the heartbeat of HAMPTON ROADS TPO
TRANSPORTATION PLANNING ORGANIZATION

REGIONAL CONNECTORS STUDY

JOINT STEERING (POLICY) COMMITTEE/WORKING GROUP MEETING

April 26, 2022

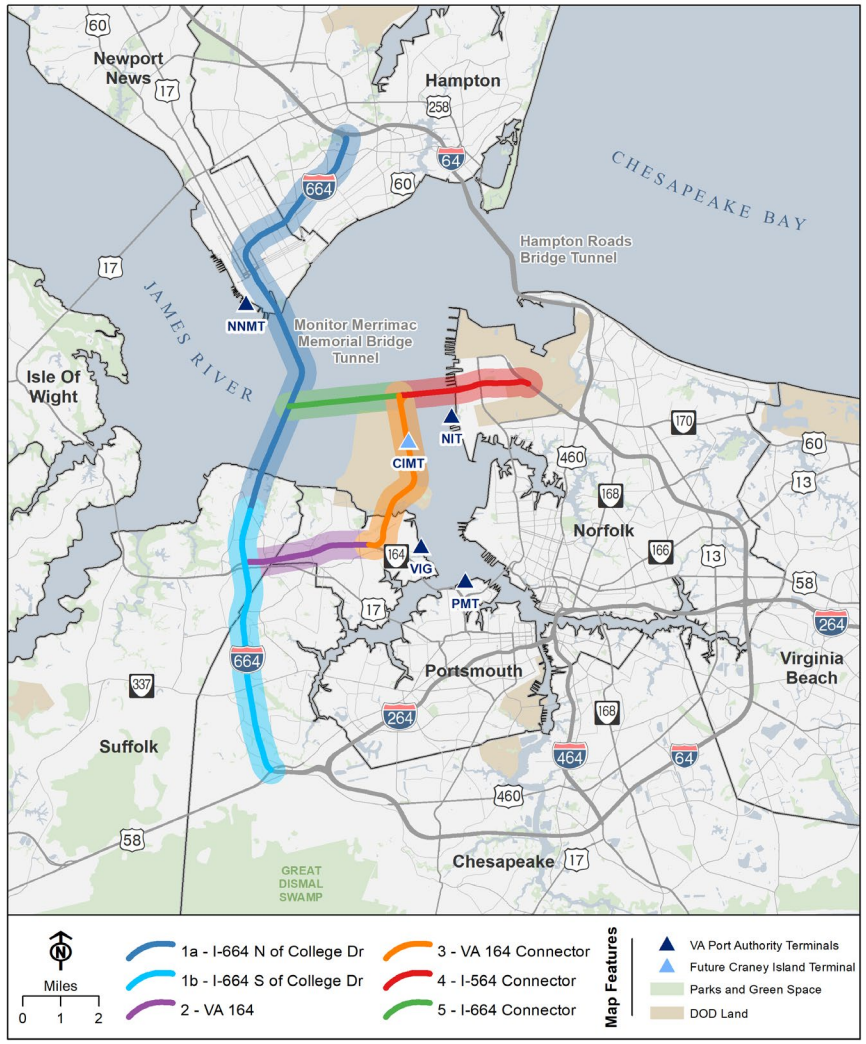
Michael Baker INTERNATIONAL

RCS Phase 3 – Summary of Qualitative Analysis

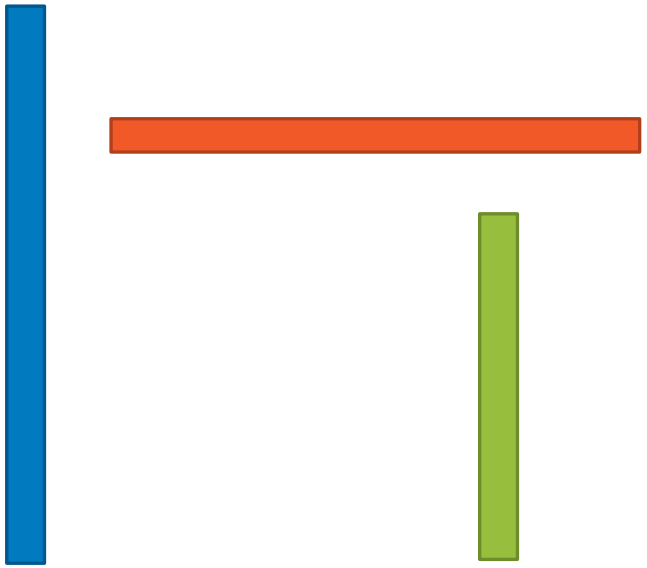
Agenda

- Overview of Process and Progress
- Step 1 evaluation highlights
  - Construction Complexity
  - Permitting Issues
  - Readiness
- Bundling Recommendations
- Next Steps

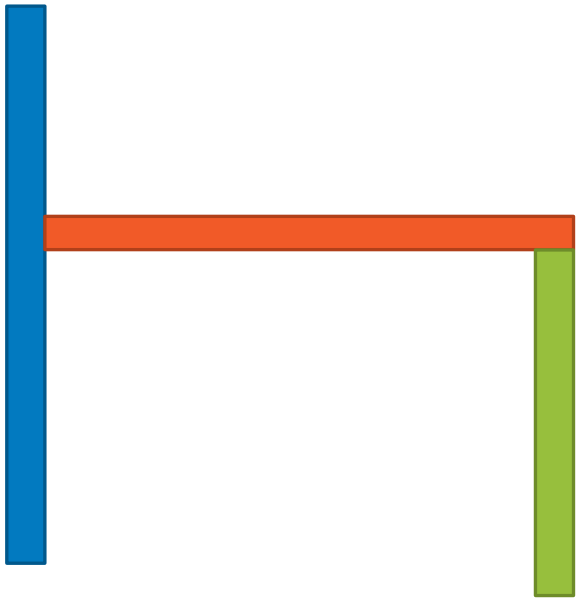
Mandated Segments



Segments vs Bundles



SEGMENTS



BUNDLE

Tiering

SEGMENT TIERING

Tier 1

Segments ready for advancement and recommended for consideration in the fiscally constrained portion of the 2050 HRTPO Long Range Transportation Plan.

Tier 2

Segments which require further refinement and maturation, and will be recommended for consideration in the 2050 Vision Plan, as developed by the HRTPO.

Tier 3

Segments that due to technical challenges and uncertainties, will be further developed at an appropriate time in the future.

Long-Range Transportation Plan

- The LRTP is the region's transportation blueprint
- 20-year timeframe, updated every 5 years
- Must be fiscally constrained
- All regionally significant transportation projects must be included in the LRTP, regardless of funding source

Assess Current Conditions

Forecast Growth - Assess Future Conditions

Evaluate and Prioritize (Across Scenarios)

Identify Funding (Fiscal Constraint)

Long-Range Transportation Plan

- Assess Current Conditions
- Forecast Growth - Assess Future Conditions
- Evaluate and Prioritize (Across Scenarios)
- Identify Funding (Fiscal Constraint)

Stakeholder and Public Input

HRTPO plans/analyses (e.g., LRTP, congestion management process, safety, freight, etc.)

Regional Studies/Efforts (e.g., Regional Connectors Study)

Fiscally Constrained LRTP

Regional Transportation Vision Plan

Phase 3 Approved Process Graphic

Step 1	Step 2	Step 3	Step 4
Qualitative Assessment of Construction, Permitting, & Readiness	Congestion Reduction Evaluation Revised Design & Cost Estimation	Scenario Analysis Traffic Operations Analysis	Final Documentation of Design, Evaluation & Recommendations
DRAFT SEGMENT TIERING	FINAL SEGMENT TIERING	FULL RECOMMENDATIONS TO HRTPO	FINAL REPORT
Website Update	Public Meetings	Regional Connectivity Symposium	Public Meetings

Recommended Process Update

Step 1:

Qualitative Assessment

- ✓Construction Complexity
- ✓Permitting Issues
- ✓Readiness

→ Segment Bundles

Step 2:

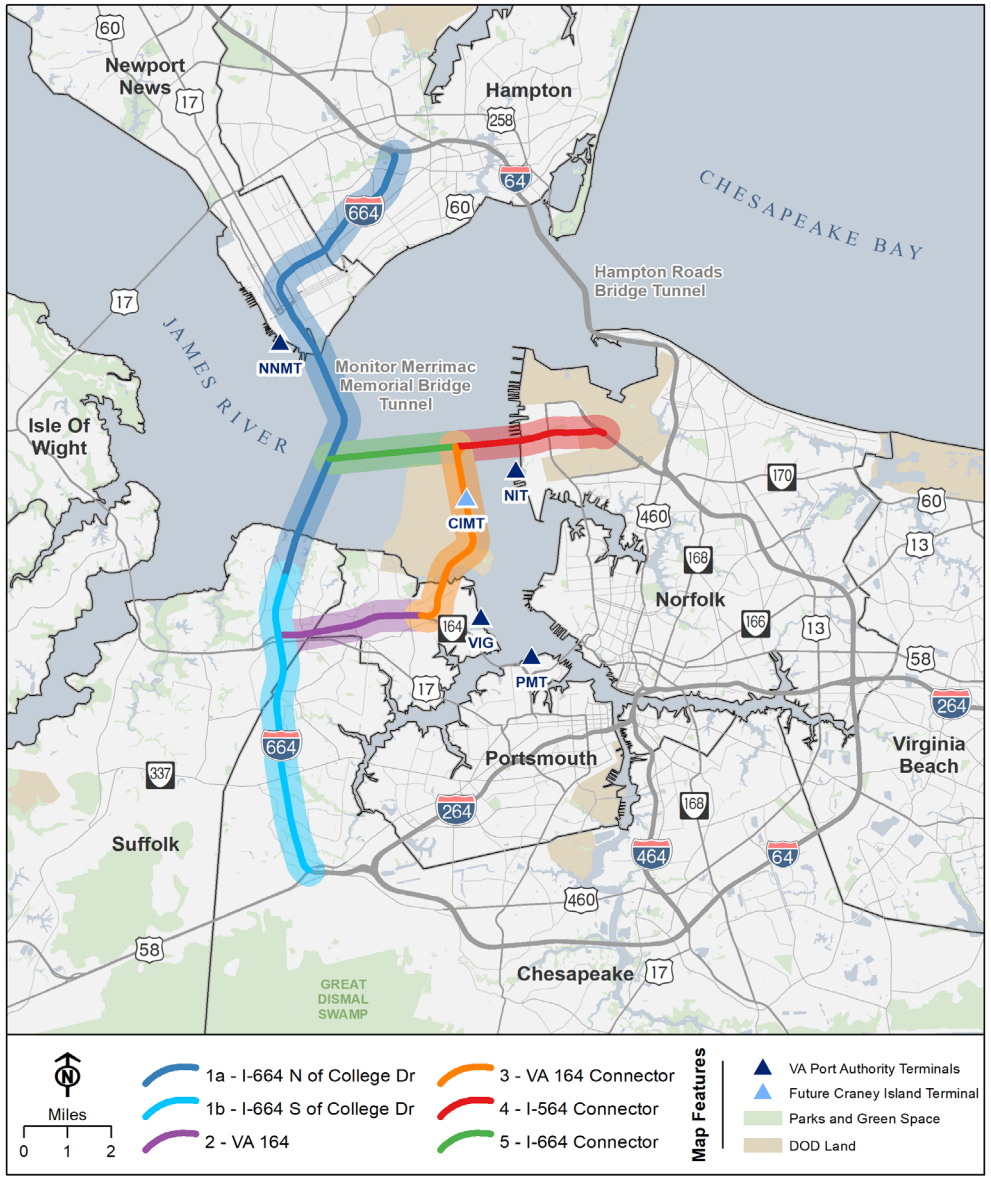
Congestion reduction evaluation

Refined design and **cost estimate**

Step 1 + Step 2:

→ Segment Tiers

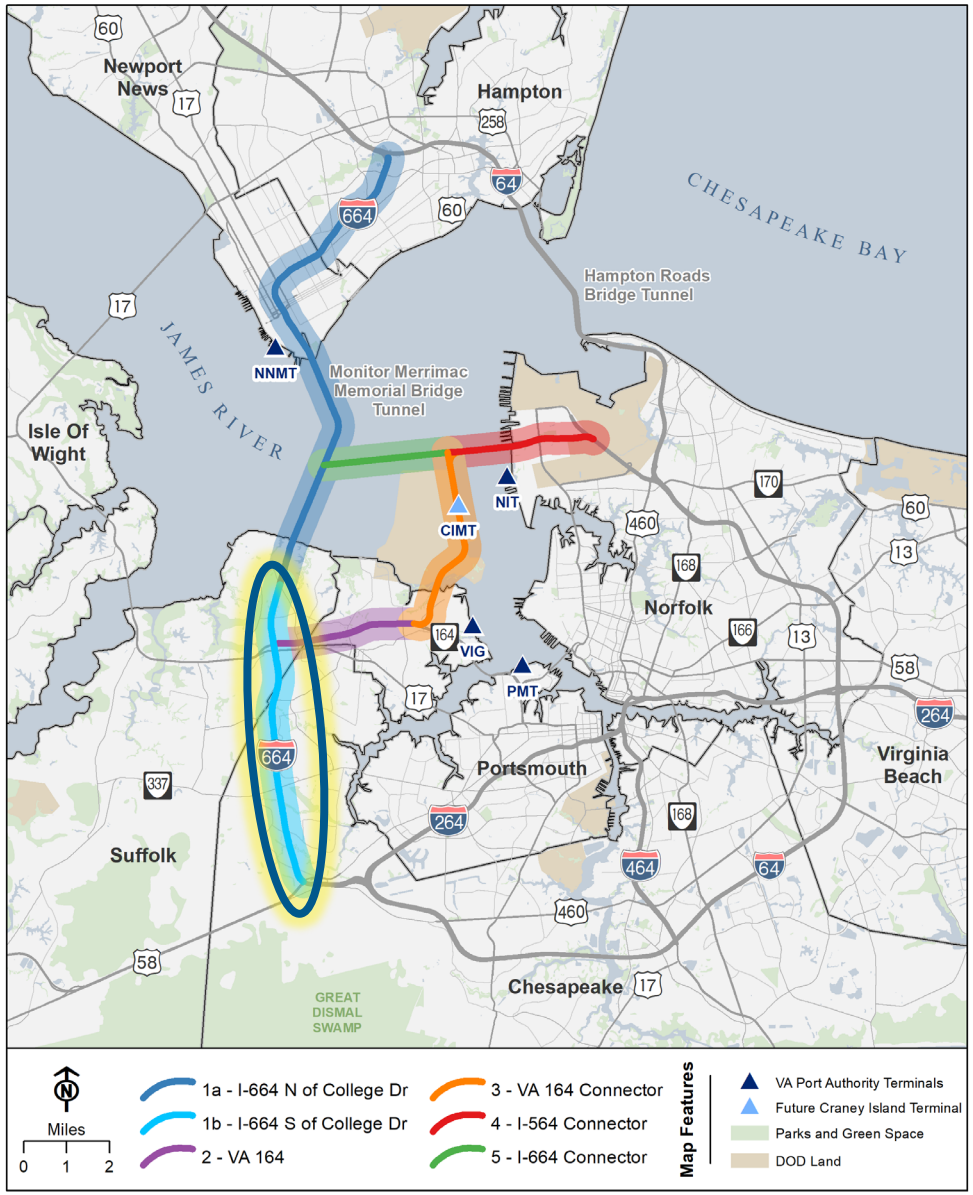
Mandated Segments



Step 1 Scope Includes:

Using the Step 1 Readiness Evaluation, differentiate "overlapping" HRTAC Funded Segments to include in an RCS 2045 Baseline Network (in addition to the E+C network)

Mandated Segments



Highlights of Results

- SEGMENTS EVALUATED
- EVALUATION MEASURES
- KEY FINDINGS

Step 1 Evaluation Highlights – Study Segments

The segments evaluated in the qualitative analysis are based on the SEIS segments as follows:

- I-664 North of College Drive – Starting with general alignment of SEIS Alternative D – *adapted lane configuration* to 8 lanes with 4 GP lanes and 4 managed lanes.
- I-664 South of College Drive, using Bowers Hill Interchange Study Alternative C.
- VA 164 – Widen toward the median to 6 GP lanes per SEIS (add one in each direction) – *expanded corridor by 20' each side as a precaution to accommodate RR crash wall depth.*
- VA 164 Connector – SEIS alignment (4 GP lanes)
- I-564 Connector – SEIS Alternative D (4 GP lanes)
- I-664 Connector – SEIS Alternative D (4 GP lanes)

For EJ analysis, also considered demographics of surrounding 500' corridor

Construction Complexity Evaluation Factors

Design & Construction

- Bridges, Tunnels, Constrained Work Areas

Constructability Constraints

- Agency Land or Projects
- Design Dependency
- Traffic Disruptions

Cost Considerations

- Right of Way, Environmental Mitigation

Permitting Issues Evaluation Factors

Social Environment

- Community, Sensitive Property, EJ Impacts

Permits

- Federal, State, and Local
- Primarily factors over water

Additional Factors

- Mitigation Complexity & Cost, Maritime Stakeholders, Effect on other Federal Navigation Projects

Project Readiness Evaluation Factors

Project Independence

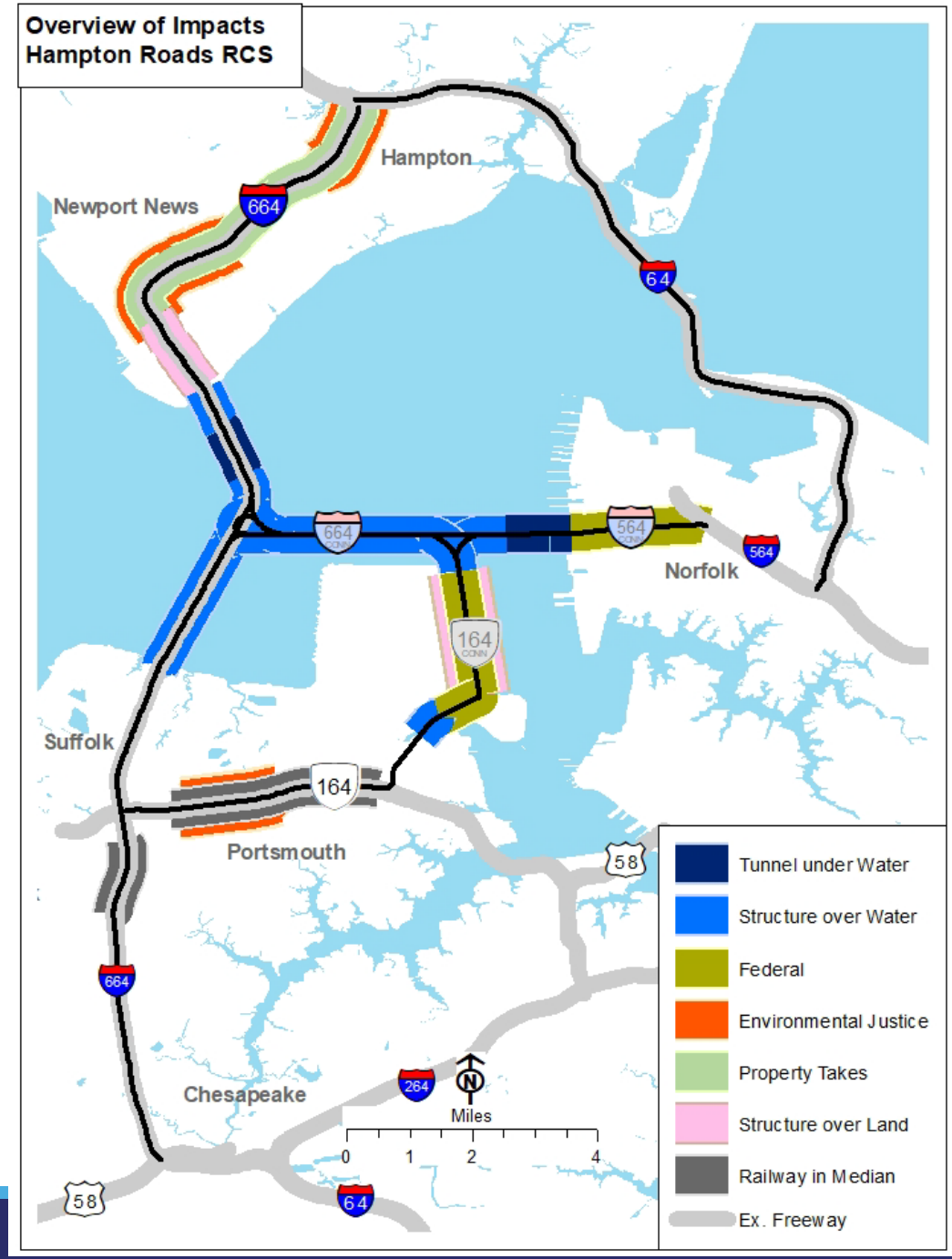
- Independence/Phasing
- Integration with HREL

Project Development

- Adopted by a Regional Agency, Engagement with Stakeholder/Review Agency, Advancement of Project Study

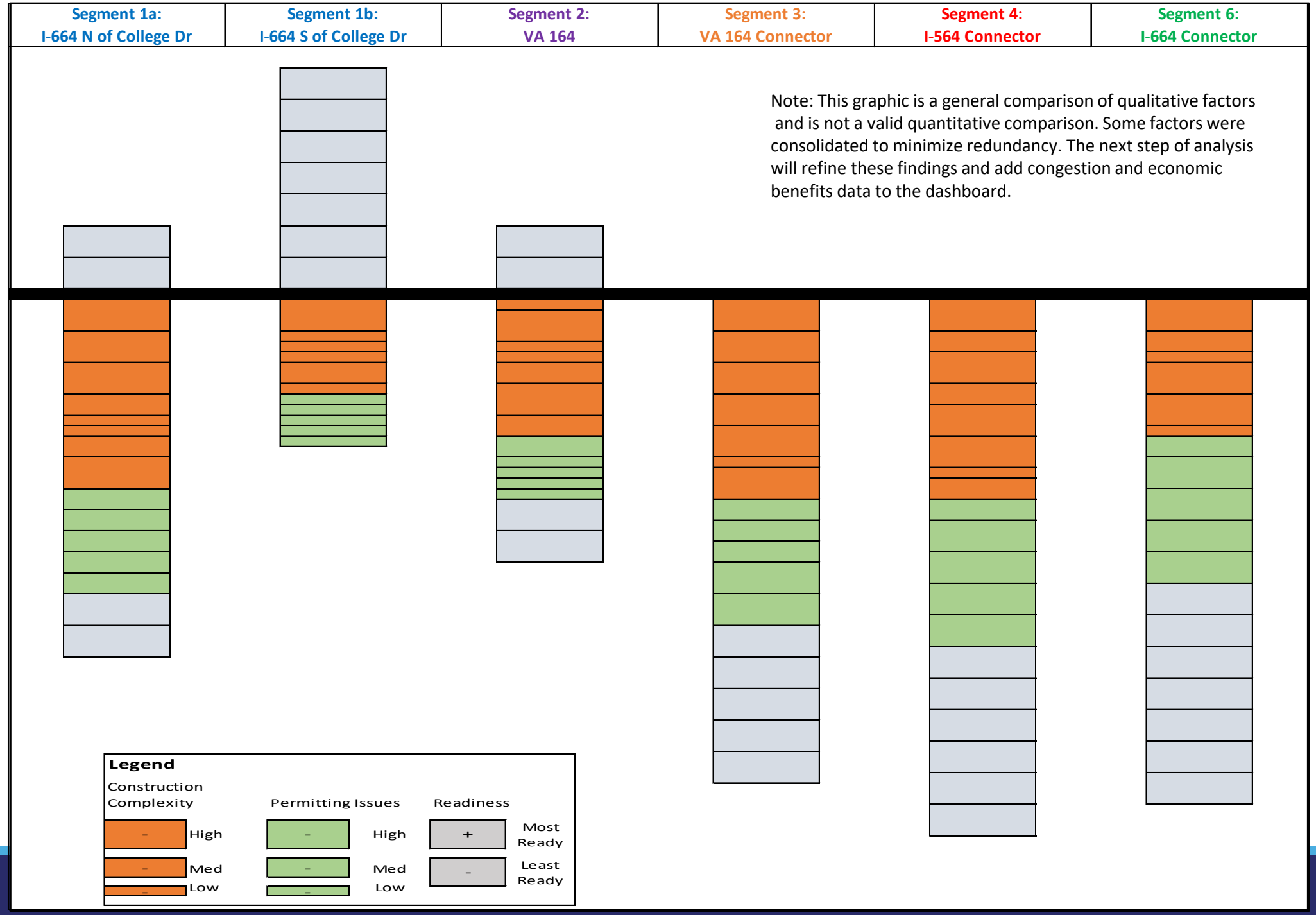
Funding Opportunities/Eligibility

- HRTAC, SMART SCALE, IIJA Grant Funding



Step 1 Qualitative Evaluation Highlights – Key Features

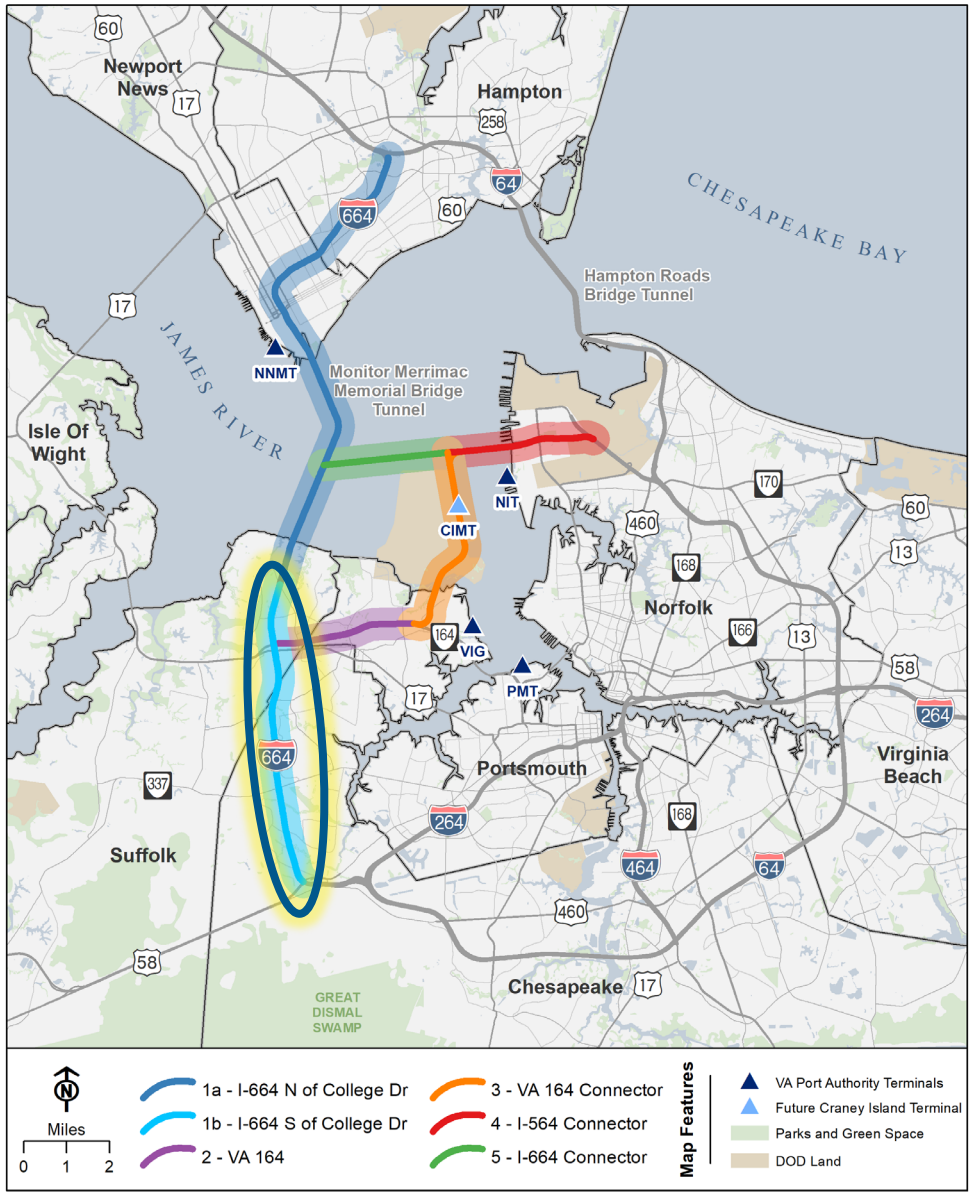
Step 1 Qualitative Evaluation Dashboard



Step 1 Qualitative Evaluation Highlights

- I-664 South of College Drive – **recommend including in RCS 2045 Baseline Network**

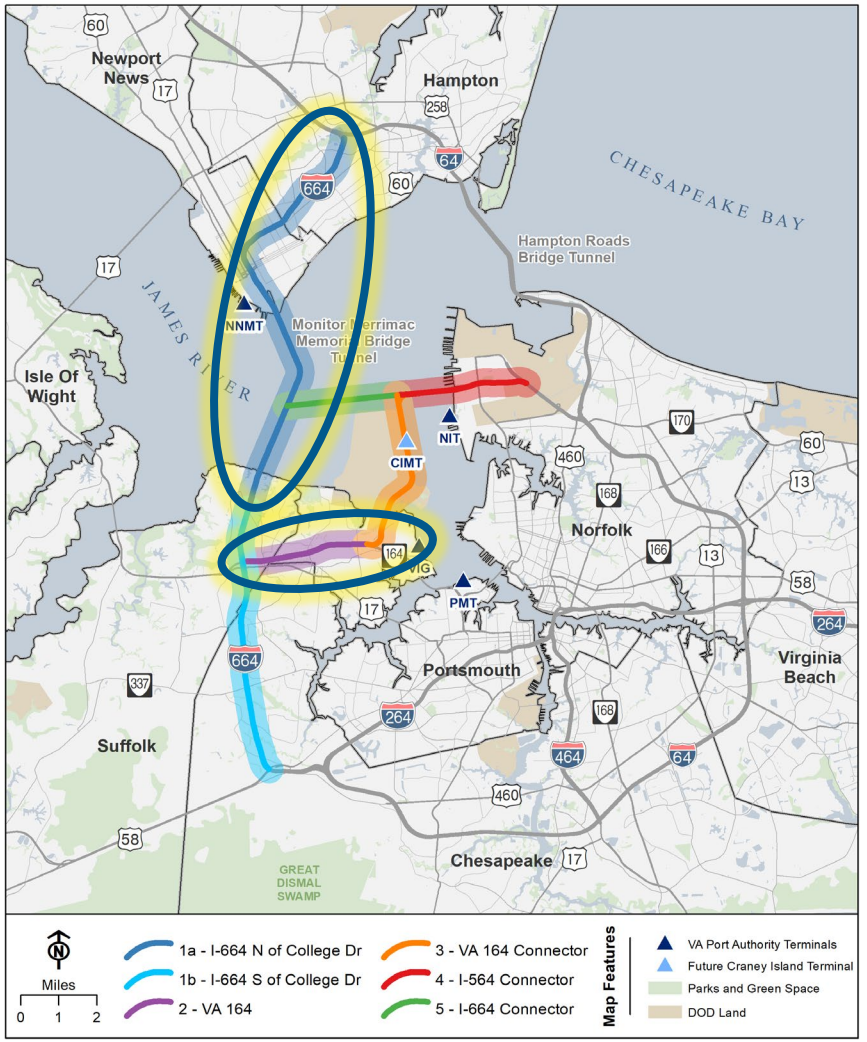
Mandated Segments



Step 1 Qualitative Evaluation Highlights

- Widening of existing highways [I-664 North of College Drive, VA 164] – have challenges but score well in the qualitative criteria
  - Both I-664 (Hampton) and VA 164 (Portsmouth) have potential indirect EJ impacts
  - I-664 complicated by pipeline and expansion over water vs land
  - I-664 has importance to completion of the HREL network
  - VA 164 rates well on construction complexity and permitting issues

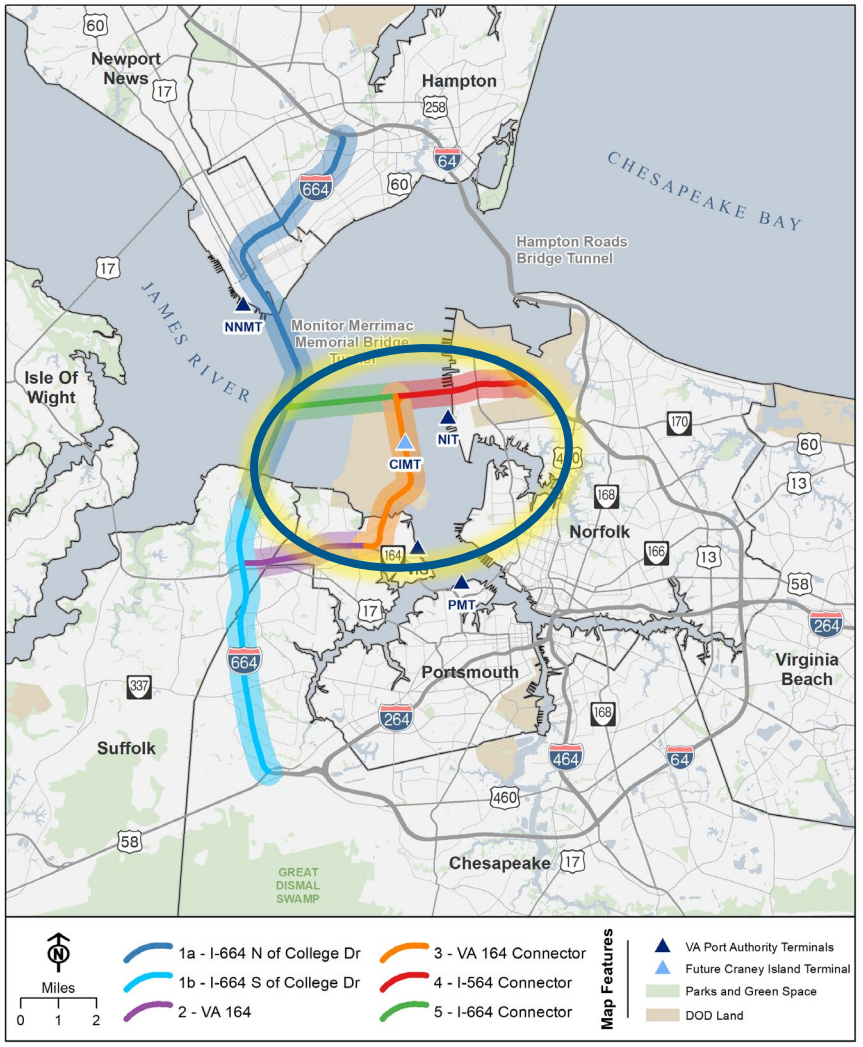
Mandated Segments



Step 1 Qualitative Evaluation Highlights

- New location segments are lowest in readiness and have greatest construction complexity and permitting issues [VA 164 connector, I-564 connector, I-664 connector]
  - Each depends on completion of other segments
  - I-564 tunnel construction method affects tie-in location of all three segments
  - Segments over water and adjacent to federal facilities have the greatest permitting issues

Mandated Segments



The benefits of bundling before tiering

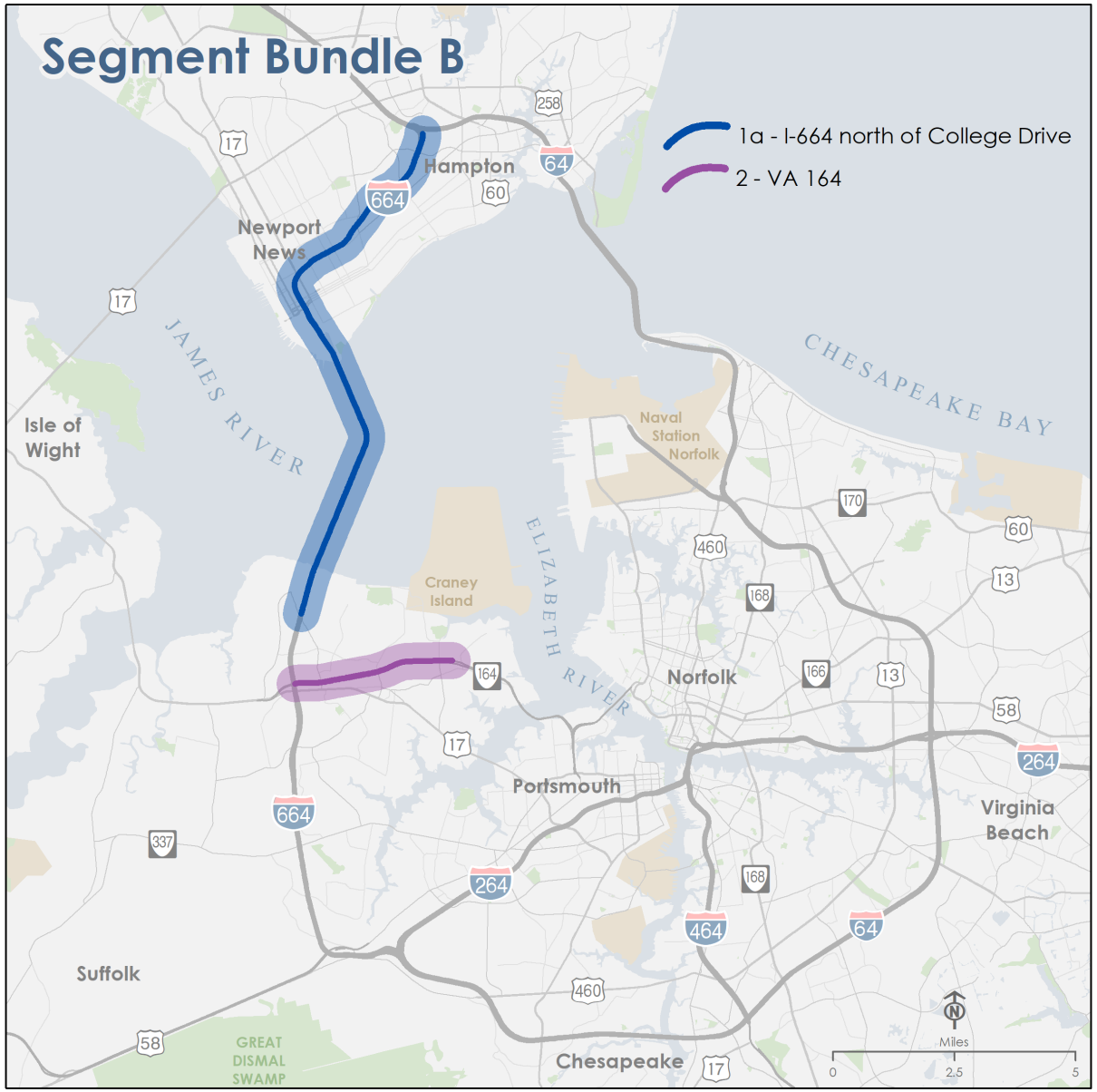
- The information we have now is mostly what is *difficult* about the segments. Without the *benefit* information, it is hard to complete tiering.
  - A less difficult corridor will tier differently depending on whether it moves the needle on congestion
  - Strategic bundling will bring insights on the congestion benefits to inform tiering

Strategic Bundling will bring insights on benefits

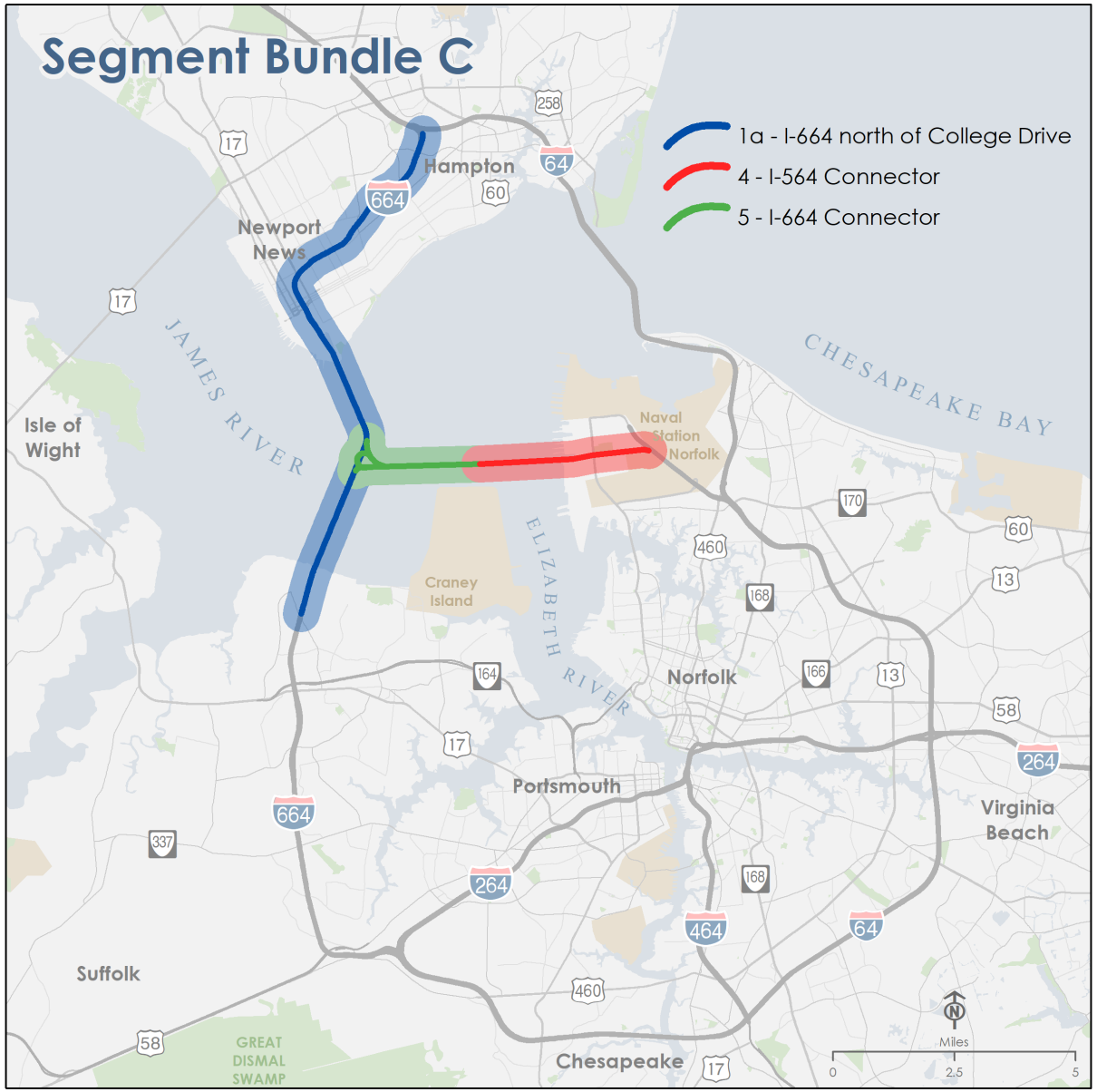
	Segment 1a: I-664 N of College Drive	Segment 2: VA-164	Segment 3: VA-164 Conn	Segment 4: I-564 Conn	Segment 5: I-664 Conn
Bundle A	■				
Bundle B	■	■			
Bundle C	■			■	■
Bundle D	■	■	■	■	

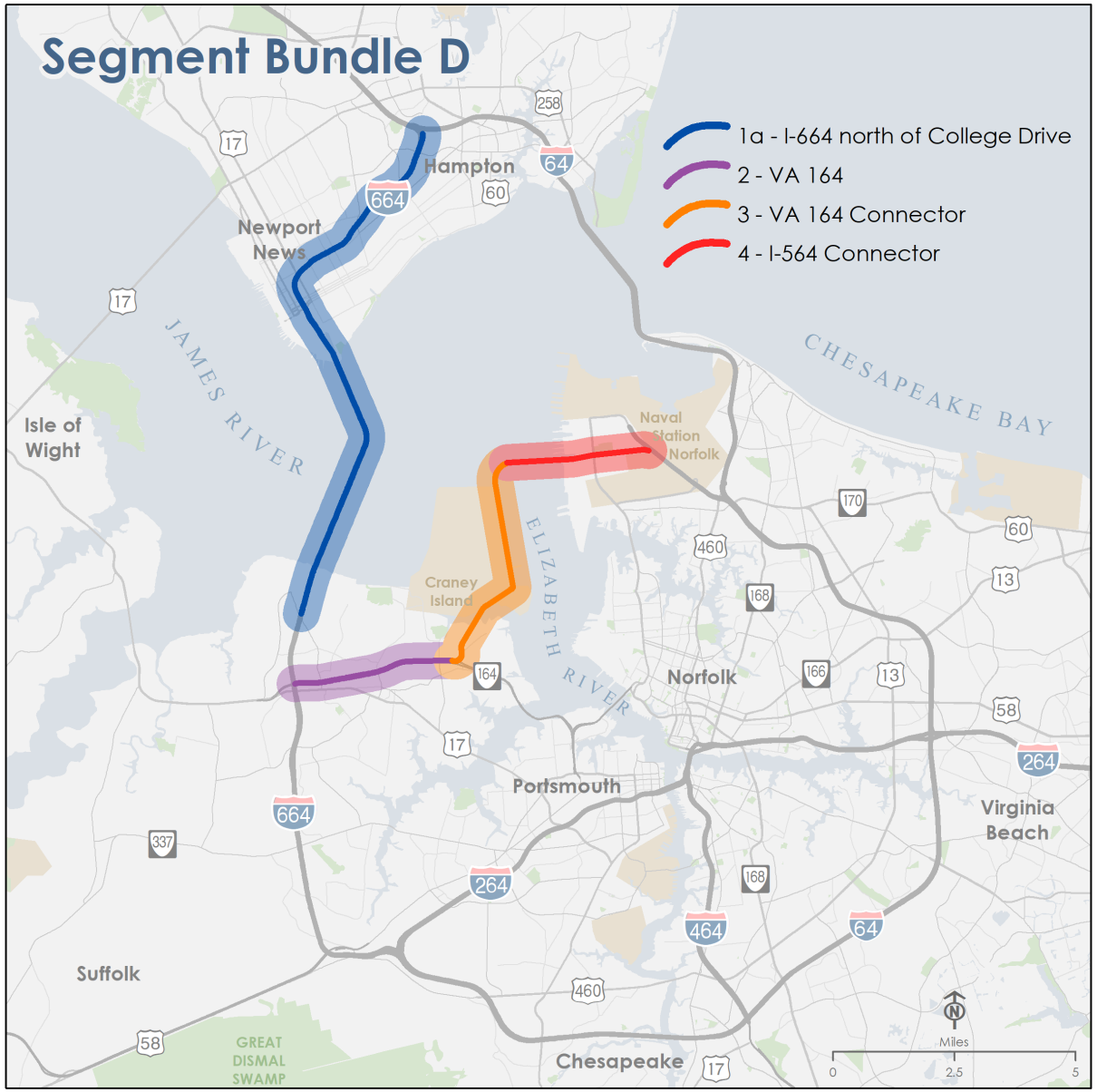
Segment 1b (I664 South of College Drive) included in the 2045 RCS Baseline Network

- Bundles B, C, and D represent different east-west alternatives across the harbor
- Comparison of Bundles B and D will add insight on Segment 3 benefits
- Comparison of Bundles C and D will add insight to the benefits of the three segments with greatest construction and permitting challenges



Segment 1b (I664 South of College Drive) included in the 2045 RCS Baseline Network





Segment 1b (I664 South of College Drive) included in the 2045 RCS Baseline Network

Steering Committee – Recommended Actions

- Approve including I-664 widening Bowers Hill to College Drive in the RCS 2045 Baseline network
- Approve the recommended bundles for congestion analysis

Next Steps

- Step 2 – Quantitative Analysis

Step 2

Congestion Reduction Evaluation

Revised Design & Cost Estimation

Final Draft Segment Tiering

- Public Engagement

Step 2 Schedule
May through July (3 months)
Steering (Policy) Committee & Working Group Meetings - June & July

Extra slides

Schedule

	2022												2023					
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
	Step 1				Step 2			Step 3							Step 4			
Study of:	Segments				Up to 4 Bundles			Up to 3 Bundles of Tier 1 and Tier 2 Segments							Documentation			
Task 2 (Design)	Qualitative Review				Revised Design* Cost Estimates			Refined Tier 1 Design and Cost Estimate							Documentation			
Task 3 (Evaluation)	Permit Challenges Readiness **DRAFT TIERING**				Congestion Relief Econ. Performance **FINAL TIERING**										Documentation			
Task 4 (Scenarios & Traffic Operations)								Congestion and Economic Evaluation of Tier 1 and Tier 2 Segments in up to 3 Bundles (Baseline + 3 Greater Growth Scenarios) Traffic Operations Analysis (see Scope) **Full Recommendations to HRTPO**							Documentation			
Task 1 (Public Engagement)	Website Updates				Round of Meetings			Regional Connectivity Symposium							Round of Meetings			
Committee Meetings	2 (January, April)				2 (June, July)			2 (December, February)							1 (May)			

** Extent of conceptual design varies by tier*