



December 2022
Monthly Project Report
I-64 HAMPTON ROADS
BRIDGE-TUNNEL
EXPANSION

Report No. 45

Project No. 0064-M06-032



Table of Contents

1. Executive Summary	1
1.1 Overview.....	1
1.2 Priorities.....	1
1.3 Key Updates	2
2. Project Schedule	6
2.1 Schedule Status	6
2.2 Longest Path.....	6
2.3 Impact Analysis	7
3. Project Budget	9
3.1 Overall Budget.....	9
3.2 Design-Build Contract Cost Status	11
3.3 Budget by Funding Source	12
3.4 Contingency.....	13
4. Environmental	16
5. Construction	17
5.1 Construction Area 1: Landside Roadways	18
5.2 Construction Area 2: Marine Trestle Work	19
5.3 Construction Area 3: Tunnels and Islands	20
5.4 Construction Area 4: Landside Bridges.....	21
6. Operations	23
7. Quality	24
8. Safety	25
9. Civil Rights & DBE/SWaM Business Opportunities	26
10. Public Outreach & Media	28

Issue Date: January 18, 2023

Prepared by:

Virginia Department of Transportation

www.hrbtextension.org

1. Executive Summary

1.1 Overview

This report provides an overview of accomplishments and activities for the Hampton Roads Bridge-Tunnel Expansion Project from November 20, 2022 – December 10, 2022. The Design-Builder for the project is Hampton Roads Connector Partners (HRCP), a consortium that includes lead contractors Dragados, Vinci, Flatiron, and Dodin Campenon Bernard, with lead designers HDR and Mott MacDonald.

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.

During this reporting period, project accomplishments included the following:

- South Island Progress:
 - Completed jet grouting operations at tunnel approach plug.
 - Headwall installation at Cell 1 launch pit to 87%.
 - Launching pit base slab to 90%.
 - Completed installing TBM maindrive.
- Tunnel Progress:
 - Precast tunnel segment liner production to 43%.
 - Completed assembly of de-sanding unit for slurry treatment plant.
- North Island Progress:
 - Completed field trial program for jet grouting.
- Landside Progress:
 - Completed placing cap pedestal concrete for Willoughby Bay Bridge eastbound widening.
 - Completed sound wall posts 4-6 installation between Bay Ave. and Evans St. for eastbound widening.
- Marine Progress:
 - North Trestle eastbound beams to 55%.
 - North Trestle eastbound decks to 26%.
 - North Trestle westbound piles to 14%.
 - South Trestle beams to 4%.

1.2 Priorities

VDOT'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.

1.3 Key Updates

Project Schedule

The last approved schedule for the project is Update 40 (data date: November 20, 2022), and the schedule information in this report reflects this update.

- Contractual Substantial and Final Completion Dates remain unchanged.
- HRCP's Schedule Update 40 is reporting Substantial Completion date of August 31, 2026.
- HRCP's Schedule Update 40 is reporting Final Completion date of October 30, 2026.

Project Budget

The project budget summary below now includes all incurred to date costs through December 10, 2022 and does not include forecasted cost outside of the reporting period.

- Project budget overview:

Current total project budget:	\$	3,935,451,641
Total costs to date:	\$	1,638,599,888
Remaining project budget:	\$	2,296,851,752

- Design-build contract overview:

Design-build contract original amount:	\$	3,299,997,227
Net change orders:	\$	4,718,413
Exercised Options:	\$	73,454,414
Design-build contract sum to date:	\$	3,378,170,054
Expenditures to date:	\$	1,561,112,082
Remaining design-build contract amount:	\$	1,817,057,972

- Design-build progress to date:

Project Management:	53.0%
Design:	89.6%
Physical Construction Progress:	28.4%
Overall:	46.2%

Environmental

Environmental updates for this reporting period include:

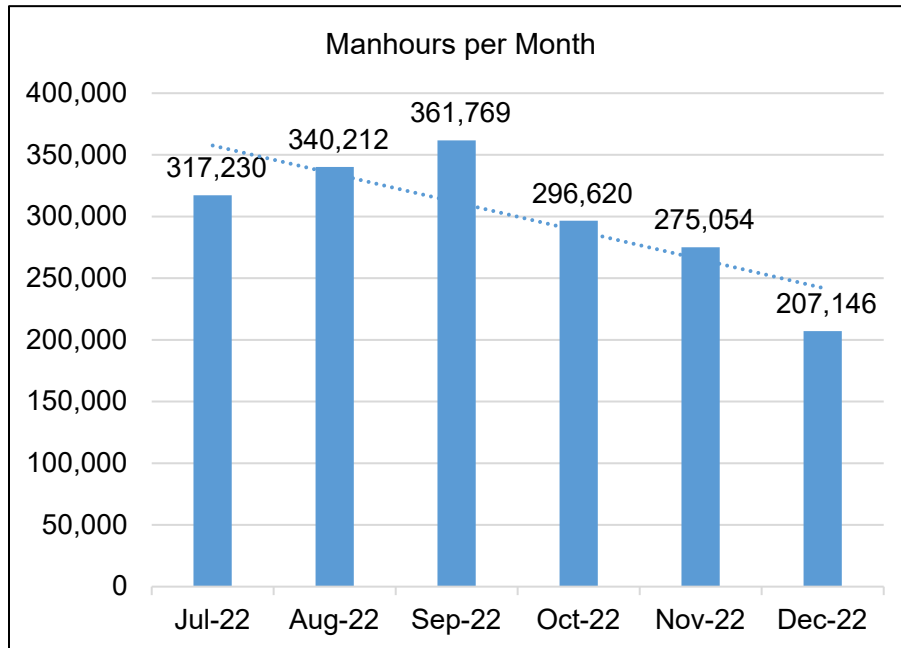
- DEQ issued air permit for the South Island concrete batch plant.
- HRCP submitted permit modification #9 to the agencies on December 14, 2022.

Construction

Progress updates for this reporting period include:

- Landside Roadways
 - Began Blue Crab substation rough grading.
 - Completed excavation/grading and began setting panels for retaining walls 103A and BC02 near Mallory St.
 - Completed sound wall posts 4-6 installation between Bay Ave. and Evans St. for eastbound widening.
- Marine Works
 - Set beams at the North eastbound MOT trestle (4 installed this period).
 - Placed deck at the North eastbound MOT trestle (1 installed this period).
 - Set beams at the North eastbound permanent trestle (6 installed this period).
 - Placed decks at the North eastbound permanent trestle (2 installed this period).
 - Drove piles at the North westbound permanent trestle (5 installed this period).
 - Drove piles at the South eastbound MOT trestle (2 installed this period).
 - Placed cap at the South eastbound MOT trestle (1 installed this period).
 - Set beams at the South eastbound MOT trestle (6 installed this period).
 - Placed decks at the South eastbound MOT trestle (3 installed this period).
 - Drove piles at the South westbound MOT trestle (5 installed this period).
 - Placed cap at the South eastbound permanent trestle (1 installed this period).
 - Set beams at the South eastbound permanent trestle (10 installed this period).
- Tunnels and Islands
 - Completed jet grouting operations at the tunnel approach.
 - Completed waterproofing installation for launching pit base slab at the South Island.
 - Completed field trial program for jet grouting at the North Island.
 - Completed installing TBM main drive at Cell 1 launching pit.
 - Completed assembly of de-sanding unit for slurry treatment plant.
- Landside Bridges
 - Completed placing concrete for cap pedestal at Willoughby Bay Bridge eastbound widening.
 - Began structure excavation at 4th View St. Bridge abutment B for eastbound widening.
 - Began and completed structure excavation at 4th View St. Bridge Pier 2 for eastbound widening.
 - Began and completed structure excavation for 1st View St. Bridge abutment A for eastbound widening.

The number of construction manhours worked each month is provided by HRCP and is current as of December 31, 2022:



Project Manhours to Date:
6,033,053

Operations

The following operations activities took place during this reporting period:

- New long term lane closure in Norfolk near 4th View St. to facilitate bridge widening.
- New long-term detour at Bay Ave. Bridge eastbound on-ramp to facilitate bridge widening.

Quality

Quality updates for this reporting period include:

- VDOT reviewed Construction Quality Management Plan (CQMP) updates for one Notice of Design Change (NDC) package this period.
- VDOT reviewed 25 Non-Conformance Reports (NCRs) for concurrence.
- VDOT continues to monitor HRCP's QA and QC material testing. VDOT also performed Independent Testing and Verification Testing on materials in accordance with VDOT requirements and coordinated with VDOT Materials Division for shop inspections as required.
- VDOT continues to engage HRCP in discussions on HRCP's implementation of their Quality Management System Plan (QMSP) and the effectiveness of the plan.

Safety

Safety procedures and activities during this reporting period include:

- HRCP met with the City of Norfolk and Hampton fire departments to plan for tunnel rescue scenarios.
- VDOT and HRCP continue collaboration on emergency response planning, with HRCP preparing a tabletop exercise for its severe weather response plan.

The following safety performance indicator information is provided by HRCP and is current as of December 31, 2022:

- Total Recordable Incidence Rate: 1.62 (National Average: 2.5)
- Lost Time Incidence Rate: 0.17 (National Average 1.6)

Civil Rights & DBE/SWaM Business Opportunities

HRCP has awarded **325** subcontracts, subconsultant agreements, and purchase orders to certified DBE/SWaM firms on the project. These contract awards represent a total of **\$493.6 million** to certified DBE/SWaM firms.

- HRCP continued to make progress towards the 80 participant On-the-Job Training (OJT) contract goal. To date, 26 participants have completed all required training hours to graduate from the OJT program.
- VDOT and HRCP participated in business development and outreach events including the Black BRAND B-Force Accelerator Program and “It Takes a District: Hampton Roads Opportunity Session and Opportunity Event.”

Public Outreach & Media

Public outreach and project media updates provided by VDOT and HRCP for this reporting period include:

- Project Team hosted site visit with Hampton University engineering students and staff.
- Project Team released November 2022 project newsletter.
- WAVY-10 published a story titled, “I-64 on-ramp at West Bay Avenue to close for HRBT construction.”

2. Project Schedule

2.1 Schedule Status

The following table depicts key milestone dates for the project and has been updated as of the current approved schedule. The last approved schedule for the project is Update 40 (data date: November 20, 2022), and the schedule information in this report reflects this update. Update 40 projects substantial completion on August 31, 2026, and final completion on October 30, 2026. Contractual Substantial and Final Completion dates remain unchanged.

	Contract Requirement	November 2022 Schedule	Actual
NTP		Sep 11, 2020	Sep 11, 2020
Substantial Completion	Sep 1, 2025	Aug 31, 2026	
Final Completion	Nov 1, 2025	Oct 30, 2026	

2.2 Longest Path

The longest path/critical path in Project Schedule Update 40 is driven by the following activities:

- Assembly of the Tunnel Boring Machine (TBM) in launching pit
- TBM Commissioning
- TBM drive in High Occupancy Toll Tunnel
- TBM U-Turn on North Island
- TBM drive in General Purpose Tunnel
- TBM Disassembly in south pit
- South Portal Cut and Cover Structures – Phase 4 Cell 1
- South Island Ventilation Building and Gate House – Phase 2
- South Ventilation Building Commissioning
- South Island Buildings Integrated Functional Testing
- Tunnel Systems Integration – ITS
- Commissioning – High Occupancy Toll and General Purpose Operational Testing
- Commissioning – Tunnel, Buildings, Roadways, and Trestles Integration Testing
- ITT Reversal
- Substantial Completion

2.3 Impact Analysis

Several elements of work are near-critical and could affect schedule performance if they are not addressed diligently. VDOT 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 Schedule Update 40:

South Portal

- South Portal Cut and Cover Structures – Phase 2, 5 and 6
- General Purpose Tunnel – Interior Structures Construction

South Island

- South Island – Slurry Treatment Plant – Complete Filter Press Area, Bi-Component Plant, Utility Surface Piping and Building
- South Island – Slurry Treatment Plant Commissioning
- South Island – Additional Conveyor and Quay Mooring Piles and Fenders
- South Island – Northside Expansion – Clear Cluster 109
- South Island – Rectilinear Approach – Jet Grouting
- South Island – Vent Building Construction – Phase 1

Tunneling

- South Portal Tri-Cell – TBM Shield Assembly – Thrust Frame Spreader Beam
- Tunnel Boring Machine – Gantry 1,2, and 4 Final Assembly in Tri-Cell

North Island

- North Portal – Phase 3 and 4 – Tunnel Construction
- North Island – Ventilation Building – Phase 2 Cell 1 – Construction

Roadway and Land Bridges

- Segment 1 Phase 1 – I-64 North Shore Roadway, Drainage, RW103A, RW02, RW105A, and RW108
- Segment 1 – Shore Feeder MV Cable Relocation
- Segment 3 Phase 1,2,4 – ITS – Lane Use Signals (LUS), Overhead Sign Structure (OHSS), Dynamic Messaging Sign (DMS), and Overheight Detector
- Segment 3b Phase 1,2,3A – I-64 Willoughby Spit PV Drains/Ground Improvement, Retaining Walls, Drainage, Roadway, Permeant Barrier Wall, and Temporary Lighting
- Segment 3b Phase 4 – 13th Avenue Ramp F Construction
- Segment 3d Phase 1,2A, 3 – Willoughby Bridge to Mason Creek - Median Widening, Retaining Walls, Storm Drainage, Roadway, and Temporary Lighting
- Segment 3d Phase 1 – ITS – Butterfly Structure Construction, Overheight Detector, OHSS
- Segment 3d 4th View Ramp H – Surcharge and Ramp Construction
- Segment 4 Phase 2, 3, 4 – Norfolk to Navy - Median Widening, Retaining Walls, Storm Drainage, and Roadway
- 13th Ave (Bayville) – Eastbound Abutment A, B and Median Piers Construction
- Willoughby Bridge – Eastbound Lighting and Abutment A Construction

- Willoughby Bridge Stage 1 Phase 2, 3A – Eastbound/Westbound Superstructure Construction
- 4th View – Eastbound Abutment B and Median Piers
- Bay Avenue Bridge – Eastbound Ramp BA – Unit 10 Construction
- Bay Avenue Bridge – Westbound Substructure and Superstructure Construction
- Evans Street Bridge – Eastbound Abutment A Construction, Eastbound /Westbound Rehabilitation
- Bayview Blvd Bridge -Eastbound/Westbound Rehabilitation
- Patrol Road Bridge – Eastbound Substructure and Superstructure Construction

Trestles

- North Trestle – Zone 1 Eastbound Abutment Construction
- North Trestle – Zone 8, 9 and 10 - Substructure and Superstructure Construction
- North Trestle – Eastbound Demolition
- South Island Expansion – Marine Works, Land Works, and Island Expansion
- South Trestle – Zone 1 Abutment D Construction
- South Trestle – Zone 3 Substructure and Superstructure Construction and Lighting
- South Trestle – Zone 5 Superstructure Construction
- South Trestle – Zone 7, 8, and 9 Substructure and Superstructure Construction
- South Trestle – Existing Trestle Demolition

Commissioning and Integration

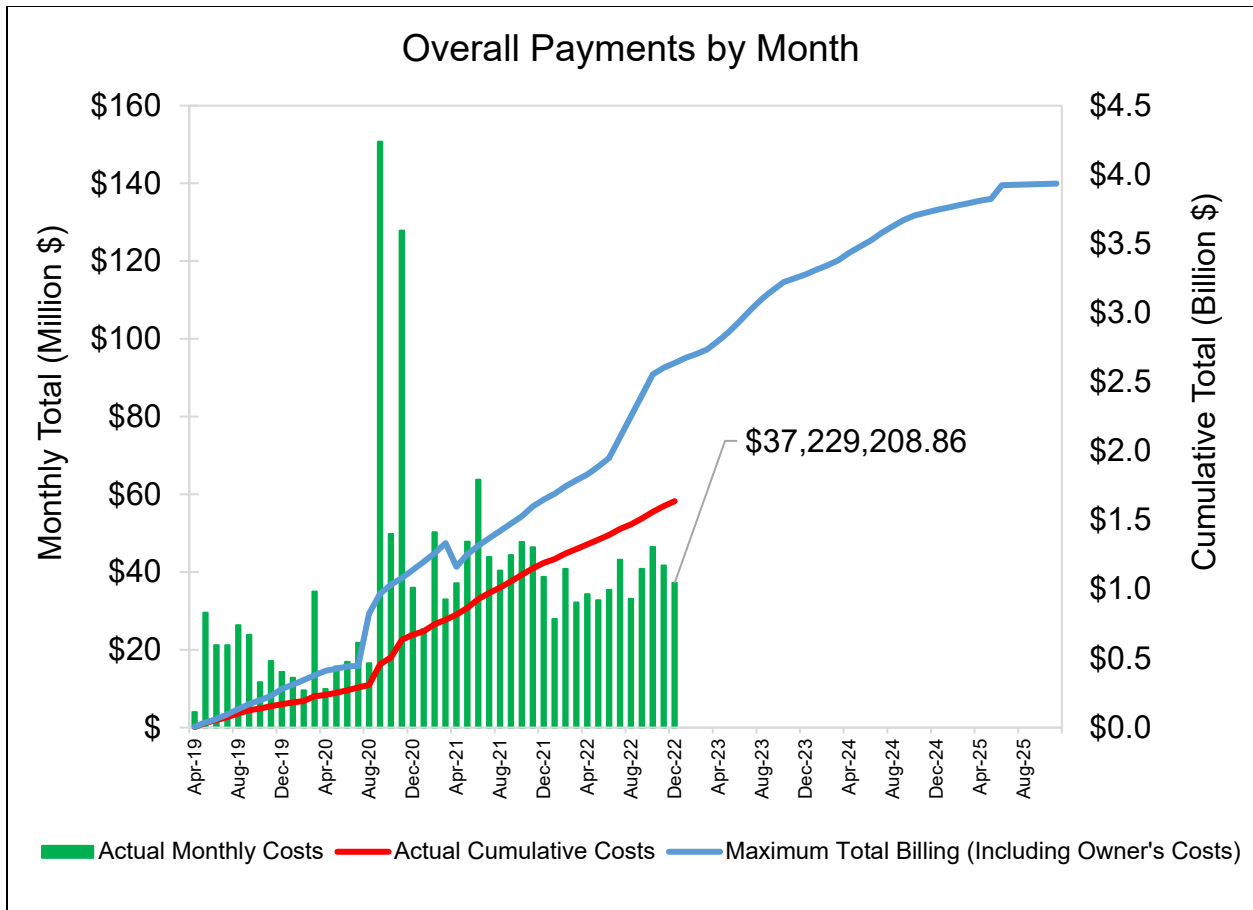
- General Purpose Tunnel – Functional Testing – Low Point Pump Station Drainage, Fire Suppression and Detection, Booster Fans, Lighting
- North Island Buildings – Functional Testing – Mechanical Pressurization
- South Island Buildings – Functional Testing – Electrical Medium Voltage/Low Voltage
- Commissioning – Operational Testing – General Purpose Fire System, General Purpose Medium Voltage/Low Voltage, General Purpose Drainage System

3. Project Budget

3.1 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 Comprehensive Agreement (monthly maximum cumulative compensation amount).

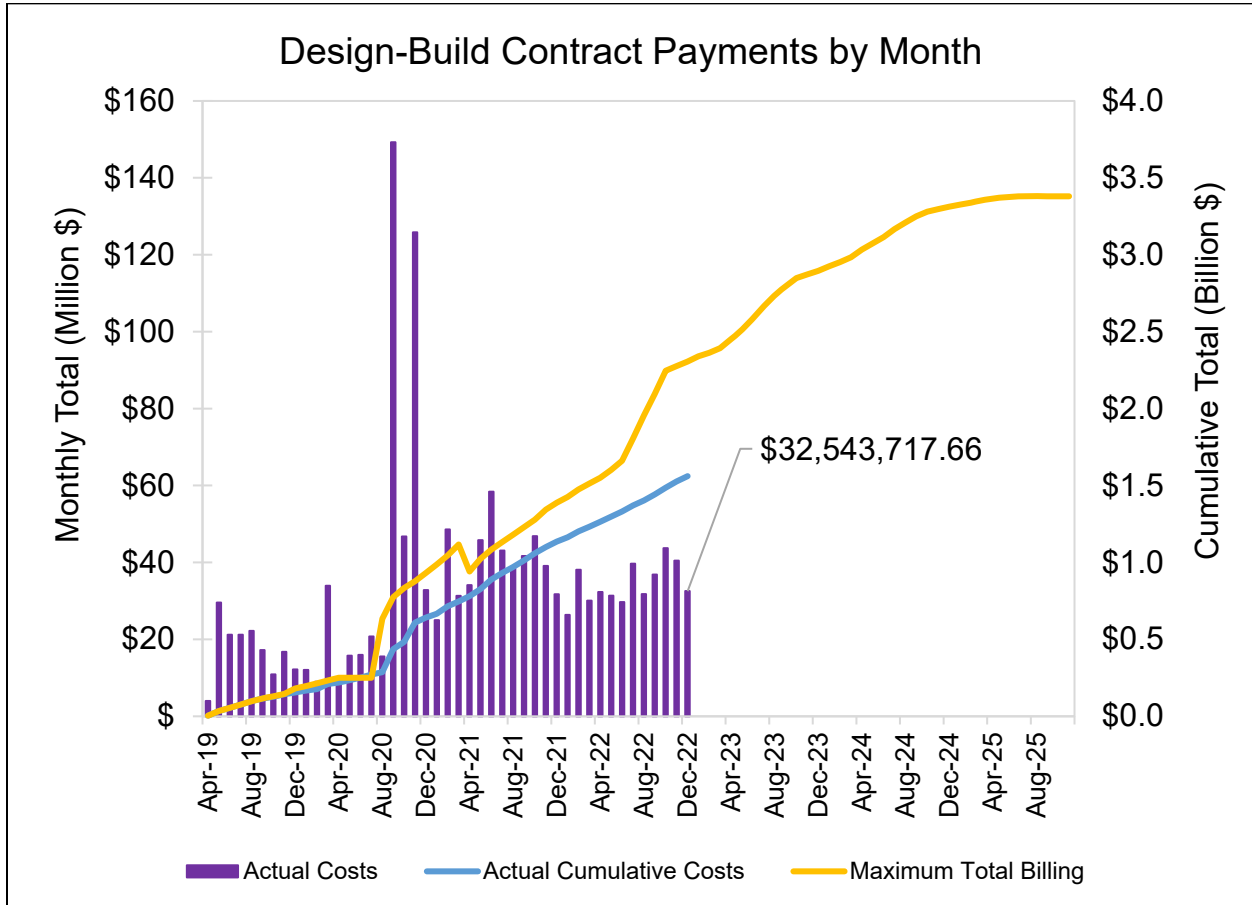
	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<u>Comprehensive Agreement</u>					
<i>Construction</i>	\$32,543,717.66	\$1,538,859,908.92	\$3,299,997,227.00	\$1,761,137,318.08	46.63%
<u>Owner Costs</u>					
<i>Administration</i>	\$3,127,957.48	\$64,792,886.41	\$122,000,000.00	\$57,207,113.59	53.11%
<i>Right of Way</i>	\$20,729.60	\$8,694,919.70	\$15,000,000.00	\$6,305,080.30	57.97%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$1,114,363.13	\$23,497,813.30	\$335,000,000.00	\$311,502,186.70	7.01%
<i>Bridge Repair Work Option</i>	\$422,440.99	\$2,754,360.14	\$73,454,413.96	\$70,700,053.82	3.75%
<u>Total</u>	\$37,229,208.86	\$1,638,599,888.47	\$3,935,451,640.96	\$2,296,851,752.49	41.64%



**The Maximum Total Billing is now showing an adjustment in May 2021 due to the executed Change Order #40 – Update Maximum Cumulative Cost Curve*

3.2 Design-Build Contract Cost Status

The budget and planned cost have been established based on the maximum cumulative compensation amount. For this period, the invoiced expenditures cover the activities noted in this report.



**The Maximum Total Billing is now showing an adjustment in May 2021 due to the executed Change Order #40 – Update Maximum Cumulative Cost Curve*

3.3 Budget by Funding Source

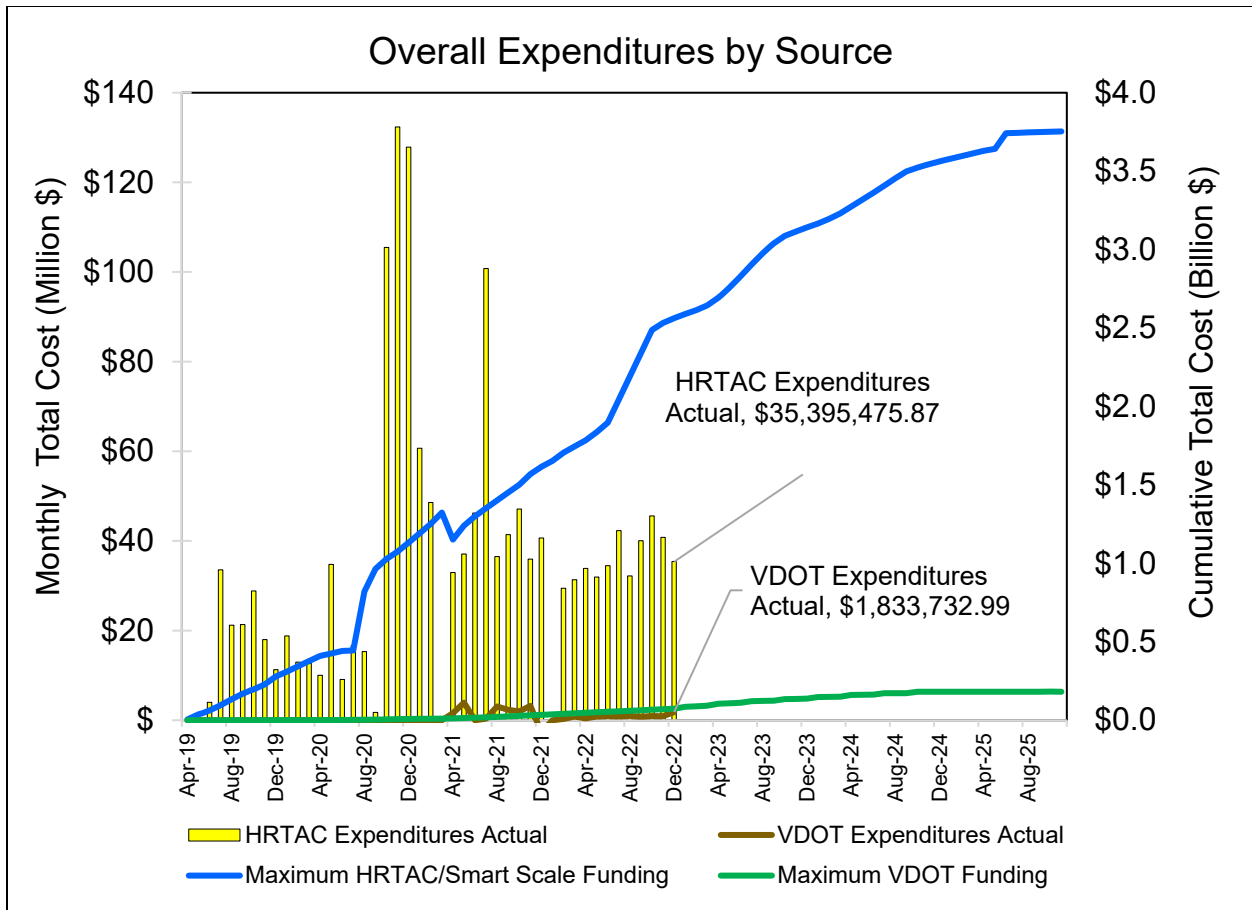
The budget for expenditures by funding source is based on the terms and conditions of Article 3 (Project Funding) and Exhibit 5 of the PAFA. This section outlines planned expenditures of both HRTAC and VDOT funds. The cost curve has been developed based on the monthly maximum cumulative compensation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

3.3.1 HRTAC and Smart Scale

	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<u>Comprehensive Agreement</u>					
<i>Construction</i>	\$31,141,640.66	\$1,522,217,354.16	\$3,204,569,251.00	\$1,682,351,896.84	47.50%
<u>Owner Costs</u>					
<i>Administration</i>	\$3,118,742.48	\$63,126,422.41	\$118,472,054.00	\$55,345,631.59	53.28%
<i>Right of Way</i>	\$20,729.60	\$8,694,919.70	\$15,000,000.00	\$6,305,080.30	57.97%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$1,114,363.13	\$22,512,847.17	\$325,428,276.00	\$302,915,428.83	6.92%
<u>Total</u>	\$35,395,475.87	\$1,616,551,543.44	\$3,753,469,581.00	\$2,136,918,037.56	43.07%

3.3.2 VDOT

	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<u>Comprehensive Agreement</u>					
<i>Construction</i>	\$1,402,077.00	\$16,642,554.76	\$95,427,976.00	\$78,785,421.24	17.44%
<u>Owner Costs</u>					
<i>Administration</i>	\$9,215.00	\$1,666,464.00	\$3,527,946.00	\$1,861,482.00	47.24%
<i>Right of Way</i>	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
<i>Contingency</i>	\$0.00	\$984,966.13	\$9,571,724.00	\$8,586,757.87	10.29%
<i>Bridge Repair Work Option</i>	\$422,440.99	\$2,754,360.14	\$73,454,413.96	\$70,700,053.82	3.75%
<u>Total</u>	\$1,833,732.99	\$22,048,345.03	\$181,982,059.96	\$159,933,714.93	12.12%



3.4 Contingency

3.4.1 Contract Changes

	Description	Date	Value	Time
CO-1	VDOT's Acquisition of Willoughby Staging Area	2/11/2020	\$ (3,000,000.00)	0 days
CO-2	Minor Revisions to Technical Requirements	3/18/2020	\$ -	0 days
CO-3	Tunnel Approach Structure Support of Excavation Requirements Refinement	4/28/2020	\$ -	0 days
CO-4	Dispute Resolution Board (DRB) Allowance	5/12/2020	\$ 200,000.00	0 days
CO-5	North Island Armor Stone Value Engineering Change Proposal (VECP)	4/28/2020	\$ (2,011,117.50)	0 days
CO-6	Exit Ramp at Bayville Avenue	5/29/2020	\$ 46,906.29	0 days
CO-7	Minor revisions to the Technical Requirements	7/16/2020	\$ -	0 days
CO-8	Zero Spread Drainage	9/16/2020	\$ 3,239,212.24	0 days
CO-9	Roadway and Bridge Scope Validation Issues	9/4/2020	\$ 15,516,248.00	0 days
CO-10	Slurry Walls as Permanent Structures	8/28/2020	\$ -	0 days
CO-12	Road and Bridge Lighting Requirements	8/27/2020	\$ 2,495,000.00	0 days
CO-13	Bridge Repair Work-Exercise Option	10/9/2020	\$ 73,454,413.96	0 days
CO-14	Trestle Barrier Form Liner Elimination	7/29/2020	\$ (99,571.80)	0 days
CO-15	South Island Ground Improvement Value Engineering Change Proposal (VECP)	9/17/2020	\$ (5,338,000.00)	0 days

CO-16	Navy Security Fencing Design	7/15/2021	\$ 150,000.00	0 days
CO-17	Westbound ITT Reduced Instrumentation	10/30/2020	\$ (184,277.50)	0 days
CO-18	Willoughby Bay Bridge Barriers	9/10/2020	\$ -	0 days
CO-19	GeoPak Version Software Updates	8/3/2020	\$ -	0 days
CO-21	Material Price Adjustment for Asphalt Materials	2/26/2021	\$ -	0 days
CO-22	South Island Asbestos Conduits	9/16/2020	\$ 81,973.93	0 days
CO-23	Island & Tunnel Baseline Monitoring Requirements	7/22/2020	\$ -	0 days
CO-24	Construction Water Supply	9/10/2020	\$ (609,157.27)	0 days
CO-25	Solids Handling Pumps Requirements	11/12/2020	\$ -	0 days
CO-26	Mass Notification Independent System Requirements	11/12/2020	\$ -	0 days
CO-27	Fixed Fire Fighting System Requirements	11/16/2020	\$ -	0 days
CO-28	HOT Lane Shoulder Width	3/29/2021	\$ 2,950,000.00	0 days
CO-30	Willoughby Bay Bridges Fender & Lighting Replacement	2/12/2021	\$ 1,495,000.00	0 days
CO-31	Builder's Risk Insurance	10/21/2021	\$ 1,500,000.00	0 days
CO-32	VCU Fisheries and SAV Mitigation Plan	4/16/2021	\$ (1,042,144.00)	0 days
CO-33	Tunnel Finishes Height	12/18/2020	\$ -	0 days
CO-38	H-Piles in Aggressive Soils	12/18/2020	\$ (47,541.00)	0 days
CO-39	Re-use of existing drainage pipes	4/20/2021	\$ (100,984.25)	0 days
CO-40	Update Maximum Cumulative Cost Curve	7/15/2021	\$ -	0 days
CO-41	Wetland Mitigation Costs	4/26/2021	\$ 3,503,400.00	0 days
CO-42	Navy Gate 22 Drainage Design and Construction	8/19/2022	\$ 1,524,940.16	0 days
CO-43	Hybrid Trestle Beam Design	7/2/2021	\$ -	0 days
CO-44	SCADA Control of Deluge Valves	7/27/2021	\$ -	0 days
CO-45	HRCF Project Executive/Representative Change	5/24/2021	\$ -	0 days
CO-46	Tunnel Sprinkler Heads Material Change	7/28/2021	\$ -	0 days
CO-47	Evans Street Approach Slab Settlement Repair	6/22/2022	\$ 34,082.83	0 days
CO-48	Scope Reduction – City of Hampton	8/24/2022	\$ (6,072,941.31)	0 days
CO-49	HRCF Senior Representative Change	7/2/2021	\$ -	0 days
CO-50	Change in Precast Form Tolerance & Change in Curing Methods	1/10/2022	\$ -	0 days
CO-53	Sound Wall Quantity Reconciliation	12/6/2021	\$ (16,561,217.63)	0 days
CO-54	4th View Interchange Design and Construction Drainage	8/17/2022	\$ 984,598.45	0 days
CO-55	HREL Overlap Scope Change in Norfolk-Proposal Costs	8/12/2022	\$ 157,237.34	0 days
CO-56	Building Code Changes - Design	10/21/2022	\$ 2,186,150.00	0 days
CO-57	Design-Builder's Senior and Representative Changes	1/11/2022	\$ -	0 days
CO-59	Fisheries and SAV Mitigation Plan - VCU	6/16/2022	\$ (70,238.22)	0 days
CO-60	Navy Fence (remaining design costs)	8/17/2022	\$ 180,142.36	0 days
CO-61	HRELN Tie-In Zero Drainage Spread	11/29/2022	\$ 2,965,469.69	0 days
CO-62	SIP Forms for Marine Bridges	6/28/2022	\$ -	0 days
CO-64	Tolling Infrastructure Proposal Costs	10/21/2022	\$ 645,242.40	0 days
TOTAL			\$ 78,172,827.17	0 days

3.4.2 Material Price Adjustments

This progress period included the following material price adjustments:

Material	Current Amount	Total to Date	Material Price Adjustment Through
Asphalt	\$ 19,305.02	\$ 43,008.88	October 2022
Fuel	\$ 20,640.35	\$ 172,093.87	October 2022
Steel	\$ 429,175.36	\$ 1,794,218.66	June 2022

4. Environmental

The following environmental management activities occurred during this reporting period:

Permits:

- HRCP submitted permit modification #9 to the agencies on December 14, 2022.
- DEQ issued air permit for the South Island concrete plant.
- HRCP and VCU coordinated on the deployment of underwater acoustic monitoring equipment near North Trestle westbound pile driving activities as part of the permit conditions.

Marine Mammal Protection:

- No new activities.

Bird Mitigation:

- No new activities.

Programmatic Agreement:

- No new activities.

Archeological Discoveries:

- VDOT received and is reviewing a draft archaeological report from the William and Mary Center for Archaeological Research covering the 2020 discovery of shipwreck timbers and stone near the North Island expansion area.

5. Construction

The figure below illustrates a map of the project corridor. The project is further categorized into four construction areas.

- Construction Area 1 is composed of landside road work.
- Construction Area 2 is composed of marine work, including the North Trestle, South Trestle, and island expansions.
- Construction Area 3 is composed of tunnel and island site work.
- Construction Area 4 is composed of landside road and bridge work.



5.1 Construction Area 1: Landside Roadways

I-64 (Segment 1):

- Drainage installation along I-64 median south of Mallory St.
- Began Blue Crab substation rough grading.
- Completed excavation/grading and began setting panels for retaining wall 103A and BC02.

I-64 (Segment 3):

- Sewer casing extension installation near Bayville off ramp for eastbound widening.
- Drainage installation near Bayville on ramp for eastbound widening.
- Drainage installation along I-64 off ramp to 4th View St. for eastbound widening.
- Embankment installation between 4th View St. and Mason Creek Rd. for eastbound widening.

I-64 (Segment 4):

- Completed installation sound wall posts 4-6 between Bay Ave. and Evans St. for eastbound widening.
- Sound wall panel 4-6 installation between Bay Ave. and Evans St. for eastbound widening.
- Concrete ditch installation along retaining wall 405A for eastbound widening.



◀ I-64 EB (Segment 4)
Sound wall 4-6 and retaining wall 405A below

5.2 Construction Area 2: Marine Trestle Work

North Trestle:

- **Eastbound MOT Trestle**
 - Completed beam placement.
 - Completed deck placement.
- **Eastbound Trestle**
 - 6 beams placed during this period (163 out of 296 total beams placed).
 - 2 decks placed during this period (9.5 out of 36 total decks placed).
- **Westbound Trestle**
 - 5 piles installed during this period (37 out of 261 total piles driven).

South Trestle:

- **Eastbound MOT Trestle**
 - 2 piles driven during this period (116 out of 118 total piles driven).
 - 1 cap placed during this period (24 out of 26 total caps/footers placed).
 - 6 beams placed during this period (83 out of 95 total beams placed).
 - 3 decks placed during this period (20 out of 25 total decks placed).
- **Westbound MOT Trestle**
 - 5 piles driven during this period (50 out of 109 total piles driven).
- **Eastbound Trestle**
 - 1 cap placed during this period (14.5 out of 70 total caps placed).
 - 10 beams placed during this period (26 out of 698 total beams placed).



◀ North Eastbound MOT Trestle
Beam and deck completion

5.3 Construction Area 3: Tunnels and Islands

South Island:

- Completed jet grouting operations at tunnel approach plug.
- 90% complete for launching pit base slab.
- 98% complete for High Occupancy Toll headwall installation.
- 76% complete for General Purpose headwall installation.
- Completed waterproofing installation for launching pit base slab.
- 11% complete for waterproofing on the launching pit walls.

North Island:

- 73% complete for installing instrumentation and dewatering wells in preparation for receiving pit excavation.

Tunnel:

- 43% complete for precast tunnel segment liner production.
- Completed assembly of de-sanding unit for slurry treatment plant.
- Completed installing TBM main drive.
- Shifted Gantry #1 into launching pit Cell 2.



◀ **South Island**
TBM main drive installation

Total Segments Required:	Conforming Segments Cast To-Date:	Percentage Complete:
21,492	9,163	43%

5.4 Construction Area 4: Landside Bridges

Willoughby Bay Bridge:

- Completed placing cap pedestal concrete for eastbound widening.
- Continued demolition of existing parapet and deck overhang for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.

4th View St Bridge:

- Began structure excavation at abutment B for eastbound widening.
- Began and completed structure excavation at Pier 2 for eastbound widening.

1st View Street Bridge:

- Began and completed structure excavation for abutment A for eastbound widening.
- Began and completed pile driving for abutment A for eastbound widening (36 out of 36 total piles driven).
- Completed concrete placements for Pier 2 footing and columns for eastbound widening (1 out of 2 total piers completed)

Bay Avenue Bridge:

- Placed caps at Bents 3, 9, and 11 for eastbound widening (19.5 out of 34 total caps placed).
- Completed Spans 34, 35, 36, and 40 deck concrete placements for eastbound widening (11 out of 37 total decks placed).
- Continued installation of bridge deck reinforcing steel and edge forms for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.

Bayview Boulevard Bridge:

- Continued repair/rehabilitation of existing eastbound and westbound bridges.

Oastes Creek Bridge:

- Continued installation of stay-in-place deck forms and overhangs for eastbound widening.
- Continued demolition of existing pile jackets for eastbound and westbound bridges.



◀ **Willoughby Bay Bridge**
Eastbound parapet wall
removal for widening work



◀ **Bay Avenue Bridge**
Setting Bent 9 precast cap
for eastbound widening.

6. Operations

Operations activities include shoulder and lane closures, creation and maintenance of Intelligent Transportation System (ITS) architecture, other maintenance within the corridor, coordination with existing VDOT Operations, and communication with the Hampton Roads Harbor Tunnels (HRHT) facility staff. The following operations activities occurred during this reporting period:

Short-Term Lane Closures:

- Willoughby Bay Bridge, North Trestle, and South Trestle eastbound to facilitate ongoing concrete placement for piles, caps, and decks.
- Willoughby Bay Bridge, North Trestle, and South Trestle eastbound for beam placements.
- South Trestle for temporary trestle tie-in.
- Willoughby Bay Bridge and South Trestle for temporary lighting installation.
- Striping maintenance throughout the project corridor.
- Slow roll of I-64 eastbound and westbound near Willoughby to support underdrain installation.

Long-Term Lane Closures:

- Bay Ave. in Norfolk to facilitate access to staging area for widening Oastes Creek Bridge.
- Bayview Blvd. in Norfolk and Mallory St. in Hampton to facilitate bridge widening.
- West Ocean Ave. in Norfolk traffic shift to facilitate bridge widening.
- 4th View St. in Norfolk traffic shift to facilitate bridge widening.

Hampton Lane Shifts:

- No new activities.

Norfolk Lane Shifts:

- No new activities.

Detours:

- Long-term detour at West Evans St. to facilitate bridge widening.
- Long-term detour on West Bay Ave. eastbound on-ramps for bridge widening work.
- Long-term detour at Mason Creek Rd. to facilitate bridge widening.

Intelligent Transportation System (ITS):

- Continued preparatory works for installation of temporary lane-use signal overhead truss structures at the Mallory and Willoughby inspection stations.
- Installation of ITS conduit on the South Trestle.

Routine Maintenance:

- HRCP performed routine incident management and maintenance operations within the corridor, including pavement repairs at several bridge approaches within the corridor.

7. Quality

Quality updates for this reporting period include:

Construction Quality Management Plan (CQMP) Updates:

- VDOT reviews these updates as part of final “Released for Construction” (RFC) design packages and “Notice of Design Change” (NDC) packages. There was 1 NDC update reviewed this period. These updates included specific testing and inspection plans for the work shown in the corresponding RFC plans and a staffing matrix showing quality assurance and quality control staffing for the work.

Independent Assurance (IA) Testing Activities:

- VDOT continues to monitor HRCP’s QA and QC material testing. VDOT also performed Independent Testing and Verification Testing on materials in accordance with VDOT requirements and coordinated with VDOT Materials Department for shop inspections as required. This testing included oversight of the HRCP precast yard in Chesapeake and Technopref’s precast yard in Cape Charles producing the tunnel lining segments.

Quality Management System Plan (QMSP):

- VDOT continues to engage HRCP in discussions on HRCP’s implementation of their QMSP and the effectiveness of the plan, which is updated quarterly.

Quarterly Updates of Quality Plans:

- HRCP resubmitted the quarterly updates of the Quality Management System Plan (QMSP), Construction Quality Management Plan (CQMP), and the Design Quality Management Plan (DQMP) for the third quarter of 2022. VDOT completed the review and returned the DQMP as approved, and the QMSP and CQMP as Revise and Resubmit.
- HRCP continues to update its Tunnel Quality Plan and address VDOT’s comments. VDOT previously reviewed Update 4 and returned the plan to HRCP to revise and resubmit.

Material Book Records:

- VDOT conducted a monthly review of the current records, and HRCP is responding to audit comments provided by VDOT. Review of the Material Book records includes confirming that HRCP is completing the proper documentation for Buy America compliance. VDOT has completed the full audit of ten volumes of Material Book records.

Routine Quality Activities:

- VDOT’s quality team conducted reviews of written deficiency notices (WDNs), non-conformance reports (NCRs), root cause analyses and dispositions of deficiencies, with 25 NCRs reviewed for concurrence during this period. VDOT conducted reviews of QA and QC records for accuracy and quality issues and coordinated documentation reviews through VDOT’s Material Department. VDOT also continues a review of current construction quality by performing inspections based on VDOT’s Construction Quality Improvement Program (CQIP).

8. Safety

Safety procedures and activities during this reporting period include:

Safety Site Visits:

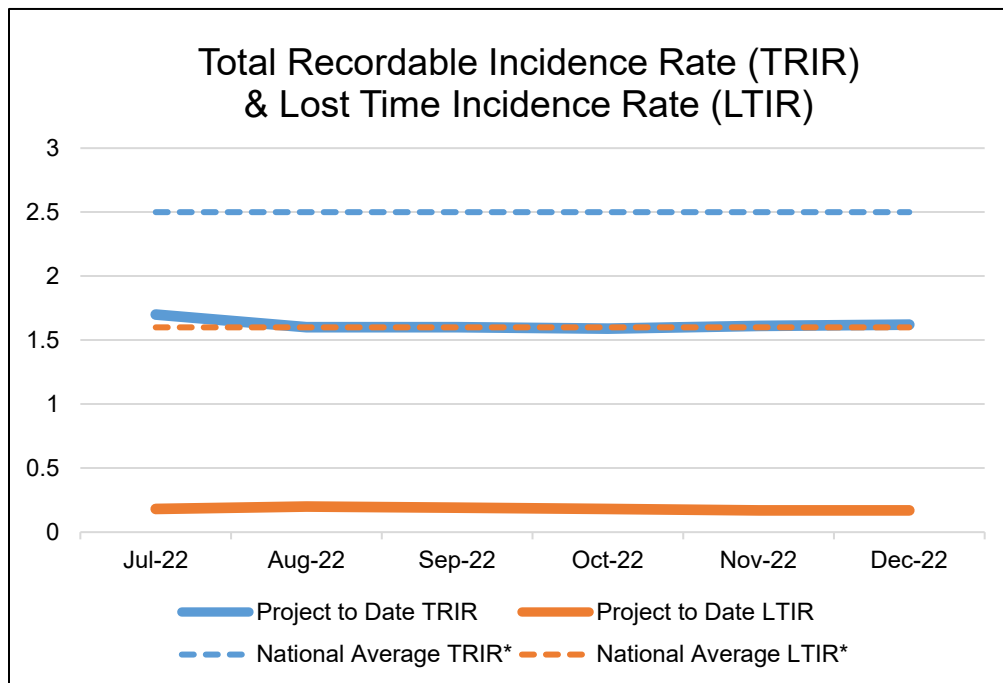
- VDOT continued to conduct routine visits to promote safe work practices throughout the project.

Emergency Response Planning:

- HRCP met with Norfolk and Hampton city fire departments to plan for tunnel rescue scenarios.
- VDOT and HRCP continue collaboration on emergency response planning, with HRCP preparing a tabletop exercise for its severe weather response plan.
- VDOT and HRCP continue collaboration on emergency response planning.

Safety Performance Indicators:

- The following safety performance indicator information is provided by HRCP and is current as of December 31, 2022:



*National averages are from the Bureau of Labor Statistics, US Department of Labor – 2021 Data for Construction Industry, Published November 9, 2022.

9. Civil Rights & DBE/SWaM Business Opportunities

To date, HRCP awarded **325** subcontracts, subconsultant agreements and purchase orders to certified DBE/SWaM firms. There was a slight increase in contract awards for a total of **\$493.6 million** due to change orders issued to active DBE/SWaM firms on the project.

Compliance Activities:

- HRCP and VDOT participated in discussions throughout the reporting period on prompt payment compliance requirements, plans for the on-site portion of the Equal Employment Opportunity contractor compliance review currently underway, and the creation of a tool to close out each subcontractor upon the final completion of their contract with HRCP.

Workforce Development Activities:

- HRCP continued to make progress towards the 80 participant On-the-Job Training (OJT) contract goal. To date, 26 participants have completed required training hours to graduate from the OJT program, with 12 actively enrolled.
- Workforce Participation represents 57% minority and 14% women, which exceeds contract goals.

Business Development Activities:

- VDOT Civil Rights presented to the Hampton Roads Black BRAND B-Force Accelerator Program on December 8, 2022, at the Slover Library in Norfolk. The 12-week program is designed to help prepare local businesses for capital investment while exposing them to capital resources.
- VDOT and HRCP hosted “It Takes a District: Hampton Roads Opportunity Session and Opportunity Event” on December 6, 2022, for DBE and SWaM firms interested in learning about upcoming procurement opportunities across the district and on the HRBT Expansion Project. The event was held at the Norfolk State University campus. Approximately 110 attendees received information about building design and construction solicitations to be advertised for the HRBT Expansion Project. Participants learned how to do business with VDOT and maintenance/operations opportunities available. Other small business resources at the event included USDOT's Small Business Resource Center, Dollar Bank, and Atlantic Union Bank.

HAMPTON ROADS OPPORTUNITY EVENT IT TAKES A DISTRICT
TUESDAY, DECEMBER 6, 2022
8:30 AM - 12:00 PM
 NORFOLK STATE UNIVERSITY STUDENT CENTER, DOROTHY B. BROTHERS AUDITORIUM (ROOM 149)

8:30 AM - 9:00 AM
REGISTRATION AND NETWORKING
 Light Breakfast
 9:00 AM - 9:20 AM

INTRODUCTIONS
 Malcolm Kates, DBE/281AM Compliance Manager, HRCP
 Louis Brails, Project Manager, HRCP
 Justin Moses, Vice President for Operations, Norfolk State University
 Ruby Spoler, Procurement Director, Norfolk State University
 Christopher Hall, District Engineer, VDOT Hampton Roads District
 Darren Brown, Acting Civil Rights Division Administrator, VDOT
 Sean Washington, Interim Director, Department of Economic Development, City of Norfolk

9:20 AM - 10:15 AM
HRBT PROJECT UPDATE
 Melissa Nichols, Procurement Manager, HRCP
 George Mankarous, Building and Services Engineer, HRCP

10:15 AM - 11:15 AM
VDOT HAMPTON ROADS DISTRICT UPDATE
 Queen Crittendon, Hampton Roads District Civil Rights Manager, VDOT
 Kim Cook, Infrastructure Manager, VDOT Hampton Roads District
 Kenneth Reynard, Traffic Operations Director, VDOT Hampton Roads District

11:15 AM - 12:00 PM
NETWORKING

SPEAKERS
 Louis Brails, Project Manager, HRCP
 Darren Brown, Acting Civil Rights Division Administrator, VDOT
 Kim Cook, Infrastructure Manager, VDOT Hampton Roads District
 Queen Crittendon, Hampton Roads District Civil Rights Manager, VDOT
 Christopher Hall, PE, District Engineer, VDOT Hampton Roads District
 Malcolm Kates, DBE/281AM Compliance Manager, HRCP
 George Mankarous, Building and Services Engineer, HRCP
 Justin Moses, Vice President for Operations, Norfolk State University
 Melissa Nichols, Procurement Manager, HRCP
 Kenneth Reynard, Traffic Operations Director, VDOT Hampton Roads District
 Ruby Spoler, Procurement Director, Norfolk State University
 Sean Washington, Interim Director, Department of Economic Development, City of Norfolk



▲ **It Takes a District: Hampton Roads Opportunity Session and Opportunity Event**
Top Left – Agenda

Top Right – Front Left to Right – Melissa Nichols, HRCP; Queen Crittendon, VDOT; Kimberly Cook, VDOT; Malcolm Kates, HRCP. Back Left to Right – Sean Washington, City of Norfolk; Vincent Powell, BTG; Floyd Miller, Metropolitan Business League; Kenneth Reynard, VDOT; and Darren Brown, VDOT

Below – Participants attending the opportunity session held on December 6, 2022

10. Public Outreach & Media

The following public outreach and project media activities occurred in this period:

Public Outreach

- November 29, 2022 – Project team hosted site visit with Hampton University Engineering students and staff

Public Materials

- November 21, 2022 – Project team released November project newsletter

Lane Closures/Advisories

- November 23, 2022 – Weekly Lane Closure Report
- November 28, 2022 – W. Bayview Travel Advisory
 - WAVY-10 published a story titled, “I-64 on-ramp at West Bay Avenue to close for HRBT construction”
- December 2, 2022 – Weekly Lane Closure Report
- December 9, 2022 – Weekly Lane Closure Report

Media

- No new updates.

Visit our website to view more information:
www.hrbtexpansion.org