



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

Report No. 42
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 | 7 |
| 2.1 Schedule Status | 7 |
| 2.2 Longest Path..... | 7 |
| 2.3 Impact Analysis | 8 |
| 3. Project Budget | 10 |
| 3.1 Overall Budget..... | 10 |
| 3.2 Design-Build Contract Cost Status | 12 |
| 3.3 Budget by Funding Source | 13 |
| 3.4 Contingency | 14 |
| 4. Environmental | 17 |
| 5. Construction..... | 18 |
| 5.1 Construction Area 1: Landside Roadways | 19 |
| 5.2 Construction Area 2: Marine Trestle Work | 20 |
| 5.3 Construction Area 3: Tunnels and Islands | 21 |
| 5.4 Construction Area 4: Landside Bridges | 23 |
| 6. Operations..... | 25 |
| 7. Quality..... | 26 |
| 8. Safety..... | 27 |
| 9. Civil Rights & DBE/SWaM Business Opportunities | 28 |
| 10. Public Outreach & Media | 29 |

Issue Date: October 13, 2022

Prepared by:

Virginia Department of Transportation

www.hrbtexpansion.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 August 21, 2022 – September 24, 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:
 - Jet grouting at tunnel approach plug to 60%.
 - Headwall installation at Cell 1 launch pit to 53%.
 - Completed Slurry Treatment Plant foundation slab.
- Tunnel Progress:
 - Precast tunnel segment liner production to 31%.
 - TBM cutterhead assembly and welding to 95%.
 - TBM shield preassembly to 60%.
- North Island Progress:
 - Completed overall installation of slurry walls.
- Landside Progress:
 - Began installation of wall panels for MSE retaining wall between 4th View St. and Mason Creek Rd. for eastbound widening.
 - Completed first deck concrete placements at Bay Ave. Bridge for eastbound widening.
- Marine Progress:
 - North Trestle eastbound caps to 65%.
 - North Trestle eastbound decks to 10%.
 - North Trestle westbound beams to 8%.
 - Permanent South Trestle caps to 7%.
 - Permanent South Trestle beams to 2%.

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 37 (data date: August 21, 2022), and the schedule information in this report reflects this update.

- Contractual Substantial and Final Completion Dates remain unchanged.
- HRCP's Schedule Update 37 is reporting Substantial Completion date of August 25, 2026.
- HRCP's Schedule Update 37 is reporting Final Completion date of October 24, 2026.

Project Budget

The project budget summary below now includes all incurred to date costs through September 24, 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: | \$ 1,513,210,194 |
| Remaining project budget: | \$ 2,422,241,447 |

- Design-build contract overview:

| | |
|--|-------------------------|
| Design-build contract original amount: | \$ 3,299,997,227 |
| Net change orders: | \$ (1,078,449) |
| Exercised Options: | \$ 73,454,414 |
| Design-build contract sum to date: | \$ 3,372,373,192 |
| Expenditures to date: | \$ 1,441,835,377 |
| Remaining design-build contract amount: | \$ 1,930,537,815 |

- Design-build progress to date:

| | |
|---------------------------------|--------------|
| Project Management: | 48.7% |
| Design: | 89.2% |
| Physical Construction Progress: | 25.4% |
| Overall: | 42.8% |

Environmental

During this reporting period, HRCP took the following steps in support of environmental management:

- HRCP submitted JPA permit modification request #8 on August 31, 2022.
- DEQ issued air permits for the North Island and South Island generators.

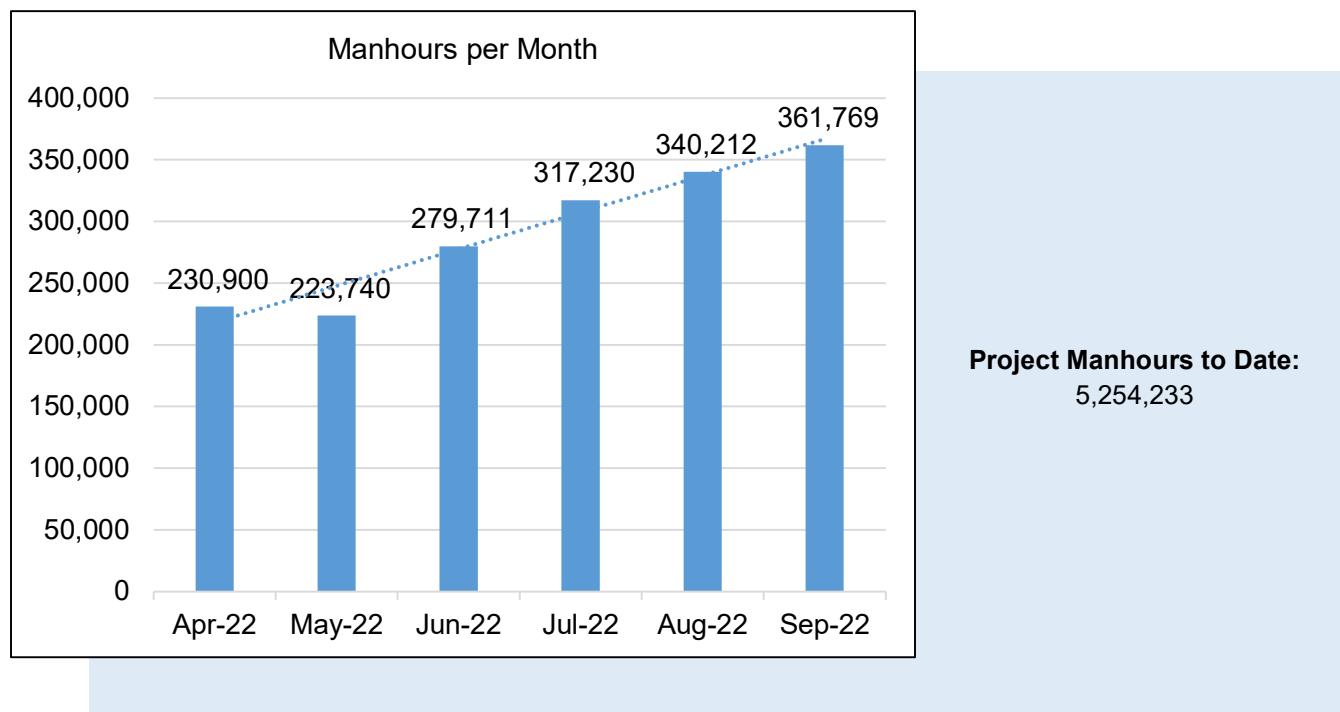
Construction

Progress updates for this reporting period include:

- Landside Roadways
 - Completed restriping for traffic shift along I-64 westbound at Willoughby inspection station.
 - Completed partial permanent paving along I-64 median at 4th View hurricane crossover.
 - Began installing wall panels for MSE retaining wall 311 along I-64 eastbound near Mason Creek Bridge.
 - Began installing wall panels for sound wall 4-6 along I-64 eastbound near Bay Ave.
- Marine Works
 - Decks placed at the North eastbound MOT trestle (3 installed this period).
 - Caps placed at the North eastbound permanent trestle (2 installed this period).
 - Beams placed at the North eastbound permanent trestle (17 installed this period).
 - Decks placed at the North eastbound permanent trestle (3 installed this period).
 - Beams placed at the North westbound permanent trestle (23 installed this period).
 - Piles driven at the South eastbound MOT trestle (5 installed this period).
 - Caps placed at the South eastbound MOT trestle (3 installed this period).
 - Beams placed at the South eastbound MOT trestle (12 installed this period).
 - Caps placed at the South permanent trestle (1.5 installed this period).
 - Beams placed at the South permanent trestle (13 installed this period).
- Tunnels and Islands
 - Completed South Island Slurry Treatment Plant foundation pad.
 - Completed overall slurry wall installation at North Island.
 - Continued TBM cutter head assembly and shield preassembly.
 - Continued TBM gantry and thrust frame assembly in the launching pit.
- Landside Bridges
 - Completed pile driving for Willoughby Bay Bridge eastbound widening.
 - Began preparing for exterior parapet demolition for Willoughby Bay Bridge eastbound widening.
 - Completed pile driving for Mason Creek Road Bridge eastbound widening.
 - Completed Abutment B for Mason Creek Road Bridge eastbound widening.

- Completed concrete placements for footings and columns for Mason Creek Road Bridge westbound widening.
- Began mobilizing for pile driving operations for 1st View Street eastbound widening.
- Began pile driving operations for the mainline portion of the Bay Avenue Bridge eastbound widening.
- Completed first deck concrete placements for Bay Avenue Bridge eastbound widening.
- Completed pile driving for Bayview Boulevard Bridge eastbound widening.
- Completed parapet demolition for Oastes Creek Bridge eastbound widening.

The number of construction manhours worked each month is provided by HRCP and is current as of September 30, 2022:



Operations

The following operations activities took place during this reporting period:

- Implemented overnight detour at eastbound 4th View off-ramp.
- Completed relocation and testing of over-height detectors at the Willoughby inspection station.
- Completed directional drilling for fiber relocation near Mallory St.
- Held quarterly Concept of Operations meeting on September 13, 2022.

Quality

Quality updates for this reporting period include:

- VDOT reviewed Construction Quality Management Plan (CQMP) updates for 3 Notice of Design Change (NDC) packages this period.
- VDOT reviewed 30 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:

- VDOT and HRCP continue to follow latest CDC guidelines regarding COVID-19.
- VDOT and HRCP continue collaboration on emergency response planning.
- Emergency Rescue Drills were conducted at South Island on September 11, 2022 and September 18, 2022.

The following safety performance indicator information is provided by HRCP and is current as of September 30, 2022:

- Total Recordable Incidence Rate: 1.60 (National Average: 2.5)
- Lost Time Incidence Rate: 0.19 (National Average 1.6)

Civil Rights & DBE/SWaM Business Opportunities

HRCP has awarded **318** subcontracts, subconsultant agreements, and purchase orders to certified DBE/SWaM firms on the project. These contract awards represent a total of **\$475.9 million** to certified DBE/SWaM firms.

- HRCP continued to make progress towards the 80 participant On-the-Job Training (OJT) contract goal. To date, 19 participants have graduated with 16 currently active in the program.
- VDOT will be conducting an extensive Equal Employment Opportunity Contractor Compliance Review for HRCP in accordance with FHWA civil rights requirements.
- VDOT and HRCP participated in several business outreach events during the reporting period, which included the B-Force Acceleration 2022 Cohort Ceremony and Resource Fair, American Council of Engineering Companies (ACEC) DBE Round Robin, VDOT Haulers Workshop and Networking Event, and the Black BRAND Member Appreciation Summit and Luncheon.



Public Outreach & Media

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

- HRBT Expansion Team presented to Emergency Media Council, Hampton Roads Chamber of Commerce, and York Senior Center.
- HRBT Expansion Team attended the Oceana Air Show (STEM) and Norfolk Neighborhood Expo, with special visit to project tent by Governor Youngkin.
- Site visit by local United States Coast Guard leadership.
- Released Summer 2022 Magazine.
- HRBT Tunnel Talk with Hampton Mayor Tuck.
- Published 4 weekly lane closure reports and 1 emergency closure advisory.
- WAVY news, WTKR 3, and WVEC 13 media coverage.

2. Project Schedule

2.1 Schedule Status

The following table depicts key milestone dates for the project. This table will be used as a benchmark to track milestone achievements and has been updated as of the current approved schedule. The last approved schedule for the project is Update 37 (data date: August 21, 2022), and the schedule information in this report reflects this update. Contractual Substantial and Final Completion dates remain unchanged. Update 37 projects substantial completion on August 25, 2026 and final completion on October 24, 2026. Contractual dates remain unchanged.

| | Contract Requirement | August 2022 Schedule | Actual |
|-------------------------------|----------------------|----------------------|--------------|
| NTP | | Sep 11, 2020 | Sep 11, 2020 |
| Substantial Completion | Sep 1, 2025 | Aug 25, 2026 | |
| Final Completion | Nov 1, 2025 | Oct 24, 2026 | |

2.2 Longest Path

The longest path/critical path in Project Schedule Update 37 is driven by the following activities:

- South Portal Launch Pit Headwall Construction
- Assembly of the Tunnel Boring Machine (TBM) in launching pit
- TBM Commissioning
- TBM drive in High Occupancy Toll (HOT) Tunnel
- TBM U-Turn on North Island
- TBM drive in General Purpose (GP) Tunnel
- TBM Disassembly in south pit
- South Portal Cut & Cover Structures Phase 4 Cell 1
- South Island Ventilation Building & Gate House – Phase 2
- South Ventilation Building Commissioning
- South Island Buildings Integrated Functional Testing
- Tunnel Systems Integration – ITS
- Commissioning – HT & GP Operational Testing
- Commissioning – Tunnel + Buildings + Roadways + 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 37:

South Portal

- South Portal Tri-Cell Base Slabs
- South Portal Cut & Cover Structures – Phase 2
- South Portal Cut & Cover Structures – Phase 4
- South Portal Cut & Cover Structures – Phase 5
- South Portal Cut & Cover Structures – Phase 6

South Island

- North Side South Island Expansion – Clear Cluster 109
- South Island Expansion – Marine Works and Island Expansion
- South Island Expansion – Land Works and Island Expansion
- South Island – Rectilinear Approach Construction
- South Island Vent Building Construction Phase 1

Tunneling

- South Island Rectilinear Approaches
- Tunnel Boring Machine – Cell 3 Gantry Assembly
- GP Tunnel Firefighting Piping & Sprinklers
- GP Egress Corridor – Mechanical, Electrical Systems

North Island

- North Portal Construction

Roadway

- Segment 3b Phase 2 – Willoughby Spit Earthworks PV Drains, Surcharge & Retaining Wall RW307
- Segment 3b Phase 3A – Willoughby Spit Roadway and Storm Drainage
- Segment 3b Phase 4 – Willoughby Spit Roadway and Storm Drainage
- Segment 3d Phase 2A – Willoughby Bridge to Mason Creek Roadway
- Segment 3d Phase 3 – Willoughby Bridge to Mason Creek Roadway and Storm Drainage
- Segment 3d ITS & DMS Construction
- Segment 3d Willoughby Abutment B - Overheight Vehicle Detector
- Segment 4 Phase 2 – 1st View to Patrol Road Retaining Wall 406 and Roadway
- Segment 4 Phase 2A – 1st View to Patrol Road Roadway
- Segment 4 Phase 3 – 1st View to Patrol Road Roadway
- Segment 4 Phase 3A – 1st View to Patrol Road Roadway

Trestles

- South Trestle – MOT Traffic Shift - EB 1
- South Trestle – Zone 3 Substructure and Superstructure Completion

Commissioning and Integration

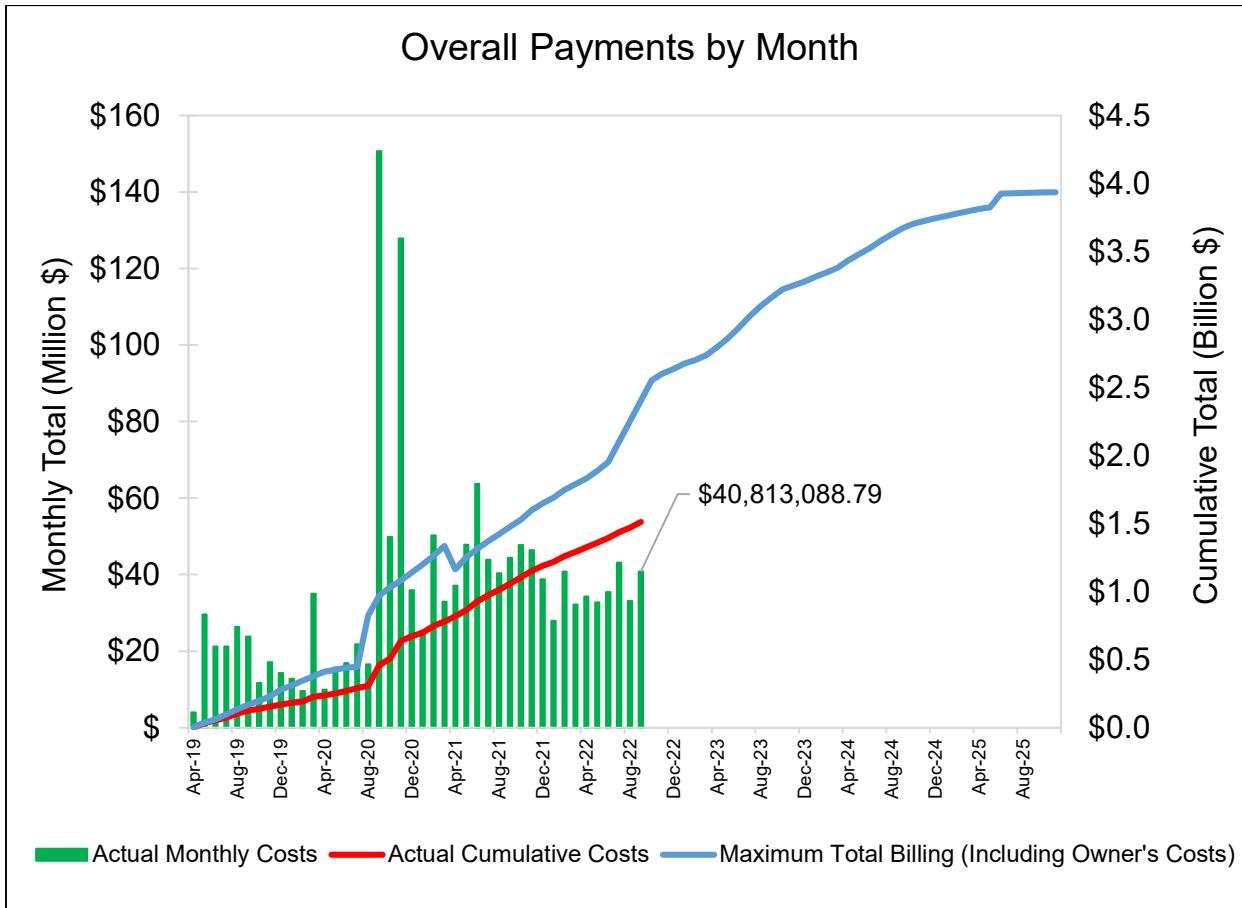
- GP Egress Corridor – Fire Fighting Piping & Deluge Valve Cabinet
- GP Egress Corridor – Low Voltage Cables
- GP Tunnel – LPPS Drainage
- GP Tunnel – Fire Suppression & Detection
- South Island Buildings – Electrical Functional Testing
- Commissioning – Operational Testing – GP Fire System
- Commissioning – Operational Testing – GP Medium Voltage/Low Voltage
- Commissioning – Operational Testing – GP 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).

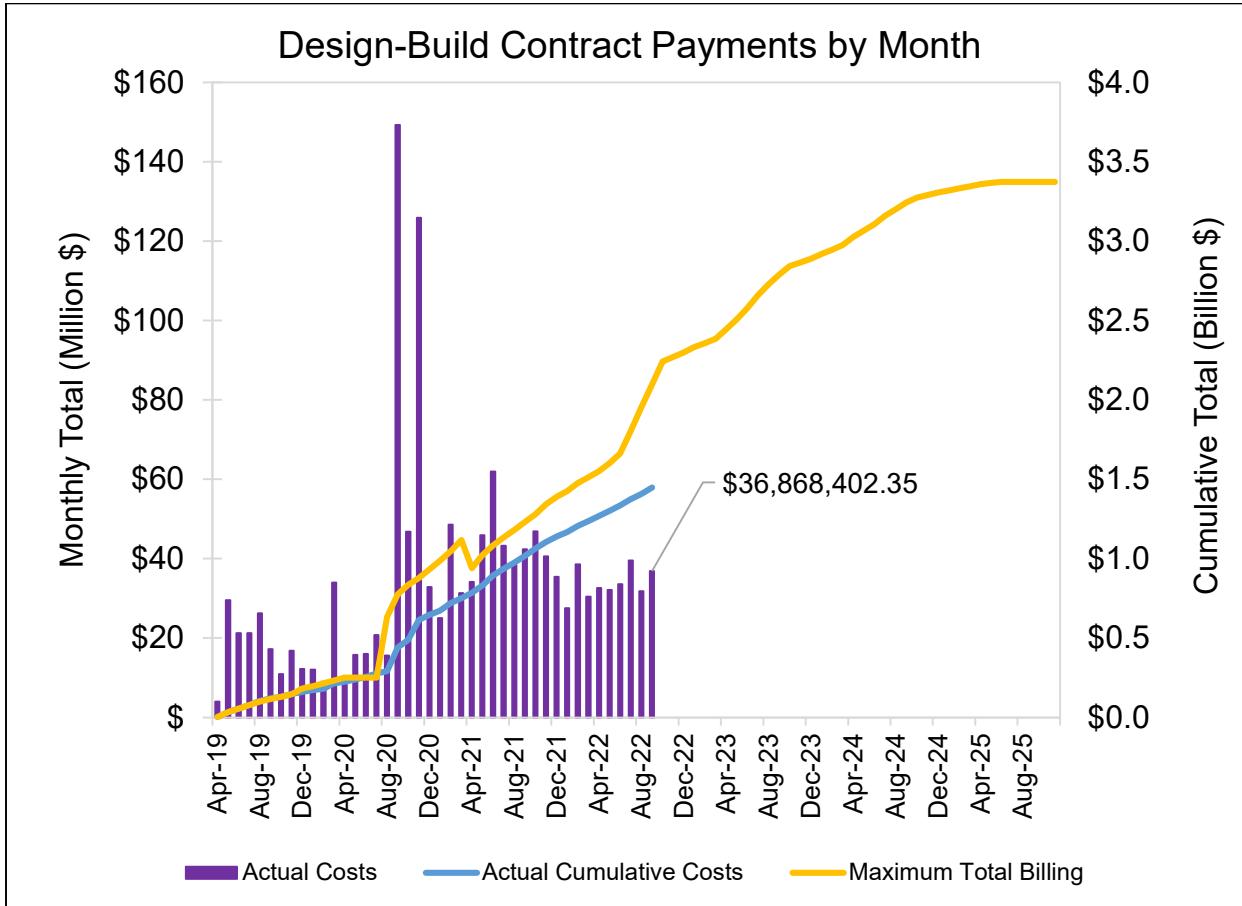
| | Amount Spent this Period: | Total Spent to Date: | Original Total Budget: | Total Remaining Budget: | Percent Spent To-date: |
|----------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------|
| Comprehensive Agreement | | | | | |
| <i>Construction</i> | \$36,868,402.35 | \$1,422,135,025.20 | \$3,299,997,227.00 | \$1,877,862,201.80 | 43.10% |
| Owner Costs | | | | | |
| <i>Administration</i> | \$2,070,673.47 | \$58,730,730.08 | \$122,000,000.00 | \$63,269,269.92 | 48.14% |
| <i>Right of Way</i> | \$16,882.67 | \$8,644,086.40 | \$15,000,000.00 | \$6,355,913.60 | 57.63% |
| No-Excuses Incentive | \$0.00 | \$0.00 | \$90,000,000.00 | \$90,000,000.00 | 0.00% |
| Contingency | \$1,618,525.91 | \$21,744,255.24 | \$335,000,000.00 | \$313,255,744.76 | 6.49% |
| Bridge Repair Work Option | \$238,604.39 | \$1,956,096.67 | \$73,454,413.96 | \$71,498,317.29 | 2.66% |
| Total | \$40,813,088.79 | \$1,513,210,193.59 | \$3,935,451,640.96 | \$2,422,241,447.37 | 38.45% |



*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

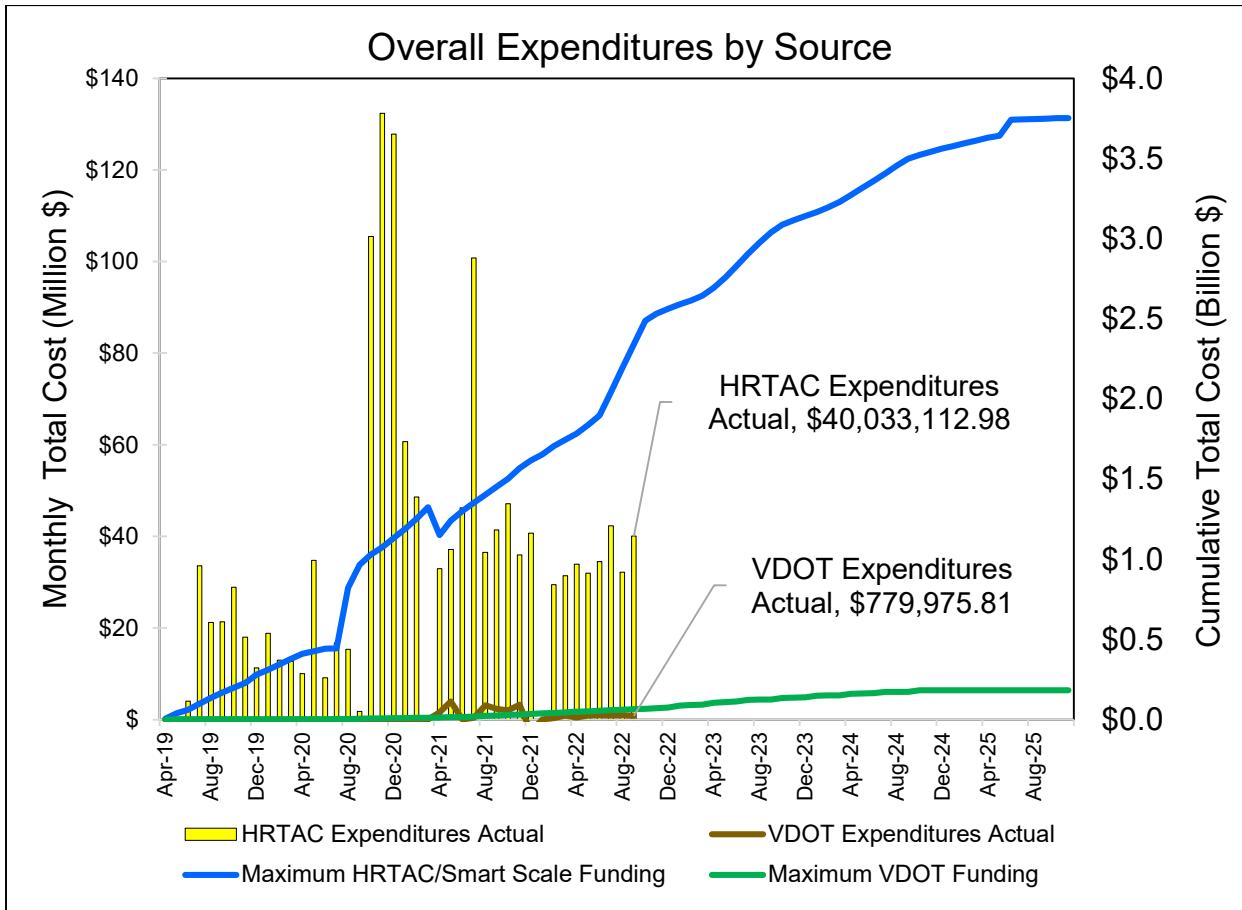
The budget for expenditures by funding source is based on the terms and conditions of Article 3 (Project Funding) and Exhibit 5 of the PAFA. This section outlines planned expenditures of both HRTAC and VDOT funds. The cost curve has been developed based on the monthly maximum cumulative compensation amount in the Comprehensive Agreement and will be updated as HRCP 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: |
|--------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------|
| Comprehensive Agreement | | | | | |
| <i>Construction</i> | \$36,511,300.35 | \$1,408,117,563.44 | \$3,204,569,251.00 | \$1,796,451,687.56 | 43.94% |
| Owner Costs | | | | | |
| <i>Administration</i> | \$1,886,404.05 | \$57,267,158.08 | \$118,472,054.00 | \$61,204,895.92 | 48.34% |
| <i>Right of Way</i> | \$16,882.67 | \$8,644,086.40 | \$15,000,000.00 | \$6,355,913.60 | 57.63% |
| <i>No-Excuses Incentive</i> | \$0.00 | \$0.00 | \$90,000,000.00 | \$90,000,000.00 | 0.00% |
| <i>Contingency</i> | \$1,618,525.91 | \$20,759,289.11 | \$325,428,276.00 | \$304,668,986.89 | 6.38% |
| Total | \$40,033,112.98 | \$1,494,788,097.03 | \$3,753,469,581.00 | \$2,258,681,483.97 | 39.82% |

3.3.2 VDOT

| | Amount Spent this Period: | Total Spent to Date: | Original Total Budget: | Total Remaining Budget: | Percent Spent To-date: |
|----------------------------------|---------------------------|------------------------|-------------------------|-------------------------|------------------------|
| Comprehensive Agreement | | | | | |
| <i>Construction</i> | \$357,102.00 | \$14,017,461.76 | \$95,427,976.00 | \$81,410,514.24 | 14.69% |
| Owner Costs | | | | | |
| <i>Administration</i> | \$184,269.42 | \$1,463,572.00 | \$3,527,946.00 | \$2,064,374.00 | 41.49% |
| <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> | \$238,604.39 | \$1,956,096.67 | \$73,454,413.96 | \$71,498,317.29 | 2.66% |
| Total | \$779,975.81 | \$18,422,096.56 | \$181,982,059.96 | \$163,559,963.40 | 10.12% |



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 | HRCP 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 | HRCP 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-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-62 | SIP Forms for Marine Bridges | 6/28/2022 | \$ - | 0 days |
| | | TOTAL | \$ 72,375,965.08 | 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 | \$ 42.73 | \$ 18,012.28 | July 2022 |
| Fuel | \$ 11,569.79 | \$ 103,012.62 | July 2022 |
| Steel | \$ 192,605.47 | \$ 927,294.93 | March 2022 |

4. Environmental

HRCP has completed or is performing several compliance tasks included in permit conditions:

Permits:

- HRCP submitted JPA permit modification request #8 on August 31, 2022. Virginia Marine Resources Commission approved the request. Virginia Department of Environmental Quality and U.S. Army Corps of Engineers are still reviewing the information.
- DEQ has drafted approval of HRCP's permit modification to the Virginia Pollutant Discharge Elimination System (VPDES) permit and the 30-day public notice period was initiated.
- DEQ issued air permits for the North Island and South Island generators. Draft permits have been issued by DEQ for the South Island slurry treatment plant and bi-component plant, which are under review by HRCP. DEQ is continuing to review the air permit application for the South Island concrete plant.
- The appropriate agencies were notified of two concrete spills and two off-site sediment discharges.

Marine Mammal Protection:

- No new activities.

Bird Mitigation:

- September 1, 2022 – the bird monitoring and deterrent activities concluded for the season on the North Island, South Island, and Willoughby Spit.

Programmatic Agreement:

- No new activities.

Archeological Discoveries:

- No new discoveries.

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 bridge work.



5.1 Construction Area 1: Landside Roadways

I-64 (Segment 1):

- Drainage installation along I-64 median south of Mallory St.
- Drainage installation along I-64 eastbound exterior near Strawberry Banks.

I-64 (Segment 3):

- Surcharge installation for retaining wall 302 along I-64 eastbound at Bayville St.
- Completed restriping for Phase 1 traffic shift along I-64 westbound between Willoughby Bridge and South Trestle.
- Completed partial permanent paving along the I-64 median hurricane crossover area between Willoughby Bay and 4th View St. for westbound widening.
- Drainage installation along I-64 eastbound off ramp at 4th View St.
- Began installation of wall panels for MSE retaining wall between 4th View St. and Mason Creek Rd. for eastbound widening.

I-64 (Segment 4):

- Began installation of leveling pad for MSE retaining wall 401 between Mason Creek Rd. and 1st View St. for eastbound widening.
- Permanent ditch installation between 1st View St. and Bay Ave. for eastbound widening.
- Began installing wall panels for sound wall 4-6 between Bay Ave. and Evans St. for eastbound widening.
- Completed drainage jack and bore between Evans St. and Bayview Blvd. for eastbound widening.



◀ I-64 EB (Norfolk)

Permanent paving along I-64 median at 4th View hurricane crossover



◀ I-64 EB (Norfolk)

View of panel installation progress for sound wall 4-6

5.2 Construction Area 2: Marine Trestle Work

North Trestle:

- **Eastbound MOT Trestle**
 - 3 decks placed during this period (4 out of 5 total decks placed).
- **Eastbound Trestle**
 - 2 caps placed during this period (24 out of 37 total caps/footers placed).
 - 17 beams placed during this period (99 out of 296 total beams placed).
 - 3 decks placed during this period (3.5 out of 36 total decks placed).
- **Westbound Trestle**
 - 23 beams placed during this period (23 out of 281 total beams placed).

South Trestle:

- **Eastbound MOT Trestle**
 - 5 piles driven during this period (100 out of 118 total piles driven).
 - 3 caps placed during this period (17 out of 26* total caps/footers placed).
 - 12 beams placed during this period (64 out of 95* total beams placed).
- **Permanent Trestle**
 - 1.5 caps placed during this period (5 out of 70 total caps placed).
 - 13 beams placed during this period (13 out of 698 total beams placed).

* Design refinement (NDC 231) eliminated 2 tie-in spans on the South eastbound MOT trestle, reducing the total counts of trestle elements.



► **South Trestle**
Beam placement

5.3 Construction Area 3: Tunnels and Islands

South Island:

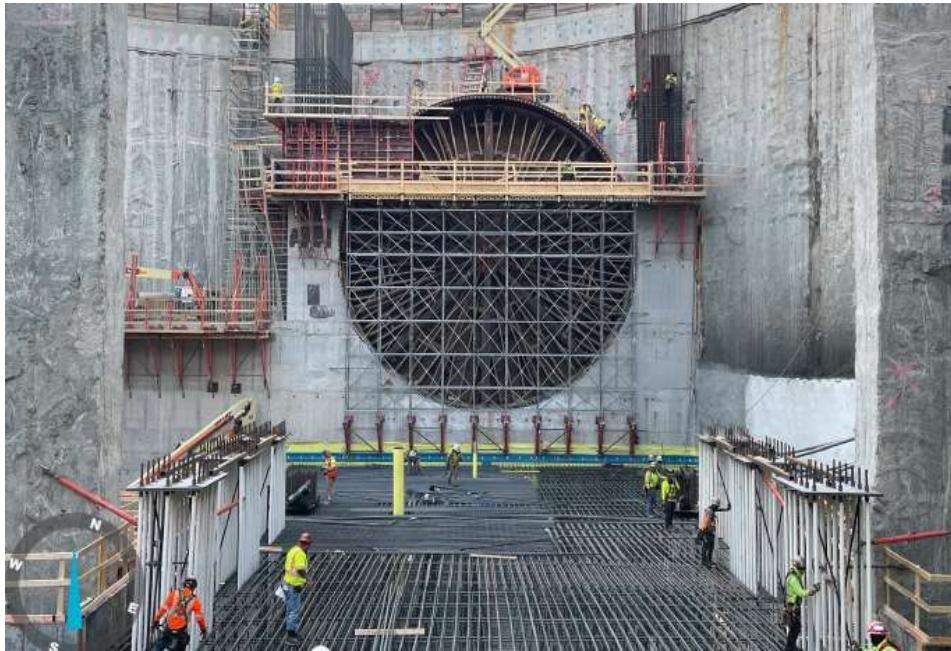
- 60% complete for jet grouting operations at tunnel approach plug.
- Completed surface slab placement at slurry treatment plant and began assembling slurry treatment plant components.
- Began rebar and formwork for base slab in Cells 1 & 2.
- 53% complete for headwall installation at Cell 1 of launching pit.
- 71% complete for waterproofing installation for overall launching pit.

North Island:

- Completed overall slurry wall installation.
- 8% complete for capping beams.
- Continued field trial program for jet grouting.

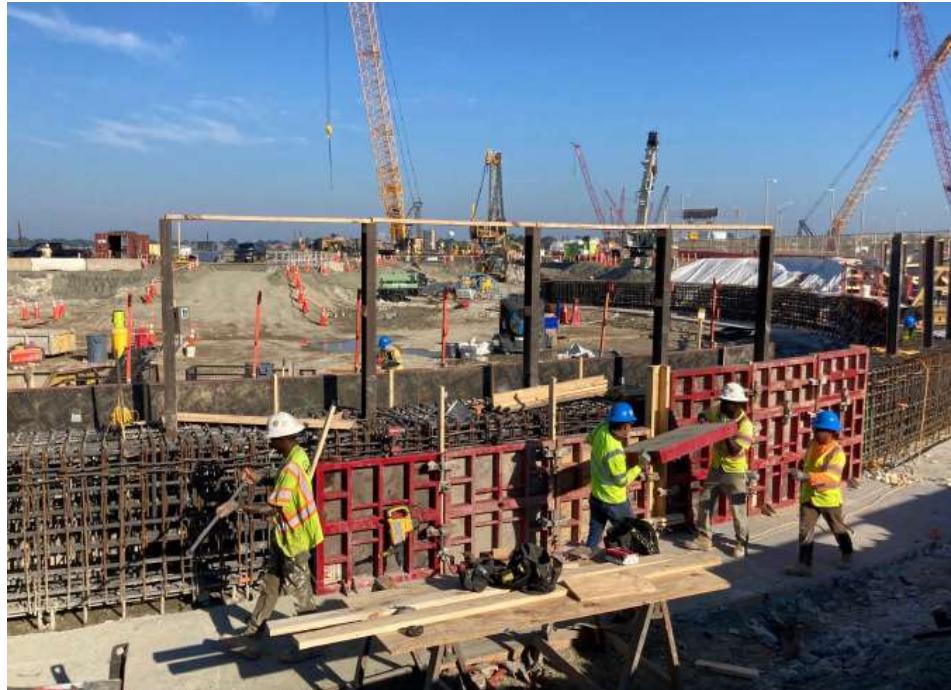
Tunnel:

- 31% complete for precast tunnel segment liner production.
- 95% complete for TBM cutterhead assembly and welding on surface TBM slab.
- Assembly of TBM gantries #1 and #3 in Cell 3 of launching pit.
- Installation of thrust frame anchors in Cell 1 of launching pit.



◀ **South Island**

Rebar installation for headwall and base slab in Cell 1



◀ **North Island**

Formwork for Cell 1 capping beam placement

| Total Segments Required: | Conforming Segments Cast To-Date: | Percentage Complete: |
|--------------------------|-----------------------------------|----------------------|
| 21,492 | 6,639 | 31% |

5.4 Construction Area 4: Landside Bridges

Willoughby Bay Bridge:

- Completed pile driving for eastbound widening (245 out of 245 total piles driven).
- Completed setting precast caps for eastbound widening (79 out of 79 total caps placed), with final caps set at Bents 1-5.
- Completed beam placements for Spans 61-68 for eastbound widening (31 out of 80 total beam spans placed entire eastbound bridge).
- Continued repair/rehabilitation of existing eastbound bridge.
- Began preparing for exterior parapet demolition for eastbound widening.

Mason Creek Road Bridge:

- Completed Abutment B backwall, wingwall, and slope protection for eastbound widening.
- Completed pile driving for eastbound widening (38 out of 38 total piles driven).
- Completed concrete placements for Piers 1 and 2 footings and columns for westbound widening.
- Began pier cap construction at Pier 2 for westbound widening.

1st View Street Bridge:

- Began preparing for pile driving operations at Pier 2 for eastbound widening.

Bay Avenue Bridge:

- Completed beam placements at Spans 40 and 41 for eastbound widening (14 out of 42 total beam spans placed).
- Completed setting precast cap at Bent 39 for eastbound widening (12.5 out of 34 total caps placed).
- Installed stay-in-place deck forms at Spans 34-42 for eastbound widening.
- Completed deck concrete placements for Spans 27 and 28 for eastbound widening (2 out of 37 decks placed).
- Began pile driving at Bents 1-11 for eastbound widening (67 out of 108 total piles driven).

Bayview Boulevard Bridge:

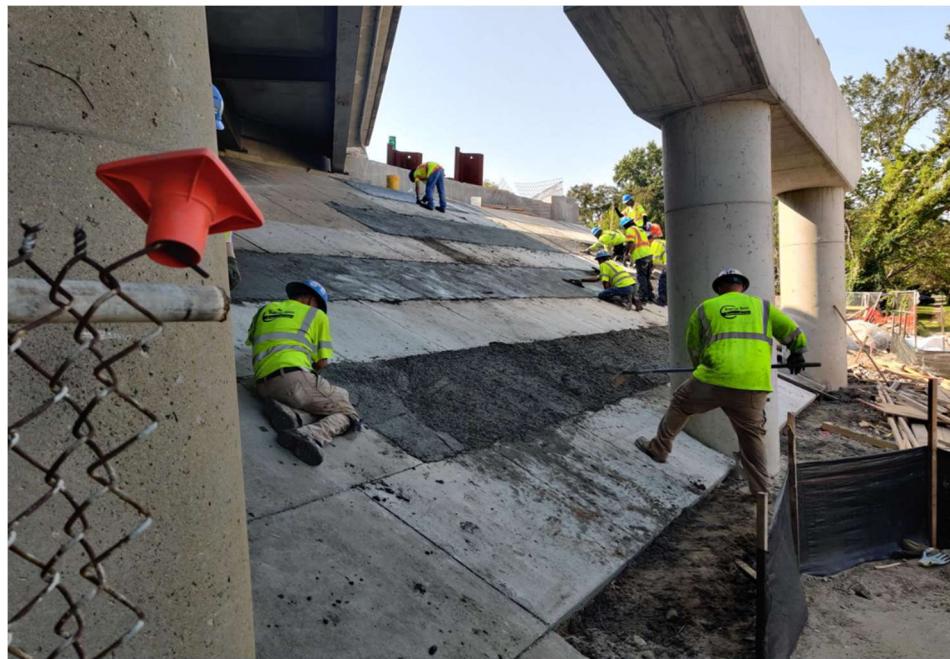
- Continued repair/rehabilitation of existing eastbound and westbound bridges.
- Completed pile driving for eastbound widening (28 out of 28 total piles driven).

Oastes Creek Bridge:

- Completed exterior parapet demolition work for eastbound bridge widening.



◀ **Bay Avenue Bridge**
Concrete placement for
Span 27 eastbound



◀ **Mason Creek Road Bridge**
Concrete placement for
Abutment B slope protection

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 and caps, and girder installation.
- Willoughby Bay Bridge and South Trestle for temporary lighting installation.
- Striping maintenance throughout the project corridor.
- Westbound near Willoughby inspection station for temporary lighting installation and ITS relocation.
- Slow roll of I-64 eastbound in Hampton to support Electrical Power Distribution (EPD) conduit directional drill and equipment mobilization.
- Eastbound and westbound lane closures for paving emergency crossover near 4th View.

Long-Term Lane Closures:

- Bay Avenue 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 Avenue 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.
- Nightly detours on West Bay Ave. eastbound on-ramps for bridge widening work.
- Long-term detour at Mason Creek Rd. to facilitate bridge widening.
- Overnight detour at eastbound 4th View off ramp for sinkhole repair.

Intelligent Transportation System (ITS):

- Completed relocation and testing of overheight detectors at the Willoughby inspection station.
- Completed directional drilling for fiber relocation near Mallory Street.
- Quarterly Concept of Operations meeting held on September 13, 2022. Topics of discussion included tunnel panoramic cameras, radio coverage, and ITS integration.

Routine Maintenance:

- HRCP performed routine incident management and maintenance operations 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 were 3 NDC updates 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 previously submitted the quarterly updates of the Quality Management System Plan, Construction Quality Management Plan, and the Design Quality Management Plan for the third quarter of 2022. VDOT completed the review of these submitted plans and returned them to HRCP to revise and resubmit. HRCP’s response is still pending.

Tunnel Quality Plan (TQP):

- HRCP continues to update its Tunnel Quality Plan and address VDOT’s comments. VDOT previously reviewed Update 3 and returned the plan to HRCP with comments. HRCP will submit Update 4 in October 2022 to address these comments.

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 nine volumes of Material Book records.

Routine Quality Activities:

- VDOT’s quality team conducted reviews of written deficiency notices (WDNs), nonconformance reports (NCRs), root cause analyses and dispositions of deficiencies. The VDOT Team reviewed 30 NCR’s 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:

COVID-19 Update:

- VDOT and HRCP continue to follow latest CDC guidelines regarding COVID-19.

Safety Site Visits:

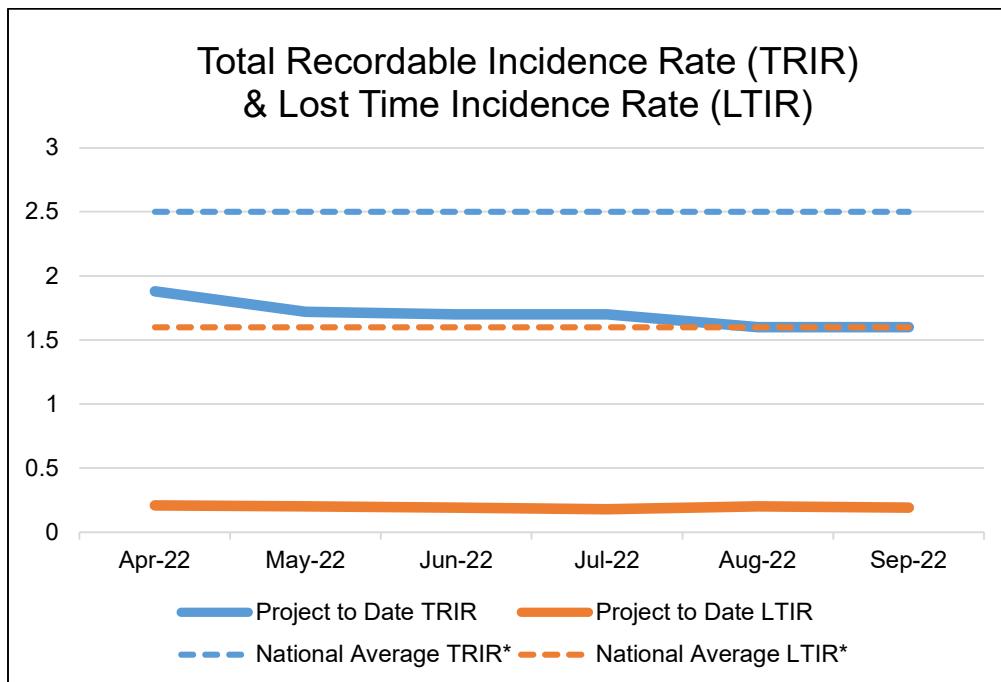
- VDOT continued to conduct routine visits to promote safe work practices throughout the project.

Emergency Response Planning (Rescue Drill):

- VDOT and HRCP continue collaboration on emergency response planning.
- Emergency Rescue Drills were conducted at South Island on September 11, 2022 and September 18, 2022.

Safety Performance Indicators:

- The following safety performance indicator information is provided by HRCP and is current as of September 30, 2022:



**National averages are from the Bureau of Labor Statistics, US Department of Labor – 2020 Data for Construction Industry, Published November 3, 2021.*

9. Civil Rights & DBE/SWaM Business Opportunities

To date, HRCP awarded **318** subcontracts, subconsultant agreements and purchase orders to certified DBE/SWaM firms. There was a slight increase in contract awards for a total of **\$475.9 million** due to change orders issued to active DBE/SWaM firms on the project.

Compliance Activities:

- HRCP and VDOT Civil Rights Work Group met on September 20, 2022 for the monthly project and compliance update, which provided an opportunity to discuss equal employment opportunity, compliance, and business development matters.
- A meeting occurred on September 7, 2022 to discuss HRCP's 2nd Quarter Good Faith Effort Activities and Narrative Report.
- VDOT will be conducting an extensive Equal Employment Opportunity Contractor Compliance Review for HRCP in accordance with FHWA civil rights requirements.
- HRCP hosted an EEO & DBE/SWaM Compliance Training on September 23, 2022 for subcontractors performing work on the Project.

Workforce Development Activities:

- HRCP continued to progress towards the 80 participant On-the-Job Training (OJT) contract goal. To date, 19 participants have graduated with 16 currently active in the program.
- HRCP has become a partner in the Department of Defense (DOD) SkillBridge Program providing Service members with the opportunity to gain valuable civilian work experience as interns on the Project for their last 180 days of service.
- During the reporting period, VDOT and HRCP participated in the following recruiting events:
 - August 27, 2022 – STOP Organization's Back to School & Community Connect sponsored by Ward 3 of Norfolk School Board

Business Development Activities:

- During this reporting period, other business development and outreach activities included:
 - August 30, 2022 – B-Force Acceleration Summer 2022 Cohort Ceremony & Resource Fair
 - September 15, 2022 – VDOT & ACEC DBE Round Robin
 - September 20, 2022 – VDOT Haulers Workshop & Networking Event
 - September 22, 2022 – Black BRAND Member Appreciation Summit & Luncheon

10. Public Outreach & Media

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

Public Outreach

- August 25, 2022 – HRCP and VDOT Media Marine Tour
- August 26, 2022 – HRBT External Communications Meeting w/ Stakeholder Public Information Officers
- September 7, 2022 – HRBT Expansion Team presented to Emergency Media Council
- September 16, 2022 – HRBT Expansion Team at Oceana Air Show (STEM), with special visit to the project tent by Governor Youngkin
- September 17, 2022 – HRBT Expansion Team at Norfolk Neighborhood Expo
- September 19, 2022 – United States Coast Guard Site Visit
- September 22, 2022 – HRBT Expansion Team presented to Hampton Roads Chamber, Norfolk Division
- September 22, 2022 – HRBT Expansion Team presented to York Senior Center, York County

Public Materials

- August 26, 2022 – Summer Magazine released
- September 23, 2022 – HRBT Tunnel Talk (Talking Regionalism with Hampton Mayor Tuck)

Lane Closures/Advisories

- August 26, 2022 – Weekly Lane Closure Report
- September 2, 2022 – Weekly Lane Closure Report
- September 9, 2022 – Weekly Lane Closure Report
- September 16, 2022 – Weekly Lane Closure Report
- September 20, 2022 – (Advisory) HRBT Expansion Project: Emergency Closure of I-64E Off-Ramp to 4th View Street
- September 23, 2022 – Weekly Lane Closure Report

Media

- August 25, 2022 – WTKR 3: News 3 Gets View of HRBT Expansion by Boat
- August 25, 2022 – WVEC 13: HRBT Expansion Project inside look
- September 2, 2022 – WAVY 10: Hampton Roads Bridge-Tunnel makes headway on marine construction



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