



Meeting Summary

Project:	I-64 Hampton Roads Bridge-Tunnel (HRBT) Expansion
Meeting Title:	Section 408 USACE Coordination Meeting
Date:	September 19, 2019 – 9:00-10:30am
Location:	USACE-NAO District Office 803 Front Street, Norfolk, VA

Attendees:

Company	Last Name	First Name	Initials	Phone Number	E-mail Address	Present
HRCP	Gaffney	Doug	DG	856-924-3363	Douglas.gaffney@mottmac.com	x
HRCP	Pico	Tina	TP	732-333-3257	Tina.pico@mottmac.com	x
HRCP	Peabody	John	JP	571-451-0954	John.peabody@mottmac.com	x
MAP/HRCP	Mansfield	Mark	MM	757-685-9864	Mark.mansfield@shoreconsultinggroup.com	x
HRCP	Magron	JP	JPM	212-671-0180	JP.magron@hdrinc.com	x
TPG/HRCP	Lattanzi	Paul	PL	207-808-9846	Paul.r.lattanzi@paratusgroup.org	x
VDOT	Reilly	Peter	PR	757-323-3307	Peter.reilly@vdot.virginia.gov	x
HRCP	Sprenkle	Taylor	TS	804-366-4097	tsprenkle@wrallp.com	x
HRCP	Barrier	David	DB	514-663-9198	David.barrier@vinci-construction.com	x
USACE ⁽¹⁾	Pruhs	Robert	RP	757-201-7130	Robert.s.pruhs@usace.army.mil	x
USACE ⁽²⁾	Janek	George	GJ	757-201-7135	George.a.janek@usace.army.mil	x
USACE ⁽¹⁾	Powell	Steve	SP	757-201-7788	Stephen.j.powell@usace.army.mil	x
USACE ⁽¹⁾	Anderson	Mike	MA	757-201-7584	Michael.l.anderson@usace.army.mil	x
USACE ⁽¹⁾	Gusev	Alex	AG	757-201-7267	Alexander.gusev@usace.army.mil	x

(1) Operations Branch / Design Section
(2) Regulatory Branch / Eastern Section

Meeting Notes:

Coordination meeting to discuss plans for submittal of the Section 408 Package to USACE

No.	Description	Action
1.	Welcome and Introductions (9:00am)	
	DG – purpose of meeting: Review action items from August 14 meeting, continue momentum towards 408 package, refine schedule, define federal projects that are potentially impacted, confirm stakeholders,	





No.	Description	Action
	<p>discuss process to get Statements of No Objection (SONO), advance coordination.</p> <p>Introductions in the room</p>	
2.	<p>Review of Key Action Items from Aug 14 Meeting</p>	
	<p>JPA application will serve as 408 initiation letter</p> <ul style="list-style-type: none"> • DG - We will put this in the form of a formal letter, • SP - concurs <p>Maritime Stakeholder meetings</p> <ul style="list-style-type: none"> • DG – need multiple Section 408 stakeholder meetings due to the project magnitude. Recommend monthly meetings until 408 submittal - work through various marine issues • MA – recommend ask VMA to use their offices. • SP – Good idea – on point with USACE expectations <p>Communications Plan</p> <ul style="list-style-type: none"> • DG - Two Comms plans needed: a plan during document development, and a separate plan for during construction • DG, SP MA and JPM – Discussion of public notification requirements for 408 permit vs. JPA. JPM reported that Jerry Barnes (USCG) said they may need some public review of TCP and NSRA, even though not currently a requirement of the USCG NSRA Guidance • MA – Public Notification from JPA and 408 stakeholder outreach meetings will satisfy the 408 EC public notice requirements. • MM – level of detail needed for communications plan in MOP? • MA – Comm plan review concurrent with Corps’ 408 review in EC’s Step 2, focused on construction and any conflicts needing resolution during construction. To be continuous as needed. • MA – once Corps’ confirms 408 application complete, USACE will identify key elements to provide for stakeholder review; routine meetings with maritime stakeholders then start. Must capture/resolve stakeholder comments during review phase. • MA – Non-Federal Sponsors (NFSs) may want to wait to issue SONO until further in the review period, USACE will be flexible with this, but later is typical. <p>Administrative Record</p> <ul style="list-style-type: none"> • MA – HRCP will prepare Section 408 application documents for the admin record, USACE will confirm the need. • SP – Admin record to include: follow up emails summarizing meetings, stakeholders’ comments and concerns at meetings, stakeholder concurrence. Concurrence means stakeholders clearly understood the project and have no objections. Need to 	<p><u>Action 1:</u> HRCP send 408 Initiation Letter</p> <p><u>Action 2:</u> DG/TP set up stakeholder meetings via doodle poll</p> <p><u>Action 3:</u> DG to contact VMA (Will Fediw and David White) to coordinate using their facility for stakeholder outreach meetings</p>



No.	Description	Action
	<p>ensure everyone concurs with <u>latest</u> version. Minor changes won't impact or require re-coordination, but substantial changes require coordination / new concurrences.</p> <p>Federal Projects to be impacted</p> <ul style="list-style-type: none"> • SP – Corps review complete of potentially affected federal projects. Stays as “preliminary” until 408 completeness review. • SP / MA - USACE needs a single, complete, large (> 10MB ok) file of permanent impacts - can zoom in and out. Key concern: barge mooring locations, barges with TBM materials, staging areas, impacts to nav traffic. • JPM – HRCP coordinating with Jeff Swallow (USACE), already exchanged kmz's; USCG said at the September 18, 2019 meeting that anchorage K may be available. • PL – Barge operations plan for USCG – present estimate of barge traffic for transporting excavated tunnel material is an avg of 2 per day– will address in NSRA. USCG more concerned with storms / severe weather plan, and the mooring and operations of the construction barges. • JP – other construction aspects needed in drawings? • MA – Need tunnel itself and limits of federal project relative to the tunnel, plan & profile view. Shallowest part of tunnel relative to boundary of the authorized channel itself. • SP - New tunnel, existing tunnel, toe of channel, side slopes. Depict this. During dredging, contractors sometimes go beyond, non-pay yardage, max of 5 ft. dredging beyond depths, so HRCP should assume 60 ft. for channel depth. • JPM – existing tunnels shallower than proposed new tunnels. HRCP will continue coord w/ Jeff Swallow, loop in MA & SP. • SP – DoD SAFE is the new data transfer mode now. • MA – provided a list of federal projects (attached) that Corps review indicates require a Section 408 assessment. Corps H&H folks do not believe modelling required for storm damage risk reduction projects to Willoughby spit. Corps thinks Section 408 does not apply to Norfolk Storm risk management study. • MM – Phoebus and Willoughby channels not maintained in many years / decades. Are these projects subject to 408 review? What coordination needed for projects with no active NFS? • SP – Phoebus still a very active channel even though not dredged in many years. If no active NFS, USACE will still do same level of review. If nobody identifies as NFS, then HRCP must note that. • MA – Working on who is NFS for Phoebus, but, it is still a federal project and USACE still maintains it. Phoebus surveyed in Sept 2019 – Jeff Swallow has this data. USACE to find out if a SONO needed for Phoebus. 	<p><u>Action 4:</u> HRCP to develop a single GIS file of the entire project</p> <p><u>Action 5:</u> HRCP to Develop a Barge Operations Plan</p> <p><u>Action 6:</u> HRCP to provide profile view of new tunnels, existing tunnels, and Norfolk Harbor entrance reach channel. Provide plan view of all the channels (including anchorage approaches and anchorages) wrt construction aspects – show toe of channels, side slopes. Show tunnel depth will be below what would be dredged for maintenance of channel.</p> <p><u>Action 7:</u> HRCP set up follow-on mtg with USACE to review the single file drawings vs. concerns of potential fed project impacts. Purpose is to identify in detail specific activities Corps will require of HRCP ref each federal project, in order to submit a complete 408 application.</p>



No.	Description	Action
	<ul style="list-style-type: none"> • SP – Willoughby was dredged in 90's. City of Norfolk was NFS. USACE will provide POC. • JP – Can Corps confirm the list of federal projects provided is final and comprehensive, and is based on Corps review of the JPA, internal Norfolk District research of files, drawings, and coordination among divisions and branches? • MA – Any list will be “preliminary” pending completeness review, but Corps has a high level of confidence list is complete. <p>Single phase review</p> <ul style="list-style-type: none"> • DG – HRCF submitting project in its entirety (as stated 8/14 mtg.) • SP – yes, single phase review • MA – 408 scope will be consistent with regulatory permits being issued. If work is being permitted in its entirety from regulatory perspective, 408 will do the same. 	<p><u>Action 8:</u> MA to find out if there is a NFS for Phoebus Channel by 9/27.</p> <p><u>Action 9:</u> USACE will provide POC for NFS for Willoughby Channel</p>
3.	Table of Contents for the Section 408 Submittal	
	<p>General Content and Coordination.</p> <ul style="list-style-type: none"> • DG – goal is to have complete package to USACE NLT end of Nov. Appendices will include TCP and NSRA. USCG's CDR Stockwell said she will get better clarity on specifics for both TCP & NSRA. • MA – when received USACE is going to take these two plans, TCP and NSRA, and give to Hal Pitts for completeness review. • PL – TCP requested when ITT was considered, but now TBM is being used. Does USACE need a letter from USCG refining TCP requirement of 8/18 USCG letter? • MA – letter not required. Coordination and communication between Corps, Applicant, and Coast Guard is more important. • MM – reference to Mason Creek, how does HRCF document this? • SP – Mason Creek is in ref to comprehensive study for city of Norfolk. Document any impacts, then Corps can say if required. • MA – Inquired whether the proposed concrete pier built adjacent to Willoughby spit would be permanent. • DB – A permanent environmental impact for DEQ and USACE because the pier will be there for over 6 mos., but will be removed at the end of the project. Plan to cut at mudline. Impact will be permanent, but pier will not be. Also, no interference with the boat ramp. • MA – If any pilings not removed entirely, USACE will have to review because it of potential as a navigation hazard if any scour is anticipated. Preference is to remove them their entirety. • GJ – If pier left in place, will require a permit modification. 	



No.	Description	Action
	<ul style="list-style-type: none"> • SP – has HRCP thought about long term pier maintenance -piers over project duration, like scour protection, rip rap? • DB – HRCP do not expect that this will be necessary for the temporary piers. Scour protection will be in the design for the permanent work elements. • SP – 408 for CBBT resulted in annual inspection of piers. • MA – If the HRBT Expansion project results in an O&M issue to the Corps’ federal projects, it must be assessed as part of 408. • DG – no plan presently for any scour protection around temporary piles. The plan is to pull or cut 2-3 ft below mudline. • MA – Need to see construction and demolition plan of these features to make decision. It’s a liability issue if they scour and then need to be cut later on. Who is responsible if damage is caused in the future? <p>Contingency and Emergency Planning</p> <ul style="list-style-type: none"> • DG – DEQ and USCG require emergency planning. HRCP will develop. UXO awareness training for first phase supplemental borings, same training continue throughout. Navy operations in Willoughby Bay require coordination. Navy POC’s: Commander Temple and Steve Jones (MA said these are the right people) <p>H&H system analysis</p> <ul style="list-style-type: none"> • DG – The potential for scour and possible hydrodynamic changes such as tidal prism and flooding were discussed. HRCP doesn’t imagine that the small changes to island footprints and new trestles will have more than a negligible effect on that section of James River. Not considering additional analysis other than for design of structures. • MA – Concern is to not exacerbate induced shoaling where channels already shoal, with pressure on USACE O&M funding and limited NFS capability. Although inactive, they are dredged periodically. No need for H&H for nourishment projects. Short term – barge work, planting equipment, making sure there is no debris as construction is completed. Not sure if these will be impacts for project of this magnitude. USACE will do baseline surveys of all channels prior to construction. Phoebus survey complete, rest of channels done over next 3-4 months. • DG – requested that USACE review & provide feedback on TOC after meeting? • SP – Yes. Will H&H be another attachment? Previous reports have been done on these analyses. Include reports. • DG – 2 modelling analyses done by VIMS as part of NEPA and then our marine work for design. • MA - Include H&H reports from VIMS. Text in report will say something like, “based on this analysis, we do not believe there 	<p><u>Action 10:</u> HRCP provide a construction and demolition plan for the temporary pier features.</p> <p><u>Action 11:</u> New attachment to 408 package, existing VIMS H&H reports, text in document as to why HRCP believes this shows that there will not be any issues.</p> <p><u>Action 12:</u> HRCP to provide specific plans and specs for installation and removal of pilings near federal projects, revetment details near federal projects, federal project profile of Norfolk Harbor Entrance Reach and new/existing tunnels (elevations in relation to federal project), impact plans</p>



No.	Description	Action
	<p>will be any issues, or if there are issues, this is how we will be addressing them.”</p> <ul style="list-style-type: none"> MA – need HRCF deep dive on following: specific plans & specs that address installation and removal of pilings near the federal projects and the revetment details near the federal projects (perimeter of North Island near Hampton Creek approach) federal project profile of Norfolk Harbour & tunnels. 	<p>that were already provided in the form of one GIS.</p>
4.	<p>Wastewater Treatment Discussion as relates to Sect 103</p> <ul style="list-style-type: none"> RP – Discharges or sediment releases that could affect chemical composition of channel sediments a key concern. USACE must meet certain water quality standards to dredge fed channels. Not as big of an issue here (HRBT) because area is very dynamic and deep, but key concern is will HRCF be permitted to release solids through plant? During the CBBT 408 process, USACE felt that VPDES sufficiently covered that. Discharge locations for HRBT are closer to channel than CBBT. Doing rigorous environmental testing for offshore placement (Section 103), doesn't take a whole lot to fail. USACE wants to know what is permitted for solids release. DG – planned to use similar model as RP describes. VPDES outfall pipe locations will affect how the discharge is released into environment. Based prior VIMS comms, HRCF tried to direct to highest area of turbulence, leading into channel. DG reviewed flow chart to give idea of how data informs the design and VPDES application. RP – TSS of 20-30 mg/L would be great number for TSS. Need to provide bench scale studies as part of the 408. SP – not allowed to alter sediment in the navigation channel. If altered, HRCF would be responsible for removing contaminated sediment so that USACE can reach required water quality standards. TS a spill response plan will be provided. USACE 408 staff want to be included in notification tree if uncontrolled release event occurred. DG – GJ also wanted monthly water quality test reports from the Thimble Shoal project, and we can also include for this project. 	<p><u>Action 13:</u> HRCF Review the outfall plan to assess potential outflow discharge into the navigable channel / adjust outfall plan to mitigate any Corps concerns</p> <p><u>Action 14:</u> HRCF provide bench scale testing results as part of 408, monthly reports</p> <p><u>Action 15:</u> HRCF develop a spill response plan</p>
5.	<p>Additional Discussion</p>	
	<p>Real Estate</p> <ul style="list-style-type: none"> DG – what are USACE expectations? Real estate USACE owns and manages, or real estate that is related to project itself? MA – Different categories, but neither category applies in this case (USACE does not own any land, nor are any federal land easements in play). Not a requirement for this application. 	



No.	Description	Action
	<ul style="list-style-type: none"> • SP – For local engagement, locals required to keep a boat ramp • MA – NFS concurrence means plan will not interfere with their ability to operate the project • DG – SONO is another way of saying from NFS perspective there are no real estate issues • SP – are there Navy real estate issues? • PR – In continuous comms with Navy, no real estate problems • SP – need to document Navy real estate has no conflicts • MM – For Willoughby beach nourishment, breakwaters used to be owned by City prior to Corps doing nourishment, did Corps incorporate breakwaters into their project? • SP – we don't know this • MA – will talk to project manager and reconcile ownership. • MA – will determine by next Friday whether NFS applies to Phoebus, and will get Willoughby beach and breakwater frameworks <p>Safety Assurance Review (SAR) Plan</p> <ul style="list-style-type: none"> • MA – not familiar with it • RP – probably if conflict difficult to resolve, need risk assessment for it <p>408 meetings</p> <ul style="list-style-type: none"> • DG – plan to start holding regular meetings starting mid-October • SP – do doodle poll for week of oct 14-18 <p>SP – show in profile how far design is from toe of channel, when HRCP says no structure of any sort will come within xx ft of the channel, that is what USACE will put in to permit</p> <p>JPM – bridge permit application, have released waterway users survey. USACE asked to spread the word. The more responses the better for gathering accurate data. JPM will send to MA and SP.</p> <p>AG – any way to look at geotechnical data specifically around north island where planned expansion is? Substantial amount of fill will be placed, would like to see underlying soils. Send whatever data you have</p> <p>DG – supplemental geotechnical next month will hopefully confirm our suspicions of geotechnical data. We will send data.</p>	<p><u>Action 16:</u> HRCP/VDOT document coordination with Navy stating that there are no real state conflicts</p> <p><u>Action 17:</u> MA will talk to the project manager of the Willoughby beach breakwaters to reconcile ownership</p> <p><u>Action 18:</u> MA will get by next Friday 9/27, whether Phoebus has a NFS and will get frameworks for Willoughby beach and breakwaters</p> <p><i>Post-meeting note: An SAR may be requested during the Corps' approval process per EC-1165-2-220. Generally, this is for alterations to dams - DG</i></p> <p><u>Action 19:</u> HRCP (TP) to send out doodle poll for meeting mid-October</p> <p><u>Action 20:</u> HRCP (JPM) to send waterway users survey to Corps (MA and SP).</p> <p><u>Action 21:</u> HRCP will send geotechnical data around north island where planned expansion is to AG</p>
	<p>Meeting Adjourned 10:38</p>	



Meeting Agenda

Project: I-64 HRBT Expansion

Subject: Section 408 Meeting

Date: Thursday, September 19, 2019

Location: USACE, 803 Front Street, Norfolk VA

Meeting purpose: Discuss plans for submittal of the Section 408 Package to USACE

1. Welcome and Introductions
2. Review of Key Actions from August 14 Meeting
 - a. Section 408 Initiation (JPA application)
 - b. Single-Phase Review
 - c. Determination from USACE which Civil Works Project to be potentially impacted
 - d. Confirmation from USACE of Non-Federal Sponsors
 - e. Outreach (Communications) Plan
3. Table of Contents for the Section 408 Submittal
 - a. Statement of No Objection (SONO) from NFS's
 - b. USACE Project and Alteration Description
 - c. Technical Analysis and Design
 - i. Footprints, anchorages, mooring locations
 - d. H&H system analysis (if required)
 - e. Environmental and Cultural Resources Compliance
 - f. Real Estate Requirements
 - g. OMRR&R
 - h. Section 221 of Flood Control Act of 1970





- i. Severe Weather Plan
 - j. Navigation Safety Risk Assessment (NSRA)
 - k. Tunnel Construction Plan (TCP)
4. Wastewater Treatment Discussion as relates to Section 103
- a. VPDES monitoring requirements



408 PACKAGE TABLE OF CONTENTS

- 1 Statement of No Objection
- 2 USACE Project and Alteration Description
 - 2.1 Background
 - 2.2 Project Location
 - 2.3 Project Description
 - 2.3.1 Design Overview
 - 2.3.2 Construction Overview
 - 2.4 Project Schedule
 - 2.5 Project Owner and Design-Builder
 - 2.6 Points of Contact During Operations
 - 2.7 Existing Federal Projects
 - 2.7.1 Navigation Projects
 - 2.7.2 Storm Flood Risk Management Projects
 - 2.8 Vessel Fleet
 - 2.9 Anchorages, Mooring Areas, and Safe Harbor Plan
 - 2.9.1 North Shore (Hampton Flats)
 - 2.9.2 Willoughby Bay
 - 2.9.3 Harbor of Safe Refuge
 - 2.10 Vessel Work Areas
 - 2.10.1 North Trestle Bridge/ North Island
 - 2.10.2 South Island Jet Grouting Trestles
 - 2.10.3 South Trestle Bridge/ South Island
 - 2.10.4 Willoughby Bay
 - 2.10.5 Willoughby Spit Staging Area
 - 2.11 Communications
 - 2.12 Contingency and Emergency Planning
 - 2.12.1 Weather
 - 2.12.2 Unanticipated Vessel Passage in Channel
 - 2.12.3 Navy Operations in Willoughby Bay
 - 2.12.4 Operational Emergencies (incl. UXO)
- 3 Technical Analysis and Design
 - 3.1 H&H System Analysis (if Required)

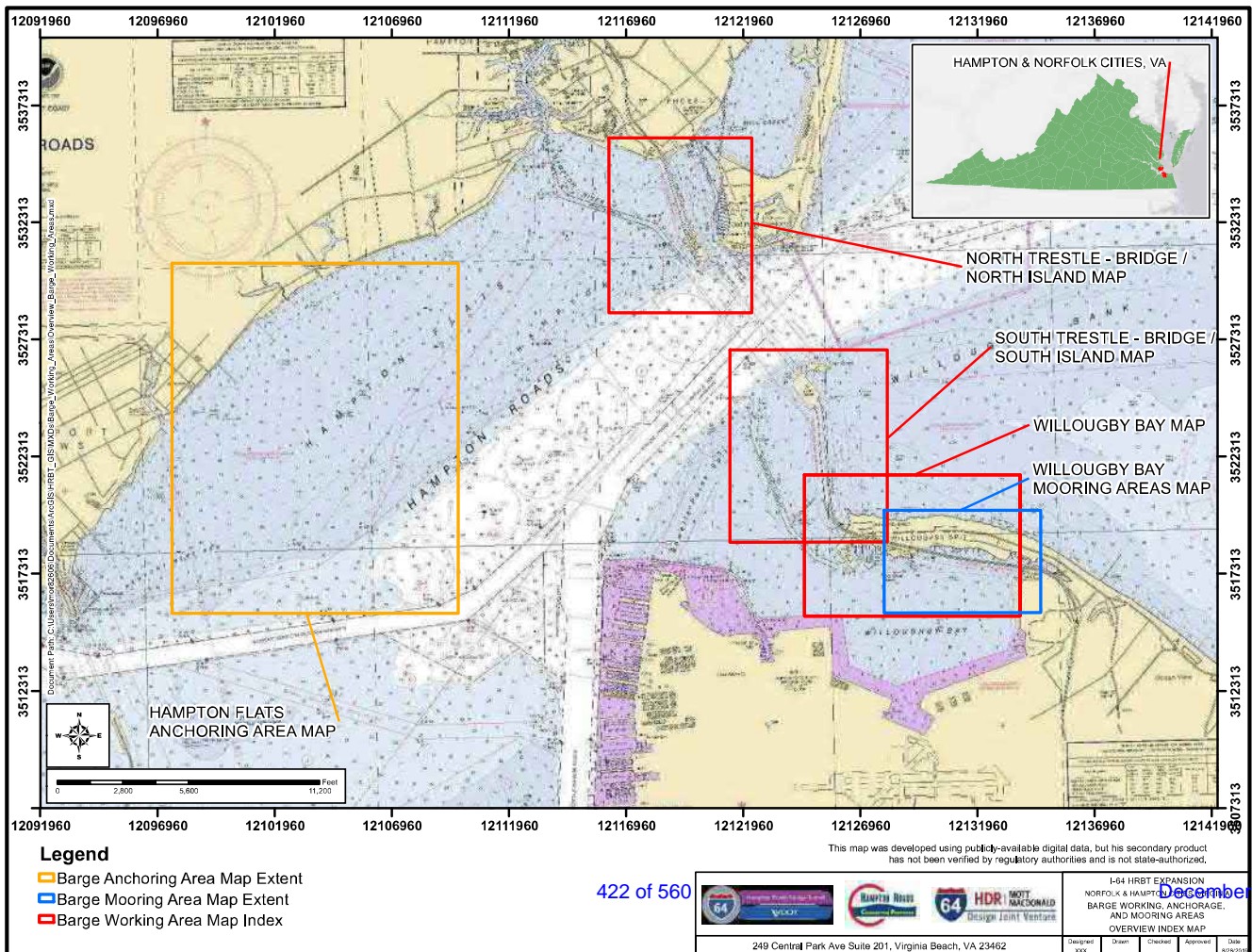
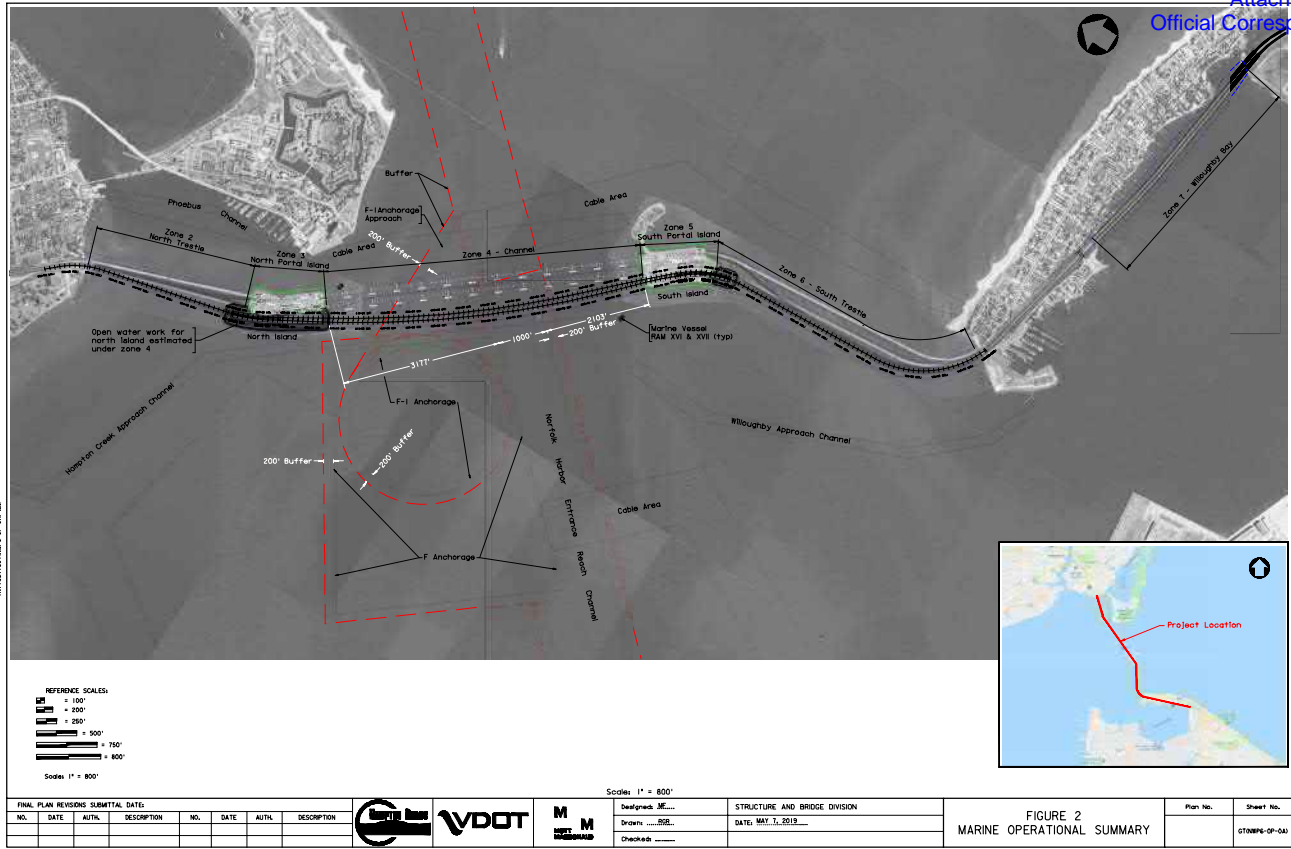
- 3.2 Design Plans
 - 3.2.1 Design Quality Control Certification
- 3.3 SAR Review Plan (if Required)
- 4 Environmental and Cultural Resources Compliance
 - 4.1 NEPA Documentation
 - 4.2 T&E Species Surveys
 - 4.3 Habitat Assessments
 - 4.4 Cultural Resource Surveys
 - 4.5 Section 401 Water Quality Certification
 - 4.6 Tribal Coordination
- 5 Real Estate Requirements
 - 5.1 Maps of Existing Real Estate Property
 - 5.2 Maps of Additional Real Estate Property Required for the Project
- 6 Operations, Maintenance, Repair, Replacement, and Rehabilitation
 - 6.1 Letter of Assumed Responsibility for Changed OMRR&R (if Required)
- 7 Section 221 of Flood Control Act of 1970

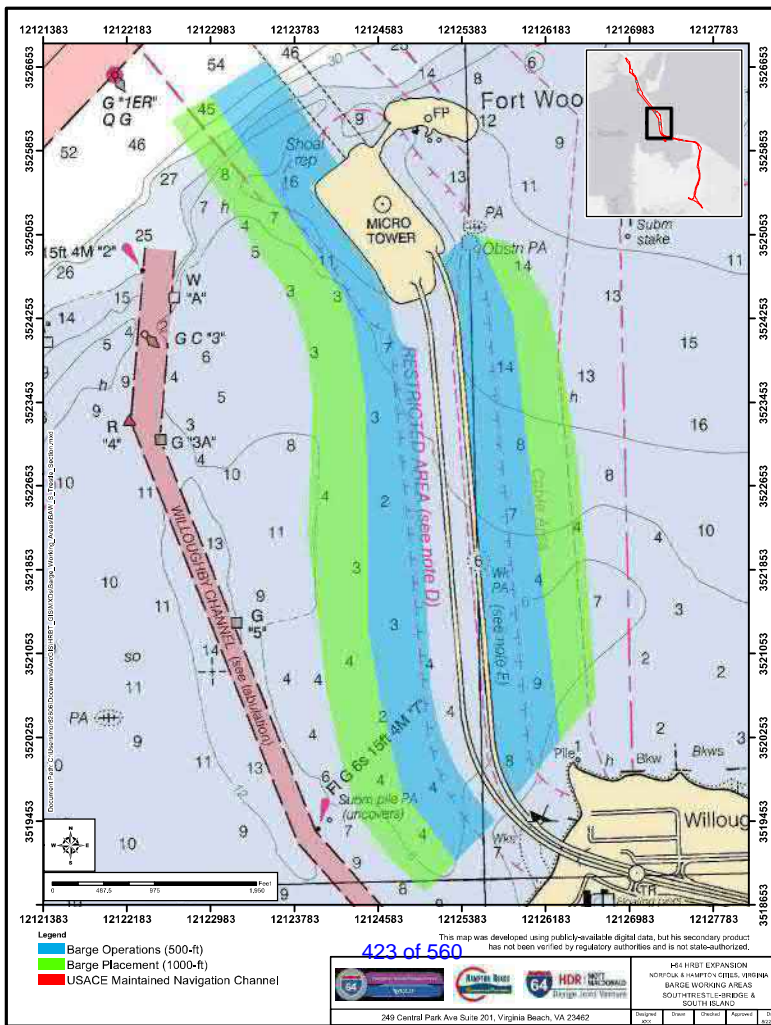
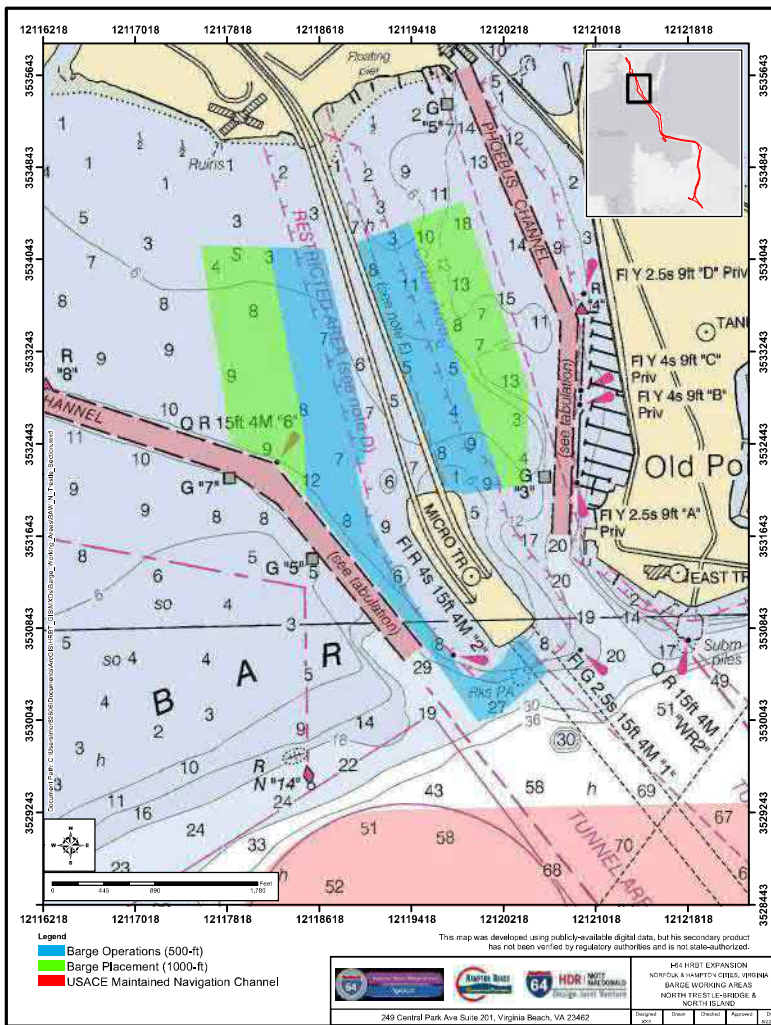
Attachment 1: Severe Weather Plan

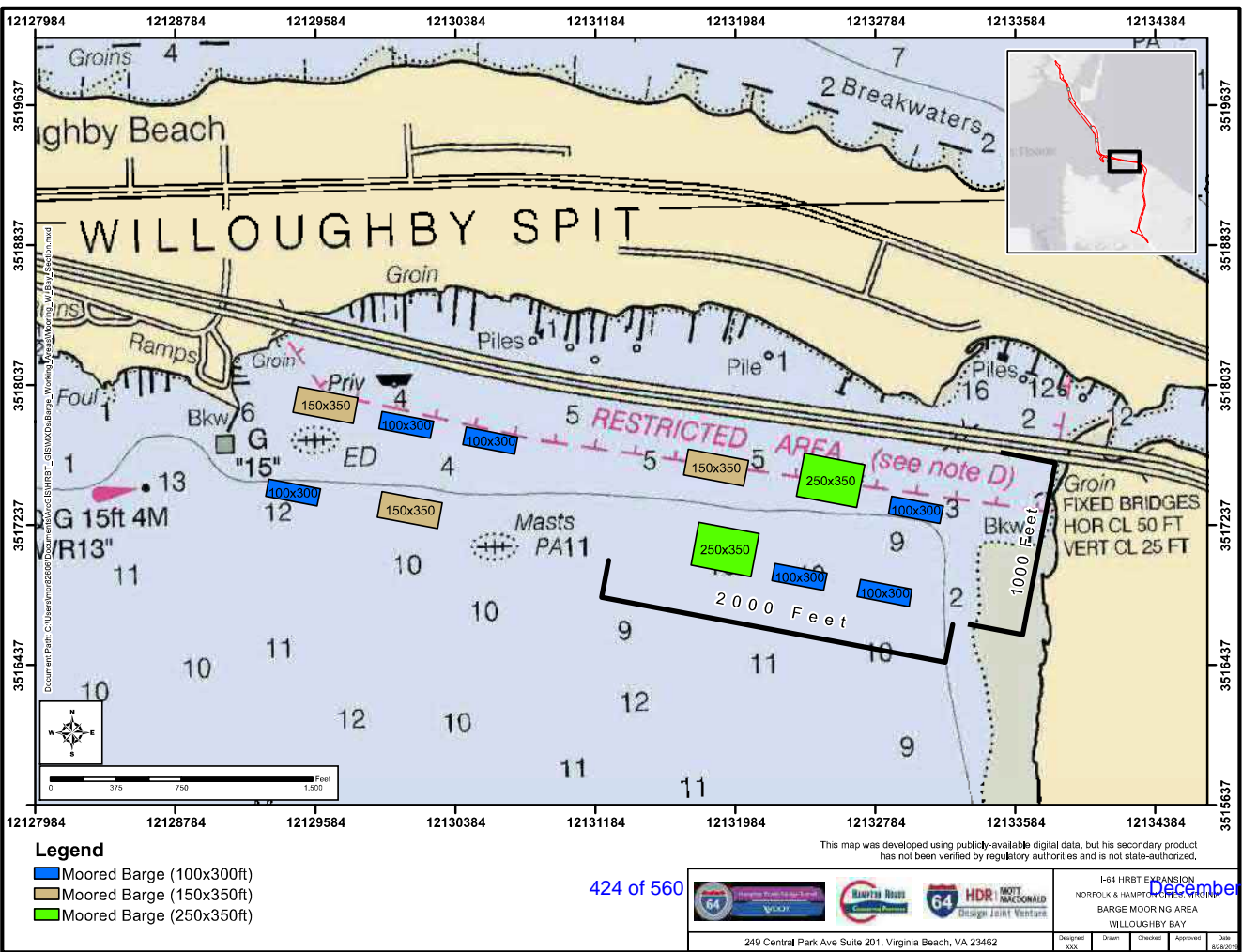
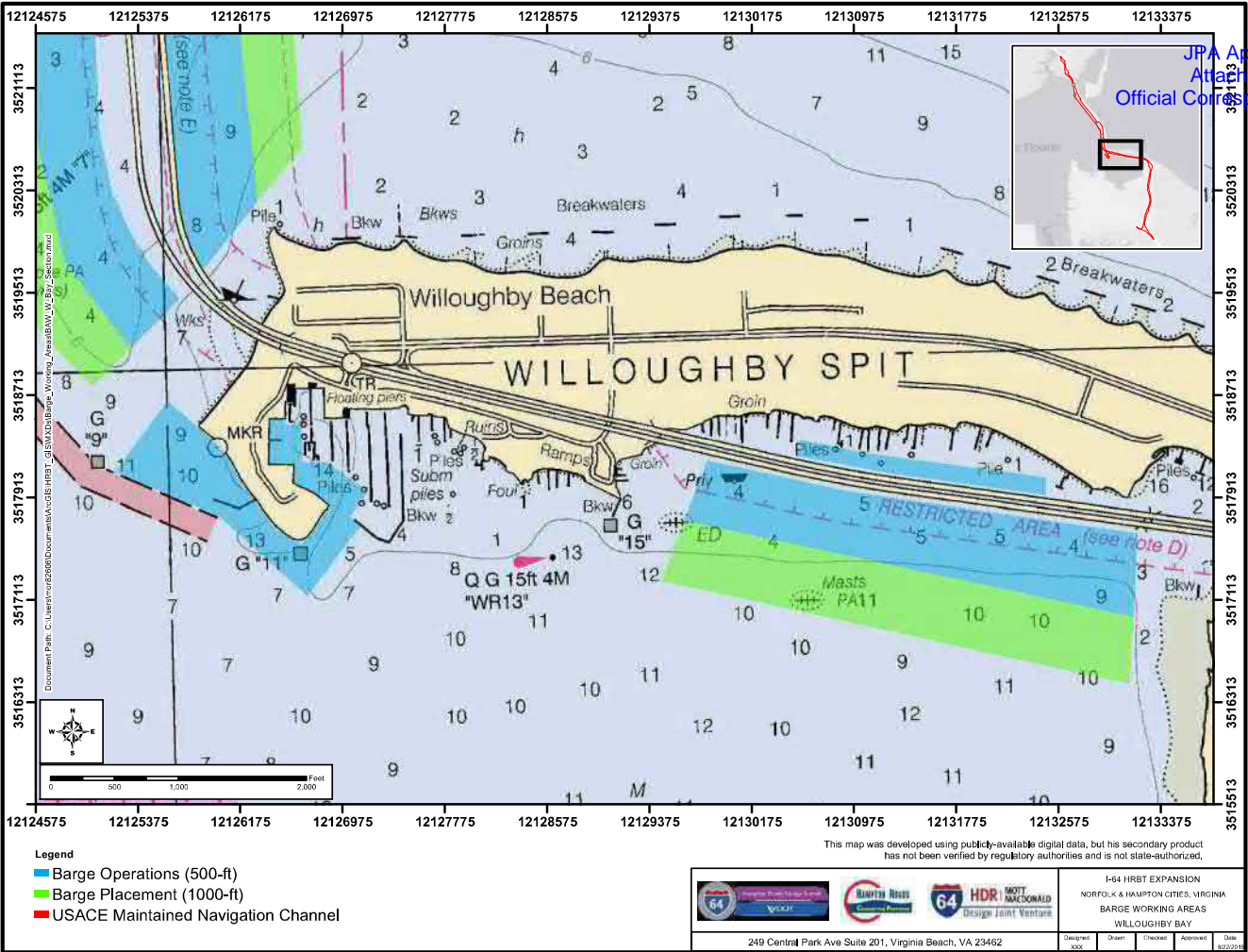
Attachment 2: Tunnel Construction Plan

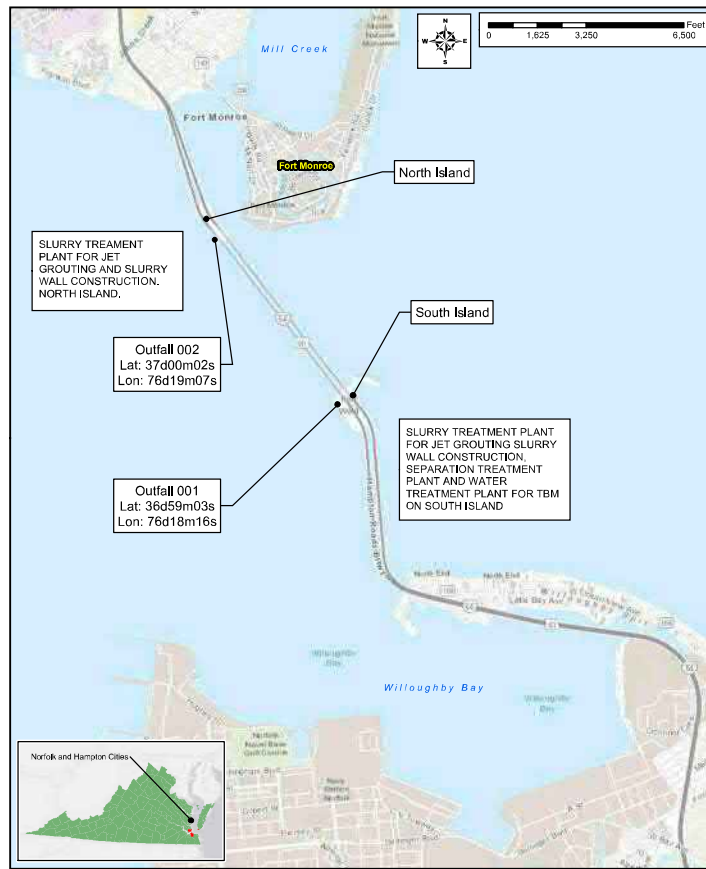
Attachment 3: Navigational Safety Risk Assessment

Attachment 4: Stakeholder Outreach









Description

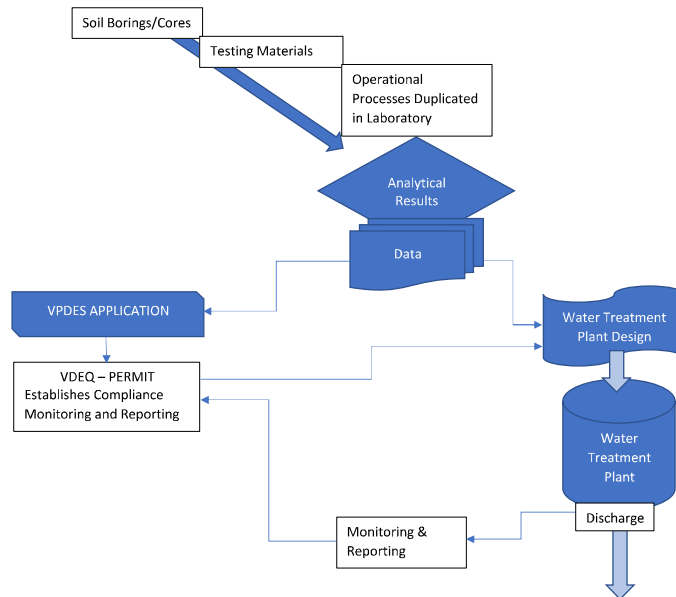
Overall view of project area depicting water crossing area between South Island and North Island. TBM support treatment plant and associated appurtenances will be located on South Island.

Map Document: C:\Users\m42406@hampden.com\Documents\GIS\181019\181019_VPDES_Outfalls.mxd
8/5/2019 9:59:35 AM m42406

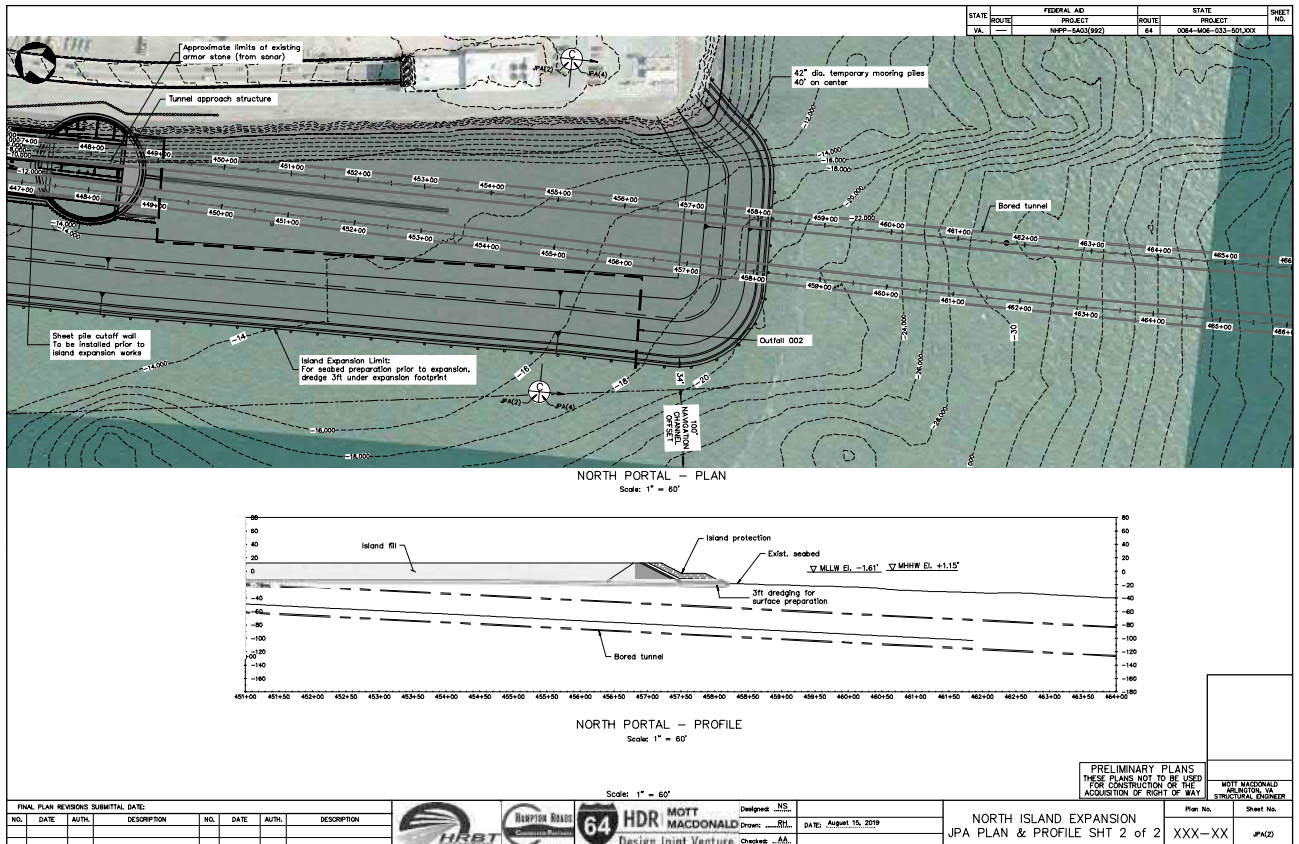
This map was developed using publicly-available digital data, but this secondary product has not been verified by regulatory authorities and is not state-authorized.

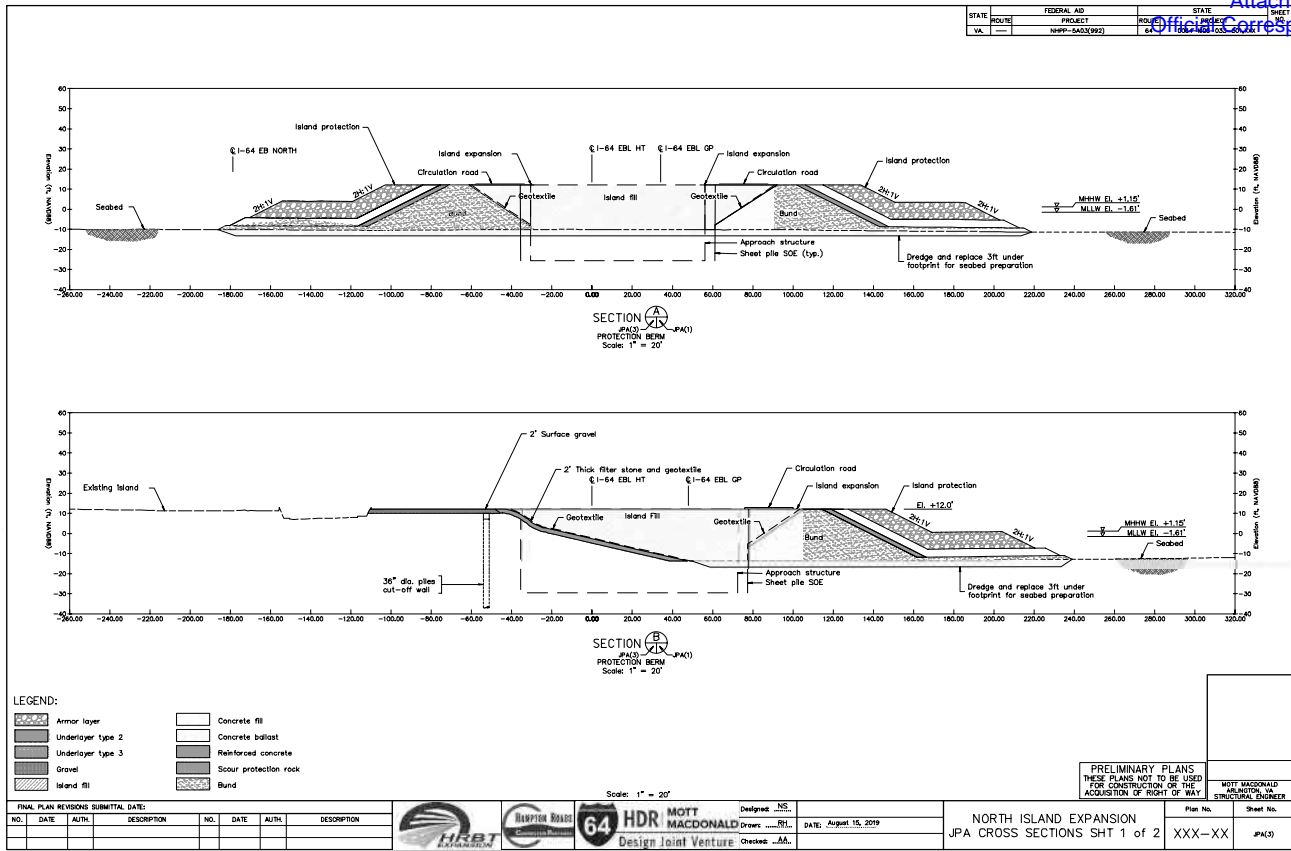
		NORFOLK-HAMPTON CITIES, VIRGINIA VPDES PERMIT APPLICATION OUTFALL MAP	
420 Corporate Boulevard, Norfolk, Virginia 23502, Suite 300		Date: 12/17/19 Sheet: 1 of 1	Date: 12/17/19 Sheet: 1 of 1

VPDES Application Flow Chart



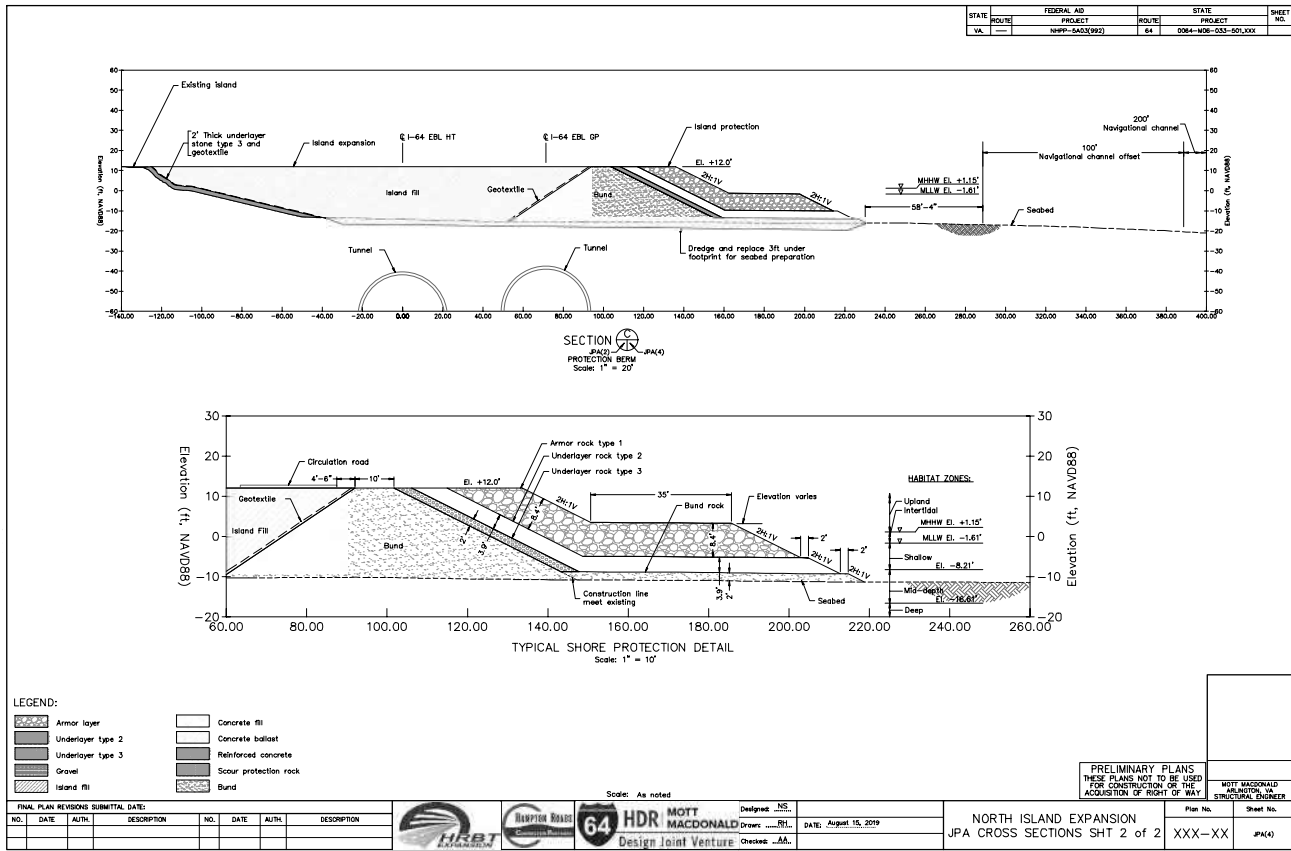
ATTACHMENT G-3B: ISLAND DESIGN





FINAL PLAN REVISIONS SUBMITTAL DATE:		DATE: August 15, 2019		DATE: August 15, 2019		DATE: August 15, 2019		DATE: August 15, 2019	
NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE

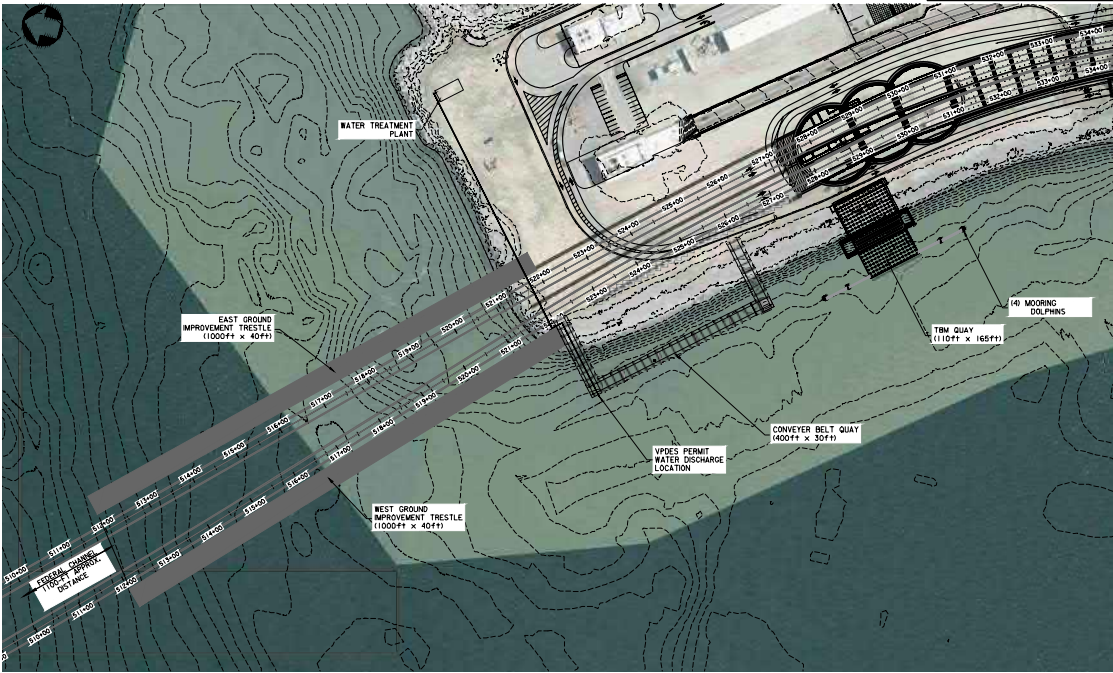
PRELIMINARY PLANS
 THESE PLANS NOT TO BE USED
 FOR CONSTRUCTION OR THE
 ACQUISITION OF RIGHT OF WAY
 STRUCTURE SHEETS
 MOTT MACDONALD
 STRUCTURE SHEETS
 NORTH ISLAND EXPANSION
 JPA CROSS SECTIONS SHT 1 of 2
 Plan No. XXX-XX
 Sheet No. #A(3)



FINAL PLAN REVISIONS SUBMITTAL DATE:		DATE: August 15, 2019		DATE: August 15, 2019		DATE: August 15, 2019		DATE: August 15, 2019	
NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE

PRELIMINARY PLANS
 THESE PLANS NOT TO BE USED
 FOR CONSTRUCTION OR THE
 ACQUISITION OF RIGHT OF WAY
 STRUCTURE SHEETS
 MOTT MACDONALD
 STRUCTURE SHEETS
 NORTH ISLAND EXPANSION
 JPA CROSS SECTIONS SHT 2 of 2
 Plan No. XXX-XX
 Sheet No. #A(4)

STATE	FEDERAL AID	STATE	SHEET
ROUTE	PROJECT	ROUTE	NO.
VA.	WPP-S425P(2)	VA.	100



SOUTH ISLAND - TEMPORARY SITE PLAN
Scale: 1" = 80'

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED
FOR CONSTRUCTION OR THE
ACQUISITION OF RIGHT OF WAY

FINAL PLAN REVISIONS SUBMITTAL DATE:					
NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE

Scale: 1" = 160'

Design: J.S. _____
 STRUCTURE AND BRIDGE DIVISION
 DATE: August 28, 2019
 Drawn: B.L. _____
 Checked: M.L. _____

SOUTH ISLAND JPA TEMPORARY SITE PLAN		Plan No. XXX-XX	Sheet No. JPA11
---	--	--------------------	--------------------

