

January 4, 2022

**Memorandum #2022-01**

**TO: Regional Connectors Study Steering Committee and Working Group**

**BY: Camelia Ravanbakht, RCS Project Coordinator**

**RE: Regional Connectors Study Steering Committee and Working Group Joint Meeting – January 11, 2022**

**Please RSVP by COB Thursday, January 6, 2022**

Attached is the agenda for the **Joint Steering (Policy) Committee and Working Group** meeting of the Regional Connectors Study (RCS) scheduled for **Tuesday, January 11, 2022, at 9:30 AM.**

**This meeting will be held in person** in Board Room A/B of the Regional Building located at 723 Woodlake Drive, Chesapeake.

/cm

Attachments

## RCS Steering Committee and Working Group Members

### **Voting Members:**

#### **Steering Policy Group**

Rick West (CH)  
Donnie Tuck (HA)  
McKinley Price (NN)  
Martin Thomas (NO)  
Shannon Glover (PO)  
Mike Duman (SU)  
Robert Dyer (VB)

#### **Working Group**

Troy Eisenberger (CH)  
Jason Mitchell (HA)  
Bryan Stilley (NN)  
Robert Brown (NO)  
James Wright (PO)  
Jason Souders (SU)  
Ric Lowman (VB)

### **Nonvoting Members:**

Ivan Rucker (FHWA)  
Craig Quigley (HRMFFA)  
Kevin Page (HRTAC)  
Jason Flowers (USACE)  
George Janek (USACE)  
Col. Brian Hallberg (USACE)  
Keith Lockwood (USACE)  
Robert Pruhs (USACE)  
Gregory Steele (USACE)  
Tim Dolan (USCG)  
Gene Leonard (USCG)  
Michael King (USN)  
Pamela Phillips (VDOT)  
Jennifer Salyers (VDOT)  
Chris Hall (VDOT)  
Stephen Edwards (VPA)  
Barbara Nelson (VPA)

### **Staff:**

Bob Crum (HRTPO)  
Pavithra Parthasarathi (HRTPO)  
Keith Cannady (HRPDC)  
Rob Case (HRTPO)  
Greg Grootendorst (HRPDC)  
Keith Nichols (HRTPO)  
Dale Stith (HRTPO)

### **Project Coordinator:**

Camelia Ravanbakht

### **Project Consultants:**

Paul Prideaux  
Lorna Parkins



## Agenda

### Regional Connectors Study

### Joint Steering (Policy) Committee and Working Group Meeting

**Tuesday, January 11, 2022**

**9:30 AM**

**Regional Board Room, The Regional Building, 723 Woodlake Drive, Chesapeake, Virginia**

**1. Call to Order**

**2. Welcome and Introductions**

**3. Public Comment Period (Limit 3 minutes per individual)**

**4. Minutes (Action Requested)**

Summary Minutes from October 12, 2021, Joint Steering (Policy) Committee and Working Group Meeting

Attachment 4

**Recommended Action:** Approve the minutes.

**5. Regional Connectors Study: Scope of Work and Schedule Update (Action Requested)**

Lorna Parkins and Paul Prideaux (MBI), RCS Co-Project Managers

At the last Joint Steering (Policy) Committee/Working Group Meeting on October 12, 2021, Mr. Crum, HRTPO Executive Director, made a presentation on the path forward for the Regional Connectors Study (RCS). He added that each of the mandated segments (Attachment 5A) would be advanced to the next phase of this study, where an analysis would be completed on the degree to which each segment addresses the needs of the region. Mr. Crum added that the cost, constructability, permitability, and

congestion relief of the various segments would be further evaluated, and the various segments will be ranked using this evaluation and tiered based on project readiness. Following some discussions, the Steering (Policy) Committee and Working Group members unanimously endorsed the path forward approach for the RCS and directed the consultant team to update the scope of work and schedule.

Since the October Joint meeting, the consultant team has been thoroughly working on the update of the scope of work and a revised schedule to reflect the approved path forward approach.

Ms. Lorna Parkins and Mr. Paul Prideaux, RCS Project Co-Managers will brief the members on this item.

Attachment 5A – Map of Mandated Segments

Attachment 5B – Revised Scope of Work and Schedule

**Recommended Action:** Approve the revised RCS Scope of Work and Schedule.

**6. Regional Connectors Study: Draft Evaluation Measures for Segment Tiering  
(Action Requested)**

Lorna Parkins and Paul Prideaux (MBI), RCS Co-Project Managers

As described in the revised scope of work (Task 3), the following criteria will be used in evaluating the mandated segments:

- Permitting Issues
- Construction Complexity
- Project Readiness
- Congestion relief

The consultant team has developed a series of draft measures and factors for evaluating the mandated segments on the first three criteria. In addition to highlighting permitting and construction challenges, this evaluation will provide a comprehensive understanding of the mandated segments including impacts to community residents and businesses, environmental justice populations, regional economic drivers, and the environment.

The outcome of this evaluation is to provide logical information, supported by qualitative and quantitative observations, which will support the initial draft designation of the mandatory segments into three tiers as described in the revised scope of work (Step 1 in the schedule). An evaluation matrix will be prepared to illustrate the characteristics of each segment and to facilitate comparisons among them.

Ms. Lorna Parkins and Mr. Paul Prideaux (MBI), RCS Co-Project Managers, will brief the Joint Committee members on the draft evaluation measures for segment tiering.

**Recommended Action:** Approve the draft Evaluation Measures.

**7. For Your Information**

RCS Diary of Key Decision Points: 2017 to Present

Attachment 7

The attached diary includes a summary of key decision points from 2017 to the present time. The purpose of this document is to provide a quick reference for members and the public. This is a living document and will be regularly updated.

**8. RCS Next Meeting:** To Be Determined

**9. Other Items of Interest**

**10. Adjournment**

**Regional Connectors Study**  
**Joint Steering (Policy) Committee & Working Group Meeting Minutes**  
**October 12, 2021, 9:30 am**

**Steering (Policy) Committee**

The following voting members attended the meeting (alphabetically by city):

Rick West (CH)  
Donnie Tuck (HA)  
McKinley Price, Chair (NN)  
Martin Thomas (NO)  
Shannon Glover (PO)  
Michael Duman (SU)  
Robert Dyer (VB)

No voting members of the Steering (Policy) Committee were absent.

**Working Group**

The following voting members attended the meeting (alphabetically by city):

Troy Eisenberger (CH)  
Lynne Keenan (HA)  
Bryan Stilley (NN)  
Amy Inman (NO)  
Carl Jackson (PO)  
Mark Shea (VB)

**Others**

The following others attended the meeting (alphabetically by last name):

Robert A. Crum, Jr. (HRTPO/HRPDC)  
Lesley Dobbins-Noble (USACE)  
George Janek (USACE)  
Carl Jackson (Portsmouth)  
Barbara Nelson (VPA)  
Keith Nichols (HRTPO)  
Kevin Page (HRTAC)  
Lorna Parkins (Michael Baker Intl.)

Pavithra Parthasarathi (HRTPO)  
Paul Prideaux (Michael Baker Intl.)  
Camelia Ravanbakht (RCS Coordinator)  
Dale Stith (HRTPO)  
Eric Stringfield (VDOT)  
Cathie Vick (VPA)

## **1. Call to Order**

The meeting was called to order at 9:30 am. Mayor Price conducted the meeting.

## **2. Welcome and Introductions**

The meeting started with attendees introducing themselves.

## **3. Public Comment Period**

There were no public comments.

## **4. Minutes**

Mayor Dyer moved approval of the minutes of the June 30, 2021 Joint Steering (Policy) Committee and Working Group meeting, and Mayor Glover seconded. The motion was approved.

## **5. RCS: Background and Recommended Path Forward**

Mr. Crum made a presentation on the path forward for the RCS. He began his presentation by introducing the consultant's new project leadership – Lorna Parkins and Paul Prideaux – and by highlighting the mandated segments and the past philosophy of the study.

Mr. Crum noted that he met with members of the Steering (Policy) Group after the June meeting. In these discussions he heard that some of the options in the RCS may not be constructed for decades; technology, community growth, and needs will evolve over time; there are questions and concerns about some segments but it's too early to eliminate them at this stage, the RCS should determine each segment's advantages and disadvantages, and ready-to-go projects shouldn't be slowed down.

Mr. Crum stated that HRTPO staff and the consultant team believe that retaining certain segments through the next stage of analysis can be accomplished without the need for additional funding. He added that each of these segments would be advanced to the next phase of this study, where an analysis would be completed on the degree to which each segment addresses the needs of the region.

Mr. Crum added that the cost, constructability, permitability and congestion relief of the various segments will be evaluated, and the various segments will be ranked using this evaluation and staged based on project readiness.

Mr. Crum ended his presentation by noting that potential category groupings might include the following:

- Those segments that are ready for advancement and should be recommended for consideration in the fiscally-constrained portion of the Hampton Roads 2050 Long-Range Transportation Plan.
- Those segments which require further refinement and maturation, and will be recommended for consideration in the 2050 Vision Plan as projects requiring further evaluation for permitability and constructability.
- Those segments that due to technical issues or other items will be retained but will warrant further consideration by the community at the appropriate time.

Vice-Mayor Thomas thanked Mr. Crum for working to get consensus on this issue and he added that he thinks that this will be a good path forward for the study.

Mayor West added that this seems like a reasonable path moving forward. He noted that other projects may not move forward due to those plans that are on the table. We need to see what other problems might be caused by having this plan on the table and be ready to revisit in the future as necessary. Mr. Crum replied that we will need to make sure that we are smart about the project groupings.

Mayor Glover noted that Portsmouth will support what the region supports, but he still has concerns about the impacts some of these projects could have on the residents of Portsmouth, especially Route 164. He added that unresolved issues with the study could still cause impacts to Portsmouth residents and other groups such as the Navy.

Mayor Dyer noted that the region is going to benefit from wind turbines and transatlantic cables moving forward. Connectivity is important to attracting corporations, based on where land available for development is located. He added that coming up with a plan will ultimately benefit all of us, so that we have answers for companies looking to move into the region.

Mayor Tuck asked if all of these projects meet the standard for congestion relief, since that is what is required to use HRTAC funds. Mr. Crum replied that HRTAC supports this study, and the study will look at congestion relief for each alternative for both today and the planning horizon under different scenarios. Mr. Crum added that the study will be looking at the long term, since what may not be critical today may be critical 30 years from now.

Mr. Page mentioned the \$2.5 billion TIFIA loan that was recently procured for HRTAC projects. Mr. Page added that when he started at HRTAC, widening the HRBT was not considered an absolute high-priority project. He added that projects can rise in terms of readiness, such as the I-664/Bowers Hill interchange. He encouraged the committee to continue to move forward with projects that are ready to go.

Mr. Page noted that this study came up with federal officials during the TIFIA loan discussions. He added that by the 2050 LRTP development, we will hopefully have less debt

and loan obligations, and that the study outcomes will also line up with next Plan of Finance for HRTAC.

Mr. Price noted that the region comes together for projects – for example the Peninsula came together with the Southside for the High Rise Bridge project – and hopefully will continue to do so.

Mr. Page added that technology is changing. For example, the two tunnels under construction in the region are being bored rather than submerged. This new technology requires tunnels to be deeper in the ground and necessitates a bigger footprint for the roadway, which can impact project alignments.

Mayor Dyer made a motion to approve the recommended path forward and Mayor Duman seconded. The motion was approved.

## **6. RCS: Proposed Approach to Study Completion**

Ms. Parkins made a presentation on the proposed approach to support the completion of the project.

Ms. Parkins noted that the mandated study segments have not changed. The updated methodology will simply sort the segments into chronological tiers based on readiness and known challenges associated with construction and permitting. She added that the updated Phase 3 Process will establish a tiering framework, apply the framework to tier the segments, evaluate congestion relief and finalize segments tiers, and provide the information for the 2050 LRTP and prioritization process.

Ms. Parkins added that there will be three tiers. Tier 1 will have favorable constructability, permitting and readiness; Tier 2 will have favorable or mixed constructability and permitting but less favorable readiness; and Tier 3 will be challenged for constructability and permitting and a higher degree of uncertainty.

Ms. Parkins noted that individual segments will be organized into bundles for analysis, and the congestion relief evaluation will include as many as three logical bundles for evaluation. The consultant will evaluate congestion relief and other system effects of the bundles, and the evaluation results will finalize the tiering of the segments.

Ms. Parkins wrapped up the presentation by noting that the next steps include revising the Phase 3 scope of work, seeking scope endorsement from the Steering (Policy) Committee, and scheduling future meetings to review progress.

Mr. Jackson mentioned that the Working Group has had a strong role in the study to this point, and asked if the Working Group will continue to have this role moving forward. Mr. Crum replied that the Working Group will continue to be key in the technical work of the study. Mr. Crum also noted that committee members indicated a preference for more Joint Steering (Policy) and Working Group meetings moving forward.

## **7. For Your Information**

Mr. Crum noted that the agenda includes a timeline and a summary of key decision points in the RCS so far.

## **8. RCS Next Meeting**

Mr. Crum noted that HRTPO staff will be working with the consultant to determine when the next meeting will be. Ms. Parkins added that they will need to work with the Working Group on scoping changes, but that the next decision point that will require Steering (Policy) Group action will likely be within a month.

## **9. Other Items of Interest**

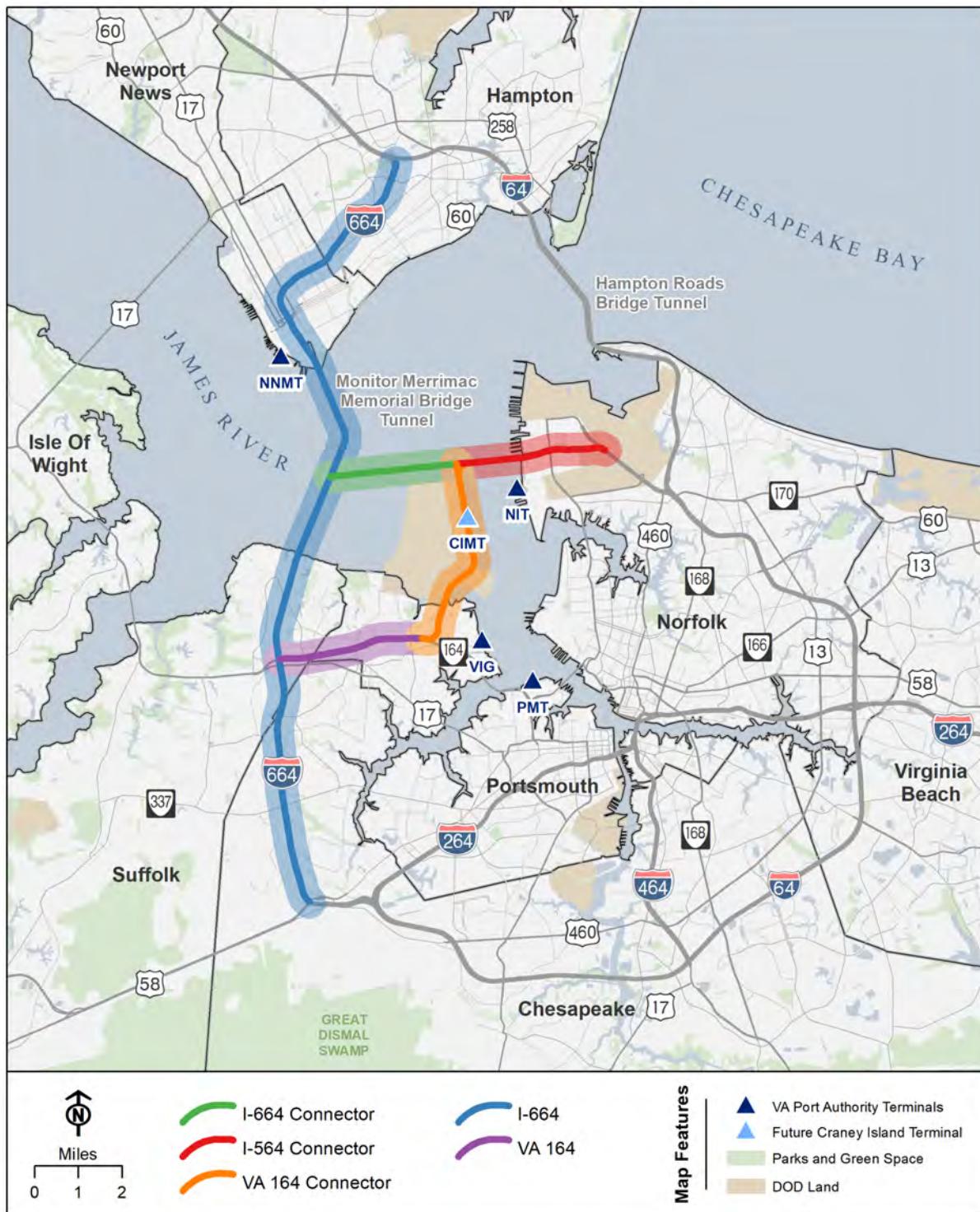
Ms. Ravanbakht, Project Coordinator, was asked to make a few comments and she noted that she was very excited with the new study approach.

## **10. Adjournment**

The meeting was adjourned at 10:15 am.

# ATTACHMENT 5A

## Mandated Segments



# **ATTACHMENT 5B**

# REGIONAL CONNECTORS STUDY

## PHASE 3 – STUDY COMPLETION

### SCOPE OF WORK REVISED (November 2021)

#### Introduction

Phase 3 of the study will entail the evaluation of the mandatory segments on the basis of cost and construction complexity; permitting challenges; project readiness; and congestion relief in order to provide a stratification of the segments for further study and consideration. The segments are anticipated to be divided into three tiers:

- Those segments that are ready for advancement and should be recommended for consideration in the fiscally constrained portion of the 2050 Long Range Transportation Plan, as developed by the HRTPO. (Tier 1)
- Those segments which require further refinement and maturation, and will be recommended for consideration in the 2050 Vision Plan as projects requiring further evaluation for permitability and constructability. (Tier 2)
- Those segments that due to technical issues or other items will be retained but will warrant further consideration by the community at the appropriate time. (Tier 3)

Further, the Tier 1 and 2 segments will be analyzed with regard to future “Greater Growth” scenarios as defined in Phase 2 of this study and an appropriate level of traffic operational analysis to provide insights for their consideration in HRTPO Long Range Planning.

The study will be conducted in four steps which apply across the scope tasks. This process is shown in Figure 1.

The Phase 3 scope is intended to include all tasks required to bring the Regional Connectors Study (RCS) to a successful conclusion. Phase 3 tasks are described in the following paragraphs. Paragraphs that are in gray italic font have been completed as of November, 2021.

Figure 1: Summary of Phase 3 Updated Scope in Four Steps\*

2022															2023						
Study of:	Step 1	Step 2		Step 3			Step 4														
Task 2 (Design)	Qualitative Review	Revised Design* Cost Estimates		Refined Tier 1 Design and Cost Estimate			Documentation														
Task 3 (Evaluation)	Permit Challenges Readiness <b>DRAFT TIERING</b>	Congestion Relief Econ. Performance <b>FINAL TIERING</b>					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

Note: Meeting timeframes subject to change

## TASK 1 – Execute Engagement Plan

This task outlines the process for continuing the implementation of the Public Engagement Plan developed in Phase 1 of the Hampton Roads Regional Connectors Study (RCS). The subtasks associated with implementation of the Public Engagement Plan seek to inform, educate and engage stakeholders, residents, businesses, and travelers in the Hampton Roads Region. The Consultant Team will adhere to all applicable policies and procedures as directed by HRTPO and applicable federal guidelines covering MPOs and recipients of federal funds for planning purposes. Social media will be a highly emphasized medium through which study information and public meeting information will be made available in the Hampton Roads area (see Task 1.3g).

### Task 1.1: Task Management

The engagement task lead will provide a task-based progress report, participate in monthly team meetings and bi-weekly calls as appropriate with HRTPO staff and the Working Group. Progress reports will summarize and report the percentage complete of each task and provide the basis for the monthly invoice. The engagement task leader will attend Consultant team meetings as needed, including but not limited to bi-weekly Consultant team meetings, internal team meetings, and meetings with HRTPO staff

as required. The engagement task leader will provide schedule updates to inform the master project schedule.

#### Task 1.2: Engagement Plan Review

The Public Engagement Plan will be reviewed on a quarterly basis to ensure alignment with the goals and objectives of the study and to address any additional information obtained through the engagement process. This review will include evaluation of the demographic profile, tools and tactics, metrics, stakeholder groups and key messages. Any revisions will be provided to the Steering Committee/ Working Group and HRTPO staff in track changes for review and acceptance. An electronic copy of major plan revisions will be submitted.

#### Task 1.3: Implementation of Engagement Program

The Consultant team will conduct stakeholder outreach tasks to engage regional stakeholders as directed and approved by the HRTPO, the Steering Committee, and the Working Group. This will consist of outreach to the targeted stakeholders representing or living in the jurisdictions covered by HRTPO agreements. Activities to be implemented include:

##### Task 1.3a Study Mailing list and Comment Database

The Consultant team will maintain the project database and mailing list to house contact details for agency representatives, elected officials, civic groups, businesses, and other important stakeholders. The Consultant team will work closely with HRTPO to update the agency and locality mailing list. The list will be used to disseminate project status information such as a study brochure and to notify people of upcoming in-person and online engagement opportunities.

Throughout the course of the study, the Consultant team will expand and update the mailing list and database by encouraging interested parties to refer others to the Consultant team or through mailing list signups via the study website. The Consultant team will utilize database software such as MailChimp to maintain the database.

This database can also be used to house public meeting comments for extraction and future response development. The Consultant team will accept all public comments submitted during public outreach efforts and at public meetings. This effort will include: developing a public comment section of the database; collecting and cataloging all correspondence sent to the Consultant team; categorizing all comments for inclusion in comment analysis or reports and creating the public outreach comment table summary for inclusion in the Engagement Report.

##### Task 1.3b Scenario Planning Virtual Meeting (Task Completed)

*At the conclusion of Phase 2, the Consultant team will prepare and lead a Virtual Public Meeting (VPM) to share information regarding the scenario planning process and the initial scenario performance results with the existing + committed transportation network.*

*The VPM will consist of educational material and an interactive interface that can record reactions and feedback related to the scenario planning process and results. The meeting will be hosted on the project*

*website, with links to the component materials such as a recorded webinar and interactive material in a platform such as MetroQuest. The virtual meeting will be available online for a period of 3-4 weeks, and the educational component will be available thereafter on the project website.*

*The Consultant team will coordinate with HRTPO staff and study jurisdictions to promote participation in the virtual meeting through social media, email, and other forms of electronic communication. The Consultant team will monitor the patterns of participation in the interactive component to identify areas to supplement with Facebook advertising or similar cost-effective means within the stipulated budget to encourage balanced participation from within the region and demographic subgroups. Also, the Consultant team will prepare a simple display board to facilitate publicizing the virtual meeting at community events. The HRTPO and study jurisdictions can use the display with their own laptop or tablet computer to gather input at community events, and the Consultant team will utilize up to two of the pop-up meetings in Task 1.3g to enhance participation in the Virtual meeting [pop-up meetings not utilized due to COVID restrictions at the time].*

*The Consultant Team will summarize the participation in the VPM, and input received through the interactive component in a presentation to the Working Group and for inclusion in the Engagement Report.*

#### Task 1.3c Community Briefings and Presentations

The Consultant team will schedule and attend up to 25 community nonprofit and organization meetings to provide an overview of the project. Presentation task elements will include the development of handouts, PowerPoint presentations, maps, and the recording of meeting minutes as appropriate. A total of up to 25 presentations will be conducted in Phase 3, as deemed necessary at the time per Steering Committee and HRTPO guidance.

#### Task 1.3d Brochures, Factsheets and Handouts

The Consultant team will prepare one (1) draft meeting brochure per round of public meetings (2 total) to report on key project elements, milestones, and recommended meeting dates. The brochure will be distributed at public meetings in Phase 3 and made available on the project website. The content will include background information, schedule, study area maps, and other pertinent project information to support full participation by the public at the meetings. In addition, the Consultant team will prepare postcards or rack cards for distribution to be featured at community facilities. These smaller, more portable formats could highlight topics or special interests and could be distributed at outreach events, community facilities, and as notification tools in advance of public meetings. The study team will print a total of 20,000 postcards or rack cards for distribution.

The Consultant team will develop posters, flyers and meeting presentation templates for the study. The team will generate up to six (6) comment cards, fact sheets and/or flyers that highlight topics, promote events, or announce key milestones in the process. They may target specific audiences or interests or be oriented more generally. The fact sheets and flyers will support and supplement key messages throughout the process to keep the public and stakeholders informed.

### Task 1.3e Public Meetings

The Consultant team will work with HRTPO to plan, host and facilitate two rounds of nine (9) public meetings during Phase 3 of the study for a total of eighteen (18) public meetings. The need to flex these meetings away from in-person meetings to more robust online meetings will be evaluated as deemed necessary at the time per Steering Committee and HRTPO guidance. Each round of meetings will have an informational component and targeted and purposeful input opportunities. Meetings will be developed in a way that manages stakeholder expectations, promotes transparency and accountability for the process, creates understanding, and builds consensus for decisions and recommendations. The team will incorporate appropriate tools and techniques to engage and inform minority, low-income, and Title VI populations. The team anticipates each meeting series to be held as follows: three (3) Peninsula meetings (Williamsburg, Newport News, and Hampton) and six (6) Southside meetings (north Norfolk, south Norfolk, Virginia Beach, Chesapeake, Western Branch/Churchland area, and Suffolk). The Consultant team will identify meeting locations for HRTPO approval, conduct onsite walk throughs and verify ADA accessibility, book meeting locations, provide light refreshments, book court reporters, advertise meetings in various media (newspapers, social media, ad buys, etc.) and secure, if required, any sign language interpreter and/or language translator as appropriate. All meetings will be accessible by public transit.

Meeting content will include, but not be limited to, scenario planning methodology, segment and bundle packaging, and analysis results. The meeting format will be a charette style public meeting and/or small group table style.

The Consultant team will offer an online open house or live stream session for each meeting series for a total of two (2) online events. Meeting notifications will be made in accordance with HRTPO policies and will use the full mailing list. Social media (see Task 1.3g) and web announcements will be used. Additionally, in advance of the first round of meetings, a printed ad announcement with meeting information will be published in local media as approved by HRTPO and the Working Group.

An online open house is very much like a traditional public open house, but information and community discussions are offered through a web forum or webinar. A variety of options are available. With a webinar option, participants would register using the GoToMeeting software. Once registered for the online open house, participants would be able to access a library of information, view a PowerPoint presentation, and ask questions of staff through an interactive messaging feature. Interactive polling is also available. Another option is to live stream a public meeting via Facebook Live or another online tool. Providing these easy and accessible online tools will encourage community members to convene online to learn more about a project, share their ideas, and provide input to decision-makers.

### Task 1.3f Regional Connectivity Symposium

To engage traditionally underserved populations the Consultant team will plan a symposium with the HRTPO EJ Roundtable, students and faculty from local Historically Black Colleges and Universities, and Title VI advocacy groups. The two- to three-hour meeting will be a facilitated conversation focused on regional connectivity for the purposes of informing the study recommendations and priorities.

The Consultant team will plan the Regional Connectivity Symposium, select the event location, develop an event management plan, speaker talking points, review of collateral materials, and provide day-of-

event coordination. The Symposium is in addition to the other outreach tools such as direct mail, community briefings, public meetings, and pop-up events to reach and engage EJ populations.

#### Task 1.3g Community Events and Outreach

The Consultant team will plan up to five (5) informal in-person pop-up events to introduce the project and to obtain stakeholder perspectives on regional mobility, transportation planning, and connectivity. The team will select event locations, schedule, develop event activity plans, determine required staffing, and review collateral material.

*In addition, the Consultant team will investigate the use of ad space on ziosks in the region and a project informational video to be priced for HRTPO and Working Group consideration and approval. (completed)*

#### Task 1.3h Social Media Engagement

The consultant team will maintain the social media program to support outreach to a variety of stakeholder groups across the region including environmental justice, Title VI and student populations for the purposes of promoting the study, events, and public meetings. The Consultant team will develop a social media content calendar to coincide with study engagement efforts and milestone announcements. Information posted on the RCS Facebook account will link the audience to the RCS website for additional details. HRTPO staff will review and approve draft social media content in addition to the content calendar. HRTPO will repost applicable social media content to the HRTPO social media pages. The Consultant team will be reimbursed for social media advertising. HRTPO will pay for social media advertising, if desired, on HRTPO's Facebook media account.

#### Task 1.3i Engagement Report

The final outreach documentation for the project will clearly highlight all activities, what we heard, and how it was considered and addressed. The final outreach summary will aid in communications for the project by telling the story of the engagement process and how the plan represents an inclusive and community-supported vision for the future.

### Task 1.4: Website Upgrades and Maintenance

The team will develop additional content for use and subsequent uploading to the study website by the study team to include information developed in 2022 regarding the segments, bundles, about the 2022 segments and bundles, and final analysis information. This effort includes initial content development to be reviewed and approved by HRTPO along with the development of content updates by the study team at project milestones and other pertinent events.

#### Task 1.4a Prepare Website Content

*The Consultant team will develop a creative brief for Phase 3 to orient readers to the Regional Connectors Study and its phases. (completed) (Scenario Planning Build Outs)*

As a part of Phase 3, the study website will be populated with fresh information as it becomes available, including analysis results, meeting dates, reports, and meeting/briefing dates. Updates and reporting documents such as one-pagers will be shared as they become available. Templates for these updates will be designed and developed as a part of this task. New content, including microsimulation of alternatives' traffic operating conditions, will be integrated into the site, and new components will be

added to the site as needed to accommodate this content. Original copywriting will be delivered as a part of these updates, and publication will be managed by the Consultant team. Regular hosting and maintenance of the study website (including the posting of meeting minutes and presentation materials) will also be covered under this scope.

*Phase 3 will also feature a new Scenario Planning pages which will appear at the top-level navigation on the site. New copy will be developed, and technical analysis elements performed by team members will be uploaded. This page will be designed to feature animations and other graphical elements. The budget is an estimate based on the assumption that the subpages will require interactive functionality surpassing what is possible in the templates created for Phase 1 and Phase 2. Additionally, this budget assumes support and maintenance up to the project completion date of April 2021. (completed)*

*As the Study gathers momentum, a plan will be created to report events on a regular schedule, and a post template for these events posts will be created. (completed)*

*Survey results will be shared in the form of a final report. Survey-generated publications will be added, and categories for these publication types will be created and added to the website backend. (completed)*

Finally, bi-monthly website analytics summaries will be submitted to HRPTO provide information regarding the number of visits to the RCS website, number and type of public comments and other pertinent information.

*Timing:* 27 months

*Meetings:*

- 18 public meetings (in-person or robust on-line)
- Up to 25 community briefings and presentations
- 5 “pop-up” events
- 1 Regional Connectivity Symposium
- Meetings with HRPTO staff: 0
- Working Group Meetings: 4
- Steering Committee Meetings: 2
- Other/Stakeholder Meetings: None

*Deliverables:*

- Study mailing list (electronic format)
- Comment database (electronic format)
- Meeting notes for stakeholder briefings, presentations, and public meetings
- Brochures, fact sheets, and handouts and comment sheets for public meetings
- Social media content calendar
- *Virtual Public Meeting educational materials for project website (completed)*
- *Virtual Public Meeting interactive component for 3-4-week deployment (completed)*
- *Summary presentation of VPM participation and input (completed)*

- *Display board for use at community meetings to publicize the VPM (flyer provided/completed)*
- *Up to \$1000 in social media advertising of the VPM (completed)*
- Engagement Summary Report
- Website deliverables

## **TASK 2 – Development of Preliminary Segments for Evaluation**

The intent of this task is to develop the mandated segments to a sufficient level of detail to support tiering of the segments. Further, this task will develop sufficient level of detail following the bundling of segments to demonstrate their feasibility and identify additional geometric, constructability and environmental constraints. The level of detail in this task will be sufficient to create construction and right-of-way planning-level costs, as well as to be able to determine each segment's potential to be permitted. Permitting Issues and Construction Complexity are two criteria that will be used to help tier the mandatory segments. More information on that screening is provided in Task 3.2 – 3.4.

The five (5) segments evaluated in the HRCS SEIS but not programmed for funding by HRTPO/HRTAC at the conclusion of the SEIS (2017) will be developed further in this task and are listed below:

- I-664
- I-664 Connector
- I-564 Connector
- VA 164
- VA 164 Connector

The segments above will be initially evaluated using the alignments from the HRCS SEIS with one exception. Considerable work has been completed on I-664 to adjust the alignment and incorporate the use of managed lanes, either two (2) or four (4), from I-64 to the Bower's Hill interchange. This is consistent with the regional strategy for managed lanes. Therefore, work completed to date on I-664 will be used in the initial evaluation to tier the segments. Following the tiering of segments and once the segments have been bundled, additional design and analysis will be conducted to further the design of the segments in the bundles.

### **Task 2.1a: Summarize Background Information**

*The Consultant team will compile documentation on the non-programmed roadway segments from the SEIS. The information gathered will be summarized and presented to the Working Group and HRTPO staff. Estimates of cost should be redone to account for any increases in planning level unit costs since the original estimates. The rest of the information associated with these 5 segments should still be applicable to the RCS. (Note, this task has been completed.)*

### **Task 2.1.b: Conduct Unconstrained Travel Demand Model Analysis**

*The Consultant team will develop AM and PM peak period demand estimates for the 2045 baseline land use scenario and the E+C roadway network in order to understand the travel market in the region. These estimates will reveal how vehicles would be distributed with no capacity constraints affixed to the roadway network. Analysis results will be summarized in a technical memorandum. (Note, this task has been completed.)*

### **2.1.c.: Preliminary Alternatives Investigation**

*The Working Group will review the results of Phase 2 Scenario Analysis of the E+C network and the results of Task 2.1.b to identify the preliminary alternatives for investigation through travel demand analysis. The travel demand model will be used to generate traffic estimates for the selected Preliminary Alternatives. The Working Group will select the set of performance measures, a subset of the full performance dashboard for the scenario analysis, to be used to evaluate performance in Tasks 3.1 and 3.5. A summary of the identified Preliminary Alternatives will be prepared. (Note, this task has been completed.)*

### **Task 2.2: Develop Geometry of Segments**

To the greatest extent possible, the Consultant team will use existing information available for the conceptual design of the segments, which includes: typical cross sections, alignments for roadways on new location, and geometric configurations of connection points to existing roadways from the SEIS.

The Consultant team will develop segments at a conceptual level in MicroStation format utilizing aerial photography and available GIS data. The Consultant will begin with the SEIS segment configurations that best match current knowledge of viable location and components.

In maintaining the continuity of the managed lane network in the region, I-664 will be analyzed with managed lanes as a part of any potential improvement. A configuration of 4 managed lanes, 2 in each direction of travel, and 4 general purpose lanes, 2 in each direction of travel, will be used in the design and evaluation of the I-664 segment. Utilizing the 4+4 configuration provides the safest and most economical re-configuration of the MMMBT tunnels in the event of a widening of I-664.

The geometry of the segments will be advanced incrementally through the development of the information described in the Task 2 subtasks that follow. The incremental development will follow three steps in the evaluation of segments and segment bundles (See Figure 1 on page 2). Note that the evaluations for segment tiering are described in Task 3 of the scope of work.

**Step 1:** Initial evaluation of construction complexity for draft segment tiering in Task 3 (Task 3.3 and 3.4) based on existing information

**Step 2:** Refined evaluation of construction complexity in Task 3 (Task 3.3 and 3.5.c), taking segment bundling into account, with more refined conceptual engineering for Tier 1 and Tier 2 segments. At this stage, the mandatory segments will be differentiated from any overlapping projects that are included in the HRTAC Plan of Finance for 2045<sup>1</sup>.

**Step 3:** Final conceptual engineering refinements during Task 4 for Tier 1 and Tier 2 segments, based on insights from traffic operational analysis (Task 4.8.d)

### **Task 2.2a Design Criteria**

Engineering design criteria for the Preliminary Segments will be established based on VDOT and AASHTO standards for the design speed and type of facility. Alignments will be developed to minimize known environmental impacts, minimize the need for right-of-way, minimize costs, and accommodate forecast traffic volumes. Horizontal alignments and vertical profiles will follow existing geometry where existing

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<sup>1</sup> June 2021 Plan of Finance referenced at the following link; updates to be considered at the time of decisions.

[HRTAC 6 17 21 Annual Organization Mtg Agenda Package Published - Web.pdf](#)

roadways are being widened. The beginning and ending stations of the alignments will be tabulated as well as proposed curve data.

The design of the segments will also include traffic analyses of connection points to existing facilities. These analyses will be undertaken to ensure that the design can adequately accommodate projected traffic volumes. The traffic analyses will be limited to Highway Capacity Manual (HCM) methodologies for merge, diverge, and weave sections on freeways and capacity analyses for arterial intersections.

#### Task 2.2b Typical sections and cross-sections

Typical sections for each segment will be developed to meet VDOT and AASHTO requirements. Materials will match existing facilities (concrete or asphalt pavement). New facilities will be assumed to be asphalt pavement, unless otherwise directed. Cross-sections will be developed at 500' intervals for the purposes of developing earthwork quantities.

#### Task 2.3: Hydraulics and Hydrology

Conceptual review will be performed for major drainage structures, to determine feasibility and cost impacts. A description of floodplain impacts will be included where there is proposed encroachment on a floodplain. Roadway drainage will generally be assumed to be an open system (ditches). Where bridge structures, roadway barriers, sound walls, or retaining walls are required, closed drainage systems (inlets and pipes) will be assumed. These areas and approximate limits will be determined as part of the segment development. Stormwater management will be estimated based on pollutant loading calculations for new impervious area. Approximate sizing of Stormwater management facilities to mitigate increases in Stormwater runoff will be performed based on “rule of thumb” estimates, but no design will be performed.

#### Task 2.4: Structures

Any new, widened, or reconstructed structures will be described. The approximate size and location of proposed bridge work will be developed at a conceptual level. The location, limits, and height of retaining walls and sound walls will also be developed at a conceptual level.

#### Task 2.5: Utilities and Railroad Crossings

Any major overhead utilities (such as electrical transmission lines, and transformer stations) will be identified, and the impact of any conflicts will be discussed. Any railroad crossings within the proposed roadway improvements will be identified and impacts described.

The conceptual plans will be turned into graphics for inclusion into the study report.

#### Task 2.6: Planning Cost Estimates

A planning level cost estimate (present year costs) will be developed for segments in Tiers 1 and 2 based on the conceptual designs and potential mitigation estimates (note that the tiering of segments is described in Task 3 of the scope of work). These cost estimates will take into consideration projects included in the HRTAC Plan of Finance for 2045. Quantities for major items such as roadway pavement,

earthwork, drainage structures, bridges and walls will be based on the conceptual designs. The quantities will be multiplied by the average unit costs for the Hampton Roads District to arrive at the construction cost for these items. The cost of the remaining disciplines will be based on allowances or lump sum costs as follows:

- Mobilization
  - Mobilization will be presented as a lump sum cost based on a percentage of construction cost.
- Traffic Control & Maintenance of Traffic (MOT)
  - Ground Mounted signs will be estimated on a “per mile” basis
  - A planning level estimate will be prepared for ITS systems along all interstates. The ITS system will be presented as a lump sum amount.
  - Traffic MOT will be based on a percentage of the total construction cost of the project, typically 4-5% of construction cost.
  - Lighting will be based on a “per mile” basis where applicable.
- Stormwater Management, E&S and Wetlands
  - It will be assumed that Nutrient Credits will be purchased for approximately 25% of the increased pollutant load
  - Plantings for constructed wetlands or bioretention facilities will be based on a lump sum cost based on VDOT District averages.
  - The presence of wetlands and streams will be based on publicly available wetland inventories (NWI) and topographic maps and coordinated with the work described in Task 3.2. The impacts will be based on limits of disturbance. Wetland mitigation costs will be based on a per acre cost for both tidal and non-tidal wetland impacts; stream impacts will be based on a linear foot cost.
  - Erosion & Sediment Control (E&SC) costs will be presented as a lump sum cost.
- Preliminary Engineering (Design) costs will be based on a percentage of the total construction cost of the project.
- Right-of-Way estimated costs will be determined by categorizing the property (residential vs. commercial), quantifying the right-of-way taking and applying per acreage costs for partial takes. Total takes will include relocation costs where applicable. Unit costs for right-of-way and relocation costs will be based on VDOT unit costs for the Hampton Roads District.
- Utility Protection and Relocation costs will be based on observations of above ground features, and record research. Utilities will be aggregated by type (water, sewer, power, gas, communication) and assigned to a range of sizes. An allowance will be made for smaller utilities/distribution lines. Larger utilities/transmission lines will be based on a linear footage basis.
- Railroad crossings – A cost for railway flaggers and watchperson service will be estimated for proposed railroad crossings. The cost will be presented as a lump sum cost.

*Timing:* 13 months (not sequential)

*Meetings:*

- Meetings with HRTPO staff: 0
- Joint Working Group / Steering Committee Meetings: 2
- Other/Stakeholder Meetings: 0

*Deliverables:*

- Travel Market analysis
- Roadway typical sections
- Roadway alignment plans
- Cost estimates

## **TASK 3 – Tiering of RCS Mandated Segments**

Criteria will be determined for use in evaluating the segments. The criteria will include, but not be limited to:

- Congestion relief
- Permitting Issues
- Construction Complexity
- Project Readiness

The intent of this evaluation is to provide logical information, supported by qualitative and quantitative observations, that will support the designation of the mandatory segments into three tiers as described on page 1 of this scope of work. For example, Permitting Issues will include (but not be limited to) key National Environmental Policy Act (NEPA) - related issues including community impacts, environmental justice (EJ), and cultural and natural resources, derived from existing data sources. An evaluation matrix will be prepared to illustrate the characteristics of each segment and to facilitate comparison among them.

### Task 3.1 Conduct Congestion Relief Assessments (Completed)

*In this task, the Consultant Team will run each alternative using the travel demand model for the 2045 Baseline future and organize the outputs based on the approved performance measures characterizing congestion relief. Congestion relief performance measures determined through interaction with the Working Group and HRTPO staff in Phase 2 will be used to evaluate initial draft alternatives and their respective segments based on daily traffic estimates. The initial draft alternatives reflect both the MMMBT 6+2 and MMMBT 4+4 design options. The congestion relief performance measure(s) are direct model outputs and do not require any traffic analysis. These regional performance measures reflect average weekday conditions and include:*

- Harbor crossing volumes
- Vehicle-Miles Traveled
- Vehicle-Hours Traveled
- Delay
- Average congested speed

### Task 3.2: Conduct Permitability Assessments

#### **Overview**

The purpose of this task is to evaluate the regulatory permitability of referenced segments and a general assessment of potentially significant community impacts. All regulatory permitability evaluations will be

conducted by reviewing Federal, State, and Local regulatory requirements in conjunction with existing environmental conditions of the referenced segments. The study team will determine potential significant regulatory flaws by ranking evaluation factors to include timing implications, resource impacts, permitting complexity, and potential mitigation costs for each of the referenced segments.

The Consultant Team understands that the Corps of Engineers (Corps) will not permit a bundle of segments that would obstruct or restrict navigation to the Craney Island Dredged Material Management Area (CIDMMA), or that would otherwise impair the Corps' ability to maintain and operate the CIDMMA. Likewise, the Corps will have to assess the impact of the different bundles on the federally authorized Norfolk Harbor and Channel Federal Navigation Project and coordinate with maritime stakeholders on the impacts of those bundles of segments. The Corps will offer comments on permitability issues associated with the bundles and additional comments may be received by the Department of Environmental Quality (DEQ), Virginia Marine Resources Commission (VMRC), or other permitting agencies. These comments will not commit the Corps to any permitting of action, nor will they be interpreted as endorsement of any bundle of segments.

The Corps can only permit the Least Environmentally Damaging Practicable Alternative (LEDPA) and cannot permit bundle of segments that will adversely affect other federal navigation projects.

#### Task 3.2a. Data Collection Review

The focus of this task will be to review and analyze environmental (community, natural and cultural resources) data created to develop the regional mapping, with the goal of establishing a unified dataset for GIS based environmental alternatives review. The regional mapping and environmental overlays will define where sensitive community, natural and cultural resources are located to determine if segments can avoid and /or minimize impacts as part of the risk analysis. In addition, should resources not be able to be avoided and/or minimized, mitigation concepts will be evaluated as part of the analysis. This information will form the basis for regulatory permitability evaluations as part of the segment and subsequent bundle analyses. The data will be evaluated to provide regional leaders and analysts with accurate information from which to make strong, technically-supported decisions regarding regulatory viability.

#### Task 3.2b: Develop permitability requirements and evaluation parameters

In this task, a set of evaluation parameters will be developed to evaluate environmental and regulatory viability of the segments. Each evaluation parameter will relate to the targeted human and natural environmental resources and potential impacts in conjunction with Federal, State, and Local laws and regulations to create a framework for risk analysis and segment prioritization. Land use/property impacts and environmental justice will be included along with the issues driving federal, state, and local permits that may be required.

In addition, this task will establish a series of regulatory permitability factors that will be used to measure how each alternative contributes to the direct and indirect environmental impacts to ensure there is not a negative environmental impact to the resources of the region. A matrix will be developed that aligns each metric according to an established objective for the region Ranking evaluation factors include timing implications, resource impacts, permitting complexity, and potential mitigation costs for each of the referenced segments.

The final evaluation measures will be vetted with the Steering Committee, Working Group and HRTPO staff. The result will be a consensus on the methods and metrics that will be used to gauge success in the regulatory evaluation of each of the segments.

#### Task 3.2c: Evaluate Segments

The next step in the regulatory permitability analysis is to evaluate environmental factors in conjunction with the design and construction factors. The goal of this task is to assemble and evaluate the performance measures for the baseline scenario only based on land use/environmental metrics, design alternatives, and reasonable constructability. This is a key step in understanding the comprehensive environmental impacts of each segment. As determined by the Steering Committee in Task 3.2b, evaluation measures will include (but are not limited to) land use/property impacts; environmental justice; issues driving wetland, water quality, and other permits; anticipated construction challenges; compatibility with design criteria; independent utility; and project development status.

All regulatory permitability parameters and evaluations will be conducted by reviewing Federal, State, and Local regulatory requirements in conjunction with existing environmental conditions, timing implications, resource impacts, permitting complexity, and potential mitigation costs for each of the referenced segments. This information will be used to determine potential regulatory challenges as well as develop draft tiering of the analyzed segments.

#### Task 3.3 Conduct Constructability Assessments

##### Task 3.3a: Initial Qualitative Review of Mandatory Segments (Step 1 of Revised Phase 3 Process)

As identified in Task 2, the high-level constructability assessments of the unfunded SEIS mandatory segments will be conducted during the initial screening evaluation. This will consist of written descriptions of constructability-related challenges.

##### Task 3.3b: Quantitative Review of Draft Tiered Segments (Step 2 of Revised Phase 3 Process)

Following the draft tiering (Task 3.4) and bundling of segments, constructability assessments will be advanced in Step 2 of the Revised Phase 3 Process. This evaluation will consist of a cost analysis using the planning level cost estimates prepared in Task 2.5 and costs associated with mitigation measures identified in the permitability assessment.

#### Task 3.4 Evaluate Readiness and Prepare Draft Tiering of Segments

Based on the assessment results from Task 3.2 and the qualitative construction complexity results from Task 3.3, the Consultant team will evaluate the Readiness of the segments. The Readiness evaluation will be based on the timing considerations identified in the construction complexity and permitting challenges evaluations, as well as factors such as independent utility, overall system and express lane continuity, necessity to the development of other segments, and consistency/compatibility with local land use. The readiness criteria will also include project development status and status of inclusion in the HRTAC Plan of Finance for 2045.

The Consultant team will prepare a summary of the segment evaluations and recommend a draft tiering of the segments into the three tiers described on page 1 of this revised scope of work. The draft segment tiering will be presented to the Steering Committee for approval.

### Task 3.5 Evaluate Congestion Relief and Finalize Tiering of Segments

The Consultant Team will evaluate up to four segment bundles of the Tier 1-3 segments based on congestion relief and utility as well as economic performance. Based on this evaluation and previous evaluations in Tasks 3.2-3.4, a maximum of three segment bundles will advance to the scenario planning evaluation (Task 4).

#### 3.5 a: Travel Demand Modeling and Congestion Relief Measures

In this task, the Consultant Team will evaluate segment bundles by performance measures characterizing congestion relief compared to the 2045 Baseline land use scenario. The *2045 RCS Baseline transportation network* will be established by the Steering Committee, based on the Step 1 Tiering evaluation (Tasks 3.2 – 3.4), and will include the E+C network plus any selected portions of the mandatory segments that overlap with the HRTAC Plan of Finance for 2045<sup>2</sup>. All segment bundles will assume the MMMBT 4+4 design option only. The performance measures will include a combination of regional and segment specific measures reflecting AM and PM peak period, as well as average weekday travel conditions. Regional measures will include those utilized in Task 3.1. Segment specific measures will include volume, congested speed, and level-of-service.

Where possible, the Consultant will utilize travel demand model outputs generated in Task 3.1 for the Candidate Alternatives congestion relief assessment.

#### 3.5.b: Economic Performance Evaluation

The Consultant team will use the travel demand model runs with Baseline 2045 land use from Task 3.5a as inputs to conduct an economic evaluation of the segments. TREDIS economic model outputs consistent with the subset of performance measures identified in Task 2.1.c will be delivered in the dashboard format to capture the regional societal benefits and economic growth impacts of each of the 4 segment bundles. These will be used to inform the tiering of segments. As appropriate based on definition of the bundles, differencing of economic results may be used to inform the analysis of segment independent utility.

#### 3.5c: Finalize Segment Tiering

The Consultant team will summarize the results of the advanced Constructability Assessment in Task 3.3 and the findings of Tasks 3.5.a and 3.5.b and will recommend a final tiering of segments to the HRTPO, Working Group, and Steering Committee.

*Timing: 7 months*

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<sup>2</sup> Based on the findings of the Step 1 evaluation and as determined by the Steering Committee, the segments (or portions thereof) included in the HRTAC Plan of Finance may be differentiated on the basis of project development status or other aspects of the Step 1 evaluation.

*Meetings:*

- Meetings with HRTPO staff: 1
- Joint Working Group / Steering Committee Meetings: 2
- Other/Stakeholder Meetings: 2-3 for Permitting Challenges Evaluation

*Deliverables:*

- Segment Evaluation Matrix
- Memo Summarizing Environmental Data, Regulatory Permit Review, and Parameters for Evaluation
- Segment Bundle Evaluation Summary of Final Segment Tiering
- Presentation materials, posters and slide decks of Deliverables for public outreach process
- All GIS data files developed as part of effort
- Documentation on methodology and changes made to Travel Demand model

## TASK 4 – Conduct Scenario Planning

The Regional Connectors Study (RCS) Regional Scenario Planning process will provide insight to decisionmakers regarding the need for and the benefits of alternative transportation investments considering potential alternative future trends. The Scenario Planning process will consider a baseline 2045 land use scenario and three alternative 2045 “Greater Growth” land use scenarios that present plausible futures with respect to economic, demographic and technology drivers. The scenario analysis will link alternative future economic and demographic trends with land use, and the resulting socioeconomic forecasts will be tested with the regional travel demand model to understand the impacts to transportation and other performance measures. The scenario outcomes will provide a series of benchmarks against which to test the resilience of different transportation investments. A potential benefit of this process will be to identify those transportation investments and projects that fare best in the analysis - that provide the most cumulative benefit to the region regardless of which alternative future scenario is tested. This will be done by testing each of the up to three bundles of segments against each scenario to gauge how robust each investment is with respect to the range of possible futures.

*Throughout the RCS Regional Scenario Planning process, the RCS Working Group will work closely with HRTPO staff and the Consultant team to provide guidance, affirm scenarios, select drivers and performance measures, and evaluate interim and final results (Completed for Phase 2). The RCS Steering Committee that is overseeing the overall RCS process will be updated on the progress on the Regional Scenario Planning effort and will receive the results of the scenario testing of the segment bundles for evaluation and consideration in the Phase 3 RCS process. The results will also be shared with the public to provide input as part of the final assessment of investment and policy insights in the study.*

The Phase 3 scope of work only includes Task 4.8 and 4.9 to complete the assessment of transportation investment impacts. Tasks 4.1-4.7 were completed in earlier Phases of the contract.

## Task 4.8: Evaluating the Tier 1 and 2 Segments in Alternative Bundles

### **Overview**

The final step in the scenario analysis is the assessment of transportation investment impacts by scenario. In this task, the Consultant Team will run up to three segment bundles for each scenario (the 2045 Baseline Scenario and the three Greater Growth Scenarios). The scope assumes that one of the segment bundles will include only the Tier 1 segments, and the others will include combinations of Tier 1 and Tier 2 segments. Combined with the 2045 RCS Baseline network model run for each scenario, this will comprise 16 model runs (2045 RCS Baseline network and 3 bundles combined with 4 land use scenarios) that will together inform the value of the Segments in various combinations and under alternative futures.

### Task 4.8a: Confirmation/Network Coding of Segment Bundles for testing

Segment bundles will be "coded" into the 2045 RCS Baseline network using planning data available from HRTPO. Coding will include information such as facility description, alignment, and capacity information associated with improvements. Network coding will also specify locations of toll assessment and toll values, if applicable. The Consultant Team will review and confirm segment coding assumptions with HRTPO. There will be one network for each segment bundle. Note, the schedule assumes the segment bundles will have already been coded into the travel demand model network by Michael Baker some time prior to the beginning of this task.

### Task 4.8b: Travel Demand Modeling for Baseline and 3 Greater Growth Scenarios (each Candidate Alternative)

Using the networks developed in earlier tasks and scenario specific socio-economic data and parameters, The Consultant team will run the travel demand model for each segment bundle over the 2045 Baseline land use and each of the 3 Greater Growth scenarios. The team will provide quality control checks on associated output. The modeling results for the newly coded segment bundles will be compared against results of similar alternatives or benchmarks (if available) to determine appropriateness of the results. Ad-hoc sensitivity testing may be performed under certain circumstances if the results of the segment bundles are not intuitive. The results for each bundle will be compared against all bundles, all land use scenarios and the 2045 RCS Baseline network demand estimates to uncover and flag any potential issues in the results.

### Task 4.8c: Evaluate Performance of Bundles of Segments under Baseline and 3 Greater Growth Scenarios

In this task, the Consultant team will complete the regional performance dashboard for each of the three bundles. The Consultant Team will select performance measures to provide a ranking of each bundle by scenario, as illustrated with hypothetical ranking in the table below. This information will provide an important basis for assessing how robust the bundles are for potential future conditions.

Segment Bundle Rank	2045 Baseline Land Use	Greater Growth on the Water Land Use	Greater Growth in Urban Places Land Use	Greater Growth in Suburban/ Greenfield Places Land Use
2045 RCS Baseline + RCS 1	3	2	2	1
2045 RCS Baseline + RCS 2	2	1	1	2
2045 RCS Baseline + RCS 3	1	3	3	3

HRPO seeks to evaluate the transportation benefits of bundles of segments and the extent to which they achieve the goal of enhancing economic vitality and improving the quality of life in the region. To do so, the Consultant Team will use TREDIS to translate travel model results describing travel time, distance, reliability, and market access, into regional economic impacts expressed in terms of jobs, labor income, business sales, and GDP, with detail available by industry sector, and over time, as specified in the performance measures developed in Phase 2. The TREDIS FREIGHT module will allow targeted analysis of the implications of transportation performance for freight-reliant industries. Given the number of bundles, and the desire to test performance of every alternative under the baseline as well as all land use scenarios, the Consultant Team will make use of TREDIS's batch mode to support easy import of project details and export of key economic performance results.

Differencing of economic results will be used as appropriate based on cumulative definition of the three bundles to inform the analysis of segment value. If deemed informative, information on potential timing of segments and bundles from Task 3.3 Constructability Assessment may be paired with the economic results to communicate differences in likely accumulation of benefits and economic growth impacts over time.

#### Task 4.8d: Evaluate Traffic Operating Conditions

The **HCS 7** software will be used to evaluate the **full interstate network and limited access facilities** (mainline and ramp junctions) for the AM and PM peak hours within the study area for the conditions listed below. There will be a total of 16 conditions evaluated in this process.

(2 peak hours x 8 conditions = 16 total conditions)

- Existing Conditions
- 2045 RCS Baseline Condition
- 2045 RCS Baseline Condition + RCS Bundle 1 (assumed Tier 1 segments)
- 2045 RCS Baseline Condition + RCS Bundle 2 (assumed Tier 1 and Tier 2 segments)

- 2045 RCS Baseline Condition + RCS Bundle 3 (assumed Tier 1 and Tier 2 segments)
- 2045 RCS Baseline Condition + Tier 1 – Greater Growth on the Water Land Use
- 2045 RCS Baseline Condition + Tier 1 – Greater Growth in Urban Places Land Use
- 2045 RCS Baseline Condition + Tier 1 – Greater Growth in Suburban/Greenfield Places Land Use

### Existing Conditions (Completed)

*This task will involve developing AM and PM peak hour HCS models based on the traffic conditions for the existing study area roadway network. The HCS model will evaluate the interstate and freeway network in Hampton Roads. The existing condition HCS models will be calibrated to the greatest extent possible using travel times and queue lengths obtained from INRIX data.*

#### 2045 RCS Baseline Condition

Similar to the task of updating the Regional Travel Demand Model to a 2045 baseline scenario, the existing conditions AM and PM HCS models will be updated to establish baseline 2045 models. Based on the direction from the Steering Committee at the completion of Step 1 of the Tiering evaluation, this network update will include adding committed roadway projects and portions of segments included in the HRTAC Plan of Finance for 2045 (see Task 3.5a) and updating traffic volumes and travel patterns based on the outputs from the Regional Travel Demand Model for the 2045 RCS Baseline network and baseline land use scenario.

This task will also involve affirming the assumptions and outputs to-date via email distribution to HRTPO staff and the Working Group as an important check before proceeding to the next steps.

#### 2045 RCS Baseline Condition + RCS Bundles

AM and PM peak hour HCS models will be developed for up to three RCS segment bundles. This will include updating the 2045 Baseline Condition (E+C) HCS models with the same bundle segments and junctions that were coded into the Regional Travel Demand Model. Traffic data output from the Regional Travel Demand Model runs will be post-processed and coded into the HCS models for each of the three RCS segment bundles. The outputs from these three segment bundle analyses will be used for comparison against the 2045 Baseline Scenario outputs to determine the congestion relief achieved by each RCS bundle.

#### 2045 Traffic Analysis for 3 Greater Growth Scenarios

It is important to note that each of the Greater Growth Scenarios will allocate traffic volume growth that is in addition to the growth inherent in the 2045 Baseline condition. This means that each Scenario is dealing with an additional increment of traffic increases above and beyond the assumed growth for the 2045 baseline condition. The work for this task will include updating the AM and PM HCS models for the preferred RCS bundle for up to three greater growth scenarios and reporting the results for comparison against the 2045 Baseline Condition results and the results from the three 2045 RCS bundle scenarios.

*Timing:* 6.5 months

*Meetings:*

- Meetings with HRTPO staff: 3
- Joint Working Group / Steering Committee Meetings: 2
- Other/Stakeholder Meetings: 0

*Deliverables:*

- Technical Memorandum on analysis results
- Travel Demand model, economic model, and prioritization tool runs
- Dashboard Outputs for Model Runs and web posting
- Tech Memo on RCS project evaluation
- Final scenario planning land use, travel demand model and TREDIS files

## Task 4.9: Reporting Results

### **Overview**

The Consultant Team will work with HRTPO Staff, the Working Group, and the Steering Committee to distill the insights from the scenario process and package them for sharing with the public.

#### Task 4.9a Scenario Results Workshops

In this task, the Consultant Team will take the materials and input generated in Task 4.8 and prepare a work session to be held individually or jointly with the Working Group and Steering Committee to discuss the scenario analysis results, risks, costs, and public comment associated with the segment bundles. This information will be presented in a concise format with engaging visuals and will illustrate the risks and opportunities revealed by the scenario analysis. This information will be used by voting members of the Working Group and Steering Committee to affirm final tiering of segments, which is the intended outcome of this subtask and the most important outcome of the entire study as the recommendations will provide input to regional investment and policy decisions.

#### Task 4.9b Recommendation Documentation

The Consultant Team will document the results of the Task 4.9a workshop in the form of a presentation, website content, and a draft report that capture the full scenario planning steps and findings. This information will be used for ongoing outreach. After a period of initial outreach and input, the Consultant Team will present final recommendations to the Working Group and Steering Committee at the conclusion of Task 4.9.

*Timing:* 8 months

*Meetings:*

- Meetings with HRTPO staff: 1
- Joint Working Group / Steering Committee Meetings: 2
- Other/Stakeholder Meetings: 0

*Deliverables:*

- Draft and final presentation of scenario planning results
- Draft and final website content of scenario planning results
- Draft and final scenario planning report

## TASK 5– Prepare for and Attend Meetings (Working Group and Steering Committee)

### Task 5.1: Working Group Meetings

*The Consultant team will be represented by the Project Manager at all meetings (barring unforeseen conflicts) and supplemental team members depending upon the type of expertise being presented/discussed at each meeting. Discipline experts have estimated the number of Working Group meetings they will attend in each of the task/subtask summaries in this scope of services. (Independent Working Group Meetings are completed)*

### Task 5.2 Steering Committee and Working Group Meetings

As part of this Fall 2021 study rescoping, the decision has been made to combine all Working Group meetings with Steering Committee Meetings. The Consultant team will be represented by the co-Project Manager(s) at all meetings and supplemental team members depending on the types of expertise germane to the discussion topics.

*Timing:* 27 months

*Meetings:*

- Meetings with HRTPO staff: 0
- Joint Working Group / Steering Committee Meetings: 10
- Other/Stakeholder Meetings: 0

*Deliverables:*

- Power Point slides and meeting handouts

## TASK 6 – Manage the Project

### Task 6.1: Weekly Coordination with HRTPO leadership

Consultant co-Project Manager(s) will participate in weekly coordination calls with HRTPO staff and Project Manager (assume 108 conference calls).

### Task 6.2: Schedule and Budget Oversight

Consultant co-Project Managers will monitor schedule and budget on monthly basis and make changes to schedule, as needed. Budget monitoring will occur monthly during preparation of monthly progress reports so that any budget issues can be included in those reports.

### Task 6.3: Quality Assurance of Deliverables

Consultant co-Project Manager(s) will review all documentation and deliverables before they are forwarded to the HRTPO Project Manager for distribution to the Working Group and HRTPO staff.

*Timing:* 27 months

*Meetings:*

- Meetings with HRTPO staff: 108 (weekly calls for 27 months)
- Working Group Meetings: 0
- Steering Committee Meetings: 0
- Other/Stakeholder Meetings: 0

*Deliverables:*

- Coordination meeting minutes

## TASK 7 – Prepare Documentation

### Task 7.1: Draft Study Report

The study report will include summaries of Phases 1-3 activities and be supplemented via appendices, which will include, but not be restricted to, the technical reports and technical memorandums for each of the major tasks in Phases 1-3. The report outline is shown below:

- Executive Summary
- Introduction
- Existing Conditions
- Regional Survey
- Stakeholder Interviews
- Travel Demand Model
- Engagement
- Scenario Planning/Alternatives
- Recommendations

Review comments will be solicited from the Working Group, Steering Committee, and HRTPO staff. Comments from the Working Group, the Steering Committee, and HRTPO staff will be discussed in the respective Working Group and Steering Committee meeting forums (unless a joint meeting is preferred). Those meetings will provide direction regarding the revisions to be made to the draft report that will subsequently be made available to the public prior to the second round of public information meetings. An electronic version of the draft report will be made available through channels outlined in the engagement plan.

Following the second round of public meetings, comments received at the meetings will be presented to the Working Group, Steering Group and HRTPO staff for discussion that will lead to decisions regarding the revisions to be made. If the revisions are substantive (i.e. – new alternatives are agreed to be studied, or more detailed analyses are required), another draft report will be prepared for review by the Working Group, Steering Committee, and HRTPO staff. An electronic version of the revised draft report will be made available. 50 hard copies will be produced, complete with appendices.

If the revisions are not substantive, the Consultant Team will initiate the preparation of the final report.

### Task 7.2: Final Study Report

Following discussion of the comments received on the Draft Report and the notice to proceed on the preparation of the Final Report from the Working Group and Steering Committee, the Consultant Team will prepare the Final Report.

An electronic version of the final report will be made available through engagement channels. 50 hard copies will be produced, complete with appendices.

*Timing:* 6 months

#### *Meetings:*

- Meetings with HRTPO staff: 1
- Joint Working Group / Steering Committee Meetings: 1
- Other/Stakeholder Meetings: 0

#### *Deliverables:*

- Draft study report (200 Executive Summaries and 50 complete reports)
- Final study report (200 Executive Summaries and 50 complete reports)
- Draft and final study report appendices (50 copies for draft and 50 copies for final)
- Draft and final website content of study report

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# Regional Connectors Study

## Summary of Key Decision Points

Prepared By: Camelia Ravanbakht, PhD  
RCS Project Coordinator  
November 13, 2020

Revised: December 2020, January 2021, February 2021, April 2021, May 2021, June 2021, October 2021, December 2021.

**Abstract:**

This document is a diary of key decision points approved by the RCS Steering (Policy) Committee and Working Group from 2017 to present, in chronological order.

The purpose of this document is to provide a quick reference for members of the Regional Connectors Study and the public. The information used in this document is based on excerpts from meeting minutes prepared by Dr. Rob Case and Mr. Keith Nichols of HRTPO.

This is a living document and will be updated with future key action items per approval from the Committee.

## 2017

### **Steering (Policy) Committee meeting on 10/05/2017**

#### **Item#5: Draft Guidance for Scope of Work**

**Motion:** Mayor Sessoms (VB) moved the endorsement and recommendation of the HRTPO Board's approval of the Guidance for Scope of Work; Mayor Rowe (Portsmouth) seconded; Motion passed unanimously.

## 2018

### **Working Group meeting on 05/11/2018:**

#### **Item#5: Contract Negotiations with Selected Consultant:**

Mr. Crum (HRPDC/HRTPO) gave an overview of the consultant selection process in which Michael Baker was chosen. Craig Eddy (Michael Baker) gave an overview, with slides, of a phased approach and a scope for Phase 1. After much discussion by Working Group members, HTRPO staff, and HRTAC staff, it was decided that the consultant would do the following:

- Monthly meetings of the Working Group, to be canceled as appropriate considering project progress
- Convene a group meeting of stakeholders (Working Group and Policy Group) for Task 1 (Initiate Engagement Program)
- Coordinate with VDOT HR District surveys to avoid duplication.
- Establish goals & objectives during Phase 1
- Prepare a scope for Phase 2 during Phase 1
- Send details of the proposed survey to Kendall Miller (HRTPO)
- Prepare a new baseline of existing conditions.

Mr. Crum asked the group if it concurred with him asking the HRTPO Board for authorization to enter contract with Michael Baker for Phase 1. A motion made by Brian Stilley (Newport News) and seconded by John Yorks (Hampton)—to move ahead with Phase 1—passed unanimously.

### **Working Group meeting on 06/04/18:**

#### **Item#5: Revised Phase 1 Scope:**

Craig Eddy (MBI) presented the current Phase 1 scope, revised based on earlier comments of the working group. Bob Crum (HRTPO) asked that the purpose of Phase 1—“the establishment of goals and objectives [and] the development of a draft scope for Phase 2”—be included in the scope of Phase 1. Craig said that he would add those items to Task 5. Bob asked if the group was comfortable with him signing a contract for Craig to proceed. The group concurred.

## 2019

### **Joint Steering (Policy) Committee and Working Group meeting on 02/13/2019:**

#### **Item#5: RCS and Relationship with 2045 Long-Range Transportation Plan (LRTP):**

Mr. Crum (HRPDC/HRTPO) stated that to-date, the timelines of the RCS and the 2045 LRTP have been synchronized; however, concerns have grown that more time is needed to conduct the RCS, and it has been suggested to pursue a second option. The options for discussion are as follows:

- Option 1: RCS Concurrent with the 2045 LRTP Schedule
- Option 2: RCS Separate Path from the 2045 LRTP Schedule

Mayor Rowe (Portsmouth) expressed support for Option 2 and stated that the RCS should be decoupled from the LRTP since the LRTP is a fiscally constrained document. He noted that in the 2030 LRTP, adopted by the HRTPO Board in March 2007, no State highway construction funds would be available by 2018; therefore, the projects in the 2030 plan were either pared down or tolled. He indicated that the LRTP was flawed in concept and should reflect the region's vision without the restrictions of fiscal constraint.

#### **Motion:**

Mayor Rowe (Portsmouth) moved to decouple the timelines of the RCS and the 2045 LRTP; seconded by Mayor Price (Newport News). The Motion Unanimously Carried.

### **Item# 6: RCS Draft Scope of Services for Phase 2:**

#### **Motion:**

Mayor Rowe (Portsmouth) moved to refer the Phase 2 Scope of Work technical comments to the Working Group for review and to recommend HRTPO Board approval of the \$1 million Phase 2 abbreviated scope of work; seconded by Mayor West (Chesapeake). The Motion carried.

### **Steering (Policy) Committee Meeting on 04/30/2019:**

#### **Item#3: Committee Organizational Structure:**

Mr. Crum (HRPDC/HRTPO) presented the idea of the committee nominating a voting member as chair. Mayor Price (Newport News) was chosen as Chair, and he appointed Mayor Rowe (Portsmouth) as Vice Chair.

### **Item#7: Phase 2 Supplemental Scope of Work, Cost and Budget:**

The committee approved the Phase 2 Supplemental Scope of Work, Cost and Budget, forwarding it to the HRTPO Board for approval at its May 16, 2019.

### **Steering (Policy) Committee meeting on 07/09/2019:**

#### **Item#5: Phase 2 Supplement Budget Omission:**

Craig Eddy (MBI) presented slides concerning this matter. The committee approved the correction.

**Item#7: Scenario Planning and Greater Growth Assumptions:**

The consultant will run the models with 16% employment growth, and then present the results to the Working Group for it to decide whether that produces sufficient variation in the congestion of the existing + committed network between the three Greater Growth scenarios. Should upward revisions be deemed necessary by the Working Group, the consultant will run the models with employment growth rates up to 21% until sufficient variation between the scenarios is determined. The Committee approved the Scenario Narratives, Goals, Objectives, and Performance Measures.

**Steering (Policy) Committee on 11/05/2019:**

**Item#6. Draft Phase 3 Scope of Work:**

Craig Eddy (MBI) presented the draft Phase 3 scope, schedule, and budget using slides. The Committee approved the scope, schedule, and budget as presented.

## **2020**

**Working Group Electronic Meeting 06/12/2020**

For the Preliminary Alternatives discussion, Craig Eddy (MBI) provided a background of the project scope, vision, goals, and objectives. His presentation included maps of the segments from the HRCS SEIS that were specified to be part of the RCS effort, as well as additional candidate segments received through stakeholder interviews. The group discussed the potential segments and alternatives to review and analyze as part of the study. Jason Flowers (USACE) read a statement regarding the Corps' federally mandated position to maintain and protect navigable waterways, channels, and access. After much discussion, there was concurrence among the members of the Working Group that the following candidate segments (shown on map provided at meeting) not be forwarded for analysis:

- o Segment 1: New bridge over James River, includes improvements on Rt 10 to US 17
- o Segment 4: Ferry service, Hampton to Norfolk
- o Segment 5: New bridge tunnel from NIT to Hampton

The Working Group also discussed at length the potential future need and scope of the VA-164 Connector and whether it should remain an RCS segment for consideration. For now, VA-164 will remain a potential segment since it is one of the mandated segments to analyze. Additional discussions with all impacted stakeholders will continue at future meetings.

**Working Group Electronic Meeting on 07/09/ 2020:**

Motion to move the study forward and accept the Travel Demand Model adjustments and calibrations were unanimously passed.

**Working Group Electronic Meeting on 08/13/2020:**

Concerning Phase 2, Lorna Parkins (MBI), Vlad Gavrilovic (EPR), Bill Thomas (MBI) presented inputs and outputs of travel demand model runs for various growth scenarios. Craig Eddy (MBI) asked the working group to confirm that the Greater Growth forecasts provide adequate differentiation in results.

Working Group members concurred that the differentiation between the 3 greater growth scenarios is sufficient and directed the consultant team to move the study forward. Congestion related performance measures will be presented at the August 27<sup>th</sup> meeting.

**Working Group Electronic Meeting on 08/27/2020:**

Bill Thomas (MBI) used slides to provide a modeling and congestion (by scenario) update. Results showed a decrease in VMT and VHT from 2017 to 2045 Base. Members expressed concerns with a decrease. Bill Thomas indicated that he intends to perform more checking of the modeling results.

Working Group directed the consultant team to improve model findings, coordinate with staff and report back in late summer/early fall.

**Working Group Electronic Meeting on 10/08/2020:**

**Item #5. RCS: Modeling Update on Congestion Measures**

Bill Thomas (MBI) indicated that he made model fixes to correct earlier counter-intuitive results and substandard differences (in screenline volumes) between counts and model. He presented volume data showing a better relationship between counts and the model. Then he presented measures (vehicle-miles traveled, delay, speed, etc.) comparing the three 2045 Greater Growth scenarios (Water, Urban, and Suburban). Bryan Stilley (Newport News) asked whether the group was satisfied with the fixes. The group made no objections. Mr. Stilley indicated that this satisfaction recommends to the Steering Committee approval of Phase 2.

**Item #6. Mandated and Other Potential Segments:**

Craig Eddy (MBI) presented slides showing the five segments from the Hampton Roads Crossing Study (HRCS) Supplemental Environmental Impact Statement (SEIS).

**Motion:** Brian Fowler (Norfolk) made a motion that the RCS move forward studying alternatives comprised of the five SEIS segments and modifications of the five. Ric Lowman (Va. Beach) seconded the motion. The Working Group approved the motion (4 to 1 from those voting members present at the time of the motion).

**Joint Steering (Policy) Committee and Working Group Electronic Meeting on 10/27/2020:**

**Item #5: RCS Phase 2 Status Report:**

**Motion:** The joint body approved Phase 2 completion, including Greater Growth scenario planning differentiation and travel demand modeling performance measures. The motion was

moved by Mayor Rowe (Portsmouth) and seconded by Mayor Dyer (Virginia Beach). Prior to the vote, at the request of Mayor Rowe (Portsmouth), Cathy Vick (VPA) and Barbara Nelson (VPA) verbalized the Port's perspective, including expected growth of the Port. The motion passed unanimously by individual voice vote.

**Item #6: RCS Mandated SEIS Segments and Other Potential Segments:**

**Motion:** Mayor Rowe (Portsmouth) moved that the Mandated Segments be carried forward for "feasibility". Camelia Ravanbakht (RCS Coordinator) mentioned that the segments will be evaluated for permitability. Brian Fowler (Norfolk) indicated that the next step would be for the segments to be modified, as necessary. Martin Thomas (Norfolk) asked that the motion mirrors the motion of the Working Group at its recent meeting. Bob Crum (HRTPO/HRPDC) listed the 5 Mandated segments—I-664 Connector, VA 164 Connector, I-564 Connector, I-664, VA 164—then he reiterated the motion: This joint committee directs the RCS to move forward with studying the feasibility of alternatives comprised of the 5 Mandated Segments and modifications thereof. The motion passed unanimously by individual voice vote.

**Working Group Electronic Meeting on 12/10/2020:**

**Item#5: Regional Connectors Study: Phase 3 - Task 2 - Development of Preliminary Alternatives**  
The Consultant Team provided the group with a detailed presentation of two travel demand model (TDM) runs: 1) one Unconstrained 2045 Baseline with the Existing + Committed (E+C) network and 2) one Unconstrained 2045 Baseline with all five mandated segments including: I-664, I-664 Connector, I-564 Connector, VA 164, and VA 164 Connector. Results from these two unconstrained 2045 Baseline model runs were compared with 2017 traffic volumes at key locations. Following some group discussions, Working Group members directed the Consultant Team to prepare for the January 14, 2021, meeting, five new 2045 Baseline model runs with a Constrained E+C network and the following Unconstrained segments:

- All five Mandated Segments (I-664, I-664 Connector, I-564 Connector, VA 164, VA 164 Connector)
- I-664 and VA 164
- I-664, VA 164, I-664 Connector, I-564 Connector
- I-664, VA 164, I-664 Connector, VA 164 Connector
- I-664, VA 164, VA 164 Connector, I-564 Connector

**2021**

**Working Group Electronic Meeting 01/14/2021**

**Item#5: Regional Connectors Study: Development of Preliminary Alternatives**

The Consultant Team presented the results from travel demand model runs for five Alternatives (see below graphics). Traffic volumes were tabulated for 2017, 2045 Baseline, and each of the five 2045 alternative runs. Following extensive discussions, Working Group Chair asked the members to decide which one of these alternatives should be moved forward to the next step for further modeling runs under Constrained E+C network as well as Constrained mandated segments.



**Motion:** Troy Eisenberger (Chesapeake) made a motion to move forward to the next step with Alternatives 2, 3, and 5. The motion was seconded by Ric Lowman (Virginia Beach) and passed 4 to 1 by those voting members present at the time of the motion.

**Working Group Electronic Meeting 02/11/2021**

**Item#5: Regional Connectors Study: Development of Preliminary Alternatives**

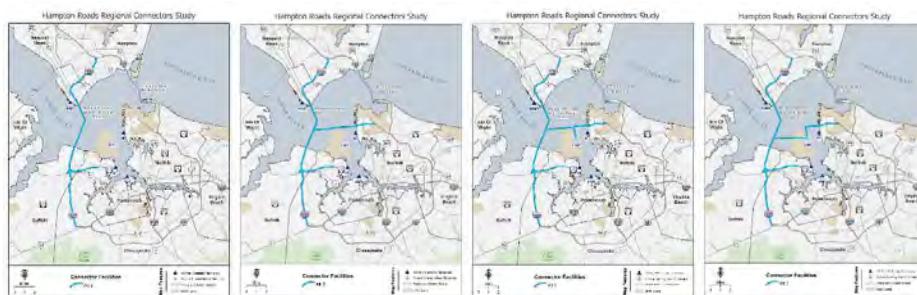
The Consultant Team presented the traffic volume results from travel demand model runs for 2045 Baseline, Alternatives 2, 3, and 5. The presentation also included summaries of two

meetings separately conducted on January 29, 2021, with ACOE and the Navy and on February 5, 2021, with the Port of Virginia staff. Discussions focused on Segment 164 Connector regarding issues and constraints (listed below) expressed by ACOE, Navy and the City of Portsmouth:

- Segments must not interfere with operations, maintenance, construction, or capacity of Craney Island
- Current projected lifespan of Craney Island is 2050 based on current technology
- Segments must be a minimum of 1800 feet from the next phase of the Navy Fuel Depot project for safety and security reasons and may require walls to further safeguard from potential security threats
- City of Portsmouth Landfill expansion

**Motion:** Carl Jackson (Portsmouth) made a motion to delete Alternative 5 and add two new Alternatives 6 and 7. The motion was seconded by Brian Fowler (Norfolk) and passed unanimously.

The modeling results for Alternatives 2, 3, 6, and 7 will be presented at the March 11 Working Group meeting.



**Working Group Electronic Meeting 03/11/2021 - Cancelled**

Working Group Electronic Meeting 04/08/2021

## **Item#5: Regional Connectors Study: Development of Preliminary Alternatives**

- The Consultant Team presented the modeling results from 2045 Baseline and Alternatives 2, 3, 6 and 7. The presentation included traffic volumes, capacity utilizations, and travel times for various runs. The Team also reviewed key model assumptions used for various model networks.

- Group discussion took place regarding the assumptions for HRELN toll rates, HRTPO Board approved 2045 list of projects, Bowers Hill Study recommended concept plans, and various design options.
- The WG members agreed to move all four alternatives (2, 3, 6, and 7) to the next step of the modeling process. In addition, they agreed to run Alternative 6 under two versions – with and without improvements to VA 164. Furthermore, they agreed to run each of the five preliminary alternatives under two design options for MMMBT: 6 General Purpose (GP) Lanes + 2 Managed Lanes (ML) and 4General Purpose Lanes + 4 Managed Lanes.

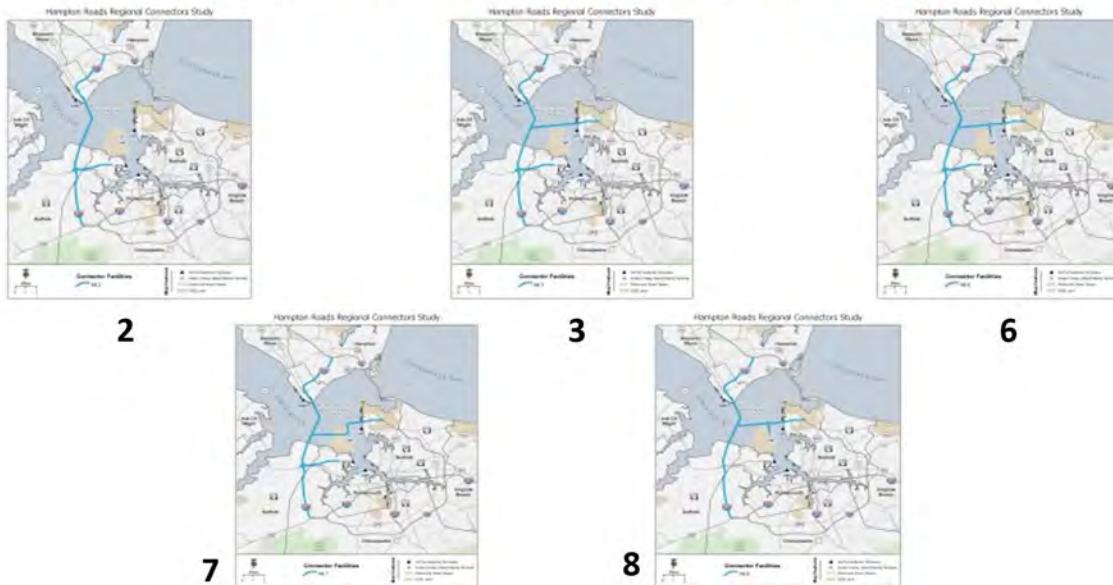
The next modeling runs will therefore include 10 Alternatives with the E+C Network (October 2020 version) while ensuring consistency with the Bowers - Hill Study recommended concept plans and HRTAC approved Initial Tolling Policy for HRELN (\$0.06/mile or \$0.25 per gantry). This is consistent with the scope of work.

## Working Group Electronic Meeting 05/25/2021

### **Item#5: Regional Connectors Study Phase 3: Development of Preliminary Alternatives**

- The Consultant Team presented the travel demand modeling results on five Alternatives (2, 3, 6, 7, and 8) selected at the April 8 meeting (see below Graphics 5A). The results were based on two design options for MMMBT: Option A (6GP+2M) and Option B (4GP+4M).
- The 2045 travel demand networks used for modeling these ten alternatives were corrected since the April 8<sup>th</sup> meeting to reflect the HRTAC Initial Toll Policy on the HRELN (\$0.06/mile) and were also consistent with the recommendations from the Bowers-Hill Interchange Improvement Study (see Modeling assumptions below).
- The WG members agreed on eliminating Alternative 7 under both design options A and B due to design limitations and low estimated traffic volumes.
- The WG members agreed and selected Alternatives 2, 3, 6, and 8 with Options A and B to be moved to the next step of the analysis. The motion passed unanimously to recommend these 8 Alternatives for the Steering Committee's consideration and approval at their next meeting to be scheduled in the June/July timeframe.

## ATTACHMENT 5A- ALTERNATIVES 2,3,6,7,8



## Modeling Assumptions



I-664 Roadway Segments	Actual Existing Lanes	MMMBT Design Option (6+2)	MMMBT Design Option (4+4)	Comments
I-64 to Terminal Avenue Interchange	6	6+2	6+4/2*	
Terminal Avenue Interchange to I-664 Connector	4	6+2	4+4	
I-664 Connector to College Dr. (Exit 8)	4	6+2	4+4	MMMBT
College Dr. (Exit 8) to VA 164**	6	6+4	6+4	
VA 164 to Dock Landing Rd**	4	4+4	4+4	
Dock Landing Rd to US 58 (Bowers Hill)**	4	6+4	6+4	
US 58 (Bowers Hill) to I-264W**	8	8+4	8+4	

\* Adds/drops second HOT lane at Powhatan Parkway

\*\*Per Bowers Hill Interchange Improvement Study

**Joint Steering (Policy) Committee and Working Group Electronic Meeting**  
**06/22/2021**

**Item#5: Regional Connectors Study Phase 3: Development of Preliminary Alternatives**

The Consultant Team provided an update of activities conducted since the October 27, 2020, Joint meeting. Mr. Craig Eddy reviewed Alternatives 1 through 8 as considered by the Working Group during the past several months. Mr. Eddy further indicated that the Working Group had eliminated Alternative 1 (high cost), Alternatives 4 and 5 (VA 164 Connector constraints and issues raised by the Navy, Army Corps of Engineers, and city of Portsmouth), and Alternative 7 (low estimated traffic volumes and design constraints). Lastly, Mr. Eddy shared with the members the four alternatives (Alternatives 2, 3, 6, and 8) under two design options A and B that were recommended by the Working Group for the Steering Committee's approval.

**Motion:** Chair Price requested the members for a motion to approve the Working Group's recommended alternatives and design options. Mr. Thomas (Norfolk) indicated that a funding request has been submitted to Congress for the Craney Island Access Study. He further requested the Chair to include Alternatives 5 and 7 in the final list of Preliminary Alternatives. Following some discussions and the absence of several members of the Policy Committee, Chair Price directed the staff to schedule a 30-minute electronic meeting the following week for the joint group to reconvene and act on this one item: selection of Preliminary Alternatives.

**Joint Steering (Policy) Committee and Working Group Electronic Meeting**  
**06/30/2021**

**Item#4: Regional Connectors Study Phase 3: Development of Preliminary Alternatives**

The purpose of this meeting was for the members to vote on the Working Group recommended Alternatives 2, 3, 6, and 8 under two design options A and B (a total of 8 Alternatives). The design options pertain to the number of general purpose (GP) and managed (M) lanes on I-664 from its interchange with I-64 on the peninsula to its proposed interchange with the I-664 Connector over the Hampton Roads Harbor. Option A would provide 6 GP and 2 M while Option B would provide 4 GP and 4 M.

Mayor Price (Newport News) initiated this item by asking for a motion to move ahead with the alternatives recommended by the working group that were to be voted on at the previous week's (June 22) meeting. Mayor Tuck (Hampton) made a motion, and Mayor Glover (Portsmouth) seconded the motion.

Vice-Mayor Thomas (Norfolk) made a substitute motion. The substitute motion is to include Alternatives 5 and 7 in the study, due to the burden of truck traffic on Hampton Boulevard, the burden that will be imposed by the future Craney Island Terminal, and the possibility that these alternatives may be cheaper. Vice-Mayor Thomas (Norfolk) then mentioned the possibility of an additional \$3.1 million in federal earmark that was requested for a study to look at access to the future Craney Island Terminal. Mayor Dyer (Virginia Beach) seconded the substitute motion.

There was extensive discussion among the Steering (Policy) Committee members regarding the importance of Alternatives 5A, 5B, 7A, and 7B even though they had been recommended for removal. The addition of Alternatives 5A, 5B, 7A, and 7B, would result in 12 preliminary alternatives to be studied when added to the 8 recommended by the Working Group, which exceeds the number allowable (maximum of ten Alternatives) as per the scope of work. During the meeting, the Steering Committee was made aware of this scope limitation.

**Motion:** Vice-Mayor Thomas (Norfolk) amended his substitute motion. His amended substitute motion is to defer the action today to determine how much additional funding would be required to analyze 12 alternatives simultaneously through Phase 3 (including Alternatives 5 and 7) and to explore what additional money is available from HRTAC to fund the additional analysis. Mayor Tuck (Hampton) moved approval of the amended substitute motion; Mayor Dyer (Virginia Beach) seconded.

The Motion passed with five Yes votes and two No votes requiring:

- an estimated cost/per additional alternative (beyond 10)
- an inquiry as to the availability of additional funds from HRTAC for such study

### **RCS on Temporary Pause: July 2021 – September 2021**

Following the June 30, 2021, Joint Steering (Policy) Committee/Working Group meeting, Robert Crum, HRPDC/HRTPO Executive Director worked diligently with the Committee members to resolve notable issues and develop a path forward to complete the RCS.

### **Joint Steering (Policy) Committee and Working Group Meeting 10/12/2021**

#### **Item #5: RCS Background and Recommended Path Forward:**

Robert Crum, HRPDC/HRTPO Executive Director made a presentation on the path forward for the RCS. He began his presentation by introducing the consultant's new project leadership – Lorna Parkins and Paul Prideaux – and by highlighting the mandated segments and the past philosophy of the study.

Mr. Crum noted that he met with members of the Steering (Policy) Group after the June meeting. In these discussions he heard that some of the options in the RCS may not be constructed for decades; technology, community growth, and needs will evolve over time; there are questions and concerns about some segments but it's too early to eliminate them at this stage, the RCS should determine each segment's advantages and disadvantages, and ready-to-go projects shouldn't be slowed down.

Mr. Crum stated that HRTPO staff and the consultant team believe that retaining certain segments through the next stage of analysis can be accomplished without the need for additional funding. He added that each of these segments would be advanced to the next phase of this study, where an analysis would be completed on the degree to which each segment addresses the needs of the region.

Mr. Crum added that the cost, constructability, permitability and congestion relief of the various segments will be evaluated, and the various segments will be ranked using this evaluation and staged based on project readiness.

Mr. Crum concluded his presentation by noting the following potential category groupings:

- Those segments that are ready for advancement and should be recommended for consideration in the fiscally-constrained portion of the Hampton Roads 2050 Long-Range Transportation Plan.
- Those segments which require further refinement and maturation, and will be recommended for consideration in the 2050 Vision Plan as projects requiring further evaluation for permitability and constructability.
- Those segments that due to technical issues or other items will be retained but will warrant further consideration by the community at the appropriate time.

**Motion:** Mayor Dyer (Virginia Beach) made a motion to approve the recommended path forward and Mayor Duman (Suffolk) seconded. The motion was unanimously approved.

**Item #6: RCS: Proposed Approach to Study Completion**

Lorna Parkins (MBI) RCS Project Co-Manager noted that the mandated study segments have not changed. The updated methodology will simply sort the segments into chronological tiers based on readiness and known challenges associated with construction and permitting. She added that the updated Phase 3 Process will establish a tiering framework, apply the framework to tier the segments, evaluate congestion relief and finalize segments tiers, and provide the information for the 2050 LRTP and prioritization process.

Ms. Parkins added that there will be three tiers. Tier 1 will have favorable constructability, permitting and readiness; Tier 2 will have favorable or mixed constructability and permitting but less favorable readiness; and Tier 3 will be challenged for constructability and permitting and a higher degree of uncertainty.

Ms. Parkins noted that individual segments will be organized into bundles for analysis, and the congestion relief evaluation will include as many as three logical bundles for evaluation. The consultant team will evaluate congestion relief and other system effects of the bundles, and the evaluation results will finalize the tiering of the segments.

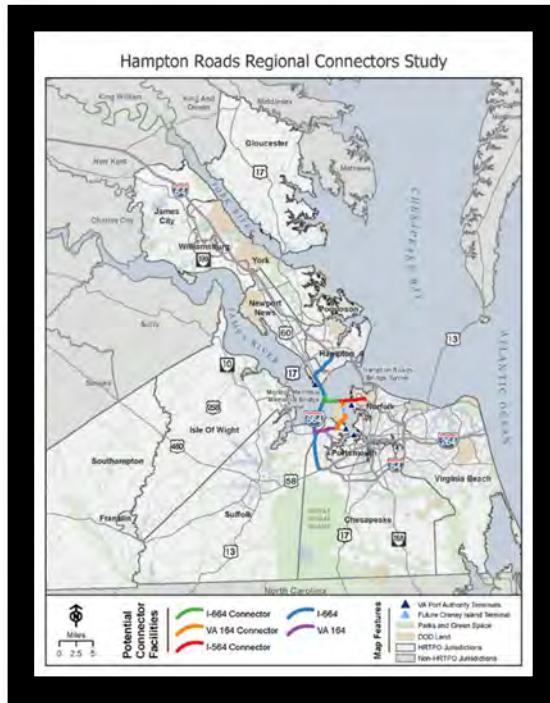
Mr. Jackson mentioned that the Working Group has had a strong role in the study to this point and asked if the Working Group will continue to have this role moving forward. Mr. Crum replied that the Working Group will continue to be key in the technical work of the study. Mr. Crum also noted that committee members indicated a preference for more Joint Steering (Policy) and Working Group meetings moving forward.

**Joint Steering (Policy) Committee and Working Group Meeting 12/07/2021 – Cancelled**

**2022**

**Joint Steering (Policy) Committee and Working Group Meeting 01/11/2022**

## APPENDIX A – STUDY AREA



## Appendix B: Funding

### Description Budget/Cost

Phase 1	\$359,497
Phase 1 (Supplement)	\$3,784
Phase 2 (Interim)	\$779,199
Phase 2 (Supplement)	\$709,637
Phase 2 (Supplement Omission)	\$96,746
Phase 3	\$4,062,710
Subtotal amount (Consultant)	\$6,011,573
Contingency	\$80,638
Total Amount (Consultant)	\$6,092,211
RCS Project Coordination	\$322,000
HRTPO staff expenses	\$535,756
<b>Grand Total</b>	<b>\$6,949,967</b>

Funded by HRTAC, Administered by HRTPO

