



March 2020
Project Report

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION

Proj. No. 0064-M06-032
Report #12



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Issue date: April 16, 2020

1. Executive Summary

1.1 Reporting Period

This report, prepared by the Virginia Department of Transportation (the Department), provides an overview of accomplishments and activities for the Hampton Roads Bridge-Tunnel Expansion project (the Project) from February 23, 2020 – March 21, 2020. The Design-Builder for the Project is Hampton Roads Connector Partners (HRCP), a consortium that includes Dragados, Vinci, Flatiron, and Dodin Campenon Bernard.

The current reporting period is aligned with HRCP's fiscal-month structure, on which the Project's design-build schedule updates and invoiced construction progress are based. Reporting periods typically close on the Saturday on or preceding the 24th of each month.

1.2 Project Accomplishments

During this reporting period, the following project accomplishments were recorded:

- HRCP received essential fish habitat (EFH) recommendations from the National Oceanic and Atmospheric Administration (NOAA) on February 25, 2020.
- HRCP provided responses to Letter of Authorization (LOA) request comments, received from NOAA on March 11, 2020.
- HRCP provided US Army Corps of Engineers (USACE) with responses to public comments from the agency's second Public Notice.
- HRCP provided responses to the second USACE Request for Information (RFI) for the Joint Permit Application (JPA) on March 13, 2020.
- NOAA published the Notice of Proposed Incidental Harassment Authorization (IHA) in the Federal Register on March 20, 2020, beginning a 30-day public comment period that ends April 20, 2020.
- HRCP executed the supply contract for procuring the tunnel boring machine (TBM).
- The US Coast Guard (USCG) issued their concurrence concerning the project Section 408 application on March 13, 2020.

1.3 Priorities

The Department's priorities for the Project are to achieve the following objectives:

- To provide mobility enhancements and travel-time reliability along the Project corridor
- To minimize Project impacts on adjacent communities
- To improve transportation operations and safety throughout the Project corridor
- To develop public infrastructure in a financially responsible manner

1.4 Schedule

Schedule updates for this reporting period include:

- No significant changes to the critical path were made this period.
- HRCP remains on track to achieve Substantial Completion in advance of the contract milestone of September 1, 2025.
- Final Completion remains as scheduled for November 1, 2025.
- Approximately 14.68% of the contract time has progressed to date.

1.5 Budget and Cost

The budget and cost updates for this reporting period are as follows:

- Project budget overview (through March 2020 payment application):

Total project budget:	\$3,861,997,227
Total charges for efforts to date:	\$228,434,397
Remaining project budget:	\$3,633,562,830

- Design-build contract overview (through March 2020 payment application):

Total contract amount:	\$3,296,997,227
Total charges for efforts to date:	\$210,135,960
Total work orders:	(\$3,000,000)

- Design-build progress to date (through March 2020 payment application):

Overall:	6.37%
Mobilization:	10.81%
General Requirements (incl. Project Management):	5.39%
Design:	40.47%
Physical Progress:	1.31%

1.6 Environmental Management

During this reporting period, HRCP took the following steps in support of permit acquisition for the project:

- HRCP received EFH recommendations from NOAA on February 25, 2020.
- HRCP received a second RFI from the USACE on February 27, 2020. On March 13, 2020, HRCP submitted responses and supplemental material to the USACE to address the RFI comments.
- HRCP met with the City of Norfolk on February 27, 2020, to discuss beneficial reuse of sandy dredged material on Norfolk beaches. HRCP has also initiated coordination with the City of Hampton.
- HRCP conducted a monthly meeting with the permitting agencies on March 4, 2020. As a result of the meeting, HRCP provided an updated and refined mitigation plan (Appendix P2 of the JPA) with the materials submitted in response to the second USACE RFI.
- HRCP conducted a meeting with USACE, NOAA, and the Virginia Marine Resources Commission (VMRC) on March 12, 2020 to discuss; the mitigation plan for impacts to fish from pile driving, pile driving underwater noise mitigation, mitigation for impacts to submerged aquatic vegetation (SAV), and draft USACE permit conditions. The bubble curtain design was also explained to the Agency attendees.
- HRCP conducted a virtual meeting with the USACE on March 18, 2020, to present modeling results demonstrating that North and South Island expansion will not increase sedimentation or shoaling within the federal channel.
- HRCP provided responses to comments the Corps received during the second public notice.
- HRCP provided responses to Letter of Authorization (LOA) request comments, received from NOAA on February 11, 2020.
- HRCP received comments concerning the Section 7 consultation from NOAA and the US Fish and Wildlife Service, respectively, and are preparing responses and revising the Biological Assessment (BA) and submission package.
- HRCP submitted the completed toxicity report for the Virginia Pollution Discharge Elimination System (VPDES) permit application.
- The US Coast Guard (USCG) issued their concurrence concerning the project Section 408 application on March 13, 2020.

1.7 Quality

Quality updates for this reporting period include:

- HRCF submitted updates to their Design Quality Management Plan (DQMP) and the Quality Management System Plan (QMSP). The QMSP update was conditionally accepted but the DQMP update was returned for revisions. The next scheduled update of all plans will be in May.
- VDOT conducted audit DQ-02 on January 30, 2020, reviewing the design package that was associated with the Tunnel Spaceproofing Tunnel Approach Structure (TAS) – Preliminary Resubmittal Package. HRCF responded to the audit comments and the audit was closed.
- Other Quality activities included reviews of Material Book Documentation and QA/QC Daily reports, coordinating with ECSC inspection staff, and conducting weekly Quality Status meetings.

1.8 Operations

The following operations activities took place during this reporting period:

- Shoulder closures and lane closures were conducted for geotechnical exploration and survey work.
- Corridor-wide field work was performed for drainage structures.
- Marine geotechnical explorations continue.
- Demolition of the existing metal building on the Willoughby Spit Parcel is complete.
- Temporary fall protection fencing installed adjacent to the existing eastbound tunnel open approach on the South Island.
- Implementation of HRCF's Bird Management Plan to install measures on the South Island to deter birds during construction.

1.9 Safety

Safety procedures and activities during this reporting period include:

- Daily field safety meetings are held on site with all field staff.
- All personnel are urged to use caution entering/exiting the tunnel islands, be aware of traffic conditions and have an adequate gap in traffic to accelerate safely into the travel lane.
- Due to the outbreak of COVID-19, all social gatherings of 10 people or more have been discontinued. Large meetings are being held with audio or video formats.
- Safety orientations are ongoing. Due to COVID-19, near term training events (1st Aid & CPR) have been delayed.

- HRCP Employees have been separated into Red and Blue teams (office and field locations as a place to conduct daily business) and are encouraged to use social distancing and sanitary practices to avoid the COVID-19 virus.

1.10 DBE & SWAM Business Activities

The following DBE & SWAM Business Activities occurred during this reporting period:

- Governor Northam's Community Forum on March 2, 2020
- Monthly Civil Rights Compliance Meeting on March 17, 2020

1.11 Public Outreach

Public outreach updates for this reporting period are as follows:

- Members of VDOT's HRBT Expansion Team have participated in more than 100 outreach events to date.
- Of specific note in this period, the following activities were completed:
 - Communications Presentation to THRIVE
 - HRBT Expansion Project Stakeholders Committee Meeting
 - City Managers of Norfolk and Hampton Dialog
 - Communications Presentation to the Elizabeth Park Civic League

2. Project Accomplishments

2.1 Overview and Look Ahead

Milestones

The LNTP1 completion milestone was achieved on September 24, 2019. LNTP2 and LNTP3 were issued to HRCP on September 25, 2019.

Geotechnical Investigation

The marine geotechnical investigations are on-going, as are landside drilling and laboratory testing for soil classification in Norfolk and Hampton. Completion of the marine geotechnical program is expected in April 2020. Landside geotechnical borings are approximately 90% complete.

Environmental Permitting

To further advance regulatory agency environmental reviews, HRCP provided responses to RFIs for several applications and consultations including a request from NOAA on the LOA, Section 7 consultation requests from USFWS and NOAA, and the JPA from USACE. This in addition to multiple informal requests for information from DEQ and VMRC. HRCP also submitted a complete toxicity report in support of the VPDES application.

HRCP conducted a meeting on March 12, 2020, with agency reviewers to discuss the mitigation plan for fish impacts from pile driving, pile driving underwater noise mitigation, mitigation for impacts to submerged aquatic vegetation (SAV), and draft USACE permit conditions. HRCP held a virtual meeting on March 18, 2020 with USACE to present modeling results demonstrating that North and South Island expansion will not increase sedimentation or shoaling within the federal channel. This coordination was completed by HRCP to further advance the JPA, Section 408 approval, VPDES application, and the Submerged Lands Permit application. In addition, coordination is underway with the Cities of Norfolk and Hampton to evaluate the beneficial use of sandy dredged material.

The Notice of Proposed IHA was published in the Federal Register on March 20, 2020. Publication in the Federal Register begins a public comment period that ends on April 20, 2020. Coordination with USACE, VMRC, DEQ, NOAA, and USFWS is ongoing and will continue until the respective permits or approvals are issued and then throughout construction as appropriate.

Construction Operations

Planning is underway for utility relocations on the South Island, which will allow installation of the slurry walls for the TBM launch pit.

During this period HRCP also executed a supply contract with the TBM manufacturer Herrenknecht for procuring the project's TBM, which will be 46 feet in diameter. The machine will be custom-built in Germany and is scheduled for delivery in mid-2021.

Third Party Coordination

Post-award coordination with the U.S. Navy and the Federal Highway Administration (FHWA) started in April 2019 and is ongoing. FHWA participates in weekly coordination meetings with VDOT and HRCP.

3. Project Schedule

3.1 Schedule Status

Baseline Schedule

The Baseline Schedule has been accepted as the Schedule of Record. The current longest path for the project remains through the boring of the two new tunnels beginning with the design, permitting, and construction of the South Island Portal.

Permitting Schedule

The Project's USACE, Virginia Department of Environmental Quality (DEQ) and Virginia Marine Resources Commission (VMRC) permits include multiple administrative documents, including the Coastal Zone Management (CZM) consistency determination, the USACE Section 404/10 permit, USACE Section 408 Permission Letter, the DEQ water protection permit, and the VMRC subaqueous land permit.

The VMRC permit information was scheduled to be presented to the VMRC Board during the last week of March. The DEQ Virginia Water Protection (VWP) permit is scheduled for public notification in April and a mid-May permit issuance is projected. USACE has completed their second public notification period (ended February 20, 2020) and are evaluating all comments received. HRCP is targeting June to receive the permits, provided the Section 408 review is completed. HRCP continues to work with the USCG with the goal of having bridge permits issued in approximately June 2020.

Key Dates

The following table depicts key milestone dates outlined in the contract requirements. HRCP's submitted Baseline Schedule reflects the early stages of HRCP's planning sequence and will be substantially refined and further detailed as the design advances. This table will be updated to reflect these dates and used as a benchmark to track milestone achievements.

Key Dates	Contract Requirement	Schedule of Record Dates	March 2020 Update	Actual
LNTP1		April 12, 2019	April 12, 2019	April 12, 2019
LNTP1 Completion Milestone		September 25, 2019	September 24, 2019	September 24, 2019
LNTP2		September 29, 2019	September 25, 2019	September 25, 2019
LNTP3		October 9, 2019	September 25, 2019	September 25, 2019
NTP		October 10, 2020	October 8, 2020	
Substantial Completion	September 1, 2025	July 18, 2025	July 18, 2025	
Final Completion	November 1, 2025	November 1, 2025	November 1, 2025	

3.2 Longest Path

The longest-path activities for the Project schedule include:

- Design of the South Portal Launching Pit - Early Works, Utility Relocations, and Slurry Walls Release for Construction (RFC) Plan Authorization
- Installation activities for slurry and water treatment plants on site
- Completion of the Slurry Walls for Cell 1 of the launching pit
- Completion of the South Portal launching pit
- Assembly of the Tunnel Boring Machine (TBM) in the launching pit
- TBM drive in the HOT tunnel, U-Turn then drive in GP tunnel
- Finishing works and MEP works in HOT tunnel
- Commissioning and integration tests

3.3 Impact Analysis

Several elements of work are near-critical and could affect Project progress if they are not addressed diligently. The Department and HRCP are closely monitoring these activities. The following work elements have been identified as near critical, meaning there is less than one month of float in the Baseline Schedule:

- Design and construction of permit-dependent structures at Oastes Creek and Bay Avenue
- Space proofing report for the TBM fabrication
- TBM Design, Fabrication, and Delivery
- Utility relocations
- North Island Reclamation*

Achieving the initial public-notice milestone for the project's JPA allowed LNTP2 and LNTP3 to be issued. LNTP2 enables procurement of the TBM, while LNTP3 allows commencement of construction work for the launching pit and ground improvement on South Island. Receipt of the project's Corps of Engineers, DEQ and VMRC permits will allow full NTP for the Project.

* While this activity is not currently shown within 30 days of the critical path, the project team recognizes it as a high priority for the project schedule and it is listed for close monitoring.

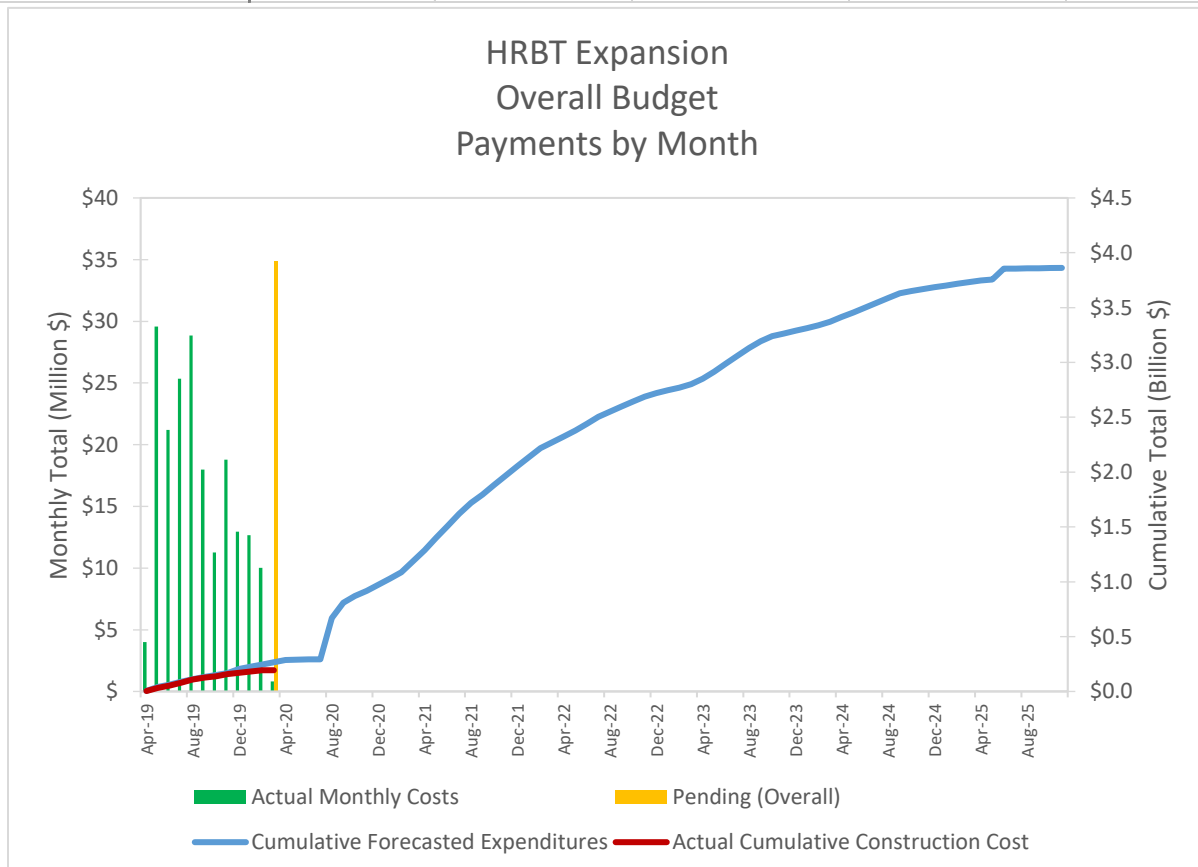
4. Budget and Cost

4.1 Overall Budget

The overall budget outlined in this report is based on the terms and conditions of Article 3 (Project Funding) in the Project Agreement for Funding and Administration (PAFA). The cost curve is based on Exhibit 6 of the CA (monthly maximum cumulative compensation amount).

Amounts this period reflects payouts for Construction, Engineering Administration, Right of Way, and Contingency between February 23, 2020 – March 21, 2020.

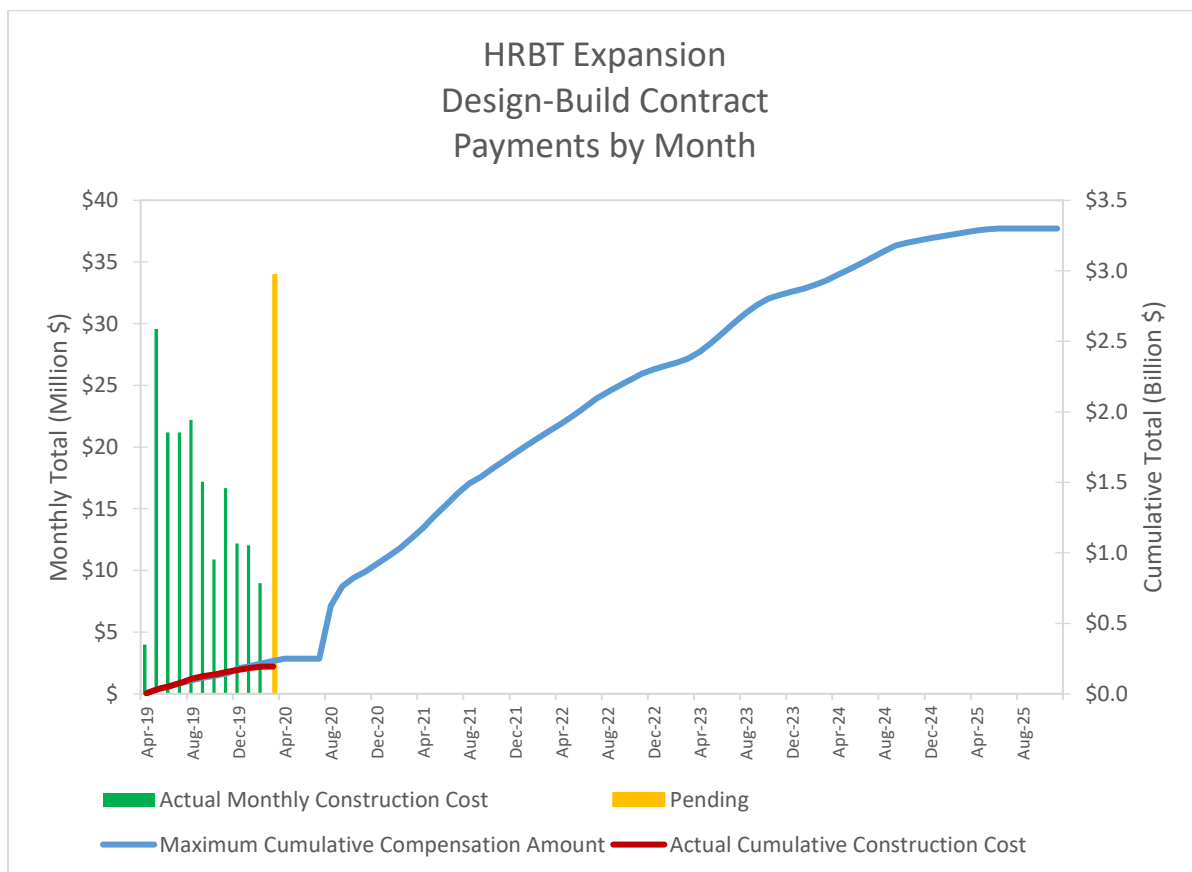
	Amount this period:	Total to Date:	Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<u>Comprehensive Agreement</u>					
Construction	\$8,974,417.61	\$176,108,677.48	\$3,296,997,227.19	\$3,120,888,549.71	5.34%
Owner Costs					
Administration	\$816,344.31	\$6,997,782.59	\$122,000,000.00	\$115,002,217.41	5.74%
Right of Way	\$5,479.29	\$6,360,528.34	\$15,000,000.00	\$8,639,471.66	42.40%
No-Excuses Incentive	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
Contingency	\$0.00	\$4,000,000.00	\$335,000,000.00	\$331,000,000.00	1.19%
Total	\$9,796,241.21	\$193,466,988.41	\$3,858,997,227.19	\$3,665,530,238.78	5.01%



4.2 Design-Build Cost Status

The construction budget and planned cost have been established based on the maximum cumulative compensation amount. For this period, the following tasks are associated with the invoiced expenditures (actual construction cost):

- Project management
- Design surveys
- Environmental permitting
- Geotechnical investigation
- Design work
- Initial payment for TBM procurement



4.3 Budget by Funding Source

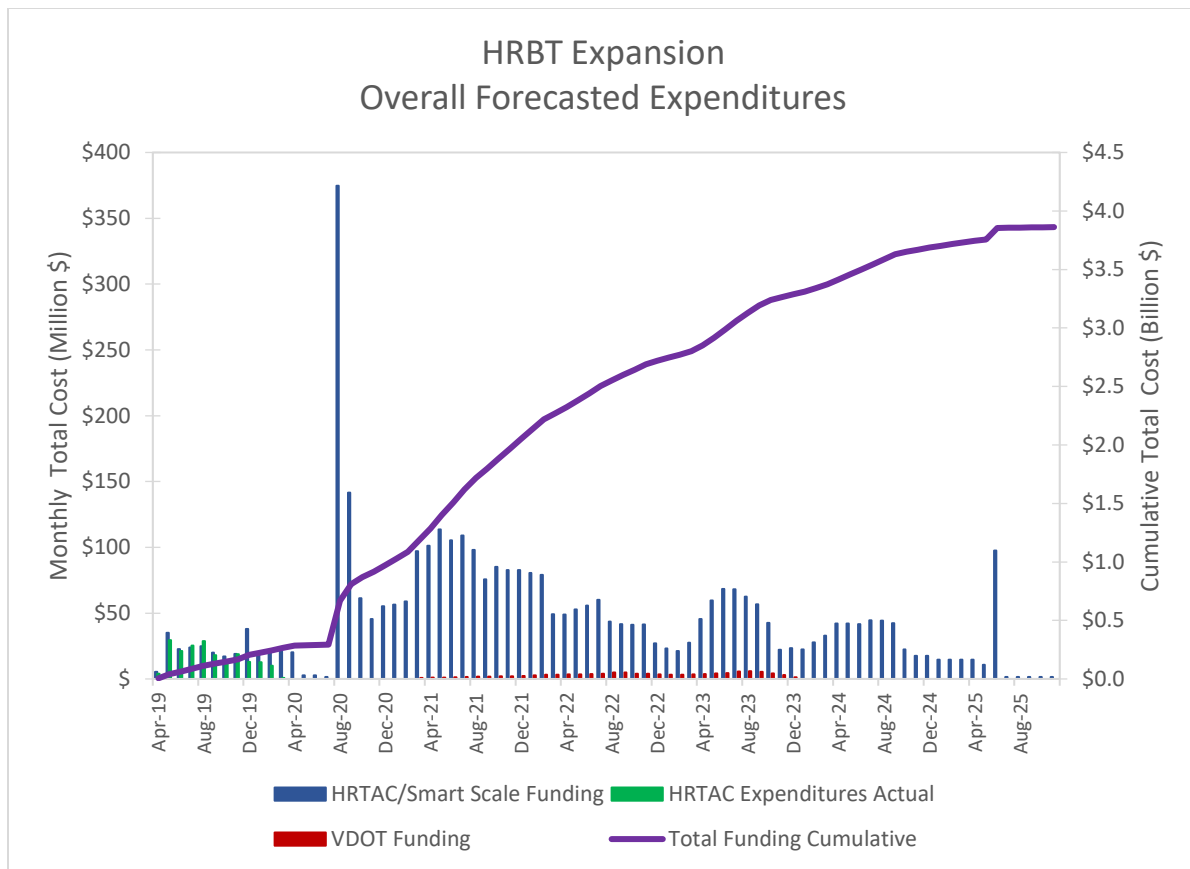
The budget for expenditures by funding source is based on the terms and conditions of Article 3 (Project Funding) and Exhibit 5 of the PAFA. This section outlines planned expenditures by both HRTAC and VDOT. The cost curve has been developed based on the monthly maximum cumulative compensation amount in the CA and will be updated as HRCP refines its design, construction means-and-methods, activity sequences, and project resourcing.

4.3.1 HRTAC and Smart Scale

	Amount this period:	Total to Date:	Total Budget Including Smart Scale:	Total Remaining Budget:	Percent Spent To-date:
<u>Comprehensive Agreement</u>					
Construction	\$8,974,417.61	\$176,108,677.48	\$3,204,569,251.14	\$3,028,460,573.66	5.50%
<u>Owner Costs</u>					
Administration	\$816,344.31	\$6,997,782.59	\$118,472,054.00	\$111,474,271.41	5.91%
Right of Way	\$5,479.29	\$6,360,528.34	\$15,000,000.00	\$8,639,471.66	42.40%
No-Excuses Incentive	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
Contingency	\$0.00	\$4,000,000.00	\$325,428,276.00	\$321,428,276.00	1.23%
Total	\$9,796,241.21	\$193,466,988.41	\$3,753,469,581.14	\$3,560,002,592.73	5.15%

4.3.2 VDOT

	Amount this period:	Total to Date:	Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<u>Comprehensive Agreement</u>					
Construction	\$0.00	\$0.00	\$95,427,976.00	\$95,427,976.00	0.00%
<u>Owner Costs</u>					
Administration	\$5,107.00	\$27,047.00	\$3,527,946.00	\$3,527,946.00	0.77%
Right of Way	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
No-Excuses Incentive	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
Contingency	\$0.00	\$0.00	\$9,571,724.00	\$9,571,724.00	0.00%
Total	\$5,107.00	\$27,047.00	\$108,527,646.00	\$108,527,646.00	0.02%



4.4 Contingency

- 1 work order to date
 - Change Order #1 (executed February 11, 2020): \$3,000,000 reduction in Contract Price due to Department's acquisition of Willoughby Staging Area.
- \$0 material price adjustments (asphalt, steel, & fuel) to date

5. Environmental Management

During this reporting period, HRCP provided responses to RFIs for several applications and consultations including the LOA request from NOAA, Section 7 consultation from USFWS and NOAA, and JPA from the USACE, as well as multiple informal requests for information from DEQ and VMRC. HRCP also submitted a complete toxicity report in support of the VPDES application. In addition, the Notice of Proposed IHA was published in the Federal Register on March 20, 2020. Publication in the Federal Register begins a public comment period that ends on April 20, 2020. HRCP coordination with USACE, VMRC, DEQ, NOAA, and USFWS are ongoing and will continue until the respective permits or approvals are issued.

HRCP has secured contractors to assist with the Nesting Bird Management Plan; and implementation of management measures on the South Island, as outlined in the management plan, was initiated. HRCP continues to coordinate with VDOT concerning revisions to the limits of disturbance, proposed site work at the Willoughby Parcel, DEQ discharge permitting for the bridge/tunnel construction, updates to the Stormwater Pollution Prevention Plan (SWPPP), and modification to the Construction General Permit (VAR10L793).

6. Operations

Field activities continued this period to support early design and utility relocation efforts. Shoulder closures and lane closures were conducted for geotechnical exploration and survey work. Corridor-wide field inspections were also performed for existing drainage structures. Landside geotechnical borings are 90% complete.

Marine geotechnical explorations continued. Two self-propelled lift boats, three smaller barges, and a tug supported spud barge are mobilized to complete the more than 400 marine borings along the HRBT trestle bridges and Willoughby Bay Bridge. This program is expected to last through April 2020.

Other geotechnical investigations in wetlands governed by the NW-6 permit continued during this period. This work requires the use of a mud buggy/track rig to access boring locations located in environmentally sensitive areas.

A pump test was performed on the South Island in order to determine certain parameters related to the existing ground water to aid in planning for excavation during construction.

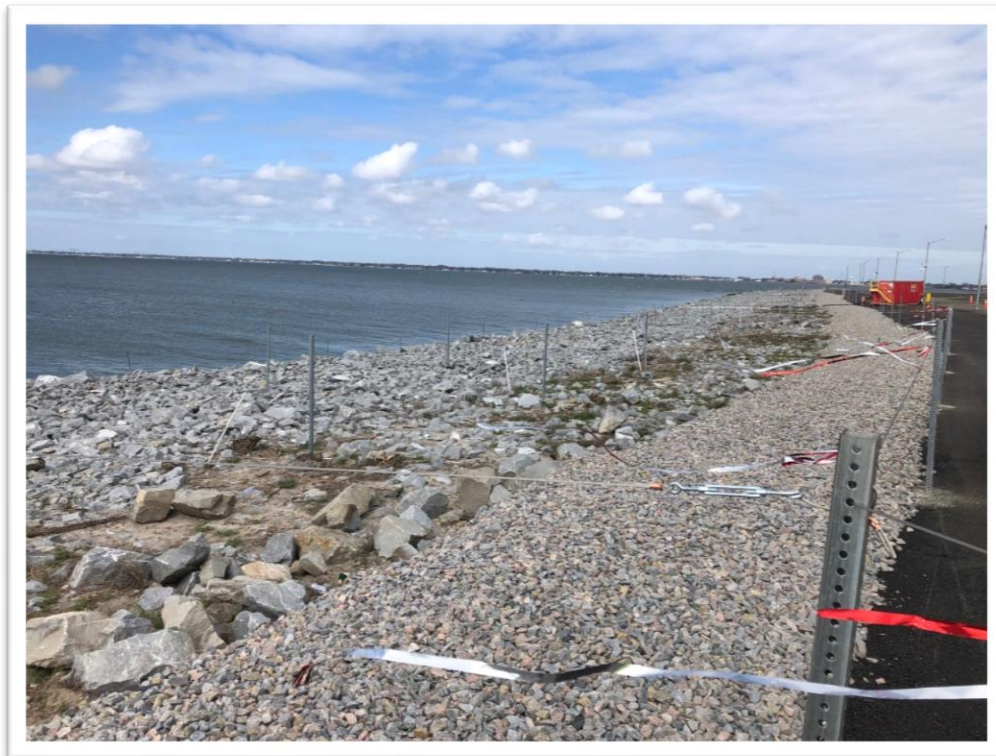
Demolition of the existing metal building at the Willoughby Spit Parcel was completed by the Department prior to execution of the MOU that will give HRCP access to this area. The area is expected to serve as a lay down yard and field office complex during construction.



Demolition of the existing metal building at the Willoughby Spit Parcel

Temporary fencing was installed adjacent to the existing EB tunnel open approach on the South Island to facilitate upcoming installation of the site office trailers. The safety fence eliminates the need for fall protection when working adjacent to the walls. More permanent fencing will be installed on the walls in the coming month.

During this period, HRCP began to install measures on the South Island to deter the roosting of birds during construction. This work will be complete in advance of the April 1, 2020 bird season.



Implementation of HRCP's Bird Management Plan

VDOT's project team maintains close coordination with the Hampton Roads Harbor Tunnels (HRHT) facility staff in order to communicate ongoing project work as well as coordinate upcoming planned work at the facility.

The weekly coordination meeting between VDOT and HRCP continues to provide a forecast of upcoming field activities and ensures concurrent activities are properly coordinated. All field work and traffic impacts are being reported through VDOT's Lane Closure Advisory Management System (LCAMS), which enables coordinating traffic operations across the region.

7. DBE & SWaM Business Activities

During the reporting period, HRCP's recruiting efforts resulted in contracts with 82 DBW/SWaM firms representing about \$22.6 million in contract awards. Both VDOT and HRCP continued to receive requests for briefings about opportunities on the project. The Design-Build remained in compliance with contract Civil Rights requirements.

On an annual basis HRCP must submit a DBE/SWaM Utilization Plan and Workforce Participation Plan. These plans were approved by VDOT. Both plans serve as guides for administering the company's internal and external civil rights programs on the project.

VDOT Civil Rights Manager and HRCP DBE/SWaM Manager participated in Governor Northam's Community Forum held in Norfolk on March 2, 2020, one of five scheduled across the state. The Governor introduced Virginia's first Chief Diversity Officer charged with developing a sustainable framework to promote inclusive practices across state government and implementing a strategic plan to address systemic inequities. Input from external stakeholders and community leaders were solicited for the creation of a statewide equity policy.

VDOT and HRCP hosted the Monthly Civil Rights Compliance Meeting on March 17, 2020. Attendees included representatives from VDOT, HRCP, and DBE/SWaM firms supporting the compliance program (TreKnot, Business Transformation Group, and A. Bruce Williams & Associates). Discussions included the following: COVID-19 Engagement Project Protocols, DBE Opportunity Debriefing Updates, HRBT Expansion Career Opportunity Fair Update; Proposed Community Roundtable, Bonding Education Program Wrap-up, DJV Payment Provision, and a Proposed Online Compliance System.

8. Public Outreach

February 24, 2020 – VDOT presented the HRBT Expansion Project Update to THRIVE, the young professionals' leadership group of the Hampton Roads Chamber of Commerce.

February 27, 2020 – Executive leadership of VDOT and HRCP jointly hosted the inaugural HRBT Expansion Project Stakeholders Committee meeting at The Regional Building in Chesapeake. The committee consists of key community, military, industry and maritime leaders directly impacted by the expansion work. These leaders will serve as advisors to the HRBT Expansion team, keeping them abreast of challenges, suggesting solutions, and serving as public ambassadors for the project.



Project Director Jim Utterback addresses the first meeting of the HRBT Expansion Project's Stakeholders Committee in Chesapeake on February 27.

Committee members include leadership from the United States Navy, United States Coast Guard, Hampton Roads Transportation Accountability Commission (HRTAC), Hampton Roads Transportation Planning Organization (HRTPO), Hampton Roads Chamber, City of Norfolk, City of Hampton, Hampton Roads Military and Federal Facilities Alliance (HRMFFA), Port of Virginia, Virginia State Police, Federal Highway Administration (FHWA), Virginia Maritime Association (VMA), Huntington-Ingalls and Hampton University.

HRBT Expansion Project Director Jim Utterback provided an overview of the project, and other team members presented the construction timeline and communications strategies. Stakeholders provided feedback and made suggestions in areas such as workforce, maritime traffic, communication with localities, and even a contest to name the Tunnel Boring Machine. Stakeholders commended the HRBT Team on its communications efforts to date.

The Stakeholders Committee meets quarterly. The next meeting is scheduled for late spring.

March 2, 2020 – Project Director Jim Utterback met with the city managers of Norfolk and Hampton to review the latest project details and to discuss right of way impacts for the two cities. These meetings occur on a quarterly basis to address any concerns and to provide expansion updates.

March 2, 2020 – At the Elizabeth Park Civic League's March 2, 2020 meeting in Norfolk, VDOT presented the project update and answered questions, most of which centered on the Tunnel Boring Machine (TBM) method of construction.



Communications Manager Paula Miller with members of the Elizabeth Park Civic League in Norfolk.