed	CC - Confirmed	CC - Confirmed	CC - Confirmed
Turtle, spotted (*Clemmys guttata*)	CC - Confirmed	CC - Confirmed	CC - Confirmed	CC - Confirmed	CC - Confirmed	CC – Not Confirmed
Kingsnale, scarlet (*Lampropeltis elapsoides*)	n/a	n/a	CC – Confirmed	CC – Not Confirmed	CC – Not Confirmed	CC – Not Confirmed

Permits Considerations:

- Federal US Army Corps of Engineers - Section 404 of CWA (Waters of the US) – Individual Permit (*The USACE and VDEQ can only permit the LEDPA (Least Environmentally Damaging Practicable Alternative)*
- Federal: US Army Corps of Engineers - Section 408 permit under Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408). Work that may alter, occupy, or use a USACE Civil Works project, such as a USACE maintained navigation channel or USACE administered dredged material disposal area, requires authorization in the form of a Section 408 permit from the USACE under Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408).
- Federal: US Army Corps of Engineers - Section 10 permit
- Federal: USCG Bridge Permit (when crossing navigable waterways)
- Federal: USFWS Migratory Bird Permit
- State must certify that state water quality standards would not be violated by the Section 401 of CWA (VDEQ) - Virginia Water Protection Permit (VWPP) Program (9 VAC 25-210) – Individual Permit regulates activities in navigable waters, including tidal wetlands
- State: VMRC permit, under the authority of Chapter 12 of Title 28.2 of the Code of Virginia - Subaqueous Bottomlands Permit for subaqueous bottoms or bottomlands, tidal wetlands, and beaches and coastal primary sand dunes
- State: VDEQ Virginia Construction General Permit (CGP) (VAR10) outlines specific measures that development projects must address, including the development of a Stormwater Pollution Prevention Plan (SWPPP).
- State: VDEQ's Ground Water Withdrawal Permitting Program in their Office of Water Supply - proximity of public drinking water sources (ground water wells, surface water intakes, and springs)
- State: VDEQ Air Permits (for construction)
- State: VMRC cannot issue a permit to encroach upon Baylor Grounds unless the Virginia General Assembly removes that portion of the Baylor Grounds from the official survey.

REGIONAL CONNECTORS STUDY

Regional Connectors Study - Comments Received on

Phase 3
Summary of Qualitative Analysis (Step 1)

May 9, 2022
Updated July 7, 2022

CITY OF PORSMOUTH COMMENTS

From: Jackson, Carl
To: Parkins, Lorna
Cc: Wright, James; Camelia Ravanbakht; Pavithra Parthasarathi; Prideaux, Paul; Baldwin, Bob
Subject: RE: EXTERNAL: Quantitative Analysis
Date: Friday, April 22, 2022 5:03:35 PM

Thanks Lorna,

We hope to see more details from the Quantitative Analysis. The Portsmouth team has reviewed the RCS Qualitative Analysis which seems to operate under the assumption that the roadway can be widened to the median (Page 5) without any design showing how this can be done. Such an assumption gives a false narrative that the project impacts would only be minimal to moderate and ignores the assumptions from the SEIS. In reality, due to the railroad in the median, the assumption for VA 164 has to be an outside widening which would have devastating impacts to residential neighborhoods and commercial businesses.

Page 22 states the following:
"Constrained Work Areas High: "The widening shown in the SEIS is proposed to be into the median that includes two Commonwealth Railway railroad tracks. This poses a significant challenge to construction the widening and likely crash wall between the tracks and VA-164. Furthermore, should any widening occur along the outside shoulder to mitigate conflicts with the railroad, the corridor is constrained by adjacent residential and commercial parcels. Resolving the challenges involved with constructing toward either the railroad or adjacent residential and commercial properties will incur a significant impact to the timing of the project."

- ***The highlighted facts above should provide a more realistic assumption that widening VA 164 will have a high impact either widening to the median or on the outside.*** 1

Page 23 states the following:
"Environmental Justice (low income and minority communities) Moderate: Moderate Expansion to the eastbound side of VA-164 may require a portion of easement from Ebony Heights Park; however, further detailed design may avoid and/or minimize any potential impacts. No residents or neighboring communities would be relocated."

- ***Where is the detailed design showing no residents will be relocated?*** 3
- ***It should also be noted that Impacts to Ebony Heights Park care significant as City Council has indicated that recreation is a priority and enhancing recreational opportunities is also a key part of the City Manager's holistic crime reduction strategy.***
- ***Any project that takes away from recreational opportunities within Portsmouth communities will be met with resistance.***

"Communities within 500 feet of the proposed construction to the north and south of the corridor are majority minority with over 25% of households in poverty. 102 houses 58 2-story apartments, 44 garden apartment blocks, and 3 churches***."***

- ***This should be a non-starter for any roadway project that truly acknowledges Environmental Justice.*** 4

Page 22 states the following:

"Local Government or Agency Minimal No impacts for local entities have been identified at this time "

- ***Why are Local Government Agency constraints considered "minimal" if Portsmouth is opposed to this? Granted the roadway is owned and maintained by the state but I can't imagine VDOT or FHWA moving forward with a project with strong local opposition. This constraint should be considered 'High". Our opposition is listed (Page 51 "Documented opposition from stakeholders Portsmouth")*** 2

Page 39 states the following:

"VDEQ Virginia Construction General Permit Minimal Assumption that all required stormwater controls and requirements pursuant to this permit will be obtained and adhered to. It is assumed for this segment that all additional stormwater controls would be located within the boundaries of the LOD."

- ***The limits of disturbance for VA-164 do not include any space for stormwater management. How is this any different for the RCS? Where is this accounted for in the analysis?*** 5

In summary, we believe that the analysis of VA 164 needs to be done with the assumptions of the SEIS and showing an outside widening which will reveal higher impacts to residential and commercial businesses and give the alternative a HIGH impact rating overall. This will provide a more realistic comparison to the other alternatives. The analysis for the VA 164 Connector showing HIGH impact ratings for almost every category is more consistent with the kind of analysis that should be done with VA 164.

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Jacksonc@portsmouthva.gov

From: Parkins, Lorna <LParkins@mbakerintl.com>
Sent: Thursday, April 21, 2022 5:05 PM
To: Jackson, Carl <jacksonc@portsmouthva.gov>
Cc: Wright, James <wrightj@portsmouthva.gov>; Camelia Ravanbakht <camelia.ravanbakht@outlook.com>; Pavithra Parthasarathi <pparthasarathi@hrtpo.org>; Prideaux, Paul <Paul.Prideaux@mbakerintl.com>
Subject: RE: EXTERNAL: Quantitative Analysis

Carl,

I might need some clarification to answer your question. First, the analysis provided at this time is the qualitative analysis results. The quantitative results will be coming later on in the next step of Phase 3.

That said, we did analyze the corridors as described in the Summary of Qualitative Analysis document on page 5 and shown in the graphics we provided by eftp link, and there was some quantitative GIS analysis behind the qualitative evaluation results for many of the criteria. This data is provided within the Summary of Qualitative Analysis document. For example, in the "Construction Complexity Technical Evaluation" beginning on page 16, the Constructability Impact column includes information such as the number of structures in a segment, the parcels and acres of property impact, etc. For the permitting issues, there is summary information in the Permitting Issues Technical Evaluation beginning on page 30, but due to the volume of analysis conducted for this part of the evaluation, the most detailed information is provided in the Permitting Issues Technical Resource Memos that begin on page 57.

If the above information does not answer your question, please let me know.

Best regards,
Lorna

Lorna Parkins, FAICP
Office Executive, Richmond VA
Michael Baker International
(804) 287-3176
lparkins@mbakerintl.com

From: Jackson, Carl <jacksonc@portsmouthva.gov>
Sent: Thursday, April 21, 2022 11:07 AM
To: Parkins, Lorna <LParkins@mbakerintl.com>
Cc: Wright, James <wrightj@portsmouthva.gov>
Subject: EXTERNAL: Quantitative Analysis

Hey Lorna,

We've been reviewing the Quantitative Analysis included in the packet for Tuesday's meeting and had a few questions, could you provided us with some of the background assumptions/documentation for the presentation.

Thanks.

Carl E. Jackson, AICP
Manager of Transportation Planning
Portsmouth Planning Department
801 Crawford Street; Portsmouth, VA 23704
757-393-8836, x4205
Jacksonc@portsmouthva.gov

From: Parkins, Lorna <LParkins@mbakerintl.com>
Sent: Thursday, March 17, 2022 8:39 AM

To: Cynthia Mulkey <cmulkey@hrpdcva.gov>; 'Cynthia Mulkey' <cmulkey@hrpdcva.gov>; Duman, Michael D. <council@suffolkva.us>; 'Dyer, Dr. Robert M. "Bob"' <Mayorsoffice@vbgov.com>; Dyer, Robert M. "Bob" <bdyer@vbgov.com>; Glover, Shannon - Mayor <glovers@portsmouthva.gov>; Glover, Shannon E. <shannon@cebs.info>; Price, McKinley L. <priceml@nnva.gov>; Thomas, Martin <martin.thomas@norfolk.gov>; Tuck, Donnie R. <dtuck@hampton.gov>; West, Rick <rwest@cityofchesapeake.net>; Christopher G. Hall (Christopher.Hall@vdot.virginia.gov) <Christopher.Hall@vdot.virginia.gov>; Edwards, Stephen A. <sedwards@portofvirginia.com>; Gene Leonard (gene.c.leonard@uscg.mil) <gene.c.leonard@uscg.mil>; 'Hallberg, Colonel Brian' <brian.p.hallberg@usace.army.mil>; Lockwood, Keith <keith.b.lockwood@usace.army.mil>; Page, Kevin <kpage@hrtac.org>; Quigley, Craig R. <cquigley@hrmffa.org>; Rucker, Ivan <Ivan.rucker@fhwa.dot.gov>; Steele, Gregory <gregory.c.steele@usace.army.mil>; Tim Dolan <Timothy.W.Dolan@uscg.mil>; Brown, Robert <rob.brown@norfolk.gov>; Eisenberger, Troy <teisenberger@cityofchesapeake.net>; Lowman, Ric <rlowman@vbgov.com>; Mitchell, Jason <jmitchell@hampton.gov>; jsouders <jsouders@suffolkva.us>; Stilley, Bryan <stilleykb@nnva.gov>; Wright, James <wrightj@portsmouthva.gov>; Flowers, Jason R <Jason.R.Flowers@usace.army.mil>; Janek, George A. <George.A.Janek@usace.army.mil>; King, Michael S. <michael.s.king@navy.mil>; Nelson, Barbara <bnelson@PortofVirginia.com>; Phillips, Pamela <pamela.phillips@vdot.virginia.gov>; Pruhs, Robert S. <Robert.S.Pruhs@usace.army.mil>; Salyers, Jennifer <jennifer.salyers@vdot.virginia.gov>; Dwyer, Rick <rdwyer@hrmffa.org>; Inman, Amy <Amy.Inman@norfolk.gov>; Jackson, Carl <jacksonc@portsmouthva.gov>; Jones, Pat <pjones@cityofchesapeake.net>; 'Jones, Steve' <steve.g.jones.civ@us.navy.mil>; Keenan, Lynne <lynne.keenan@hampton.gov>; Rico, Angela <RicoAC@nnva.gov>; Santos, Evandro <Evandro.santos@norfolk.gov>; Lori Sharp <lsharp@prrbiz.com>; Shea, Mark <meshea@vbgov.com>; Stringfield, Eric <eric.stringfield@vdot.virginia.gov>
Cc: Camelia Ravanbakht <Camelia.ravanbakht@outlook.com>; 'Chandler, Chris L.' <CLChandle@vbgov.com>; Crum, Robert <rcrum@hrpdcva.gov>; 'Dale Stith' <dstith@hrtpo.org>; Dawley, Erika <edawley@suffolkva.us>; Harvey, Melinda A. <Melinda.harvey@navy.mil>; 'Hasick, Tracey' <tracey.hasick@norfolk.gov>; 'Keith Nichols' <knichols@hrtpo.org>; 'Krista Lauro' <Klauro@hrpdcva.gov>; Madison, Sandy <smadison@cityofchesapeake.net>; Mautz, Joy <jmautz@hampton.gov>; O'Connell, Clara <coconnell@nnva.gov>; 'Pavithra Parthasarathi' <pparthasarathi@hrtpo.org>; Price, Christopher M. <cprice@cityofchesapeake.net>; Prideaux, Paul <Paul.Prideaux@mbakerintl.com>; Pullen, Phil <ppullen@vbgov.com>; 'Rob Case' <rcase@hrtpo.org>; Rohlf, Cynthia D. <crohlf@nnva.gov>; Sorey, Earl <easorey@cityofchesapeake.net>; Weinstock, Phyllis <pweinstock@nnva.gov>; White, Debra - City Clerk <WhiteD@portsmouthva.gov>; Benson, Tracey D <Tracey.Benson@norfolk.gov>; 'Greg Grootendorst' <ggrootendorst@hrpdcva.gov>; 'Keith Cannady' <kcannady@hrpdcva.gov>; Thomas, Bill <BThomas@mbakerintl.com>; Weinstock, Phyllis H. <weinstockph@nnva.gov>; Cathie Vick <cvick@portofvirginia.com>; Claudette Lajoie <claudette@solsticeenv.com>; Dobbins-Noble, Lesley C CIV USARMY CENAO (USA) <Lesley.Dobbins-Noble@usace.army.mil>; O'Connell, Clara N. <oconnellcn@nnva.gov>; Rohlf, Cynthia D. <rohlfcd@nnva.gov>; todd.halacy@vdot.virginia.gov
Subject: RCS Monthly Status Report

Dear Regional Connectors Study (RCS) Steering (Policy) Committee & Working Group,

During the re-scoped Phase 3 of the RCS project, we will provide a monthly status report on

activities. The February 2022 status report is attached for your information.

If you have any questions, please contact the Independent Project Coordinator (camelia.ravanbakht@outlook.com) or the consultant project management team of Paul Prideaux (paul.prideaux@mbakerintl.com) and me (lparkins@mbakerintl.com).

Best regards,
Lorna Parkins
RCS Project Manager

Lorna Parkins, FAICP | Office Executive
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USACOE OPERATIONS BRANCH COMMENTS

From: Dobbins-Noble, Lesley C CIV USARMY CENAO (USA)
To: Parkins, Lorna
Cc: Camelia Ravanbakht; steve.g.jones.civ@us.navy.mil; Anderson, Michael L CIV USARMY CENAO (USA); Pruhs, Robert S CIV USARMY CENAO (USA); Lockwood, Keith B CIV USARMY CENAO (USA); Williams, Greggory G CIV USARMY CENAO (USA); Janek, George A CIV USARMY CENAO (USA)
Subject: EXTERNAL: Corps of Engineers Operations Branch comments for Regional Connector Study - Phase 3 Qualitative Analysis
Date: Wednesday, May 4, 2022 10:42:18 PM

Ms. Parkins,

28

I would like to reiterate that the concerns expressed in the 2016 letter from previous Norfolk District Corps of Engineers Commander, COL Jason Kelly, are still valid and to second the concerns that George Janek of our Regulatory Branch has already provided. Of utmost concern for the Norfolk District Operations Branch at this time are the potential impacts associated with the 164 Connector segment. The raised roadway that transits alongside the eastern edge of Craney Island is of major concern to the Operations Branch as we routinely utilize the eastern side of Craney Island to access our rehandling basin and moor Corps and contractor vessels at the bulkhead. The raised roadway poses an access concern due to the restriction of passage of government vessels equipped with cranes, as they require greater overhead clearance. As you are aware, the Norfolk District Corps of Engineers will be required to assess any proposed roadway alignment through the Section 408 evaluation process. During that review, district staff will determine whether the proposal poses a detrimental effect on our approved civil works projects.

29

As studies advance and segments/bundles are moved forward in the evaluation process, the Norfolk District will continue to assess and provide additional updated comments from our command leadership. We thank you for the opportunity to participate in this planning process and to provide comments that help scope this important local project. If you have any questions about anything I have referenced, please feel free to reach out for clarification.

Best,
Lesley

Lesley Dobbins-Noble
Chief, Operations Branch
U.S. Army Corps of Engineers, Norfolk District
office: (757) 201-7764
mobile: (757) 585-0735

From: Janek, George A CIV USARMY CENAO (USA) <George.A.Janek@usace.army.mil>
Sent: Tuesday, May 3, 2022 3:38 PM
To: LParkins@mbakerintl.com
Cc: Dobbins-Noble, Lesley C CIV USARMY CENAO (USA) <Lesley.Dobbins-Noble@usace.army.mil>; Prisco-Baggett, Kimberly A CIV USARMY USACE (USA) <Kimberly.A.Prisco-Baggett@usace.army.mil>; Kube, Peter R CIV USARMY CENAO (USA) <Peter.R.Kube@usace.army.mil>; Camelia Ravanbakht

From: Janek, George A CIV USARMY CENAO (USA)
To: Parkins, Lorna
Cc: Dobbins-Noble, Lesley C CIV USARMY CENAO (USA); Prisco-Baggett, Kimberly A CIV USARMY USACE (USA); Kube, Peter R CIV USARMY CENAO (USA); Camelia Ravanbakht; Janek, George A CIV USARMY CENAO (USA)
Subject: EXTERNAL: Corps of Engineers Regulatory comments for Regional Connector Study - Phase 3 Qualitative Analysis
Date: Tuesday, May 3, 2022 3:40:37 PM
Attachments: Col Kelly letter to VDOT re_Hampton Roads crossing alternatives_june2016.pdf

Ms. Parkins,

Please find attached the June 2016 letter which outlines some of the Corps' concerns with transportation segments which may affect Craney Island and federal navigation channels. This has been shared before, but it is good information that should be periodically reviewed. 30

Here are the Corps of Engineers Regulatory comments for Attachment 5B:

1. Each of the six mandated segments, and "bundled" combinations of these segments, must have independent utility and can only be permitted if they are separate and complete projects with logical termini. 31

2. Page 8: As part of the Mitigation of Environmental Factors analysis, you should consider whether there are tidal and/or nontidal compensation credits available from approved commercial banks. 32

3. Page 9: 408, 404, and Section 10 permits are all related. If there are 408 issues with a segment, there will likely be permitting issues as well. 33

4. Page 19, Segment 1A: Even if there are no wetland impacts from this alternative, potential impacts from bridges, tunnels, and island configurations could be significant. 34

5. Page 24, Segment 3: Concur with this statement: "Determining the suitability of construction over/through the CIDMMA facility at the end of its lifespan will be a significant challenge and will require significant resources to resolve." Until 408 issues associated with CIDMMA are resolved, Corps Regulatory will be unable to issue a permit. 35

6. Page 25, Segment 3: Wetland impacts are projected to be 31.3 acres. This will require either the purchase of credits or remediation. What does "remediation" mean? The Corps usually requires wetland credits to offset unavoidable wetland impacts, and depending on the type of wetland impacts (tidal vs. nontidal) there may be a shortage of available credits in this watershed. 36

7. Page 26, Segment 4: Even though there may not be wetland impacts associated with the I-564 Connector, mitigation may be required for impacts to EFH, shallow water areas, and other impacts to subaqueous bottom. 37

8. Page 31: Environmental justice impacts of all segments must be identified early and coordinated with affected communities. 38

9. Page 39, Segment 3: This segment probably has “high” 408 issues, not moderate, due to its proximity to CIDMMA. 39

10. Page 61, re: Colonial Waterbird nesting habitat: Anticipate strong interest in and public objections to impacts to colonial nesting birds. Mitigation requirements for displaced birds may be required under Migratory Bird Treaty Act. 40

11. Page 62, benthic species: Pilings and riprap from new bridge and tunnel structures are probably not sufficient to offset impacts to benthic species. This has not been considered compensation on other large projects. 41

12. Page 62, benthic species: Construction BMPs like TOYR, dredging BMPs, etc. may help mitigate turbidity impacts. However, “compliance with the VESCH” and “strict adherence to erosion and sediment control measures” are statements that are too general. These practices are intended for upland construction and stormwater control and generally don’t apply to marine construction. It’s not too early to start exploring more project-specific measures to control turbidity. These types of vague general statements are used throughout this section of the document. 42

13. Page 64, Potential Future Changes in Policy Issues: Impacts to shallow water habitat (are less than 2 meters deep) may require in-kind compensation. 43

14. Page 70, Environmental Justice: EJ is more than relocating residents or affected populations. Noise and air quality impacts must also be taken into account and coordinated early with stakeholders and affected communities. 44

15. Page 78, Colonial Waterbird nesting habitat: The use of bird dogs to discourage bird nesting within the LOD may be an effective deterrent but will not be considered as a mitigation measure for bird nesting impacts. 45

Thank you for the opportunity to comment on this study.

George Janek
Norfolk District Regulatory Branch
757-201-7135

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1096

Executive Office

JUN 29 2016

Ms. Angel Deem
Environmental Division Director
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219-2000

Dear Ms. Deem:

I am replying to your letter, dated April 29, 2016, regarding the Hampton Roads Crossing (HRC) Study Supplemental Environmental Impact Statement (SEIS), which the Virginia Department of Transportation (VDOT) is preparing in conjunction with the Federal Highway Administration (FHWA) and other agency and stakeholder partners. In your letter, you request comments from the U.S. Army Corps of Engineers (USACE), Norfolk District, in accordance with our role as a National Environmental Policy Act (NEPA) "cooperating agency" for the SEIS. Specifically, you have requested comments on how the USACE might evaluate, pursuant to Section 14 of the Rivers and Harbors Act of 1899, 33 USC 408 (Section 408), the impacts of the proposed HRC project alternatives on USACE federally authorized civil works projects.

As interpreted by agency policy, Section 408 prohibits the alteration of federally authorized USACE civil works projects unless the acting party obtains USACE permission prior to making the alteration. The USACE may grant such permission where it determines that the proposed alteration will neither impair the usefulness of the civil works project nor be injurious to the public interest. The USACE has published Section 408 guidance in Engineer Circular (EC) 1165-2-216, "Policy and Procedural Guidance for Processing Requests to Alter US Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408," which provides the policy and procedural guidance for Section 408 requests.

The four proposed HCR project alternatives, identified in the Alternatives Technical Report (ATR) as "A," "B," "C," and "D," would have varying impacts on the federally authorized Norfolk Harbor and Channels Federal Navigation Project (the Norfolk Harbor Project). The Norfolk Harbor Project includes the channel elements of Channel to Newport News, Sewells Point Anchorage, Newport News Anchorage, and the Craney Island Dredged Material Management Area (CIDMMA).

While the enclosed document provides our preliminary Section 408-related comments and concerns in accordance with our role as a NEPA cooperating agency, we stress that the ATR for the HRC Project does not provide sufficient detail and information to make a Section 408 determination. Section 408 review can be

accomplished for this project once the plans have been developed to a sufficient level for our assessment of potential effects to our operation of Craney Island. EC 1165-2-216 indicates that plans should be developed to at least 60% completion in order to provide the level of detail necessary for Section 408 review of a proposal.

A copy of this letter, with enclosure, has been provided to Mr. Jim Utterback and Mr. Scott Smizik, with VDOT and Mr. Ed Sundra, with FHWA.

My staff will be happy to continue coordination on this project to assist in addressing these concerns for potential impacts to federally authorized civil works projects. If you require further information, please do not hesitate to contact Mr. Gregory C. Steele, P.E., Chief, Water Resources Division, at (757) 201-7764.

Sincerely,

Jason E. Kelly, PMP
Colonel, U.S. Army
Commanding

Enclosure

Norfolk District Corps of Engineers
Comments on the Hampton Roads Crossing Study (HRCS)
Alternatives Technical Report

1. Alternatives C and D for the HRCS surround and traverse Craney Island Dredged Material Management Area (CIDMMA) and alter the facility in the following manner:

a. The alternatives obstruct and restrict navigation to the CIDMMA. Obstructed or restricted navigable access will impair the ability of the Corps to maintain and operate CIDMMA and federal navigation channels and anchorages. Proposed alterations to the project will impact facility operation and maintenance, facility construction, contract performance periods, and result in increased costs to the Federal government and users of CIDMMA through increased tolls to deposit dredged material.

b. The proposed vertical clearance will restrict navigable access to the facility. The HRCS Supplemental Environmental Impact Statement (SEIS) Alternatives Technical Report provided to the Corps, indicates a vertical clearance for all bridge crossings of 18-feet relative to North American Vertical Datum of 1988 (NAVD 88). Restricted vertical clearance will prohibit delivery of construction materials and equipment and limit the type of vessels calling on the facility including Corps vessels and contractor vessels (i.e., tugs, derricks, barges, and cranes). The Corps will require continued unconstrained navigable access to the CIDMMA.

2. Alternatives B, C, and D traverse the east side of the CIDMMA. Proposed vertical clearance of bridge crossings on the facility will restrict access for vessels using the Craney Island Rehandling Basin (CIRB) bulkhead facility and construction lay-down area. As currently proposed cranes and similar equipment would be required to break-down and re-erect to clear the Virginia Port Authority rail and the proposed Hampton Roads Crossing (HRC) bridge structures. Proposed alterations to the project will impact facility operation and maintenance, facility construction, contract performance periods, and result in increased costs to the Federal government and users of CIDMMA through increased tolls to deposit dredged material.

3. Alternatives B, C, and D traverse the east side of the CIDMMA and propose to take land in the existing south containment cell. Relocation and reconstruction of the containment dike to the west will impair and reduce the long-term capacity of the CIDMMA. It is anticipated that the reduction of acreage within the containment cell will result in significant loss of capacity and associated lifespan of the south cell containment area. Any proposed excavation and re-deposit of south cell dredged material into containment cells from site work in the area will further reduce long-term capacity. Redeposit of excavated dredged material located in the south containment cell will require an evaluation to determine if the material may be redeposited at the CIDMMA. Additionally, any excavated material proposed for redeposit into CIDMMA may require evaluation and testing to insure the material meets Clean Water Act (CWA) and facility requirements. Additionally, relocation and reconstruction of the containment dike to the west may render the cell unable to accept dredged material for many years.

4. Alternatives B, C, and D will restrict dredge pipeline alignments for dredged material placement operations during maintenance of Federal navigation channels. Access for pipelines and tender vessels will be required at multiple locations under bridge structures. Perpetual easements for dredge pipelines will be required for alignments along proposed bridge structures. Constraining dredge pipeline alignments for dredged material placement operations at CIDMMA will result in increased costs to the Federal government and users of CIDMMA. Construction methods for the HRC project will need to be performed in a manner that minimizes impacts to Corps contractor's ability to install and maintain submerged and floating pipelines and ancillary equipment supporting maintenance dredging of Federal navigation channels and anchorages.

5. Alternatives B, C, and D will eliminate contractor lay-down area located at the CIRB bulkhead. Loss of the contractor lay-down area will require an alternate location for contractor access and lay-down area. It should be noted that lay-down areas provided to the north of the CIRB will require significant maintenance due to elevated land subsidence of the areas northward. This will result in increased costs to the Federal government through additional maintenance and to contractors who will not have access or lay-down areas proximate to operations at the bulkhead facility.

6. Alternatives B, C, and D will have impacts to United States Government property. Real estate coordination and real estate instruments will be required to construct the project on government property. Perpetual easements will need to be provided to support maintenance dredging, dredged material placement operations, and facility maintenance and construction.

7. Alternatives A, B, C, and D will each have tunnel elements that impact multiple Federal navigation channels and anchorages. Tunnel clearances in the Federal navigation channels will need to meet or exceed the clearance of the existing Hampton Roads Bridge Tunnel (HRBT). Tunnels will need to be protected to withstand all potentially foreseen impacts from navigational emergencies and dredging operations. Tunnel armament and depth must consider spud and anchor embedment depths and potential vessel strikes.

8. Alternatives A, B, C, and D will have impacts to designated Federal project anchorages. Construction methods and scheduling for project construction including any proposed use of Federal navigation anchorages during construction will need to be performed in a manner that minimizes impacts to navigation to a level acceptable to the navigation community. Loss of anchorage areas will reduce anchorage capacity, availability, and reduce vessel scheduling, access, and maneuverability.

9. Alternatives B, C, and D will have impacts to navigation and operations during construction of the project. Construction methods and scheduling for the project, especially features crossing navigation channels and facilities, will need to be performed in a manner that minimizes impacts to navigation to a level acceptable to the navigation community.

10. Alternatives B, C, and D will have impacts to maintenance and construction on the CIDMMA facility. Construction methods and scheduling for the HRC project will need to be performed in a manner to minimize impacts to dredging, dredged material placement operations, facility maintenance, and construction to a level that accommodates timely dredged material placement by the Corps and other stakeholders using the facility. HRC construction on CIDMMA will need to be performed to not interfere with containment dike raising, dredged material borrow operations, and construction and maintenance of other facility infrastructure.

11. Alternatives B, C, and D propose to construct a roadway adjacent to an existing utility corridor on CIDMMA. The project design and construction will need to be performed to ensure the stability and differential loading and movement that may result on the utilities (i.e., Virginia Natural Gas pipeline, U.S. Navy JP-5 line).

12. Impacts to navigation for the selected alternative (A, B, C, or D) must be vetted and approved by the U.S. Coast Guard (USCG) Sector Hampton Roads.

DEPARTMENT OF THE NAVY
NAVAL STATION NORFOLK
1530 GILBERT STREET SUITE 2000
NORFOLK, VA 23511-2722

1000
Ser N00/118
3 June 22

Mr. Robert A. Crum
Executive Director
Hampton Roads Planning District Commission
723 Woodlake Drive
Chesapeake, VA 23320

Dear Mr. Crum,

SUBJECT: NAVSTA NORFOLK COMMENTS FOR THE REGIONAL CONNECTORS STUDY - PHASE 3 QUALITATIVE ANALYSIS

Thank you and the Regional Connectors Study Team for the team's efforts and the opportunity for Naval Station Norfolk (NSN) to review the Phase Three Qualitative Analysis. The comments and concerns shared in the September 19, 2016, letter from Commander, Navy Region Mid-Atlantic (CNRMA) to Virginia Department of Transportation on the Hampton Roads Crossing Study Supplemental Environmental Impact Statement (SEIS) are still valid, (the 2016 letter is attached as a courtesy).

The drawings and cross sections of the six mandated segments in the Phase 3 Qualitative Analysis provided the Navy reviewers additional data to review specific to the I-564 Connector and the I-164 Connector which allowed for more detailed comments.

Below are Naval Station Norfolk's comments for Phase 3 Qualitative Analysis for I-564 Connector and I-164 Connector:

1. Following the 2016 letter the Navy completed the investigation for safety distance requirements from public highway to the facilities at Craney Island Fuel Terminal in relation to fueling operations to a public highway, referenced in paragraph (2) of the 2016 letter. A distance of approximately 1,800 feet is required with a physical barrier to prevent visual observation of the fueling operation systems (pump, tanks and fuel lines) from the public highway. 7

    a. As proposed the I-164 Connector roadway is adjacent to the corner where Midway Road intersects Waterfront Drive. This area of Navy property has been approved and designated for the construction of four additional above ground fuel storage tanks. Site approval for this location to include Environmental approval has already occurred and the design is expected to begin in the near future. 8

b. Based on the Navy Security Engineering Planning Assessment, the minimum standoff distance from any non-DOD roadway or rail line is approximately 1,800 feet from the Navy Fuel Tanks. In addition, the roadway will need a wall along this stretch to prevent visual observation of the Fuel Facility and operations. 9

c. The current proposed I-164 Connector crosses further West over Navy property where the above ground main fuel supply lines are located. A wall along the roadway will also be required where this crossing occurs to prevent visual observation of the fueling operation systems. 10

d. Defense Fuel Support Point (DFSP) Craney Island is a strategic, irreplaceable asset on the East Coast to not only Navy, but also to Air Force, Army, Marine, and Coast Guard. The strategic nature of Craney Island is largely due to 2 facts: 11

1) Location. Craney Island is located on the Elizabeth River in Hampton Roads in close proximity to the Navy's largest single concentration of ships worldwide. The location also allows ready access to tankers to transport fuel from Gulf Coast refineries, and transshipment via the Atlantic sea lanes and the Atlantic Intracoastal Water Way. 12

2) Colonial Pipeline. Craney Island has resilient and redundant access to the refining capacity of the Gulf Coast via direct connection with the Colonial Pipeline. Secondarily, Craney Island can receive by tanker at the piers. This capability cannot be easily duplicated anywhere else. 13

Craney Island and the multi-billion dollars worth of fuel infrastructure cannot be moved and must be safeguarded to preserve critical fuel mission support to the warfighters. 14

2. The proposed I-564 Connector alignment as reflected in the Phase 3 Qualitative Analysis is approximately 300 feet south of the bulkhead at the southern edge of Naval Station Norfolk and existing fueling facility. Based on the Navy Security Engineering Planning Assessment noted above, the minimum standoff distance from any non-DOD roadway is approximately 1,800 feet from the Navy Fuel Tanks and fueling facility. The 1,800 feet safety distance is required between the existing fueling operation system at the southern end of Naval Station Norfolk (near the bulkhead) and a public roadway and the proposed I-564 Connector. A visual and physical barrier would be required to prevent visual observation of the Fuel Facility, Security Entry Control (Gate 6) and naval operations inside the fence. 15

3. Based on the information available in the Phase 3 Qualitative Analysis for I-564 Connector roadway plans and cross sections and utilizing nominal heights for street lighting, Navy team was able to identify concerns to the approach and departure corridor, 16

transitional and imaginary surfaces and instrument precision approaches to runway 10 which would negatively impact current missions and operations at Chambers Field.

4. The proposed I-564 Connector is approximately 5,000 feet west by southwest of the end of runway 10 centerline. If cranes of similar heights to those used on the current VDOT Hampton Roads Bridge Tunnel (HRBT) and I-64 widening projects are used for this proposed project flight operations would have restrictions placed on them due to crane height impacting the operational capability of the airfield and its ability to support worldwide operations. These restrictions would be significant and require excessive coordination that would significantly impact and likely result in the loss of mission sets such as the Air Mobility Command cargo mission from Chambers Field. In visual meteorological conditions (VMC) (clear) weather, daily coordination would be required to minimize impacts to flight operations with Chambers Field. In instrument meteorological conditions (IMC) weather or forecasted weather to be IMC, work on the tunnel would need to be immediately halted, the crane lowered and remain lowered until VMC was recovered due to the proximity of the construction area to Chamber's Field runway and precision landing path. This coordination and actions would impart additional risk to aircrew and airfield operations due to this need and result in a day for day extension to construction time for every IMC day. FAA Obstacle Evaluations with a 1A survey level of accuracy would be required in order to minimize impacts to operations. Based on the information available today, the impacts to existing and future missions and operations are not fully known and the Navy reserves the opportunity to continue evaluating for temporary as well as permanent impacts as more information becomes available. 17

5. As reflected in the Phase 3 Qualitative Analysis drawing and cross section for the I-564 Connector the elevated overpasses over Naval Station Norfolk and in close proximity to the perimeter fence line near Gate 6, causes significant security issues for military personnel, for fuel operations, fuel barges and fuel tanks, ordnance movements, military vessels, piers, as well as other facilities and waterfront operations. The past and current land uses of the area identified for the proposed I-564 Connector are compatible with current missions and operations adjacent to the southern boundary of Naval Station Norfolk. 18

6. Based on proposed alignment of I-564 Connector and not having the minimum separation distances needed between public roadway and ordnance handling operations at NSN piers 1 through 3, these operations and missions are in jeopardy. Based on the projected traffic counts of the proposed new road, the installation would not qualify for a waiver if the I-564 Connector is built given its proximity to the piers 1 through 3 and the expected traffic loading, resulting in a loss of mission and operational capability of weapon loading/unloading at piers 1 through 3. A contract award of $300M to replace submarine Pier 3 a WWI era pier was awarded in May 2022 and is expected to be completed in the year 2027 to support berthing of Los Angeles class, extended version of the Virginia class and Virginia Payload Module class submarines and allow for greater weapons on-loading as supported by Naval Station Norfolk's current permits. This pier is mission 19

essential to United States National Security and is projected to be in service for over 50 years.

7. The water area north of the proposed I-564 Connector aligns with northern edge of Norfolk International Terminal's Pier 3, and falls within the military restricted area as established by the Army Corps of Engineers at 33 CFR 334.300. Additionally, permission coordination must be obtained from the Navy for construction personnel or work boats to access and operate inside the military restricted area and must meet Navy security requirements. 20

8. During the proposed bridge and tunnel construction detailed coordination will be required to avoid impacts to Navy ships and fuel barges transiting to and from Craney Island Fuel Terminal to Naval Station Norfolk. 21

9. Construction and dredge disposal requires detailed coordination to avoid impacts to OWWO transport from Naval Norfolk to Craney Island Fuel Terminal as well as ships transitioning the channel. 22

10. The Navy has a fuel line and OWWO pipeline running from Naval Station Norfolk to Craney Island Fuel Terminal and this project appears to be sited on top of them, which might require relocation of pipelines at VDOT expense, due to conflict. 23

11. The VA-164 Connector over the Navy's Craney Island Fuel Terminal will need to provide measures that restrict vehicle and pedestrian access that meets all Federal security requirements without bisecting the DoD internal connectivity between the north and south areas. 24

12. Based on the segment drawing and cross section it is unclear how the I-564 Connector Study considered the ongoing VDOT ATI Interchange that is currently at 100% design with expected completion in FY-24. The ATI Interchange and access improvements are located between the existing I-564 and the SPUI at "D" Ave, and is relevant to the interchange spacing in the corridor. 25

13. Based on the current alignment of I-564 Connector it appears modifications may be required to the recent finalized I-564 Intermodal Connector including: 26

    a. Bridge crossings over Hampton Boulevard
    b. Navy secured access to/from Commercial Vehicle Inspection Station
    c. Public Connector Ramp to Hampton Boulevard

Naval Station Norfolk is the largest U.S. Naval base in the world, with a combined civil and military population of 125,427 (FY20). It is the top employer in the Hampton Roads region. NSN is home to the U.S. Atlantic Fleet and covers 4,631 acres and includes several activity centers including piers, airfields, fueling operations, administrative campus buildings, warehousing facilities, housing, child care facilities and fitness/recreation facilities. NSN

supports projects in the local area that support Navy operations and benefit the Navy mission and will continue to work with Hampton Roads Transportation Planning Organization to address transportation issues in the Hampton roads area.

Please contact my Community Plans and Liaison Officer, Mr. Steve Jones, at (757) 322-2333, or by email at steve.g.jones.civ@us.navy.mil with questions or other concerns relating to this subject.

Sincerely,

D. S. Dees
Captain, U.S. Navy
Commanding Officer
Naval Station Norfolk

Encl: NRMA letter of 9 Sep 16

Copy to:
Commander, United States Fleet Forces Command
Commander, Navy Installations Command
Commander, Navy Region Mid-Atlantic

DEPARTMENT OF THE NAVY
COMMANDER,
NAVY REGION MID-ATLANTIC
1510 GILBERT STREET
NORFOLK, VA 23511-2737

IN REPLY REFER TO:
11210
N4
September 19, 2016

Virginia Department of Transportation
Attn: Mr. Scott Smizik
1401 East Broad Street
Richmond, VA 23219-2000

Dear Mr. Smizik:

As a cooperating agency in the re-evaluation of the Hampton Roads Crossing Study Supplemental Environmental Impact Statement (SEIS), Commander, Navy Region Mid-Atlantic (CNRMA) appreciates the opportunity to comment on the draft SEIS.

Naval Station Norfolk is the largest Naval Base in the world with an average daytime population of 70,000. One of the specific elements of the SEIS is to improve strategic military connectivity. All alternatives provide additional capacity which will alleviate congestion and improve emergency readiness as it pertains specifically to naval operations and mission readiness. In addition, alternatives B, C and D incorporate a secondary connection that would allow both civilian and active duty commuters to be distributed more evenly across transportation corridors throughout Hampton Roads. Consequently, this would reduce congestion and ultimately improve strategic military connectivity beyond the current roadway system.

Enclosure 1 herein provides additional information regarding potential Navy impacts. Detailed comments regarding various roadway constructs will be submitted in the future once the preferred alternative has been selected. The following comments highlight potential direct impacts to the Navy based on a review of the SEIS:

(1) The proposed alignment of the I-164 Connector identified in Alternatives B, C, and D would negatively impact planned, mission-critical infrastructure at the Craney Island Fuel Depot. Further coordination with the U.S. Navy and U.S. Army Corps of Engineers will be required to identify a mutually agreeable alignment should the preferred alternative include this option. Additionally, the proposed at-grade roadway would bisect the Navy's property. The Navy requires unimpeded access to all of its facilities at Craney Island;

(2) The Navy is in the process of investigating safety distance requirements for military ships refueling at Craney Island in relation to a public highway and will provide that information when available;

(3) Further coordination with the U.S. Navy and U.S. Army Corps of Engineers will be required to consider the alignment of a future tunnel beneath Norfolk Harbor Reach with respect to anticipated federal navigation channel deepening activities and the cumulative impact on maritime operations at Naval Station Norfolk should the preferred alternative include this tunnel/bridge option;

Enclosure 1: Navy Comments, Hampton Roads Crossing Study - SEIS

Topic or Area of Concern (AOC)	Segment 1 (CO) I-664 from US 58 (Bowers Hill) to I-264	Segment 2 (CO) I-664 from VA 164 to US 58 (Bowers Hill)	Segment 3 (SCO) I-564 and VA 164 Interchange	Segment 4 (CO) I-564 from I-564 Connector to VA 164	Segment 5C I-564 from Terminal Avenue Interchange to I-564 Connector	Segment 5D I-564 from Terminal Avenue Interchange to I-564 Connector	Segment 5E Terminal Avenue Interchange	Segment 6D Terminal Avenue Interchange	Segment 7C I-564 from I-64 to and including Terminal Avenue Interchange	Segment 7D I-564 from I-64 to and including Terminal Avenue Interchange	Segment 8 I-64 north of HRBT	Segment 8 I-64 from HRBT to I-564	Segment 10 (SO) I-564 and I-564 Connector	Segment 10C I-564 and I-564 Connector	Segment 11C I-564 Connector including I-564 Interchange	Segment 11D I-564 Connector including I-564 Interchange	Segment 12B I-564 Connector and VA 164 Connector Interchange	Segment 12C I-564 Connector, I-564 Connector and VA 164 Connector Interchange	Segment 12D I-564 Connector, I-564 Connector and VA 164 Connector Interchange	Segment 13 VA 164 Connector	Segment 14 VA 164	Construction and/or Temporary	Recommendations / Additional Comments
Air Operations at Chambers Field (located at Naval Station Norfolk)																							
Low altitude rotary wing training and operations for both take off/landing												No Impact (NI)										✔	For further clarification, mapping elements and other information, please contact the Navy's project POC.
Operational training including streaming of equipment from helicopters through the channel												NI										✔	
Night operations and training												NI										✔	
Marginal weather operations and training												NI										✔	
Potential penetration into flight safety zones												NI										✔	
Air diversion impacts causing traffic over residential areas												NI										✔	
Potential hazards associated with lighting (structures/highway) which could impact pilot acclimation												✔										✔	
Any proposed development, to include temporary structures, involving height must comply with the FAA Obstruction Evaluation criteria												✔										✔	
Vertical penetration of approach/ departure corridor would impact Navy terminal instrument and visual approaches												NI										✔	
Regional Port Operations																							
Dredging requirements for siltation build-up					NI	NI						NI	NI	NI								✔	
Potential impacts to normal water traffic; impacts to channel and shipping lanes					NI	NI						NI	NI	NI								✔	
Harbor traffic and persons					NI	NI						NI	NI	NI								✔	
Channel depths for submarines and deep draft ships					✔	✔						✔	✔	✔								✔	
Required minimum sufficient clearance and draft depths					✔	✔						✔	✔	✔								✔	
Alignment of a future tunnel beneath Norfolk Harbor Reach with respect to anticipated federal navigation channel deepening activities and the cumulative impact on Navy maritime operations					NI	NI						NI	✔	✔								✔	
Regional Emergency Management																							
Potential impacts to emergency evacuation or operations (land and water) if the channel or roadway were to be impacted					NI	NI						NI	NI	NI								✔	Roadway improvements that increase capacity and provide new corridors benefit Navy emergency evacuation and operations
Transportation/Traffic Operations																							
Traffic model for I-564 Project under construction demonstration that the Navy requires three general purpose lanes to/from NAVSTA Norfolk Gates 1, 2, and 3A													NI	✔									
Naval Station Norfolk (NAVSTA) Facility AOC																							
Installation Anti-Terrorism Force Protection (ATFP)																							
Installation of a noise barrier near Willoughby housing will need to be evaluated for compliance												NI											
Operation of Gate 10, Gate 4, and Gate 22 facilities may be impacted. Any increase of the approach speed of vehicles, reduced approach zones, or reduced site lines at the gates could reduce the operation capability of the gate below required security standards during construction												NI										✔	Criteria requirements for gates are provided in UFC 4-022-01 Entry Control Facilities / Access Control Points
Proposed interchange west of Hampton Boulevard does not take into consideration the Navy's new Gate 6 currently under construction. Any increase of the approach speed of vehicles, reduced approach zones, or reduced site lines at the gates could reduce the operation capability of the gate below required security standards												NI	✔	✔								✔	Navy is in support of a full movement interchange that provides access to the Navy, MIT, and the public. The Navy requests that VDOT evaluate UPC 90175, I-564 Air Terminal Interchange, which is east of Hampton Boulevard and identified in the 2040 Regional Long Range Transportation Plan.

THE PORT OF VIRGINIA®

VIRGINIA PORT AUTHORITY
600 WORLD TRADE CENTER, NORFOLK, VA 23510
(757) 683-8000

August 3, 2022

Ms. Pavithra Parthasarathi
Deputy Executive Director, HRTPO
723 Woodlake Drive
Chesapeake, VA 23320

RE: Regional Connectors Study, Phase 3 Qualitative Analysis

Dear Ms. Parthasarathi,

The Port appreciates the opportunity to actively engage in the region's planning efforts with the HRPTO and HRTAC, and we are excited about the success the region has accomplished by working together. As stakeholders in the Regional Connectors Study (RCS), we believe that identifying specific links that accomplish congestion relief **and** provide economic opportunities will benefit the region. As the RCS team continues to evaluate the segments through the Phase 3 Qualitative Analysis component of the study, several stakeholders have shared challenges, including those relating to the Craney Island Dredge Management Area, the VA-164 Connector segment, and the I-564 corridor alignment. 46

The I-564 corridor is a key gateway for The Port of Virginia and since the inception of the I-564 Intermodal Connector in the late-1990's, the port has partnered with regional partners, FHWA, VDOT, US Navy, and City of Norfolk to establish the I-564 corridor investments by utilizing the FHWA guidelines to address the needs of all stakeholders. Examples of collaboration in meeting stakeholder needs include: the Air Terminal Interchange to provide enhanced access to the Navy's Commercial Vehicles Inspection Station, the new connection to the port's North Gate at Norfolk International Terminals, and the Naval Station Norfolk's Gate 6. 47

As a designated Port of National Defense, The Port of Virginia understands the importance of security requirements of the U.S. Navy and we recognize that security requirements change over time based on unforeseen events or conditions. Based on the uncertainty of when the I-564 cross-harbor segment will move forward to construction, we believe that security requirements at the time of design and construction may be accommodated with hardened infrastructure or technology advancements. However, based on the input and collaboration that has occurred over the last two decades, The Port of Virginia has been strategically investing in critical infrastructure with the understanding that the I-564 corridor alignment would remain in its current location and consistent with the final design plans. Examples of these investments in proximity to I-564 include: 48 49 50

- working with the Army Corps of Engineers to collaborate on funding and creating the deepest East Coast channel providing access to a national strategic port and Naval Station Norfolk;

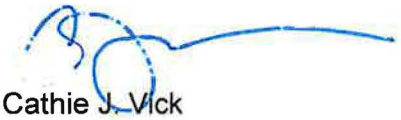
- securing $20 million in federal Port Infrastructure Development funds to expand rail capacity of the Central Rail Yard at NIT; and
- advancing a $650 million NIT North Optimization project – with Phase 1 scheduled for completion in 2025, with $266 million in funding provided by the Virginia General Assembly.

50

We appreciate the opportunity to share these comments and commit to partnering with the study's stakeholders to find solutions that address design criteria and security requirements for the VA-164 Connector on the Craney Island Marine Terminal. We look forward to continued engagement with the Regional Connectors study team, the HRTPO, and HRTAC to prioritize the region's future transportation system investments and participating in the continued success of the region.

51

Sincerely,



Cathie J. Vick
Chief Development and Government Affairs Officer

Number	Page	Section	Source	Comment	Response
			Friday, April 22, 2022		
1	22	VA 164	Carl Jackson - City of Portsmouth	"Constrained Work Areas High: "The widening shown in the SEIS is proposed to be into the median that includes two Commonwealth Railway railroad tracks. This poses a significant challenge to construction the widening and likely crash wall between the tracks and VA-164. Furthermore, should any widening occur along the outside shoulder to mitigate conflicts with the railroad, the corridor is constrained by adjacent residential and commercial parcels. Resolving the challenges involved with constructing toward either the railroad or adjacent residential and commercial properties will incur a significant impact to the timing of the project." The highlighted facts above should provide a more realistic assumption that widening VA 164 will have a high impact either widening to the median or on the outside.	Agreed. This is a constrained corridor that will be addressed as the planning process continues. More advanced conceptual design will be done later in the planning process that will further identify corridor constraints and impacts.
2	22	VA 164	Carl Jackson - City of Portsmouth	"Local Government or Agency Minimal/No impacts for local entities have been identified at this time" · Why are Local Government Agency constraints considered "minimal" if Portsmouth is opposed to this? Granted the roadway is owned and maintained by the state but I can't imagine VDOT or FHWA moving forward with a project with strong local opposition. This constraint should be considered 'High". Our opposition is listed (Page 51 "Documented opposition from stakeholders Portsmouth")	The qualitative rating for the the VA 164 segment will be changed to reflect Portsmouth's concerns. Portsmouth will be included in the discussion as the planning and design process outreach, with opportunities to raise, raise, document and resolve concerns. This inclusive process including Portsmouth will continue as detailed planning proceeds at a later date.

Number	Page	Section	Source	Comment	Response
3	23	VA 164	Carl Jackson - City of Portsmouth	"Environmental Justice (low income and minority communities) Moderate: Moderate Expansion to the eastbound side of VA-164 may require a portion of easement from Ebony Heights Park; however, further detailed design may avoid and/or minimize any potential impacts. No residents or neighboring communities would be relocated." · Where is the detailed design showing no residents will be relocated? · It should also be noted that Impacts to Ebony Heights Park care significant as City Council has indicated that recreation is a priority and enhancing recreational opportunities is also a key part of the City Manager's holistic crime reduction strategy. · Any project that takes away from recreational opportunities within Portsmouth communities will be met with resistance.	Noted. We have seen that Ebony Heights Park is both a recreational and hallowed ground, and will pay close attention to this park as planning and design progresses by the project owner. More advanced conceptual design will be done later in the planning process. At this first tier planning stage, it does not appear that any residential structures fall within the preliminary and developing Limits of Disturbance. The planning process is still in its early stages, and will continue to solicit, document and resolve comments and concerns about relocation, displacement and property from Portsmouth in later stages of planning and design.
4		VA 164	Carl Jackson - City of Portsmouth	"Communities within 500 feet of the proposed construction to the north and south of the corridor are majority minority with over 25% of households in poverty. 102 houses 58 2-story apartments, 44 garden apartment blocks, and 3 churches." · This should be a non-starter for any roadway project that truly acknowledges Environmental Justice.	Noted. Communities within 500 feet of the preliminary Limits of Disturbance for VA 164 are diverse racially and in income. As this and future planning and project development processes continue, outreach, partnering and collaboration with neighboring communities will engage these communities to mitigate any potential impacts.
5	39	VA 164	Carl Jackson - City of Portsmouth	"VDEQ Virginia Construction General Permit Minimal Assumption that all required stormwater controls and requirements pursuant to this permit will be obtained and adhered to. It is assumed for this segment that all additional stormwater controls would be located within the boundaries of the LOD." · The limits of disturbance for VA-164 do not include any space for stormwater management. How is this any different for the RCS? Where is this accounted for in the analysis?	At this early planning stage, it is unknown what additional impervious surface will be constructed. The future design process will develop better estimates of impervious surface burden to determine what best management practices to implement, and where, in the future timeframe that is indicated in the RCS segment tiering recommendation.

Number	Page	Section	Source	Comment	Response
6		VA 164	Carl Jackson - City of Portsmouth	In summary, we believe that the analysis of VA 164 needs to be done with the assumptions of the SEIS and showing an outside widening which will reveal higher impacts to residential and commercial businesses and give the alternative a HIGH impact rating overall. This will provide a more realistic comparison to the other alternatives. The analysis for the VA 164 Connector showing HIGH impact ratings for almost every category is more consistent with the kind of analysis that should be done with VA 164.	Noted. The planning process is in its early stages. We appreciate your comments, as they provide us the opportunity to understand, respond, and work with Portsmouth to reach the development outcome that is best for the communities neighboring VA 164 , Portsmouth, and the region. The qualitative analysis presented in May of 2022 balanced widening to the inside of existing VA 164 per input from key stakeholders, and the next step of the quantitative analysis is further refining the design of the corridor for impact analysis.
			Tuesday, May 3, 2022		
7		VA 164 Connector	George Janek Norfolk District Regulatory Branch	June 2016 letter which outlines some of the Corps' concerns with transportation segments which may affect Craney Island and federal navigation channels	Comment noted. All concerns addressed in the June 2016 letter have been incorporated into the permitability review tables for each of the segments. Particular of note is the Craney Island Dredge Disposal Facility Section 408 status and new GIS boundary received May 2022.
8		RCS	George Janek Norfolk District Regulatory Branch	Each of the six mandated segments, and "bundled" combinations of these segments, must have independent utility and can only be permitted if they are separate and complete projects with logical termini.	Comment noted. The first tier review only included a segment evaluation while the second level of review is including segments joined into logical bundles for evaluations with logical termini.
9	8	RCS	George Janek Norfolk District Regulatory Branch	As part of the Mitigation of Environmental Factors analysis, you should consider whether there are tidal and/or nontidal compensation credits available from approved commercial banks.	Comment noted. At this time in the evaluation, we only have rough order of magnitude impacts numbers for tidal and nontidal US Waters resources. As detailed design continues for specific bundles, more detailed impact numbers will be available to the project owner and coordination on available credits with approved commercial banks will be completed. Final planning, design, and construction will continue under the project owner, after the term of the RCS team.

Number	Page	Section	Source	Comment	Response
10	9	RCS	George Janek Norfolk District Regulatory Branch	408, 404, and Section 10 permits are all related. If there are 408 issues with a segment, there will likely be permitting issues as well.	Comment noted and consultant agrees.
11	19	RCS	George Janek Norfolk District Regulatory Branch	Segment 1A: Even if there are no wetland impacts from this alternative, potential impacts from bridges, tunnels, and island configurations could be significant.	Comment noted. All segments have undergone an initial environmental review with additional evaluations occurring as more detailed design information becomes available.
12	24	VA 164 Connector	George Janek Norfolk District Regulatory Branch	Segment 3: Concur with this statement: “Determining the suitability of construction over/through the CIDMMA facility at the end of its lifespan will be a significant challenge and will require significant resources to resolve.” Until 408 issues associated with CIDMMA are resolved, Corps Regulatory will be unable to issue a permit.	Comment noted and consultant agrees.
13	25	VA 164 Connector	George Janek Norfolk District Regulatory Branch	Segment 3: Wetland impacts are projected to be 31.3 acres. This will require either the purchase of credits or remediation. What does “remediation” mean? The Corps usually requires wetland credits to offset unavoidable wetland impacts, and depending on the type of wetland impacts (tidal vs. nontidal) there may be a shortage of available credits in this watershed.	Comment noted. At this time in the evaluation, we only have rough order of magnitude impacts numbers for tidal and nontidal US Waters resources. As detailed design continues for specific bundles, more detailed impact numbers will be available to the project owner and coordination on available credits with approved commercial banks will be completed. Final planning, design, and construction will continue under the project owner, after the term of the RCS team.

Number	Page	Section	Source	Comment	Response
14	26	I-564 Connector	George Janek Norfolk District Regulatory Branch	Segment 4: Even though there may not be wetland impacts associated with the I-564 Connector, mitigation may be required for impacts to EFH, shallow water areas, and other impacts to subaqueous bottom.	Comment noted. At this time in the evaluation, we only have rough order of magnitude impacts numbers for tidal and nontidal US Waters resources. As detailed design continues for specific bundles, more detailed impact numbers will be available to the project owner and coordination on available credits with approved commercial banks will be completed. Final planning, design, and construction will continue under the project owner, after the term of the RCS team.
15		RCS	George Janek Norfolk District Regulatory Branch	Environmental justice impacts of all segments must be identified early and coordinated with affected communities.	Comment noted. All segments have undergone an initial environmental justice review with additional evaluations occurring as more detailed design information becomes available.
16	39	VA 164 Connector	George Janek Norfolk District Regulatory Branch	Segment 3: This segment probably has “high” 408 issues, not moderate, due to its proximity to CIDMMA.	Comment noted. Craney Island Dredge Disposal Facility Section 408 status and new GIS boundary received May 2022. The status of this segment will be changed to "high" for 408 issues for ongoing and future tiering coordination.
17	61	I-664 N. of College Dr.	George Janek Norfolk District Regulatory Branch	re: Colonial Waterbird nesting habitat: Anticipate strong interest in and public objections to impacts to colonial nesting birds. Mitigation requirements for displaced birds may be required under Migratory Bird Treaty Act.	Comment noted. Consultant will make note of all comments during the public involvement stage of this project.
18	62	I-664 N. of College Dr.	George Janek Norfolk District Regulatory Branch	benthic species: Pilings and riprap from new bridge and tunnel structures are probably not sufficient to offset impacts to benthic species. This has not been considered compensation on other large projects.	Comment noted. No specific measures can be determined at this level of engineering design.

Number	Page	Section	Source	Comment	Response
19	62	I-664 N. of College Dr.	George Janek Norfolk District Regulatory Branch	benthic species: Construction BMPs like TOYR, dredging BMPs, etc. may help mitigate turbidity impacts. However, “compliance with the VESCH” and “strict adherence to erosion and sediment control measures” are statements that are too general. These practices are intended for upland construction and stormwater control and generally don’t apply to marine construction. It’s not too early to start exploring more project-specific measures to control turbidity. These types of vague general statements are used throughout this section of the document.	Comment noted. No specific measures can be determined at this level of engineering design.
20	64	I-664 N. of College Dr.	George Janek Norfolk District Regulatory Branch	Potential Future Changes in Policy Issues: Impacts to shallow water habitat (are less than 2 meters deep) may require in-kind compensation.	Comment noted.
21	70	VA 164	George Janek Norfolk District Regulatory Branch	Environmental Justice: EJ is more than relocating residents or affected populations. Noise and air quality impacts must also be taken into account and coordinated early with stakeholders and affected communities.	Comment noted. All segments have undergone an initial environmental justice review with additional evaluations occurring as more detailed design information becomes available. At this qualitative stage, noise and air quality were not specifically measured or modeled, but described generally as potential impacts. Noise wall information will be incorporated into the more detailed planning and design reviews. As this and future planning and project development processes continue, outreach, partnering and collaboration with neighboring communities will engage these communities to mitigate any potential impacts.

Number	Page	Section	Source	Comment	Response
22	78	I-564 Connector	George Janek Norfolk District Regulatory Branch	Colonial Waterbird nesting habitat: The use of bird dogs to discourage bird nesting within the LOD may be an effective deterrent but will not be considered as a mitigation measure for bird nesting impacts.	Comment noted. Additional mitigation measures for bird nesting impacts will be evaluated as more detailed design allows for the determination of potential bird nesting impacts. The RCS team will not be the project owner in the final stages of planning, design and construction.
			Wednesday, May 4, 2022		
23		VA 164 Connector	Lesley Dobbins-Noble Chief, Operations Branch U.S. Army Corps of Engineers, Norfolk District	April 29, 2022 - Provided federal real estate GIS boundary of Craney Island Dredged Material Management Area (CIDMMA)	Received corrected GIS boundary file and included in project mapping.
24		VA 164 Connector	Lesley Dobbins-Noble Chief, Operations Branch U.S. Army Corps of Engineers, Norfolk District	May 5, 2022 - Reiterate that the concerns expressed in the 2016 letter from previous Norfolk District Corps of Engineers Commander, COL Jason Kelly, are still valid - Of utmost concern for the Norfolk District Operations Branch at this time are the potential impacts associated with the 164 Connector segment. - The raised roadway that transits alongside the eastern edge of Craney Island is of major concern to the Operations Branch as we routinely utilize the eastern side of Craney Island to access our rehandling basin and moor Corps and contractor vessels at the bulkhead. The raised roadway poses an access concern due to the restriction of passage of government vessels equipped with cranes, as they require greater overhead clearance.	Understood. We will continue to work with the COE to understand the operations requirements for the Craney Island Dredge Disposal Facility and incorporate all requirements into the planning and design. The RCS team will not be the project owner in the final stages of planning, design and construction.

Number	Page	Section	Source	Comment	Response
25		VA 164 Connector	Lesley Dobbins-Noble Chief, Operations Branch U.S. Army Corps of Engineers, Norfolk District	5/5/2022 - As you are aware, the Norfolk District Corps of Engineers will be required to assess any proposed roadway alignment through the Section 408 evaluation process. During that review, district staff will determine whether the proposal poses a detrimental effect on our approved civil works projects.	Understood. Section 408 permit requirements for the Craney Island Dredge Disposal Facility will be taken into consideration during the permitability review efforts.
			Friday, June 3, 2022		
26		VA 164 Connector	D. Dees - US Navy	1. Following the 2016 letter the Navy completed the investigation for safety distance requirements from public highway to the facilities at Craney Island Fuel Terminal in relation to fueling operations to a public highway, referenced in paragraph (2) of the 2016 letter. A distance of approximately 1,800 feet is required with a physical barrier to prevent visual observation of the fueling operation systems (pump, tanks and fuel lines) from the public highway.	Understood. As a result of this required specification, the RCS Team is developing the VA 164 connector corridor with an 1,800-foot distance from the planned refueling in addition to a visual barrier in future design iterations.
27		VA 164 Connector	D. Dees - US Navy	1.a. As proposed the l-164 Connector roadway is adjacent to the comer where Midway Road intersects Waterfront Drive. This area of Navy property has been approved and designated for the construction of four additional above ground fuel storage tanks. Site approval for this location to include Environmental approval has already occurred and the design is expected to begin in the near future.	Understood. As a result of this required buffer, the RCS Team is developing the VA 164 connector corridor with an 1,800-foot distance from the planned refueling in addition to a visual barrier in future design iterations.
28		VA 164 Connector	D. Dees - US Navy	1.b. Based on the Navy Security Engineering Planning Assessment, the minimum standoff distance from any non-DOD roadway or rail line is approximately 1,800 feet from the Navy Fuel Tanks. In addition, the roadway will need a wall along this stretch to prevent visual observation of the Fuel Facility and operations.	Understood. The RCS Team is developing the VA 164 connector corridor with an 1,800-foot distance from the planned refueling in addition to a visual barrier in future design iterations.

Number	Page	Section	Source	Comment	Response
29		VA 164 Connector	D. Dees - US Navy	1.c. The current proposed 1-164 Connector crosses further West over Navy property where the above ground main fuel supply lines are located. A wall along the roadway will also be required where this crossing occurs to prevent visual observation of the fueling operation systems.	Understood. The RCS Team is developing the VA 164 connector corridor with an 1,800-foot distance from the planned refueling in addition to a visual barrier in future design iterations.
30		VA 164 Connector	D. Dees - US Navy	1.d. Defense Fuel Support Point (DFSP) Craney Island is a strategic, irreplaceable asset on the East Coast to not only Navy, but also to Air Force, Army, Marine, and Coast Guard. The strategic nature of Craney Island is largely due to 2 facts:	The RCS evaluation team acknowledges that strategic importance of Craney Island within the context of Naval Station Norfolk and are staying in communication with stakeholders like the Navy throughout the process to ensure that the planning process evolves into a design and construction process that serves both the strategic and regional needs of the Hampton Roads region.
31		VA 164 Connector	D. Dees - US Navy	1.d.1) Location. Craney Island is located on the Elizabeth River in Hampton Roads in close proximity to the Navy's largest single concentration of ships worldwide. The location also allows ready access to tankers to transport fuel from Gulf Coast refineries, and transshipment via the Atlantic sea lanes and the Atlantic Intracoastal Water Way.	Understood. The RCS report in May of 2022 was a qualitative assessment, and the RCS team is now working on refining the quantitative understanding of traffic demand modeling and design needs. The RCS team and the agencies that carry this planning process forward to design, construction and operations will work in partnership with the Navy to develop, design, and construct the VA 164 connector alignment, roadway, and facilities in a way that does not impair the planned functions of Craney Island.
32		VA 164 Connector	D. Dees - US Navy	1.d.2) Colonial Pipeline. Craney Island has resilient and redundant access to the refining capacity of the Gulf Coast via direct connection with the Colonial Pipeline. Secondarily, Craney Island can receive by tanker at the piers. This capability cannot be easily duplicated anywhere else.	Understood. The RCS report in May of 2022 was a qualitative assessment, and the RCS team is now working on refining the quantitative understanding of traffic demand modeling and design needs. The RCS team and the agencies that carry this planning process forward to design, construction and operations will work in partnership with the Navy to develop, design, and construct the VA 164 connector alignment, roadway, and facilities in a way that does not impair the planned functions of Craney Island.

Number	Page	Section	Source	Comment	Response
33		VA 164 Connector	D. Dees - US Navy	Craney Island and the multi-billion dollars worth of fuel infrastructure cannot be moved and must be safeguarded to preserve critical fuel mission support to the warfighters.	Understood. The RCS report in May of 2022 was a qualitative assessment, and the RCS team is now working on refining the quantitative understanding of traffic demand modeling and design needs. The RCS team and the agencies that carry this planning process forward to design, construction and operations will work in partnership with the Navy to develop, design, and construct the VA 164 connector alignment, roadway, and facilities in a way that does not impair the planned functions of Craney Island.
34		I-564 Connector	D. Dees - US Navy	2. The proposed 1-564 Connector alignment as reflected in the Phase 3 Qualitative Analysis is approximately 300 feet south of the bulkhead at the southern edge of Naval Station Norfolk and existing fueling facility. Based on the Navy Security Engineering Planning Assessment noted above, the minimum standoff distance from any non-DOD roadway is approximately 1,800 feet from the Navy Fuel Tanks and fueling facility. The 1,800 feet safety distance is required between the existing fueling operation system at the southern end of Naval Station Norfolk (near the bulkhead) and a public roadway and the proposed 1-564 Connector. A visual and physical barrier would be required to prevent visual observation of the Fuel Facility, Security Entry Control (Gate 6) and naval operations inside the fence.	Understood. It should be noted that the fueling facility referred to in this comment is within 300 feet of the existing Intermodal connector, which is currently planned to have the same alignment as the proposed I-564 connector. There are currently walls separating the Navy's fuel facility from the existing Intermodal connector. To satisfy the 1,800 foot the setback from the fueling facility would require a significant re-evaluation of the I-564 connector by FHWA, VDOT, Norfolk, and Port of Virginia. At the time that the segment design is developed further the appropriate mitigation will be determined in consideration of the security protocols in place at that time.

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35		I-564 Connector	D. Dees - US Navy	3. Based on the information available in the Phase 3 Qualitative Analysis for 1-564 Connector roadway plans and cross sections and utilizing nominal heights for street lighting, Navy team was able to identify concerns to the approach and departure corridor, transitional and imaginary surfaces and instrument precision approaches to runway 10 which would negatively impact current missions and operations at Chambers Field.	Understood. At the end of the Phase 3 (Step 2) Quantitative analysis, which we are conducting now, we will recommend tiering of the segments into three tiers that correspond to timing of/readiness for implementation, with Tier 1 the most ready. As the project moves into design and construction, the project owner will be able to make decisions about equipment height and clearance to accommodate the Navy's operational needs in Norfolk. The RCS team will not be the project owner in the final stages of planning, design and construction.

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36		I-564 Connector	D. Dees - US Navy	4. The proposed 1-564 Connector is approximately 5,000 feet west by southwest of the end of runway 10 centerline. If cranes of similar heights to those used on the current VDOT Hampton Roads Bridge Tunnel (HRBT) and 1-64 widening projects are used for this proposed project flight operations would have restrictions placed on them due to crane height impacting the operational capability of the airfield and its ability to support worldwide operations. These restrictions would be significant and require excessive coordination that would significantly impact and likely result in the loss of mission sets such as the Air Mobility Command cargo mission from Chambers Field. In visual meteorological conditions (VMC) (clear) weather, daily coordination would be required to minimize impacts to flight operations with Chambers Field. In instrument meteorological conditions (IMC) weather or forecasted weather to be IMC, work on the tunnel would need to be immediately halted, the crane lowered and remain lowered until VMC was recovered due to the proximity of the construction area to Chamber's Field runway and precision landing path. This coordination and actions would impart additional risk to aircrew and airfield operations due to this need and result in a day for day extension to construction time for every IMC day. FAA Obstacle Evaluations with a lA survey level of accuracy would be required in order to minimize impacts to operations. Based on the information available today, the impacts to existing and future missions and operations are not fully known and the Navy reserves the opportunity to continue evaluating for temporary as well as permanent impacts as more information becomes available.	Understood. As the project moves into- design and construction, the project owner will be able to make decisions about equipment height and clearance to accommodate the Navy's operational needs in Norfolk. The RCS team will not be the project owner in the final stages of planning, design and construction.

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37		I-564 Connector	D. Dees - US Navy	5. As reflected in the Phase 3 Qualitative Analysis drawing and cross section for the 1-564 Connector the elevated overpasses over Naval Station Norfolk and in close proximity to the perimeter fence line near Gate 6, causes significant security issues for military personnel, for fuel operations, fuel barges and fuel tanks, ordnance movements, military vessels, piers, as well as other facilities and waterfront operations. The past and current land uses of the area identified for the proposed 1-564 Connector are compatible with current missions and operations adjacent to the southern boundary of Naval Station Norfolk.	Understood. At the end of the Phase 3 (Step 2) Quantitative analysis, which we are conducting now, we will recommend tiering of the segments into three tiers that correspond to timing of/readiness for implementation, with Tier 1 the most ready and Tier 3 the least ready. At the time of project design and construction, the project owner will be able to make decisions about equipment height and clearance to accommodate the Navy's operational needs in Norfolk. At this early planning stage of the segment tiering process the Regional Connectors study is not considering an elevated section between the end of the existing Intermodal connector and the end of Norfolk International Terminal Pier 3. Instead, the I-564 connector is planned to be underground along the length of existing NIT Pier 3 and tunnel under the Elizabeth River shipping lanes to surface at a bridge to the west of the NIT and to the north of Craney island. It may be possible to tunnel the I-564 connector further East approaching the Hampton Boulevard underpass, but that design will involve additional costs.

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38		I-564 Connector	D. Dees - US Navy	6. Based on proposed alignment of 1-564 Connector and not having the minimum separation distances needed between public roadway and ordnance handling operations at NSN piers 1 through 3, these operations and missions are in jeopardy. Based on the projected traffic counts of the proposed new road, the installation would not qualify for a waiver if the 1-564 Connector is built given its proximity to the piers 1 through 3 and the expected traffic loading, resulting in a loss of mission and operational capability of weapon loading/unloading at piers l through 3. A contract award of $300M to replace submarine Pier 3 a WWI era pier was awarded in May 2022 and is expected to be completed in the year 2027 to support berthing of Los Angeles class, extended version of the Virginia class and Virginia Payload Module class submarines and allow for greater weapons onloading as supported by Naval Station Norfolk's current permits. This pier is mission essential to United States National Security and is projected to be in service for over 50 years.	Understood. The NIT pier alignment that the RCS alternatives is currently planning on using is nearest to Naval Station Norfolk's Pier 1. Evolving security and visibility technology may resolve these security concerns as the I-564 corridor progresses from planning to design. Evolving transportation technology may change the corridor design as well. Horizontal and vertical clearances required by the Navy for essential security will be considered in the future plannig and design process.
39		I-564 Connector	D. Dees - US Navy	7. The water area north of the proposed 1-564 Connector aligns with northern edge of Norfolk International Terminal's Pier 3, and falls within the military restricted area as established by the Army Corps of Engineers at 33 CFR 334.300. Additionally, permission coordination must be obtained from the Navy for construction personnel or work boats to access and operate inside the military restricted area and must meet Navy security requirements.	Understood. The boundaries of Naval Station Norfolk as codified in the CFR begin along the northern edge of NIT pier 3. The RCS study does not plan nor contemplate exceeding the northern edge of Pier 3 of the NIT during the construction or operations of the I-564 connector. The RCS team will plan for and produce cost estimates to account for the need for vetting and hiring personnel with sufficient security clearances to work in the vicinity of Norfolk Naval Station Pier 1.

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40		I-564 Connector	D. Dees - US Navy	8. During the proposed bridge and tunnel construction detailed coordination will be required to avoid impacts to Navy ships and fuel barges transiting to and from Craney Island Fuel Terminal to Naval Station Norfolk.	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.
41		I-564 Connector	D. Dees - US Navy	9. Construction and dredge disposal requires detailed coordination to avoid impacts to OWWO transport from Naval Norfolk to Craney Island Fuel Terminal as well as ships transitioning the channel.	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.
42		I-564 Connector	D. Dees - US Navy	10. Construction and dredge disposal requires detailed coordination to avoid impacts to OWWO transport from Naval Norfolk to Craney Island Fuel Terminal as well as ships transitioning the channel.	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.
43		VA 164 Connector	D. Dees - US Navy	11. The VA-164 Connector over the Navy's Craney Island Fuel Terminal will need to provide measures that restrict vehicle and pedestrian access that meets all Federal security requirements without bisecting the DoD internal connectivity between the north and south areas.	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.

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44		I-564 Connector	D. Dees - US Navy	12. Based on the segment drawing and cross section it is unclear how the I-564 Connector Study considered the ongoing VDOT ATI Interchange that is currently at 100% design with expected completion in FY-24. The ATI Interchange and access improvements are located between the existing 1-564 and the SPUI at "D'' Ave, and is relevant to the interchange spacing in the corridor.	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth entities such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.
45		I-564 Connector	D. Dees - US Navy	13. Based on the current alignment of I-564 Connector it appears modifications may be required to the recent finalized 1-564 Intermodal Connector including: a. Bridge crossings over Hampton Boulevard b. Navy secured access to/from Commercial Vehicle Inspection Station c. Public Connector Ramp to Hampton Boulevard	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.
			Wednesday, August 3, 2022		
46		I-564 Connector	Cathie J. Vick, Chief Development and Government Afffairs Officer - Port of Virginia	As stakeholders in the Regional Connectors Study (RCS), we believe that identifying specific links that accomplish congestion relief and provide economic opportunities will benefit the region. As the RCS team continues to evaluate the segments through the Phase3 Qualitative Analysis component of the study, several stakeholders have shared challenges, including those relating to the Craney Island Dredge Management Area, the VA-164 Connector segment, and the 1-564 corridor alignment.	Agreed

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47		I-564 Connector	Cathie J. Vick, Chief Development and Government Afffairs Officer - Port of Virginia	The 1-564 corridor is a key gateway for The Port of Virginia and since the inception of the 1-564 Intermodal Connector in the late-1990's, the port has partnered with regional partners, FHWA,VDOT, US Navy, and City of Norfolk to establish the 1-564 corridor investments by utilizing the FHWA guidelines to address the needs of all stakeholders. Examples of collaboration in meeting stakeholder needs include: the Air Terminal Interchange to provide enhanced access tothe Navy's Commercial Vehicles Inspection Station,the new connection to the port's North Gate at Norfolk International Terminals, and the Naval Station Norfolk's Gate 6.	Agreed. Thank you for the historical perspective of past improvements to the Hampton Roads region in response to increasing infrastructural needs.
48		I-564 Connector	Cathie J. Vick, Chief Development and Government Afffairs Officer - Port of Virginia	As a designated Port of National Defense, The Port of Virginia understands the importance of security requirements of the U.S. Navy and we recognize that security requirements change over time based on unforeseen events or conditions. Based on the uncertainty of when the 1-564 cross-harbor segment will move forward to construction, we believe that security requirements at the time of design and construction may be accommodated with hardened infrastructure or technology advancements.	Agreed. Thank you for acknowledging the heightened security requirements throughout the region and especially around the Port facilities and the Navy.
49		I-564 Connector	Cathie J. Vick, Chief Development and Government Afffairs Officer - Port of Virginia	Based on the input and collaboration that has occurred over the last two decades, The Port of Virginia has been strategically investing in critical infrastructure with the understanding that the 1-564 corridor alignment would remain in its current location and consistent with the final design plans.	Acknowledged. The project team is working to determine the optimal form of corridor expansion and new connector(s) to satisfy regional and stakeholder needs.

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50		I-564 Connector	Cathie J. Vick, Chief Development and Government Afffairs Officer - Port of Virginia	Examples of these investments in proximity to 1-564 include: • working with the Army Corps of Engineers to collaborate on funding and creating the deepest East Coast channel providing access to a national strategic port and Naval Station Norfolk; • securing $20 million in federal Port Infrastructure Development funds to expand rail capacity of the Central Rail Yard at NIT; and • advancing a $650 million NIT North Optimization project - with Phase 1 scheduled for completion in 2025, with $266 million in funding provided by the Virginia General Assembly.	Acknowledged. The project team is working to determine the optimal form of corridor expansion and new connector(s) to satisfy regional and stakeholder needs. This comment indicates that the expectation of the regional connectors is already driving other infrastructural decisions, which is a compelling reason for the Regional Connectors Study and the project team to arrive at a balanced recommendation for the project owners to progress to design and construction.
51		VA 164 Connector	Cathie J. Vick, Chief Development and Government Afffairs Officer - Port of Virginia	We appreciate the opportunity to share these comments and commit to partnering with the study's stakeholders to find solutions that address design criteria and security requirements for the VA-164 Connector on the Craney Island Marine Terminal. We look forward to continued engagement with the Regional Connectors study team, the HRTPO, and HRTAC to prioritize the region's future transportation system investments and participating in the continued success of the region.	Acknowledged.