





# Meeting Summary

Project: I-64 Hampton Roads Bridge-Tunnel Expansion  
 Meeting Title: JPA – Pre Application Page Turn Meeting  
 Date: August 20, 2019 9:00 am – 11:00 am  
 Location: DoubleTree Hotel  
 1500 N. Military Highway, Norfolk VA 23502

Attendees:

Company	Last Name	First Name	Phone Number	E-mail Address	Present
VMRC	Lay	Allison	(757) 247-2254	<a href="mailto:allison.lay@mrc.virginia.gov">allison.lay@mrc.virginia.gov</a>	XX
I-64 DJV	Stowe	Angela	845-216-3052	<a href="mailto:angela.stowe@hdrinc.com">angela.stowe@hdrinc.com</a>	XX
USACE	Mickel	Blair	804-267-3474	<a href="mailto:blair.mickel@stantec.com">blair.mickel@stantec.com</a>	XX
USACE	Keeler	Carolyn	804-912-3042	<a href="mailto:corolyn.keeler@stantec.com">corolyn.keeler@stantec.com</a>	XX
VHB	Frye	Chris	(757) 503-3796	<a href="mailto:cfrye@vhb.com">cfrye@vhb.com</a>	XX
I-64 DJV	Benson	Craig	703-389-3196	<a href="mailto:Craig.benson@mottmac.com">Craig.benson@mottmac.com</a>	XX
HRCP	Barrier	David	(514) 663-9198	<a href="mailto:david.barrier@hrnpjv.com">david.barrier@hrnpjv.com</a>	XX
I-64 DJV	Field	David	(371) 212-9332	<a href="mailto:david.field@mottmac.com">david.field@mottmac.com</a>	XX
NOAA	Obrien	David	804-684-7828	<a href="mailto:david.i.obrien@noaa.gov">david.i.obrien@noaa.gov</a>	XX
I-64 DJV	Gaffney	Doug	(856) 924-3363	<a href="mailto:douglas.gaffney@mottmac.com">douglas.gaffney@mottmac.com</a>	XX
I-64 DJV	Drahos	Emily	804-822-2173	<a href="mailto:edrahos@wrallp.com">edrahos@wrallp.com</a>	XX
VIMS	Hein	Emily	804-684-7482	<a href="mailto:eahein@vims.edu">eahein@vims.edu</a>	XX
DEQ	Weyland	Janet	(757) 518-2151	<a href="mailto:janet.weyland@deq.virginia.gov">janet.weyland@deq.virginia.gov</a>	XX
DEQ	Hannah	Jeff	(757) 518-2146	<a href="mailto:jeffrey.hannah@deq.virginia.gov">jeffrey.hannah@deq.virginia.gov</a>	XX
I-64 DJV	Felton	Joe	804-839-0964	<a href="mailto:jfelton@wrallp.com">jfelton@wrallp.com</a>	XX
I-64 DJV	Duschang	John	(845) 596-7953	<a href="mailto:john.duschang@hdrinc.com">john.duschang@hdrinc.com</a>	XX
HRCP	Martin Alos	Jose Ignacio	(404) 702-1030	<a href="mailto:jimartinalosb@dragados-usa.com">jimartinalosb@dragados-usa.com</a>	XX
I-64 DJV	Mace	Josh	804-248-2050	<a href="mailto:joshua.mace@hdrinc.com">joshua.mace@hdrinc.com</a>	XX
VDOT	Ambrose	Larissa	757-956-3187	<a href="mailto:larissa.ambrose@vdot.virginia.gov">larissa.ambrose@vdot.virginia.gov</a>	XX
DEQ	Woodruff	Melinda	(757) 518-2174	<a href="mailto:melinda.woodruff@deq.virginia.gov">melinda.woodruff@deq.virginia.gov</a>	XX
WSP	Martin	Michelle	(757) 466-9607	<a href="mailto:michelle.martin@wsp.com">michelle.martin@wsp.com</a>	XX
VDOT	Reilly	Peter	(757) 323-3307	<a href="mailto:peter.reilly@vdot.virginia.gov">peter.reilly@vdot.virginia.gov</a>	XX
VMRC	Owen	Randy	757-247-2251	<a href="mailto:randy.owen@mrc.virginia.gov">randy.owen@mrc.virginia.gov</a>	XX
VDOT	Smizik	Scott	(804) 371-4082	<a href="mailto:scott.smizik@VDOT.virginia.gov">scott.smizik@VDOT.virginia.gov</a>	XX
HRCP	Vazelle	Solene	(757) 933-0878	<a href="mailto:solene.vazelle@vinci-construction.com">solene.vazelle@vinci-construction.com</a>	XX
I-64 DJV	Sword	Taylor	(757) 672-4528	<a href="mailto:taylor.sword@mottmac.com">taylor.sword@mottmac.com</a>	XX
I-64 DJV	Pico	Tina	732-333-3257	<a href="mailto:tina.pico@mottmac.com">tina.pico@mottmac.com</a>	XX





	Garmon	Greg		
DGIF	Fernald	Ray		<a href="mailto:ray.fernaldd@dgif.virginia.gov">ray.fernaldd@dgif.virginia.gov</a>

Meeting Notes:

General Setup – Center Screen had the JPA-Pre-Submittal Page Turn Meeting Agenda (Attached).  
Second monitor was included to provided the JPA Appendix Sections when they were discussed.

No.	Description	Action
1.	Introductions (9:00pm)	
	<ul style="list-style-type: none"> <li>Walk through JPA submittal</li> <li>Presentation developed to illustrate how sections of the application are connected to the included Appendix sections.</li> <li>Some sections of the JPA do not apply</li> <li>Presentation will also review the Construction Schedule.</li> </ul>	Slides
2.	JPA Section 3 – Description of Project, Purposes, needs, Uses, Alternatives	
	<ul style="list-style-type: none"> <li>"the Project" has a definition now (Slides 5)</li> <li>Alternative A was the Lease Environmentally Damaging Preferred Alternative (LEDPA)</li> <li>EA Re-evaluation, selected alternative considered the FONSI on October 28, 2018. (Slide 7)</li> <li>Many project elements                             <ul style="list-style-type: none"> <li>Roadway(Slide 8)</li> <li>Marine (Slide 9)</li> <li>Design into 5 marine design segments (Slide 10)</li> </ul> </li> <li>Willoughby Spit will be used as a staging area                             <ul style="list-style-type: none"> <li>Fixed pier, Floating dock, replace bulkhead</li> <li>3 new timber finger piers, (Slide 13, 14)</li> <li>Work covered by NEPA and part of the JD with the USACE</li> <li>All temporary structures, but wetlands will be permanently filled (bulkhead will stay)</li> </ul> </li> <li>North Trestle and South Trestle                             <ul style="list-style-type: none"> <li>Barge working areas defined (Slide 15, 16, 17)</li> </ul> </li> <li>Willoughby Bay                             <ul style="list-style-type: none"> <li>Details of barge operations</li> </ul> </li> <li>Refined barge construction zones                             <ul style="list-style-type: none"> <li>Island expansion gets about 150 ft away from navigation channel</li> <li>Mooring piles around expansion will keep barges outside of channel (Slide 19)</li> <li>Mooring and anchorage areas</li> </ul> </li> </ul>	





No.	Description	Action
	<ul style="list-style-type: none"> <li>○ Will stay out of resource areas</li> <li>○ Willoughby bay mooring in small footprint (Slide 22)</li> </ul>	
	<p>JPA Section 5 – Public Notification</p>	
	<ul style="list-style-type: none"> <li>● Public notification                             <ul style="list-style-type: none"> <li>○ HRCP will provide addressed labels</li> <li>○ VMRC: can piggy back on USACE public notice were they will talk with George Janek                                     <ul style="list-style-type: none"> <li>● Riparian adjacent, not upland adjacent</li> </ul> </li> <li>○ VDEQ: 1/4 mile upstream for tidal waters, nontidal: anything adjacent</li> </ul> </li> </ul>	
	<p>JPA Section 6 – Threatened and Endangered Species Information</p>	
	<ul style="list-style-type: none"> <li>● Using simplified attenuation formula that GARFO recommends</li> <li>● No seasonal restriction for sturgeon</li> <li>● Are we proposing sound monitoring? No</li> <li>● Longer list for state species but again no effects</li> <li>● HRCP did meet with DGIF, are cooperating</li> <li>● EFH, Ray (ON PHONE): gull billed terns will be impacted to some degree, double check "no adverse effects" before we submit the application</li> <li>● Does gull billed tern have federal status - no, listed as state threatened</li> <li>● Bottlenose dolphin, relatively large numbers</li> <li>● Will be submitting an IHA for early works and then an LOA for the remainder of the project</li> <li>● LOA will be submitted after JPA</li> <li>● Dr. Garmin: sturgeon study ran 18 months in Hampton roads corridor. Only fish that they can detect are the fish that have the acoustic tag implanted in them</li> <li>● Adults: Over 100 unique sturgeon within the array detected, average time in the corridor was 3 hours over 18 months, most were detected in deep water in main shipping channel, very few detected in shallow habitat. Linger times very short and many are in deeper navigation channel waters. Late summer, late fall, month of April - peak periods</li> <li>● Sub-adult: 34 unique. Linger times 4.5 hours, more than 90% were in deep water in channel. 2 peaks of occurrence: November, April</li> </ul>	



No.	Description	Action
	<ul style="list-style-type: none"> <li>• Juvenile: defined as fish that has never left river. Very few detected. 4 were detected in the array in early 2018 - left because of low temps in February, high freshwater flows. Unusual behavior - anomaly</li> <li>• Risk of being impacted by construction is very low</li> <li>• Does not believe it is necessary to impose a TOYR</li> <li>• Randy: will there be multiple jet grouting/pile driving at once?</li> <li>• Very rarely will multiple piles be driven at the same time</li> </ul>	
	JPA Section 7 – Historic Resources Information	
	<ul style="list-style-type: none"> <li>• Historic resources</li> <li>• Reference back to PA and contract requirements, NEPA documents</li> <li>• Have no new historic resources that have been discovered, NEPA still valid</li> <li>• Cultural resource maps</li> </ul>	
	JPA Section 8 – Wetlands, Water, and Dunes/Beaches Impact Information	
	<ul style="list-style-type: none"> <li>• Fill, shading, piles, dredging, temporary, extended temporary</li> <li>• VDEQ manual says temporary impacts is 6 months or less</li> <li>• Plan and profile set of impacts as well as GIS set</li> <li>• Jeff Hannah: Goal to review permit, reference one plan set, not multiple</li> <li>• Dave Obrien (NOAA) : bulking factor for dredging? DG: 1.6</li> <li>• Randy Owen (VRM) : Whatever plan set is that is going to be used, need to break into like sized pieces, think 10MB               <ul style="list-style-type: none"> <li>◦ If we do single drawings, will be 100+ files</li> <li>◦ Will have OneNote page with full application</li> <li>◦ Need everyone to be looking at same set of plans, most current</li> <li>◦ Can handle greater than 10MB, but need to find out that number and get back to us on that</li> <li>◦ Make email list to send to everyone - probably better if we do distribution</li> </ul> </li> <li>• AMMP               <ul style="list-style-type: none"> <li>◦ Table of what is being mitigated, comp ratio, credits required</li> </ul> </li> </ul>	<p>Split drawings by segment and try to make file size less than 10 MB if possible</p> <p>A SharePoint site should be provided for the drawings. However, the drawings should be subdivided up still in order for the public to review drawings.</p>



No.	Description	Action
	JPA Section 13 – Free Standing Mooring Piles, Osprey Nesting Poles, Mooring Buoys, and Dolphins	
	<ul style="list-style-type: none"> <li>• Tug boats, barges, workboats: push boats, spud barges, vessel transport</li> <li>• Smaller vessels will use Willoughby spit area</li> <li>• Larger vessels will be subcontracted and will have their own home ports</li> <li>• All temporary works - not permanent construction</li> <li>• Randy Owen - anything being moored in Baylor grounds?</li> <li>• Currently included in application for # of barges and safe haven</li> <li>• Randy says he would not moor inside the baylor grounds - cannot authorize private use of baylor</li> <li>• Avoid baylor, period. He cannot give us permission to be there, does not have authority</li> </ul>	HRCP will overlay Baylor areas and adjust mooring areas to fit around the area. The Baylor grounds will not be used for mooring
	JPA Section 15 – Shore Protection	
	<ul style="list-style-type: none"> <li>• North and south island rock perimeter</li> <li>• Bund is gravel, fill is soil</li> <li>• Bulkheads at Willoughby spit staging area</li> </ul>	Specify bund material in drawings
	JPA Section 16 – Beach Nourishment	
	<ul style="list-style-type: none"> <li>• Dredge material will probably be the right size, not sure about chemistry, for beach nourishment use</li> <li>• Have discussed with Norfolk if there are nourishment projects that are looking for sediment, have not yet discussed with Hampton</li> <li>• Randy: can you show area in-shore of south island? Where is area of concern for contaminants?</li> <li>• Have bored material on south island, and Cardno report samples from 2018, plus water testing - water sediment and PCBs in it. Hits of PCBs in geostrata on the island (small - not HAZMAT), greater than what would be on a beach.</li> </ul>	<p>Action: Talk to Chuck Joyner - wants southern shoreline of Norfolk at Willoughby spit nourished, we must show why the material should NOT go there. Ask Chuck if that material would be accepted on that beach.</p> <p>Action: Doug: look at table 1 dredge material. Show south trestle under reusable but then leave final decision for when we get chemistry and ask Norfolk</p>
	JPA Section 17 – Dredging	

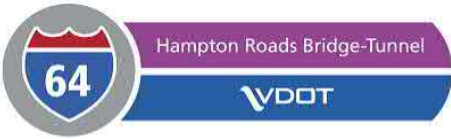


No.	Description	Action
	<ul style="list-style-type: none"> <li>• Numbers are very conservative</li> <li>• Most of dredging is at north island for poor quality material</li> <li>• Potential reuse for TBM separation process sediment</li> <li>• Material from south island is potentially being reused on north island</li> </ul>	
	JPA Section 18 – Fill and other structures in wetlands or waters	
	<ul style="list-style-type: none"> <li>• North island expansion for the new tunnel portal</li> <li>• Island expansions only use of fill besides temporary piles</li> <li>• Extraction from casing, sand may be pulled out to facilitate pile driving</li> </ul>	
	JPA Section 21 – Road Crossings	
	<ul style="list-style-type: none"> <li>• Culvert extension, but will remain same size at bay ave</li> <li>• 2 applications for bridge permit, one for north and south trestle, one for Willoughby bay</li> <li>• Cross sections of crossings in plan sets</li> <li>• Jeff Hannah: CG didn't want anything at creeks?</li> <li>• Verbally they said they don't need a bridge permit application, we can file for a waiver</li> <li>• Doug side note: we marked utility crossings as N/A</li> <li>• Running fresh water and electrical out to south island on existing south trestle for temporary construction</li> <li>• Randy: show in permit, it's not a problem. We do need to include in permit because it is over submerged lands. Will wrap into entire permit. It's an encroachment. Will be part of temporary trestle</li> <li>• Can we do this before JPA? Randy - we need a separate permit if that's the case</li> <li>• USACE has nationwide permit for utilities - best bet for temporary utilities</li> <li>• Randy: anything put in, on, or over water: need a permit. Existing structure with encroachment on it.</li> <li>• There was a suggestion that temporary utilities should be permitted not as part of the JPA.</li> </ul>	<p>Action: fill in section 20 for permanent utilities on new trestles, temporary utilities will be a separate permit.</p> <p>These should show up on the drawings.</p>
	JPA Section 22 – Impoundments, Dams and Stormwater Management Facilities	
	<ul style="list-style-type: none"> <li>• No new outfalls, existing will be rebuilt in kind, related to stream impact - not permanent, temporary impact if we need to replace in kind</li> <li>• Stormwater management on islands</li> </ul>	



No.	Description	Action
	<ul style="list-style-type: none"> <li>2 existing outfalls, 3 new outfalls (stormwater VPDES outfalls after highways are expanded)</li> <li>5 stormwater outfalls when complex is completed - this will be in the VPDES permit application for stormwater outfalls</li> </ul>	
	JPA Section 23 – Outfalls	
	<ul style="list-style-type: none"> <li>Process water VPDES discharges for jet grouting and slurry wall construction, TBM, excavation</li> <li>Two Temporary outfalls for construction, location adjusted based on pre-app meeting and suggested review of modeling data by VIMS</li> </ul>	
	Construction Schedule	
	<ul style="list-style-type: none"> <li>Jeff Hannah and DEQ - not available September 26 (just this day)</li> <li>Harbor safety meeting in September with Virginia maritime association</li> <li>Scott Smizik - VDEQ will need to go in front of their boards</li> <li>Randy: commission meets 4th Tuesday of the month, they will let us know when we are on the schedule</li> <li>Janet: VPDES submittal date?</li> <li>DG: date might change - end of September/early October because we will have more results by then</li> <li>Randy: when do we need temporary water and electrical run to South Island?</li> <li>DB: early 2020, Randy: plenty of time to come through for separate application</li> <li>Gantt chart will be provided as well as TILOS schedule</li> <li>Whole TILOS chart is north (left side) to south (right side)</li> </ul>	<p>Action: put together a separate permit for temporary utilities to South Island</p> <p>Action: change post submittal meeting to Tuesday, October 1st</p>
	Additional Questions	
	<p>Janet Weyland (VDEQ): dominion recycling cannot take any PCB's, do not have that permission to her knowledge</p> <ul style="list-style-type: none"> <li>Jeff Hannah (VDEQ): Fate of existing tunnels? They will continue to be used</li> </ul> <p>Meeting Conclude: 11:17am</p>	<p>Action confirm dominion recycling PCB regulations</p>





No.	Description	Action



## JPA Pre-submittal Page Turn Meeting 20 August 2019

### I-64 Hampton Roads Bridge-Tunnel (HRBT) Expansion Project

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## Agenda



1. Introduction
2. Joint Permit Application
  1. Section 1 – Applicant, Agent, Property Owner, and Contractor Information
  2. Section 2 – Project Location Information
  3. Section 3 – Description of Project, Purposes, Need, Use(s), and Alternatives
    1. Appendix E: Project Description
    2. Appendix F: Alternatives Analysis
  4. Section 4 – Project Costs
  5. Section 5 – Public Notification
  6. Section 6 – Threatened and Endangered Species Information
    1. Appendix I: Federal Species
    2. Appendix J: State Species
    3. Appendix M: EFH
    4. Appendix R: Marine Mammals
  7. Section 7 – Historic Resources Information
    1. Appendix K: Cultural and Historic Resources
  8. Section 8 – Wetlands, Waters, and Dunes/Beaches Impact Information
    1. Appendix P: Avoidance Minimization and Mitigation Plan
  9. Section 9 – Applicant, Agent, Property Owner and Contractor Certifications
  10. Sections 10, 11, 12 and 14 – N/A
  11. Section 13 – Free Standing Mooring Piles, Osprey Nesting Poles, Mooring Buoys, and Dolphins
  12. Section 15 – Tidal/Nontidal Shoreline Stabilization Structures
  13. Section 16 – Beach Nourishment
  14. Section 17 – Dredging, Mining, and Excavating
    1. Appendix L: Materials Management Plan
  15. Section 18 – Fill and Other Structures in Wetlands or Waters, or on Dunes/Beaches
    1. Appendix G: Impact Drawings
  16. Sections 19 and 20 – N/A
  17. Section 21 – Road Crossings
  18. Section 22 – Impoundments, Dams, and Stormwater Management Facilities
    1. Appendix T: Stormwater Facilities
  19. Section 23 – Outfalls Not Associated with Proposed Water Withdrawal Activities
  20. Sections 24, 25 and 26 – N/A
3. Permitting and Construction Schedule
  1. Appendix N: Project Schedule

- On June 12, 2017 the FHWA issued a ROD for the HRCS Final SEIS identifying refined Alternative A as the Selected Action, replacing the previous ROD, issued in 2001, for a different alternative. FHWA identified the following reasons for identifying Alternative A (with refinements) as the Selected Action
  - Acceptably addressed the purpose and need to be considered a reasonable alternative under NEPA;
  - Had the **least environmental impacts**;
  - Had the **lowest estimated cost** and would allow other regionally funded transportation priorities to advance;
  - Was **unanimously endorsed by all the localities** comprising the Hampton Roads Transportation Planning Organization (HRTPO) and the HRTAC, which includes the Cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg, and the Counties of Isle of Wight, James City, Southampton, and York;
  - Was concurred with by the **federal cooperating agencies as the recommended Preferred Alternative**;
  - Had the least aquatic resource impacts, which allowed the US Army Corps of Engineers to state it appears to be the **Least Environmentally Damaging Preferred Alternative (LEDPA)**; and
  - Had the second highest number of Public Hearing comments submitted in support of it (Alternative D received the highest number of comments in support, but it could not be the LEDPA per input from the US Army Corps of Engineers).



- On June 7, 2018, FHWA approved the Environmental Assessment (EA) re-evaluation.
  - Designation of High Occupancy Toll (HOT) lanes.
  - Limit of Disturbance (LOD) was widened.
  
- On October 28, 2018, FHWA issued a Finding of No Significant Impact (FONSI) for the Hampton Roads Crossing Study EA re-evaluation.
  - Increase in floodplain acreage associated with the Refined Selected Action is not considered significant.
  - Increase in wetland impacts have been considered in light of Executive Order 11990. No practicable alternative.

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## JPA Section 3



- The HRBT Expansion project includes the following elements:
  - Roadway Elements
    - Roadway signing, both ground-mounted and overhead.
    - Pavement marking, pavement markers, and delineators.
    - Roadway lighting.
    - Relocation of existing and installation of new intelligent transportation system (ITS) infrastructure and equipment.
    - Traffic signals.
    - Pavement widening to accommodate new lane configurations.
    - Drivable shoulders (inside) for part-time use.
    - Outside shoulders.
    - Retaining walls.
    - Sound barrier walls.
    - Full-depth construction on mainline roadway pavement.
    - Milling and asphalt overlay.
    - Removal and replacement of the overpass bridge at South Mallory Street, including any necessary improvements or realignment of Mallory Street.
    - Bridge widening, repair, and replacement.
    - Entrance/exit ramp modifications.

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## ■ The HRBT Expansion project includes the following elements:

### ■ Marine Elements

- Two new two-lane HRBT tunnels, including new tunnel systems and associated facilities.
- New four-lane trestle-bridges(s).
- Removal and replacement of all existing tunnel approach trestle-bridges.
- Expansion of the existing North and South Islands of the HRBT.
- Installation of storm drain outfall pipes and stormwater management facilities.
- Temporary features including VPDES outfall pipes, temporary trestles, dock, small vessel access at Willoughby Spit
- Artificial reef.

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## ■ The HRBT Expansion project includes the following elements:

- Nine Design Sub-segments. Five are predominantly in the marine environment.
  - Segment 1b North Trestle-bridge
  - Segment 2a – tunnel
  - Segment 3a – South Trestle-bridge
  - Segment 3b – Willoughby Spit
  - Segment 3c – Willoughby Bay Trestle-bridge



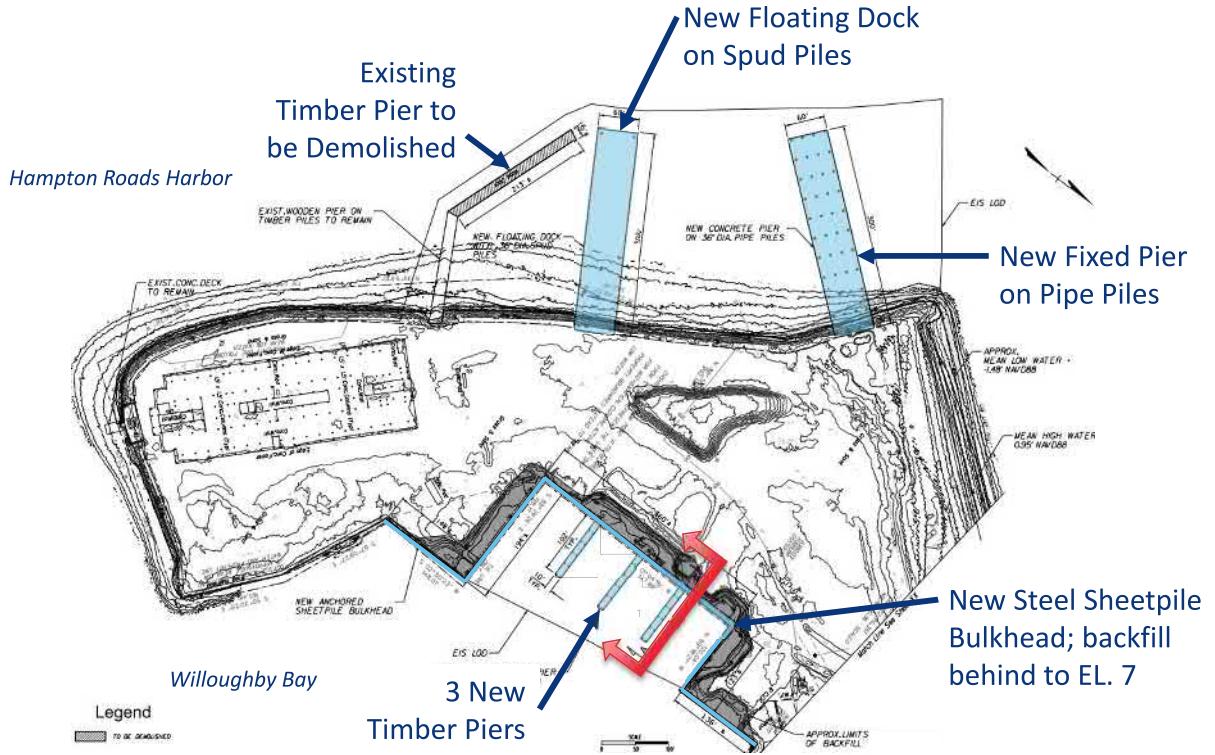
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JPA Section 3 Segment 3b

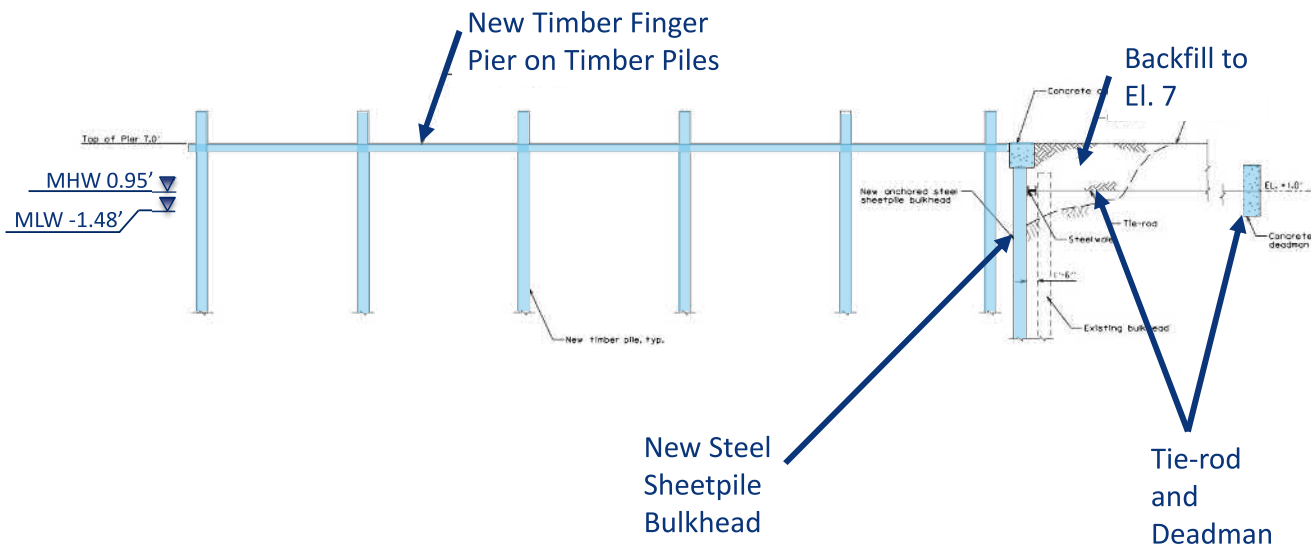


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Willoughby Spit marine structures



Willoughby Spit marine structures –Typical Section through new Bulkhead





■ North Trestle

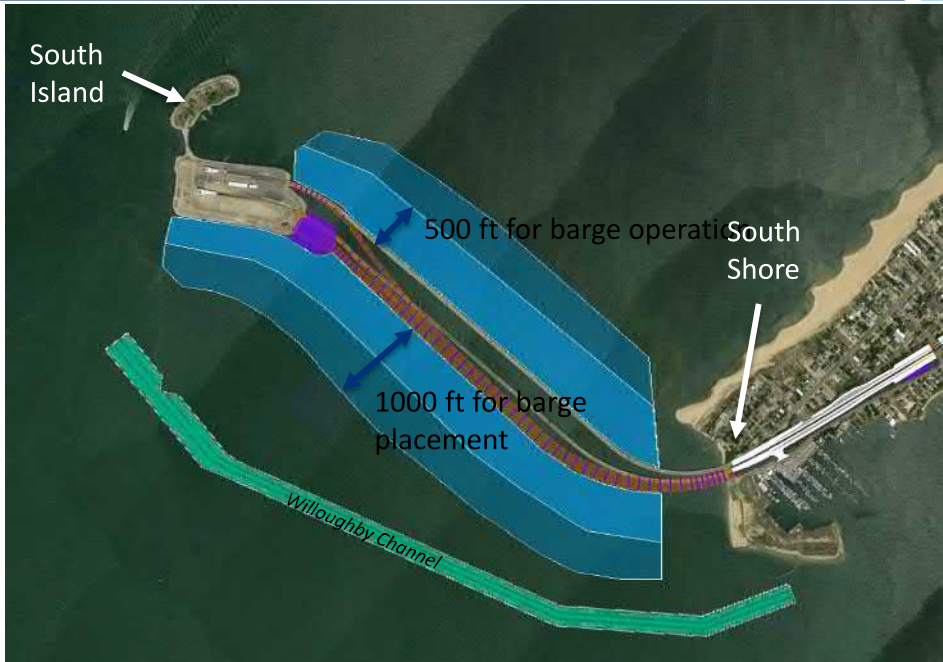
- Spud barges used in areas with more than 4.5 ft of water (at MLW)
- 15 +/- working barges
- First activity after receipt of the JPA
- Last activity in September 2024 + 6 months to remove structures

JPA Section 3

■ North & South Islands

- Mooring area to be created near North and South Island Expansions
- 1 mooring pile (42" pipe pile) every 40FT around the footprint of the islands
- Spud barges used in areas with more than 4.5 ft of water (at MLW)
- 1000 ft from expansion boundary for barge anchoring
- 500 ft from expansion boundary for barge operation
- At peak, ~15 working barges
- First activity after receipt of the JPA
- Last activity in September 2024 + 6 months to remove structures

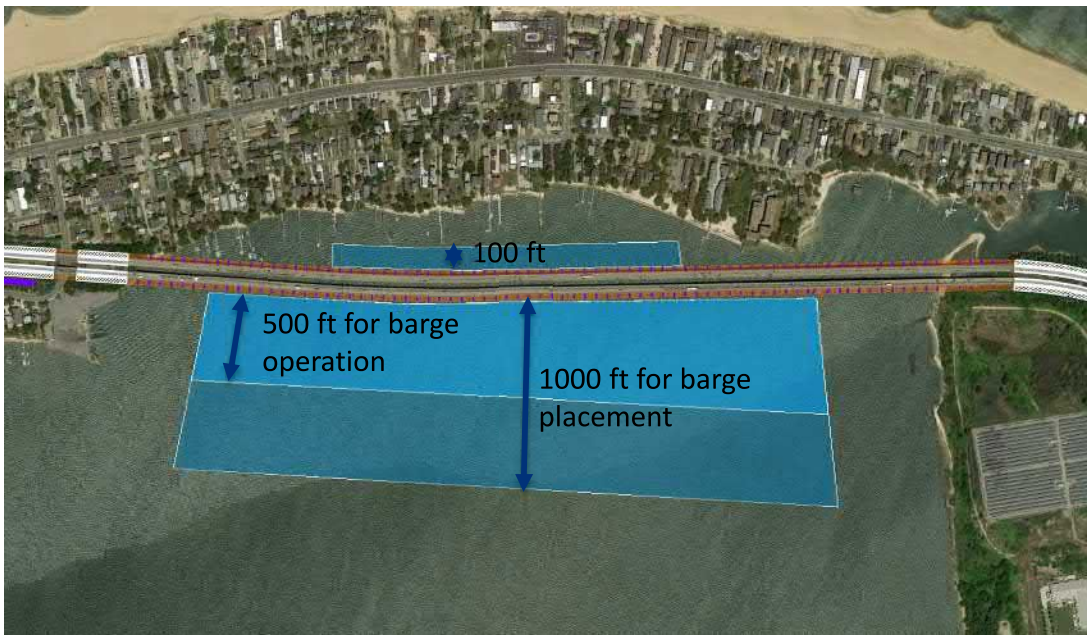




■ South Trestle

- Spud barges used in areas with more than 4.5 ft of water (at MLW)
- At peak, ~25 working barges
- First activity after receipt of the JPA
- Last activity in September 2024 + 6 months to remove structures

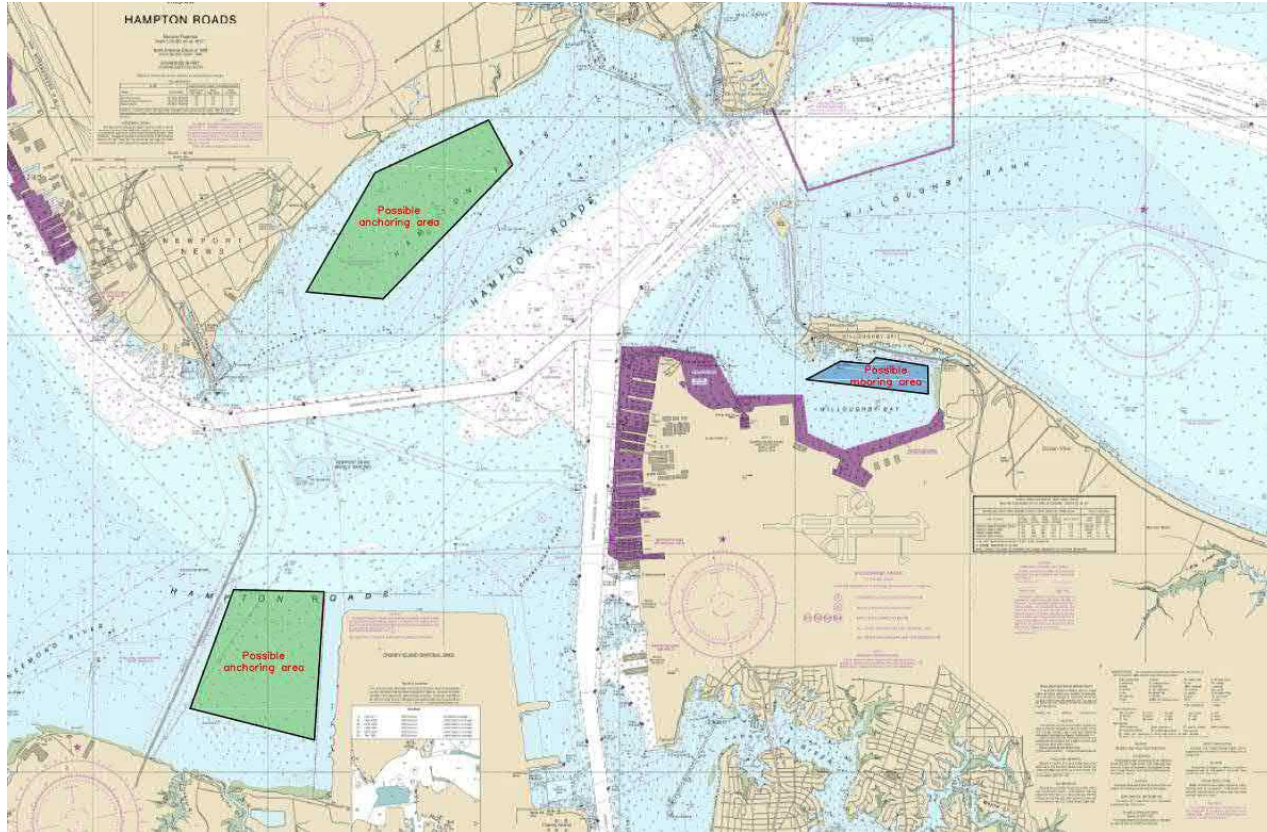
JPA Section 3 - Segment 2-c



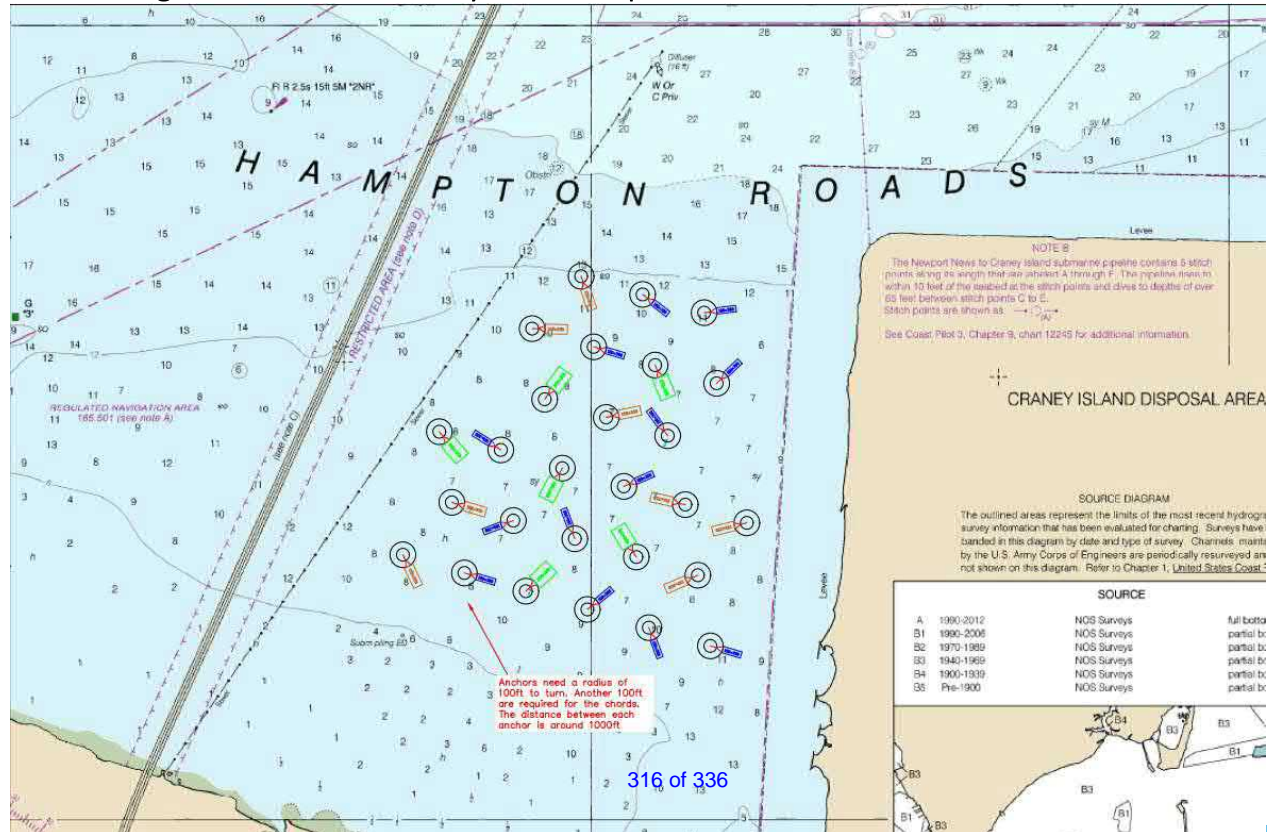
■ Willoughby Bay

- Mooring area to be created in Willoughby Bay with mooring piles (42" pipe piles)
- Spud barges used in areas with more than 4.5 ft of water (at MLW)
- At peak, ~15 working barges
- First activity after receipt of the JPA
- Last activity in December 2024 + 3 months to remove structures

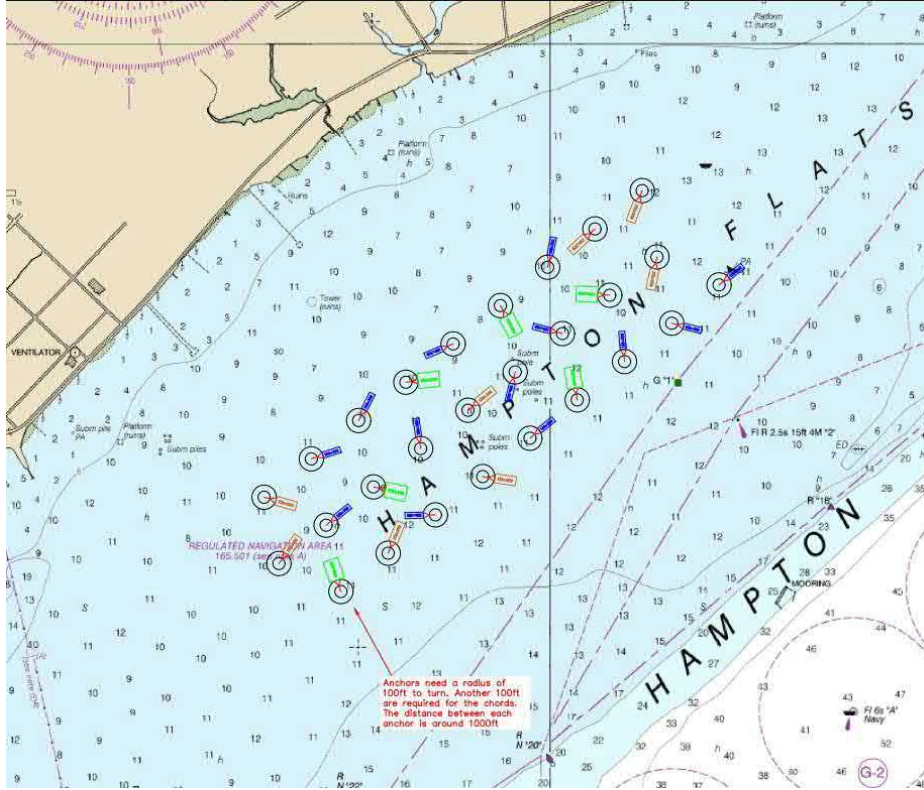
Mooring and anchorage areas



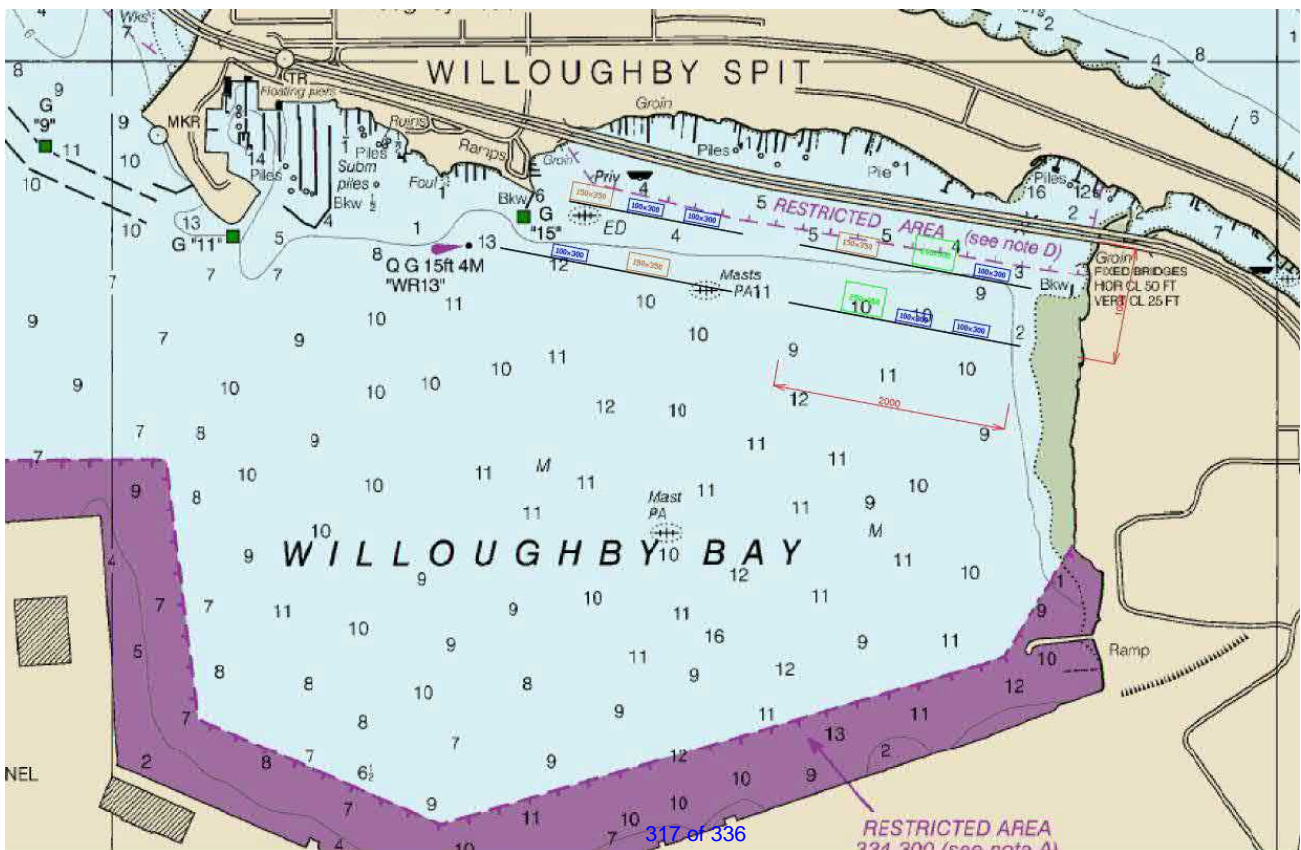
Anchorage area west of Craney Island Disposal Area



Anchorage area - Hampton Flats



JPA Section 3 - Willoughby Bay Anchorage Area



- Public Notification – HRCP will provide addressed labels
  - USACE: Adjacent to the project site
  - VADEQ: ¼ mile up/down Stream

	A	B	C	D	E	F	G	H	I	J
	OWNER NAME	OWNER ADDRESS	OWNER CITY	OWNER STATE	OWNER ZIP	PARCEL ADDRESS	PARCEL CITY	PARCEL STATE	PARCEL ZIP	PARCEL ID
1	ADAMS OUTDOOR ADVERTISING	5547 E VIRGINIA BEACH BLVD	NORFOLK	VA	23502	EATON ST	HAMPTON	VA	23066	P650
2	ADAMS OUTDOOR ADVERTISING	5547 E VIRGINIA BEACH BLVD	NORFOLK	VA	23502	752 N KING ST	HAMPTON	VA	23066	P652
3	ADAMS OUTDOOR LTD PARTNERSHIP	5547 E VIRGINIA BEACH BLVD	NORFOLK	VA	23502	1018 THOMAS ST	HAMPTON	VA	23066	P568
4	Alan Dale Phillips Et Al	9311 Phillip Ave	Norfolk	VA	23503-3327	9318 Atwood Av	Norfolk	VA	23503	P663
5	Alan Dale Phillips, Et Al	9311 Phillip Ave	Norfolk	VA	23503-3327	9311 Phillip Av	Norfolk	VA	23503-3327	P667
6	Alan Gregory & Brandy Lynn Gennetta	8581 Granby St	Norfolk	VA	23503-4815	8581 Granby St	Norfolk	VA	23503-4815	P850
7	Albert N & Mary E Williams	1209 Little Bay Ave	Norfolk	VA	23503-1206	S S Willoughby Bay Av	Norfolk	VA	23503-0000	P743
8	Albert N Williams, Et Als	1201 Little Bay Ave	Norfolk	VA	23503-1206	1201 Little Bay Av	Norfolk	VA	23503-1208	P967
9	Alexaco, Llc	255 W Ocean View Ave Apt 12	Norfolk	VA	23503-1546	1411 W Ocean View Av	Norfolk	VA	23503-1045	P1011
10	Alexander W Renard	148 Swanson Rd	Norfolk	VA	23503-4730	148 Swanson Rd	Norfolk	VA	23503-4730	P619
11	ALFRED C FINCH ET LIX	118 SEGAR ST	HAMPTON	VA	23063	118 SEGAR ST	HAMPTON	VA	23063	P233
12	ALPHONSO SPRUELL ET UX ET AL	913 QUASH ST	HAMPTON	VA	23066	913 QUASH ST	HAMPTON	VA	23066	P464
13	Andrea L Hussien	9250 Hickory St	Norfolk	VA	23503-3354	9250 Hickory St	Norfolk	VA	23503-3354	P670
14	Andy L Cabanes	9290 Phillip Ave	Norfolk	VA	23503-3226	9290 Phillip Av	Norfolk	VA	23503-3326	P727
15	Anna M Braun	7141 Hunters Chase	Norfolk	VA	23518	211 Ridgewell Cir	Norfolk	VA	23503-4220	P687
16	Annamarie Fitzgibbons	9223 Mason Creek Rd	Norfolk	VA	23503-2706	9223 Mason Creek Rd	Norfolk	VA	23503-2706	P706
17	ANNETTE M SEARS	801 LANGLEY AVE	HAMPTON	VA	23069	801 LANGLEY AVE	HAMPTON	VA	23069	P467
18	Anqiyang Et Als	9456 Garnett Ave	Norfolk	VA	23503-3312	9456 Garnett Av	Norfolk	VA	23503-3312	P671
19	ANTHONY D GRUBER	325 BASSETTE ST	HAMPTON	VA	23069	325 BASSETTE ST	HAMPTON	VA	23069	P447
20	Anthony H & Sandra G English	1217 Little Bay Ave	Norfolk	VA	23503-1206	S S Willoughby Bay Av	Norfolk	VA	23503-0000	P622
21	ANTHONY J & GRETTA D MOISER	421 COLBERT AVE	HAMPTON	VA	23069	421 COLBERT AVE	HAMPTON	VA	23069	P448
22	April L & Michael L Davis	825 Polln Ln Se	Vienna	VA	22182-4907	8259 Peachtree St	Norfolk	VA	23503-3336	P725
23	Arthur A & Jean F Martin	1227 Little Bay Ave	Norfolk	VA	23503-1206	S S Willoughby Bay Av	Norfolk	VA	23503-0000	P759
24	Arthur A & Jean F Martin	1227 Little Bay Ave	Norfolk	VA	23503-1206	S S Willoughby Bay Av	Norfolk	VA	23503-0000	P851
25	Ashley Wheeler	246 Ridgewell Ave	Norfolk	VA	23503-2748	246 Ridgewell Av	Norfolk	VA	23503-2748	P714
26	Audrey G & Barbara E Heflin	1416 W Ocean View Ave	Norfolk	VA	23503-1015	9413 Atwood Av	Norfolk	VA	23503-3306	P603
27	AUDREY C CHARITY	1008 CARVER ST	HAMPTON	VA	23069	1008 CARVER ST	HAMPTON	VA	23069	P491
28	BARBARA A BROWN	6 CURL RD	HAMPTON	VA	23069	314 COOPER ST	HAMPTON	VA	23069	P606
29	BARBARA A MARTIN	321 BASSETT ST	HAMPTON	VA	23069	BASSETTE ST	HAMPTON	VA	23069	P307
30	BARBARA A MARTIN	321 BASSETT ST	HAMPTON	VA	23069	BASSETTE ST	HAMPTON	VA	23069	P309
31	BARBARA A MARTIN	321 BASSETT ST	HAMPTON	VA	23069	321 BASSETTE ST	HAMPTON	VA	23069	P402
32	BARBARA A MARTIN	321 BASSETT ST	HAMPTON	VA	23069	BASSETTE ST	HAMPTON	VA	23069	P450
33	Barbara P Cobb	141 W Evans St	Norfolk	VA	23503-4731	141 W Evans St	Norfolk	VA	23503-4731	P883
34	Barry T & Kathy H Watts	182 Rodman Rd	Norfolk	VA	23503-3004	182 Rodman Rd	Norfolk	VA	23503-4726	P882
35	Bayville Llc	1455 Bayville St	Norfolk	VA	23503-1004	1455 Bayville St	Norfolk	VA	23503-1004	P710
36	Bayville Llc	1455 Bayville St	Norfolk	VA	23503-1004	1455 Bayville St	Norfolk	VA	23503-1004	P715

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- Threatened and Endangered Species Information
- Appendix I: Federal Species
- NMFS Jurisdictional Species Determination
- Species with “No Effect” Determination
  - Hawksbill Sea Turtle
  - Shortnose Sturgeon
  - North Atlantic Right Whale
- Species with “May Affect, but Not Likely to Adversely Affect” Determination
  - Sea Turtles (Loggerhead, Kemp’s Ridley, Green, and Leatherback)
  - Atlantic Sturgeon
  - Fin Whale
- USFWS Jurisdictional Species
  - Piping Plover
  - Bald Eagle
  - Golden Eagle
- No TOYR

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## JPA Section 6



- Appendix J: State Species
- No Adverse Effects
- VAFWIS Search Report and VDCR Natural Heritage Report
  - Northern long-eared bat (*Myotis septentrionalis*) (State Threatened)
  - Tricolored bat (*Perimyotis subflavus*) (State Endangered)
  - Northeastern beach tiger beetle (*Cicindela dorsalis*) (State threatened)
  - Gull billed tern (*Sterna nilotica*) (State Threatened)
  - Piping plover (*Charadrius melodus*) (no critical habitat at HRBT, State threatened)
  - Red knot (*Calidris canutus rufa*) (State threatened)
  - Peregrine Falcon (*Falco peregrinus*) (state threatened)
  - Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) (endangered)
  - Shortnose sturgeon (*Acipenser brevirostrum*) (endangered)
  - Green sea turtle (*Chelonia mydas*) (State threatened)
  - Loggerhead sea turtle (*Caretta caretta*) (State threatened)
  - Kemp’s ridley sea turtle (*Lepidochelys kempii*) (State endangered)
  - Hawksbill sea turtle (*Eretmochelys imbricata*) (State endangered)
  - Leatherback sea turtle (*Dermochelys coriacea*) (State endangered)
  - Canebrake rattlesnake (*Crotalus horridus*) (State Endangered)
  - Mabee’s salamander (*Ambystoma mabeei*) (State Threatened)

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- Appendix M: Essential Fish Habitat (EFH) Assessment
  - Atlantic Herring
  - Atlantic Butterfish
  - Black Sea Bass
  - Bluefish
  - Cobia
  - Summer Flounder and Windowpane Flounder
  - King Mackerel and Spanish Mackerel
  - Red Drum
  - Red Hake
  - Scup
  - Atlantic Sharpnose, Sandbar, Dusky, and Sand Tiger Shark
  - Winter, Little, and Clearnose Skate
- Anadromous Fish
  - River Herring (Alewife, blueback)
  - Shad (American shad, hickory)
  - Striped Bass
  - White Perch
- No TOYR
- Habitat Condition Assessment and Mitigation

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## JPA Section 6



- Appendix R: Marine Mammals
  - Fin Whale (rare)
  - Common Minke Whale (rare)
  - Humpback Whale (regular)
  - North Atlantic Right Whale (rare)
  - Common Bottlenose Dolphin (regular)
  - Harbor Porpoise (regular)
  - Harbor Seal (regular)
  - Grey Seal (regular)
- Potential Effects on Marine Mammals
  - Noise (In-Air and Underwater)
  - Habitat Loss and Alteration
  - Prey Availability and Habitat
  - Sedimentation
- Incidental Harassment Authorization (IHA)
  - Level B
  - Level A
- Letters of Authorization (LOA)

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## JPA Section 7



### ■ Appendix K: Cultural and Historic Resources Information

- FHWA and VDOT have complied with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations at 36 CFR Part 800
- Programmatic Agreement (PA) requires VDOT to meet specific design commitments for avoidance of adverse effects within the Area of Potential Effect (APE)

### ■ Commitments in the Programmatic Agreement

- No permanent acquisition of property from Hampton University
- Memorandum of agreement outlining terms for temporary Hampton University property
- Emancipation Oak: No encroachment into the Tree Limit of Disturbance
  - Baseline Assessment & Monitoring Plan
- Noise Barriers
  - Hampton Institute Historic District & Hampton Institute National Historic Landmark
  - Pasture Point Historic District
  - Hampton National Cemetery
  - Phoebus–Mill Creek Terrace Neighborhood Historic District
  - Norfolk Naval Base Historic District

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## JPA Section 8



- Appendix G: Impacts
  - WOUS Impact Tables
    - Summary of Impacts by Segment and Type
    - Fill Impacts
    - Shading Impacts
    - Pile Impacts
    - Dredging Impacts
    - Extended Temporary (>6 mo) Trestles
    - Temporary (< 6mo) Impacts
  - Impact Drawings
    - Location and footprint of each numbered site
  - Design Plans



- Appendix P: Avoidance Minimization and Mitigation Plan
  - Immersed Tube Tunnel vs. Bored Tunnel
    - Avoid substantial in-water impacts, and avoid direct navigation impacts to the federal channel.
  - Temporary Construction Trestles
  - Minimization by Impact Area
  - Supporting Documents
    - HCA
    - 2018 Benthic Survey
    - Mitigation Plan

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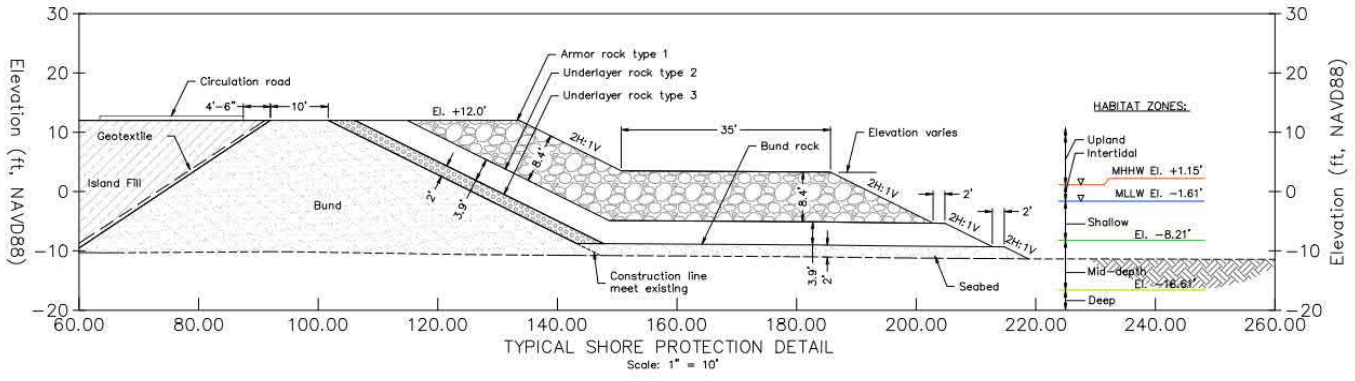
- Section 13: Free Standing Mooring Piles, Osprey Nesting Poles, Mooring Buoys, and Dolphins main points
- Appendix E: Project Description, Section 2 Marine Operations
  - 42" Mooring Piles
  - Mooring Dolphins – Three 24" Piles
  - Vessels:
    - Tug Boats
    - Barge/Transport Vessels
    - Workboats

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- Shoreline stabilization structures
- Replacement bulkheads at the Willoughby Spit Property
- Rock perimeter protection around the North and South Islands



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■ Beach nourishment

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Location	Cubic Yards	Square Feet	Acres
North Island	152,000	715,000	16.41
South Island	200,000	115,000	2.64
Dredge Area #1	40,000	204,290	4.75
Dredge Area #2		41,062	0.94
Dredge Area #3		49,643	1.14
Dredge Area #4		7,434	0.17
Shipwreck Debris removal	13,000	38,768	0.89
Total	405,000	1,171,197	26.89



**Table 1**  
Source and Volume of Material to be Removed and Managed

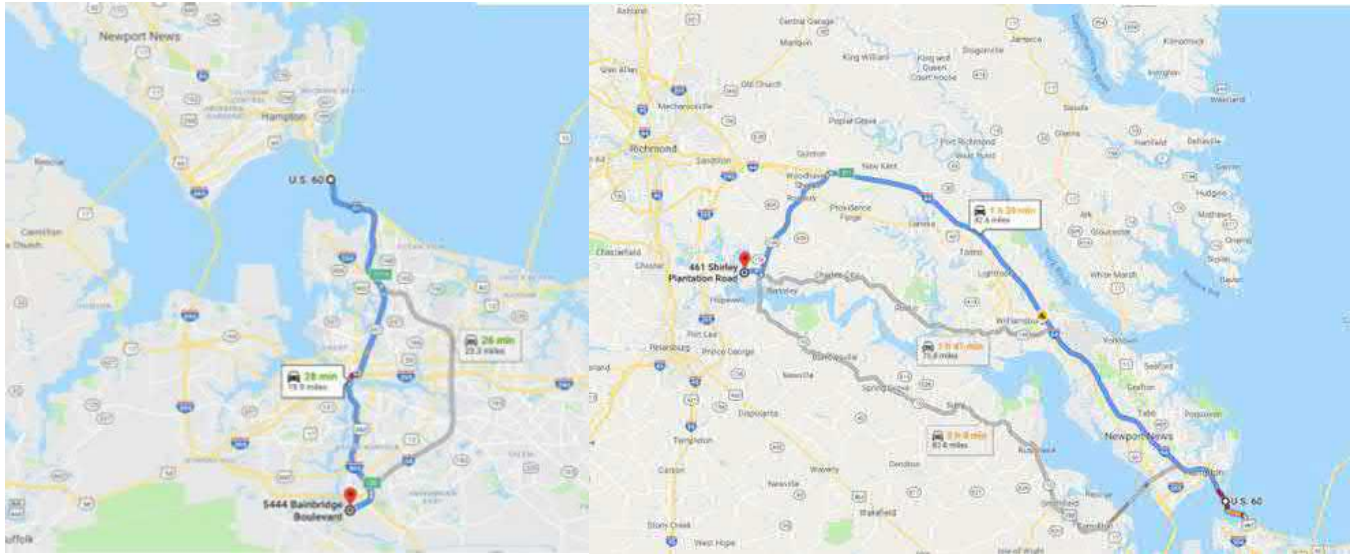
Table 1. Source and Volume of Material to be Removed and Managed			Category of Material						Total Volume cy (Bulked)	Reusable Volume by Source Material cy (Bulked)	Disposal Volume by Source Material cy (Bulked)	
Source Material	Construction Activity	Excavated Material cy (Bulked) <sup>a</sup>	Bored Material cy (Bulked) <sup>a</sup>	Dredged Material cy (Bulked) <sup>b</sup>	Armor and Quarry Stone cy <sup>c</sup>	Jet Grouted Residual Material cy (Bulked) <sup>a</sup>	Debris <sup>c</sup>					
On Island	Slurry Walls	84,000	-	-	-	-	-	-	-	84,000		
	North Island Tunnel Approach and Entry Portal	176,760	-	-	-	111,600	-	-	-	288,360		
	South Island Slurry Walls	132,000	-	-	-	-	-	-	-	132,000		
In Water	South Island Tunnel Approach and Entry Portal	206,760	-	-	-	145,800	-	-	-	206,000	146,560	
	Tunnel Alignment Tunnel Boring	Coarse Sand	-	316,800	-	-	-	-	-	-	316,800	-
		Fines	-	739,200	-	-	-	-	-	-	-	739,200
	North Island Dredged Material Island Expansion	Filter Cake	-	360,000	-	-	-	-	-	-	-	360,000
		Island Expansion	-	-	152,000	40,000	-	-	-	-	-	192,000
	South Island Dredged Material Island Expansion	-	-	32,000 to 200,000	30,000	-	-	-	-	-	62,000 to 230,000	
	South Trestle Dredged Material Dredging	-	-	40,000	-	-	-	-	-	-	40,000	
	Bridge Construction Pile Installation	Extraction from casing	-	-	32,000	-	-	-	-	-	32,000	
	Trestle Concrete Bridge Demolition	-	-	-	-	-	-	80,500	-	-	80,500	
	Willoughby Spit Offshore Debris Removal	-	-	-	-	-	-	13,000	-	-	13,000	
Upland Various Roadway Improvements	-	27,500	-	-	-	-	-	-	27,500	-		
Totals by Category		627,020	1,416,000	480,000 to 648,000	70,000	257,400	93,500	2,463,920	630,800	2,089,120 to 2,257,120		

Notes:  
a) Bulking Factor = 1.2  
b) Bulking Factor = 1.6  
c) No Bulking Factor

JPA Section 17 – Barge Routes



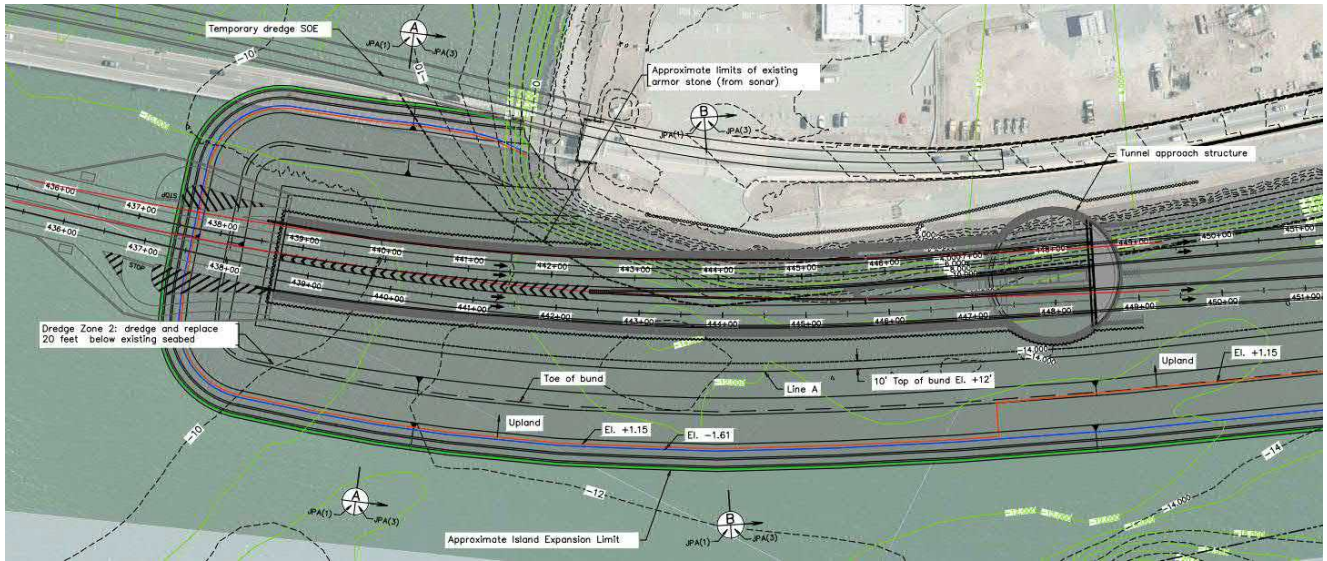
■ Truck Routes



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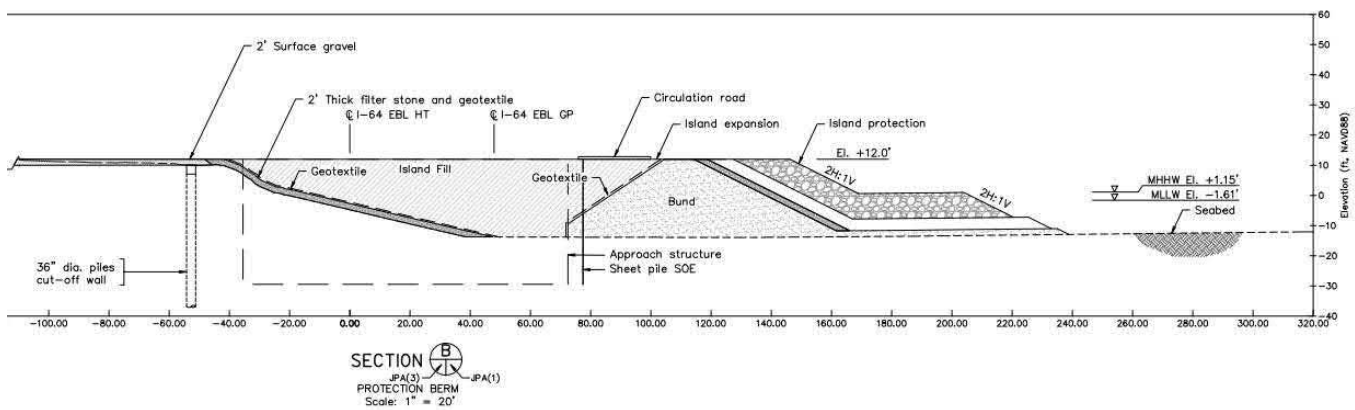
■ Fill – North Island Example – Cross Section B-B



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JPA Section 18

■ Fill – North Island Example – Cross Section B-B



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**Table 1**  
 Source and Volume of Material to be Removed and Managed

Table 1. Source and Volume of Material to be Removed and Managed				Category of Material					Total Volume cy (Bulked)	Reusable Volume by Source Material cy (Bulked)	Disposal Volume by Source Material cy (Bulked)	
Source Material	Construction Activity		Excavated Material cy (Bulked) <sup>a</sup>	Bored Material cy (Bulked) <sup>a</sup>	Dredged Material cy (Bulked) <sup>b</sup>	Armor and Quarry Stone cy <sup>c</sup>	Jet Grouted Residual Material cy (Bulked) <sup>a</sup>	Debris <sup>c</sup>				
On Island	North Island	Slurry Walls	84,000	-	-	-	-	-	-	-	84,000	
		Tunnel Approach and Entry Portal	176,760	-	-	-	111,600	-	-	-	288,360	
	South Island	Slurry Walls	132,000	-	-	-	-	-	-	-	132,000	
In Water	Tunnel Alignment	Tunnel Boring	Coarse Sand	-	316,800	-	-	-	-	-	316,800	
			Fines	-	739,200	-	-	-	-	-	739,200	
			Filter Cake	-	360,000	-	-	-	-	-	-	360,000
			Island Expansion	-	-	152,000	40,000	-	-	-	-	192,000
	North Island	Dredged Material	Island Expansion	-	-	32,000 to 200,000	30,000	-	-	-	62,000 to 230,000	
			Dredging	-	-	40,000	-	-	-	-	40,000	
	South Trestle	Dredged Material	-	-	-	-	-	-	-	-	-	
	Bridge Construction	Pile Installation	Extraction from casing	-	-	32,000	-	-	-	-	32,000	
			Bridge Demolition	-	-	-	-	-	80,500	-	80,500	
	Trestle Concrete	Bridge Demolition	-	-	-	-	-	-	80,500	-	80,500	
Willoughby Spit Offshore	Debris Removal	-	-	-	-	-	-	13,000	-	13,000		
Upland	Various	Roadway Improvements	27,500	-	-	-	-	-	-	27,500		
Totals by Category			627,020	1,416,000	480,000 to 648,000	70,000	257,400	93,500	2,463,920	630,800	2,089,120 to 2,257,120	

Notes:  
 a) Bulking Factor = 1.2  
 b) Bulking Factor = 1.6  
 c) No Bulking Factor

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- Road Crossings

- Culvert Extension at Bay Ave

- Appendix G, JPA Plan Set

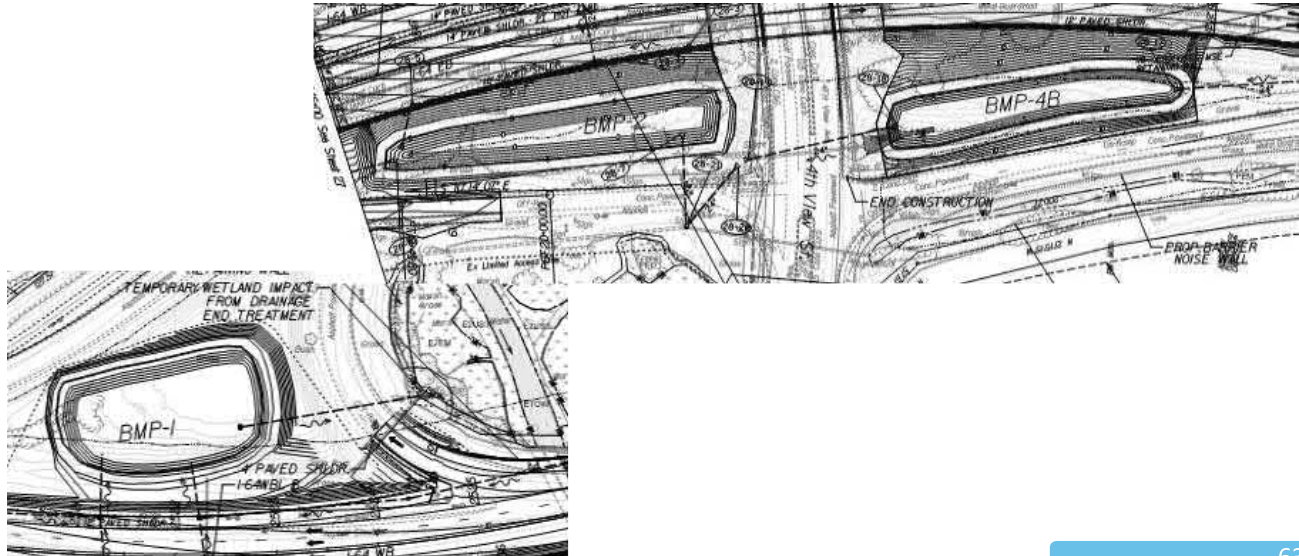
- Includes elevations showing the project bridges and clearances
      - North Trestle
      - South Trestle
      - Willoughby Bay
      - Bay Ave
      - Oastes Creek

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- Upland Stormwater Management (SWM)
- For quantity control, three SWM Best Management Practices (BMPs) will be constructed throughout the project corridor.
  - BMP-1 is located at the Mallory Street Interchange in Hampton
  - BMP-2 and BMP-4B are located at the 4th View Interchange in Norfolk
- All SWM facilities for this project will discharge to existing outfall locations throughout the corridor and no new outfalls are proposed for upland SWM.



- Island SWM
  - Stormwater runoff from North Island, South Island and the connecting tunnels, are captured and discharged at five (5) outfalls

Island Outfall	Approximate Location
North Island (south side) existing outfall	36°59'56.00"N, 76°19'1.00"W
South Island (north side) existing outfall	36°59'8.00"N, 76°18'16.00"W
North Island (north side) new outfall	37° 0'11.30"N, 76°19'10.45"W
North Island TAS outfall	37° 0'5.11"N, 76°19'11.37"W
South Island TAS outfall	36°58'59.02"N, 76°18'16.47"W

Island Outfall	Required Design Discharge Rates
North Island (south side) existing outfall	25 CFS
South Island (north side) existing outfall	60 CFS
North Island (north side) new outfall	35 CFS
North Island TAS outfall*	7.9 MGD
South Island TAS outfall*	7.9 MGD

\*This discharge rate for each tunnel outfall considers 1 pump running at full capacity for the design storm (100-yr) and assuming fire suppression is in operation concurrently.

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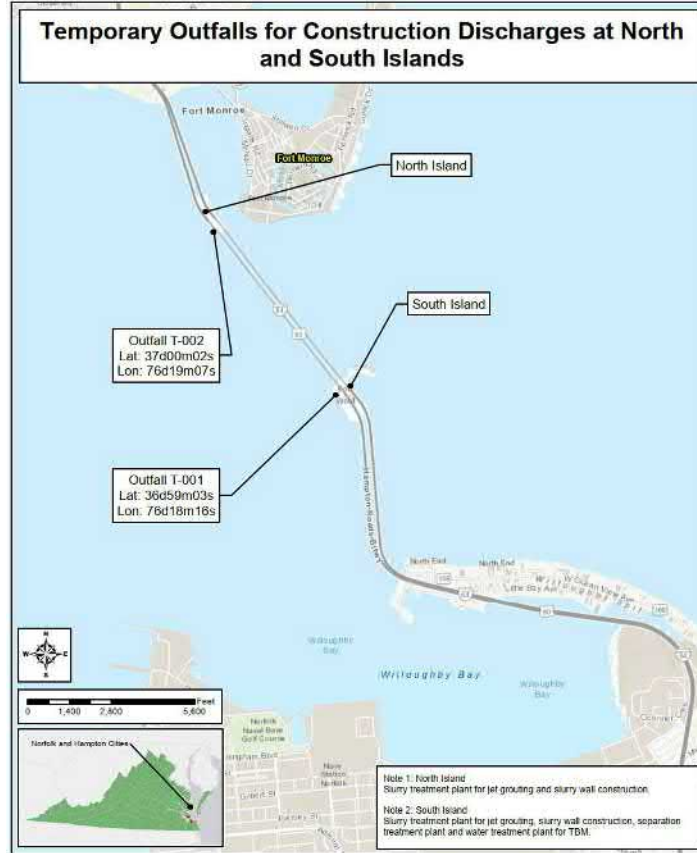
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## JPA Section 23



- Point source discharge of construction process water
- Characterized as Industrial Minor
- Flow rate <0.5 MDG
- Two planned outfalls 001 and 002
  - 001 South Island
    - Water treatment from
      - Jet Grouting – construction
      - Slurry Wall - construction
      - Excavation water of tri-cell (Pit for TBM entry) north bore
      - TBM boring of tunnels
  - 002 North Island
    - Water treatment from
      - Jet Grouting – construction
      - Slurry Wall - construction
      - Excavation of water tri-cell for south bore of TBM

Planned Outfall Locations



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- JPA
  - JPA submission – August 30, 2019
  - Anticipated public notice date September 15, 2019
  - JPA Post-Submission Follow-up – September 26, 2019
  - Anticipated permit issuance – April 2020
- Section 408 Concurrence
  - Public Notice
  - Package Submittal November 2019
  - Approval before April 2020
- USCG Bridge Permit
  - Approval after Section 408
- VPDES
- Construction
  - Commence field construction activities – scheduled for April 2020
  - Project Substantial Completion – July 2025

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## Comments/Questions?