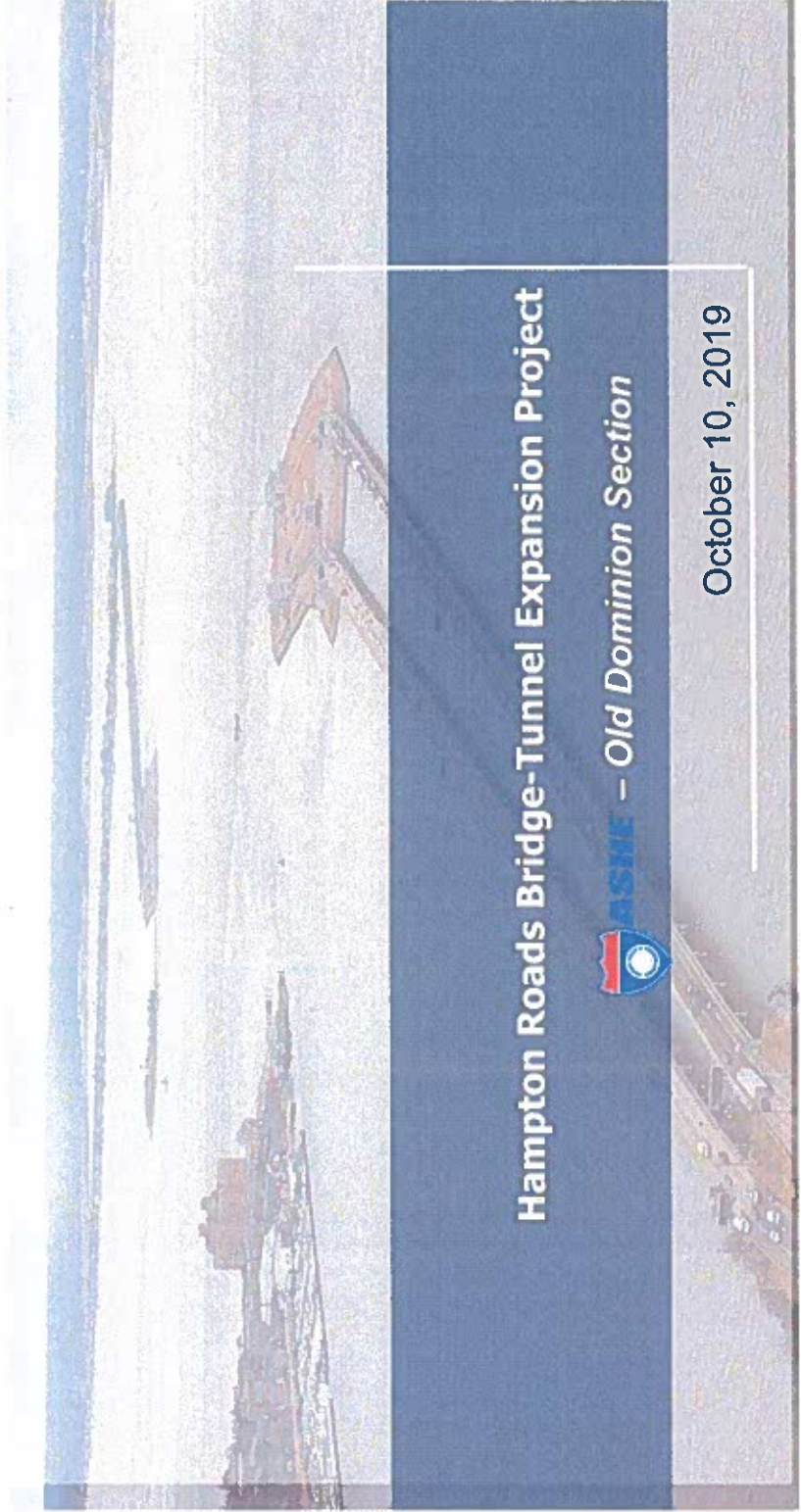




Hampton Roads Bridge-Tunnel



Hampton Roads Bridge-Tunnel Expansion Project



ASWE - Old Dominion Section

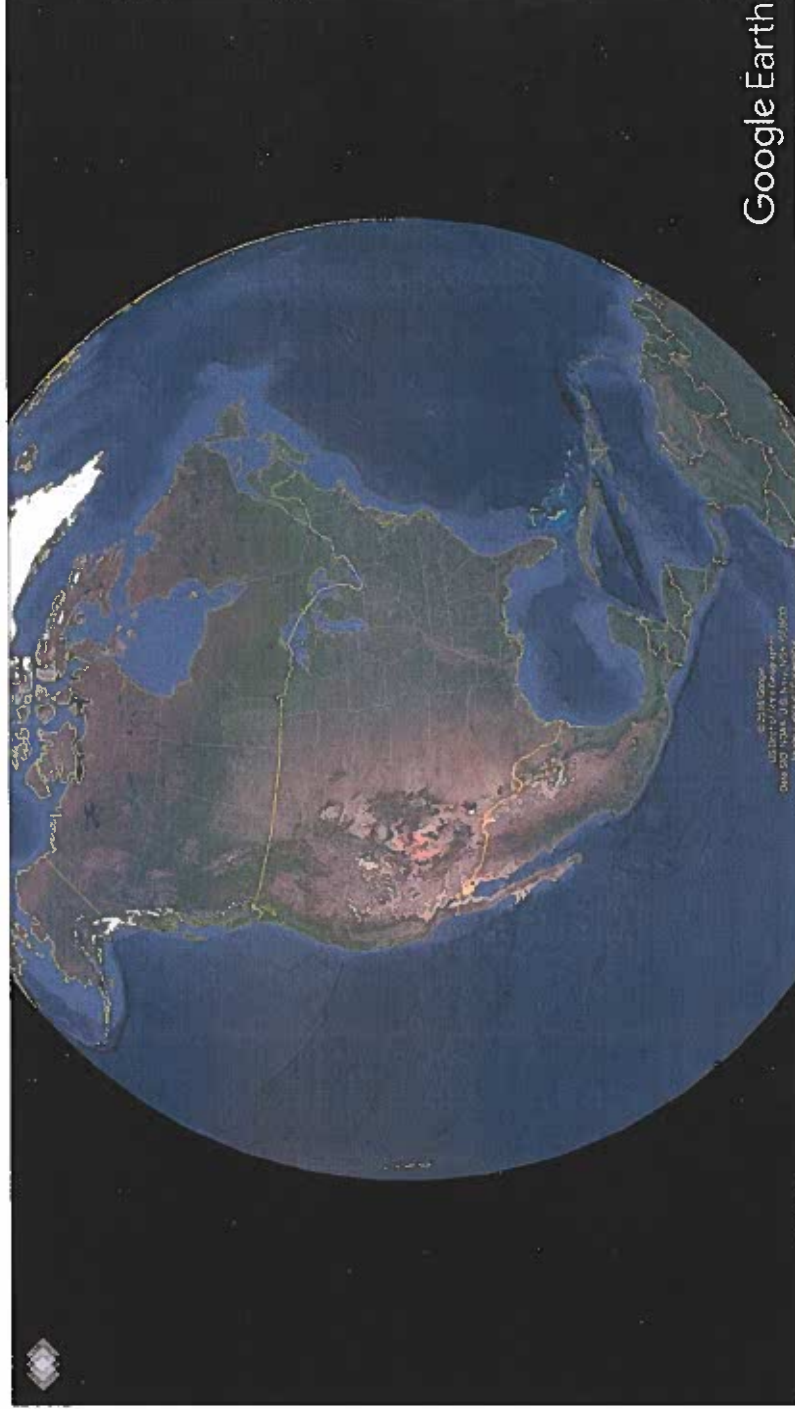
October 10, 2019

HRBT Expansion: Agenda



- ❖ Project Location
- ❖ Historical Background of the HRBT
- ❖ Project Team
- ❖ Project Benefits
- ❖ Project Scope
- ❖ Project Challenges
- ❖ Roadway and Bridge Work
- ❖ Tunnel & Island Expansions
- ❖ Maintenance of Traffic
- ❖ Project Timeline
- ❖ Project Funding
- ❖ SWM & DBE Opportunities
- ❖ Public Outreach
- ❖ Closing

HRBT Expansion: Project Location



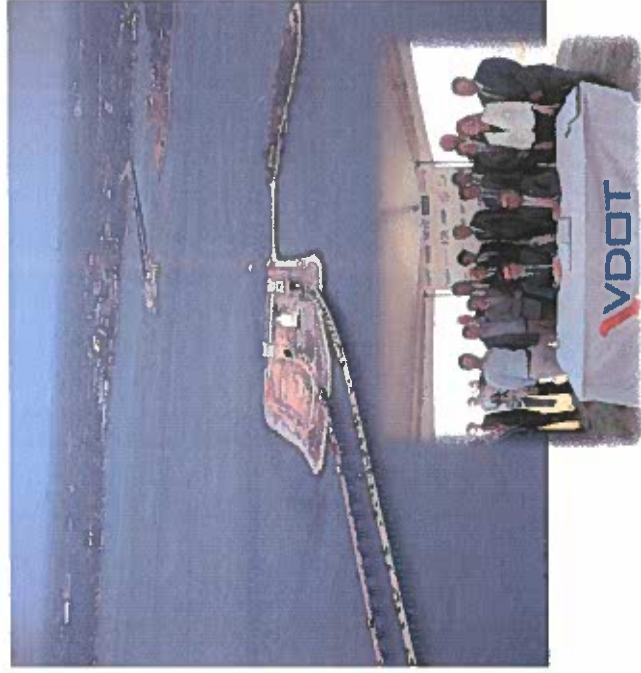
HRBT Expansion: The Hampton Roads Bridge-Tunnel



First tunnel section nearing final location at North Island
July 19, 1955

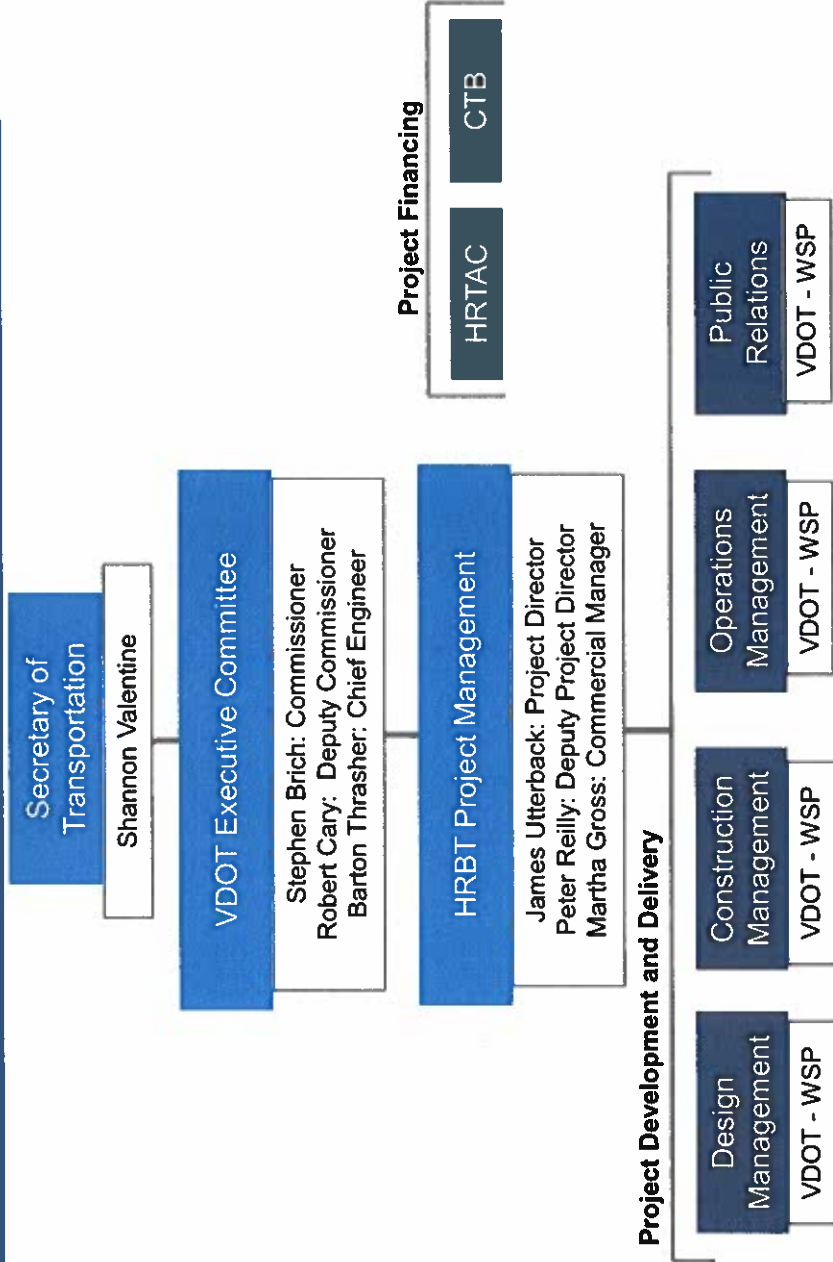
- ❖ First Hampton Roads Bridge-Tunnel (current westbound tunnel) opened November 1, 1957
- ❖ Eastbound tunnel opened in 1976
- ❖ December 2016 - Commonwealth Transportation Board approved expansion of the Hampton Roads Bridge-Tunnel
- ❖ The expansion is a design-build project

HRBT Expansion: The Current Design-Build Project

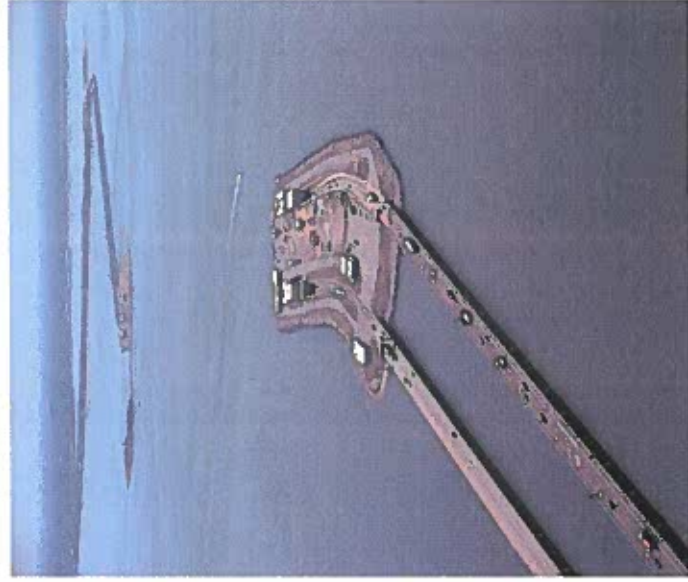


- ❖ Comprehensive Agreement between Commonwealth of Virginia and Hampton Roads Connector Partners JV signed in April 2019
- ❖ Joint Venture Partners: Dragados USA, Vinci Construction, Flatiron Constructors, Dodin Campenon Bernard
- ❖ Designers: HDR and Mott MacDonald
- ❖ Project Cost: \$3.8 Billion

HRBT Project Owner Organization

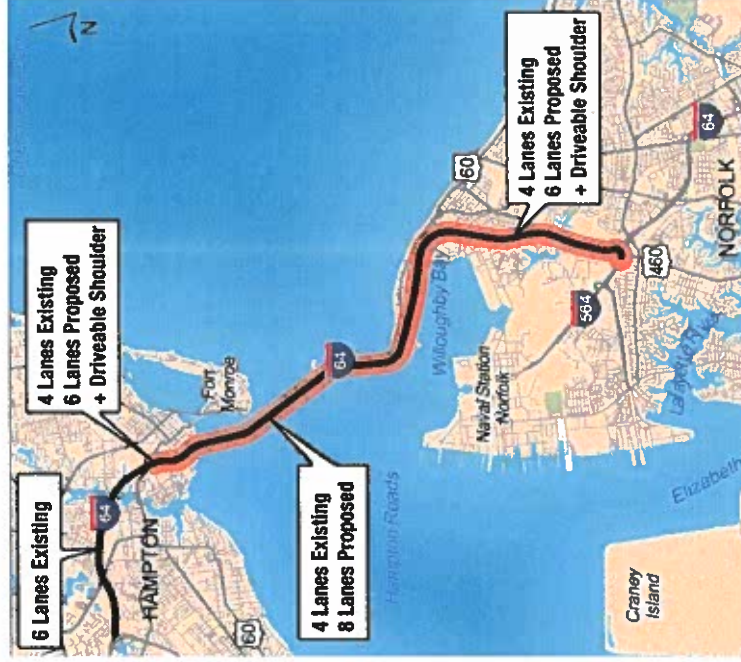


HRBT Expansion: Project Benefits



- ❖ Increase capacity
- ❖ Improve safety
- ❖ Ease major congestion
- ❖ Update transportation management systems
- ❖ Enhance travel time reliability
- ❖ Support emergency evacuation

HRBT Expansion: Scope of the Design-Build Project



- ❖ Twin two-lane bored tunnels (existing Hampton Roads tunnels are immersed tunnels)
- ❖ New tunnels approx. 50 ft. deeper than current tunnels- 8,000 feet each in length
- ❖ Landside Interstate Widening
 - 1 mile, Hampton
 - 4 miles, Norfolk
 - Widening: four lanes to six lanes, plus part-time drivable shoulder lanes
- ❖ Bridges
 - 10 bridge structures to be replaced (new)
 - 17 bridge structures to be rebuilt (widened)
 - 9,000 ft. across Hampton Roads Waterway
 - 5,000 ft. across Willoughby Bay

HRBT Expansion: Project Challenges



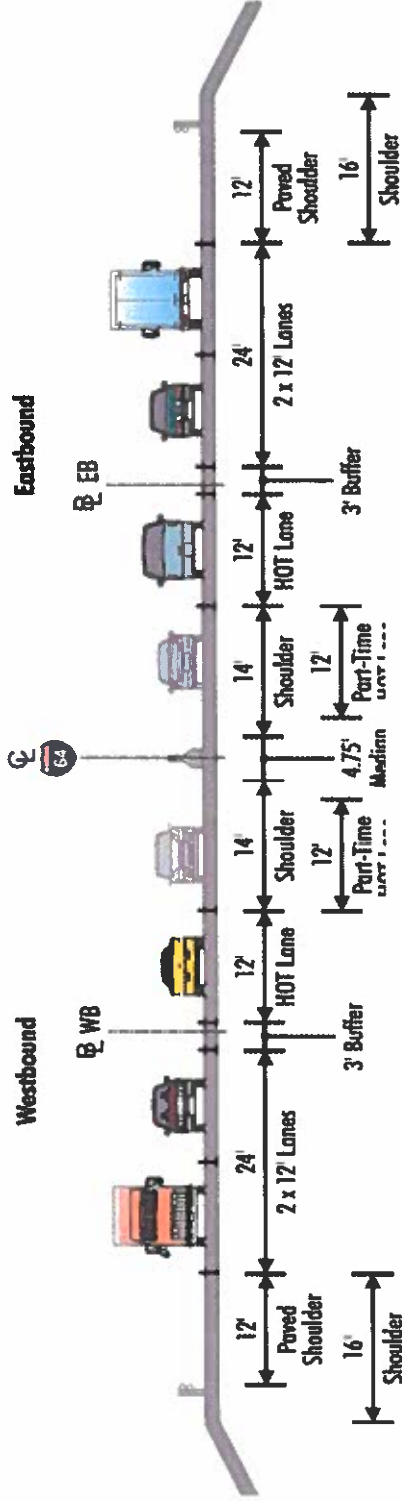
Structural

- ❖ Adjacency to Exist Tunnel & Operation Facilities
- ❖ Soft and Variable Soils
- ❖ Marine & Urban Environment Bridge Widening
- ❖ 100-year Design Life
- ❖ Island Expansion & Ground Improvements
- ❖ Tunnel Leakage Criteria

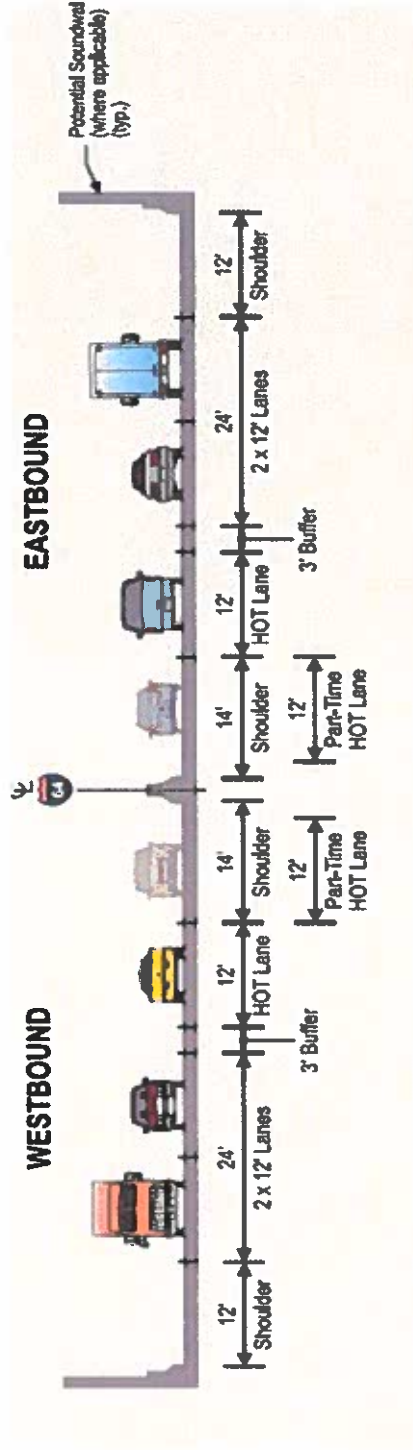
Other

- ❖ Material Disposal Sites
- ❖ Maintenance of Active Interstate Traffic (MOT)
- ❖ Environmental Commitments
- ❖ Utilities
- ❖ Minimization of RW Impacts
- ❖ Diverse List of Stakeholders

HRBT Expansion: Concept Roadway Features



HRBT Expansion: Concept Bridge Features



HRBT Expansion: The Tunnels Section

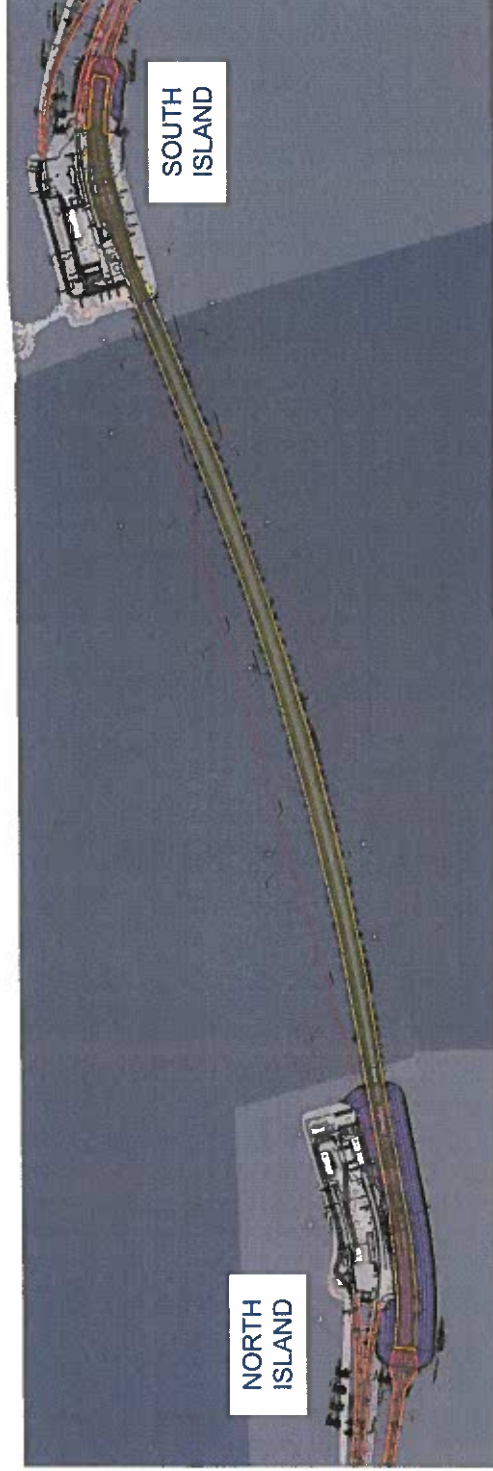
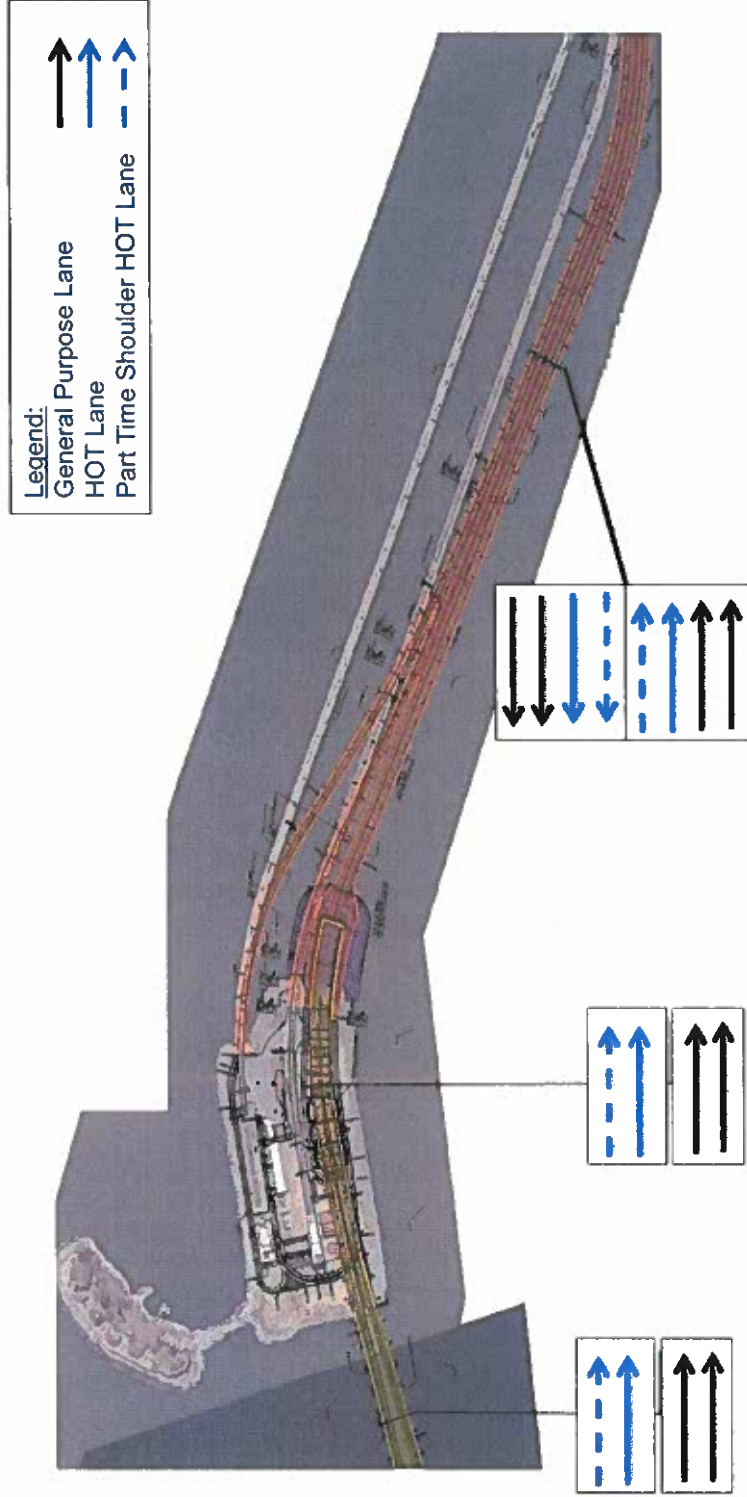


Illustration of twin bored-tunnels between North and South Islands
Boring Machine will launch from the South Island and bore toward North Island

HRBT Expansion: The South Island



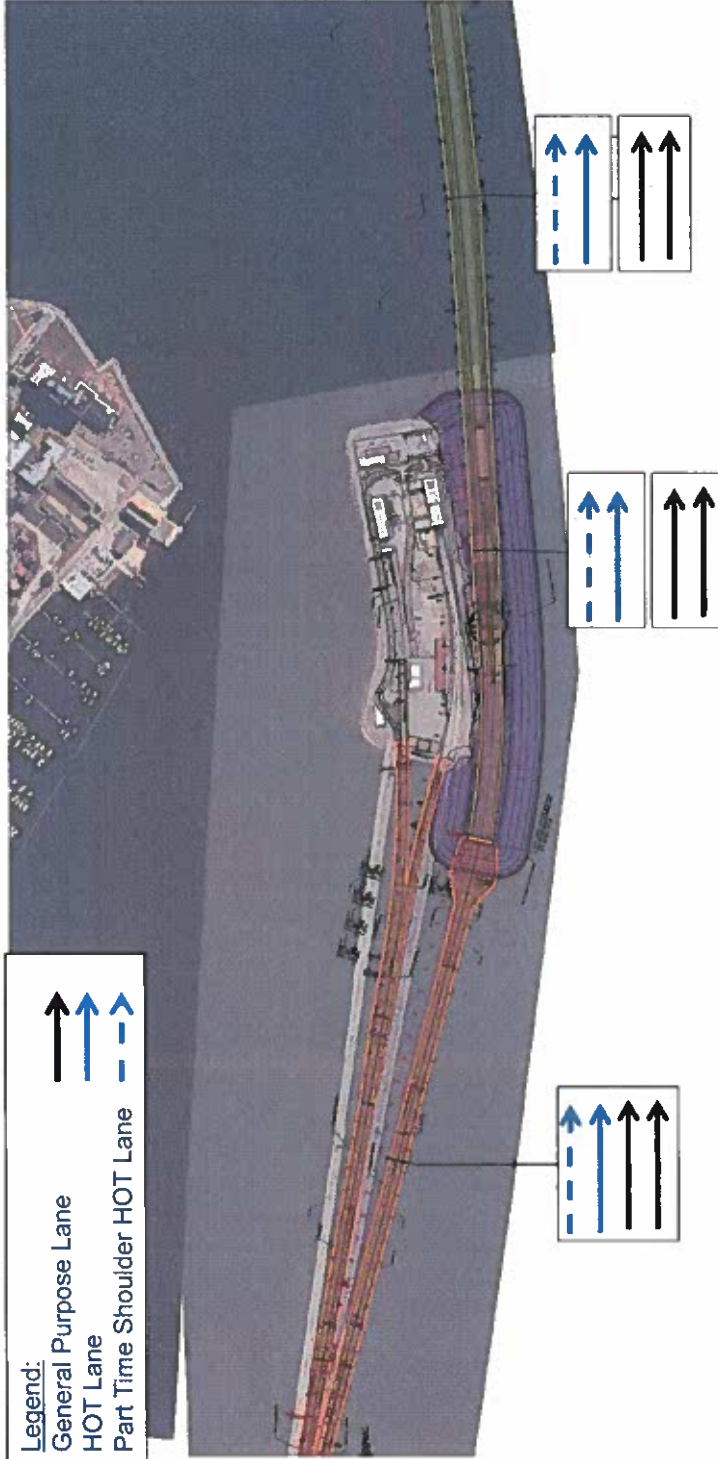
South Island Expansion and New South Trestle

HRBT Expansion: The North Island



Legend:

- General Purpose Lane
- HOT Lane
- Part Time Shoulder HOT Lane

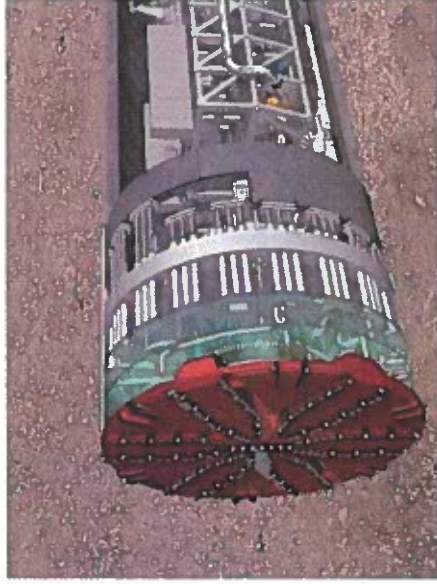


Island Expansion Work - Purple Shaded Area

HRBT Expansion: About the Tunnels



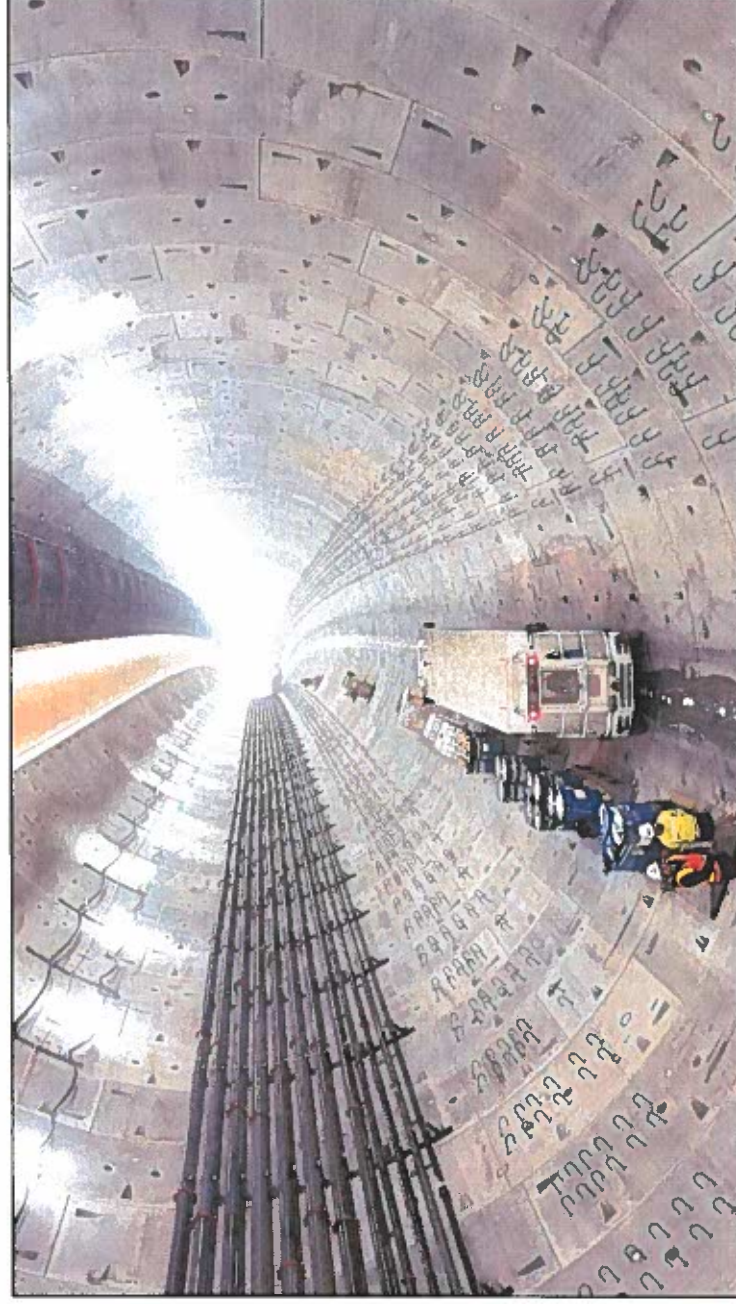
- ❖ This is the fourth bored roadway tunnel project in the U.S.
- ❖ Twin two-lane tunnels to be built west of existing eastbound tunnel (Navy side) to carry all eastbound traffic
- ❖ Existing eastbound tunnel and current westbound tunnel will accommodate all westbound traffic upon project completion
- ❖ Diameter of each new tunnel: approx. 45 feet; second largest tunnel opening for a Tunnel Boring Machine in North America



HRBT Expansion: Tunnel Liner



Hampton Roads Bridge-Tunnel
VDOT



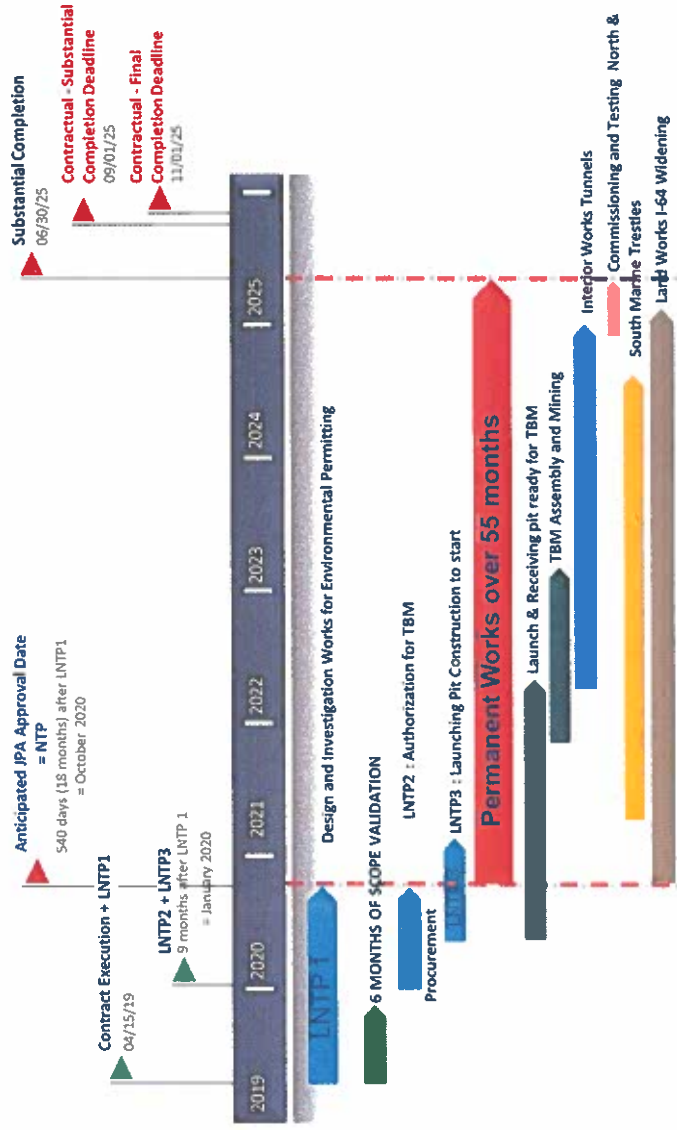
Precast Concrete Ring Segments – Seattle Tunnel

HRBT Expansion: Mitigating Traffic Impacts During Construction



- ❖ Two lanes of traffic to be maintained in both eastbound and westbound directions throughout the entire construction period
- ❖ Pre-positioned wrecker service along the project 24 hours/day
- ❖ Active public outreach campaigns during construction

HRBT Expansion: The Project Timeline



HRBT Expansion: Project Funding



- ❖ Hampton Roads Transportation Fund to fund 95 percent of the project
- ❖ Monies raised through regional gas and sales taxes
- ❖ Other project funding includes \$200 million from the Commonwealth's SMART SCALE program
- ❖ \$108 million from VDOT to fund replacement of the Norfolk Side Trestle Bridges in Norfolk



HRBT Expansion: DBE/SWaM Opportunities



Disadvantaged Business Enterprise
(DBE)

and

Small, Women and Minority-owned
businesses (SWaM)

Goals:

12 percent-DBE

20 percent-SWaM

HRBT Expansion: Public Outreach



PUBLIC OUTREACH

- ❖ To continue throughout life of project
- ❖ Citizens Committee to be established
- ❖ Tunnel Boring Machine naming contest to include Hampton Roads school-age children
- ❖ VDOT has participated in more than 65 public outreach events about the HRBT Expansion Project since May 2017



PROJECT WEBSITE

www.hrtextension.org

Paula Miller-Communications Manager

To schedule public outreach:

Paula.Miller@vdot.virginia.gov

757-858-6776