

I-64 Capacity Improvements – Segment I Initial Financial Plan

December 23, 2014



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Introduction

Purpose

I-64 Capacity Improvements – Segment I Financial Plan is prepared pursuant to requirements of the United States Code and the *Code of Virginia*, as described below.

Title 23, § 106 of the United States Code requires that an annual financial plan be prepared for any federal aid highway project with an estimated total cost of \$100 million or more. The financial plan must:

- be based on detailed estimates of the cost to complete the project;
- provide for the annual submission of updates based on reasonable assumptions of future increases in the cost to complete the project; and
- assess the appropriateness of a public-private partnership to deliver the project

The annual financial plan must be made available for review at the request of the U.S. Secretary of Transportation.

In addition, § 33.1-23.5:3 of the *Code of Virginia* provides:

For transportation construction projects valued in excess of \$100 million, the Commissioner shall require that a financial plan be prepared and presented to the Commonwealth Transportation Board for its review. This plan shall include, but not be limited to, the following: (i) a complete cost estimate for all major project elements, (ii) an implementation plan with the project schedule and cost-to-complete information presented for each year, (iii) identified revenues by funding source available each year to meet project costs, (iv) a detailed cash-flow analysis for each year of the proposed project, and (v) efforts to be made to ensure maximum involvement of private enterprise and private capital.

Summary

This project is Segment 1 of the planned I-64 Capacity Improvements on the Peninsula. The project limits are from 0.5 Miles East of Route 238, Yorktown Road (Exit 247) to 1.55 Miles West of Route 143, Jefferson Avenue (Exit 255). The 5.67 mile long project lies completely in the City of Newport News. I-64 is classified as an Urban Interstate through the City of Newport News. VDOT has initiated this proposed widening project to provide immediate congestion relief to the roadway corridor.

VDOT has determined that the use of Design-Build contracting will expedite delivery and ensure timely authorization of federal funding. The Design-Builder will be able to perform final design, right of way acquisition, and utility relocation and some construction activities concurrently. This project contributes to the Preferred Alternative and contributes to the Purpose & Need elements outlined in the Final Environmental Impact Statement (FEIS). The project will incorporate context sensitive design where practical and in accordance with the resolution of the Transportation Planning Organization (TPO).

The current budget for the project is \$144 million, with approximately \$2 million expended as of the end of December 2014. Based on the program cost estimate as shown in the Final FY 2015-2020 SYIP, the project can be completed within current and planned allocations.

Project Description

Under the terms of the design-build contract scheduled to be awarded by the Commonwealth Transportation Board (CTB) in February, 2015, the design-builder will construct the widening of I-64 from a 4 lane divided interstate to a 6 lane divided interstate from state milepoint 248.48 to state milepoint 254.43. The proposed improvements include the addition of one 12-foot-wide travel lane and one 12-foot-wide shoulder in each direction. This 4-lane section of I-64 ties into an 8-lane interstate system to the east and is currently the most congested section of the I-64 Peninsula corridor. The widening is expected to occur in the median of the existing interstate, limiting the amount of right of way required to construct the project and avoiding impacts to existing interchanges. These improvements will increase capacity, minimize geometric and structural deficiencies, provide more lanes for evacuation and improve safety by reducing congestion and improving vehicular level of service.

Six existing bridges (three east and west pairs) within the corridor will be widened to the inside to accommodate the same typical section as the roadway. One pair of bridges is over CSX Railroad at Industrial Park Drive. Two box culverts at Stony Run will also be extended due to the interstate widening.

Project History

The following is a brief chronology on the development of the project I-64 Capacity Improvements – Segment I:

November 2012

The draft EIS for the Interstate 64 Peninsula Study, a 75-mile long corridor from Hampton to Richmond was released for public review.

December 2012

Location Public Hearings for the draft EIS were held in Richmond, Williamsburg, and Newport News.

April 2013

The Commonwealth Transportation Board (CTB) passed a resolution identifying a preferred alternative for the Interstate 64 Peninsula Study as Alternative 1: general purpose widening with the option to widen to the outside or within the median, to be determined on a segment-by-segment basis. The resolution also stated that future development of operationally independent segments within the study corridor should be closely coordinated with the Hampton Roads Transportation Planning Organization (TPO).

The Richmond Area Metropolitan Planning Organization identified Alternative 1B in the Draft EIS as its locally preferred alternative, subject to conditions relating to right of way acquisition and design.

March 2013

The Hampton Roads Transportation Planning Organization (TPO) Transportation Technical Advisory Committee recommended Alternative 1A as the locally preferred alternative, with the caveat that Context Sensitive Design be applied, as well as a phased approach (build in fundable sections) for construction of the project.

May 2013

VDOT released the Draft 2014-2019 SYIP that includes \$100 million in funding for Capacity Improvements to Interstate 64 (I-64) from the City of Newport News to the City of Williamsburg.

June 2013

HB 2313 was signed into law, which provides a comprehensive transportation funding source and includes a major regional funding package for Hampton Roads.

The CTB adopted the 2014-2019 SYIP that included \$100 million in funding for capacity improvements to Interstate 64 from the City of Newport News to the City of Williamsburg.

The Hampton Roads Transportation Planning Organization (HRTPO) approved and adopted a resolution endorsing six-lane options to provide immediate congestion relief of I-64 between Exit 255 (Jefferson Avenue) and Exit 242 (Humelsine Parkway).

November 2013

HRTPO provided VDOT with updates to the 2034 Long Range Transportation Plan to include a section from Exit 255 to Exit 250 for construction.

January 2014

It was determined that the I-64 Capacity Improvements – Segment I project needed to be lengthened past the Fort Eustis Boulevard Interchange to avoid negative impacts to the interchange traffic. The \$100 million estimate was updated to extend Segment I approximately 2 miles further west than previously described, resulting in a new cost estimate of \$144 million. HRTPO Board approved an update to expand the project limits to Mile Marker 258, resulting in an allocation of \$44 million from the Hampton Roads Transportation Fund to Segment I of the I-64 Peninsula Widening Project.

March 2014

The RFQ was advertised for I-64 Capacity Improvements – Segment I, UPC 104905.

June 2014

The CTB adopted the 2015-2020 SYIP that included \$144 million in funding for capacity improvements to Interstate 64 from the City of Newport News to the City of Williamsburg.

The RFP was released for I-64 Capacity Improvements – Segment I, UPC 104905.

Current Activities

The Design-Build contract is scheduled to be awarded in February 2015 with a March 2015 NTP.

Project Website

Additional information on the I-64 Capacity Improvements project can be found on the project website at the following link:

http://www.virginiadot.org/projects/hamptonroads/i-64_widening_project.asp

The website provides additional information regarding project description, purpose, location map, implementation schedule, cost, contact information, etc.

The financial plan defines the methodology, resources, and time schedule of the work completed and remaining work to finish the project, and includes the following topics:

- Section 1: Project Cost Estimate
- Section 2: Project Implementation Plan
- Section 3: Project Financing
- Section 4: Project Cash Flow
- Section 5: Risk Identification and Mitigation Factors
- Section 6: Involvement of Private Enterprise and Private Capital
- Section 7: Updates and Resources

Section 1: Project Cost Estimate

VDOT’s Project Cost Estimating System (PCES) is the official source for all cost estimate information. Table 1 below shows the current total project cost estimate for the I-64 Capacity Improvements – Segment I project.

This Initial Financial Plan includes \$144 million in funding for the I-64 Capacity Improvements – Segment I project.

In June 2013, the CTB adopted the 2014-2019 SYIP that included \$100 million in funding for this project. In January 2014 the HRTPO Board approved the extension of Segment I as well as an amendment to the HRTPO FY 2012-2015 Transportation Improvement Program (TIP) to account for modifying the project termini to expand the project limits to 1.55 miles west of Route 143 Jefferson Avenue (Exit 255), resulting in an allocation of \$44 million from the Hampton Roads Transportation Fund (HRTF).

Table 1: Project Cost Estimates by Phase

Phase	Estimate
PE	\$3,995,000
RW	\$5,901,490
CN	\$134,103,510
Total	\$144,000,000

For billing and tracking purposes, these anticipated costs have been allocated among the project number (UPC) and phases as shown in Table 2 below.

Table 2: Projected Cost Estimates

UPC	Route County/City Type Length	Description	Phase	Estimate	Allocation	Expenditures as of 12/18/14
104905	0064 Urban Interstate – One Hearing Design 0.0000	I-64 Capacity Improvements – Segment I	PE	\$3,995,000	\$3,995,000	\$1,904,220
			RW	\$5,901,490	\$5,901,490	\$0
			CN	\$134,103,510	\$134,103,510	\$0
			Total	\$144,000,000	\$144,000,000	\$1,904,220
			Total	\$144,000,000	\$144,000,000	\$1,904,220

Cost Estimating Methodology

Work elements associated with the I-64 Capacity Improvements – Segment I project can be summarized in two components: (1) work to be carried out under the design-build contract by the design-builder and (2) work outside of the design-build contract for which VDOT is responsible or has already accomplished throughout the development of the project.

Design-Build Contract: The awarded design-build contract for the I-64 Capacity Improvements project will be lump sum and will include the following major work elements to be provided by the design-builder: final design; right-of-way acquisition services; utility coordination; utility relocations; construction; and construction QA/QC. The estimated cost for the design-build contract was developed using the RFP Plans and making adjustments to a construction quantity estimate developed for those plans, to account for anticipated changes to the Project. The changes account for modifications to the plans to meet current Project design criteria as detailed in the Design-Build RFP Technical Requirements. The fixed amount of the design-build contract is a lump sum, with payments based upon the project physical percent of completion.

Work Outside of Design-Build Contract: VDOT will remain responsible for updating the EIS documentation; preliminary engineering support services; oversight of final design; oversight of right-of-way acquisition services; payment for new right-of-way acquired for the project; landscaping maintenance after project construction; design-build risk contingency; and oversight of construction:

- Preliminary Engineering: VDOT will execute an agreement with a professional services firm to provide engineering and technical support during project development. Specifically, VDOT needs support for reviewing preliminary and final design submissions.
- Right of Way Purchases: In accordance with the design-build Request for Proposals, Part 2, Section 1.5, VDOT remains responsible for the actual cost of the purchase of right-of-way, all easements and miscellaneous fees associated with real estate closings as part of the Project and oversight of the right-of-way acquisition/payment/condemnation process.
- Virginia Department of Transportation Project Oversight Costs: VDOT costs to manage the project and provide oversight of the project are estimated to be \$3,856,983. These costs include overall project management, design reviews, contract administration and construction oversight.

In addition, other Preliminary Engineering expenditures associated with project development of the I-64 Capacity Improvements project are reflected in the total project estimate.

Summary of Estimates and Expenditures

Table 3 depicts the estimated project expenditures as of December 18, 2014 along with the project budget. It shows that the project is funded for costs incurred to date, as well as for currently estimated remaining costs.

Table 3: Comparison of Project Estimate and Expenditures

Phase	Estimate	Expenditures as of 12/18/14	Balance to Complete
PE	\$3,995,000	\$1,904,220	\$2,090,780
RW	\$5,901,490	\$0	\$5,901,490
CN	\$134,103,510	\$0	\$134,103,510
Total	\$144,000,000	\$1,904,220	\$142,095,780

Section 2: Project Implementation Plan

Table 4 below illustrates the project implementation plan for the I-64 Capacity Improvements – Segment I project by detailing the actual or anticipated start and completion dates for remaining project activities.

Table 4: Project Implementation Plan

Project	Activity	Notice to Proceed Issued	Scheduled Completion
I-64 Capacity Improvements – Segment I NTP	<ul style="list-style-type: none"> - Preliminary design activities - ROW purchase - Utility relocation - Environmental and Design Permits/Approvals - Survey and geotechnical investigations - Construction 	March 2015	12/01/2017

Section 3: Project Financing

The current total project cost estimate is \$144,000,000. The Final FY 2015-2020 Six-Year Improvement Program (SYIP) adopted by the CTB in June 2014 includes total previous and future allocations that fully fund the project. The distribution of funding across the FY 2015-2020 SYIP includes \$44,373,590 in previous allocations and \$99,626,410 in planned allocations from FY 2015 through FY 2020, inclusive.

Six-Year Improvement Program Funding

I-64 Capacity Improvements Project – Segment I is funded from a combination of state and federal sources.

Federal Sources

CTB Formula - PPTA Federal (CF1140) – The Final FY 2015-2020 SYIP includes \$298,872 in CTB Formula: CTB Formula - PPTA Federal (CF1140) funds allocated in previous years through FY 2019. The Commonwealth Transportation Board (CTB) funds are for bridge and interstate improvements on this high priority interstate project.

Soft Match: CTB Formula - PPTA Soft Match (CF1141) – The Final FY 2015-2020 SYIP includes \$74,718 in CTB Formula - PPTA Soft Match (CF1141) funds allocated in previous years. The Commonwealth Transportation Board (CTB) funds are for bridge and interstate improvements on this high priority interstate project.

Bond Proceeds: GARVEE (CNB296) – (CNB296) – The Final FY 2015-2020 SYIP includes \$99,626,410 in future GARVEE funds Bond Proceeds.

State Sources

Hampton Roads Funds - Hampton Roads Transportation Funds (FASHAM) The Final FY 2015-2020 SYIP includes \$44,000,000 in Hampton Roads Transportation Funds (FASHAM) funds previously allocated. The Hampton Roads Transportation Funds (FASHAM) funds were previously allocated by the HRTPO.

Table 5 on the following page summarizes the funding allocated to the I-64 Capacity Improvements – Segment I in the Final FY 2015-2020 SYIP by fund source and year.

Table 5: Summary of Funding by Source and Year

Source	Fund Name	Previous	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Total
Federal	CTB Formula	\$373,590	\$ -	\$ -	\$ -	\$ -	\$ -	\$373,590
Federal	Bond Proceeds	\$ -	\$ -	\$90,000,000	\$9,626,410	\$ -	\$ -	\$99,626,410
State	Hampton Roads Funds	\$44,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$44,000,000
Total		\$44,373,590	\$0	\$90,000,000	\$9,626,410	\$0	\$0	\$144,000,000

Section 4: Project Cash Flow

Projected Costs Compared to Allocations by Fiscal Year

I-64 Capacity Improvements – Segment I project is a high priority for both VDOT and the local area. Allocations are re-evaluated annually through the SYIP update. A comparison of projected expenditures to allocations by fiscal year is shown in Table 6.

Table 6: Comparison of Projected Expenditures to Allocations

	Previous	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
PE	\$2,000,000	\$1,995,000	\$0	\$0	\$0	\$0
Right of Way	\$0	\$0	\$5,901,490	\$0	\$0	\$0
Construction	\$0	\$18,203,824	\$48,899,686	\$46,500,000	\$20,500,000	\$0
Total Annual Expenditures	\$2,000,000	\$20,198,824	\$54,801,176	\$46,500,000	\$20,500,000	\$0
Cumulative Expenditures	\$2,000,000	\$22,198,824	\$77,000,000	\$123,500,000	\$144,000,000	\$144,000,000
Total Annual Allocations	\$44,373,590	\$0	\$90,000,000	\$9,626,410	\$0	\$0
Cumulative Allocations	\$44,373,590	\$44,373,590	\$134,373,590	\$144,000,000	\$144,000,000	\$144,000,000
Cumulative Allocation Surplus (Deficit)	\$42,373,590	\$22,174,766	\$57,373,590	\$20,500,000	\$0	\$0

Approach

I-64 Capacity Improvements – Segment I project annual cash expenditures are based on the project schedule assumed by the VDOT Design Team.

Financial Status

In accordance with § 33.1-12(9) of the *Code of Virginia*, the total funds allocated to the Project are equal to total expenditures within 12 months following anticipated completion of the project. VDOT’s Financial Plan Guidelines state that the Programming Division “will be responsible for maintaining copies of all financial plans for documentation as part of the Six-Year Improvement Program...” and will coordinate annual update certification processes for this document. This document will be used in the development of each year’s SYIP so that the required funding for the project is properly allocated.

Based on current cost estimates, there is no projected funding shortfall on the I-64 Capacity Improvements project.

Future Cost Factors

I-64 Capacity Improvements – Segment I project has incurred expenditures related to preliminary engineering activities performed by the project team. To date, these costs have been contained within the project's current Preliminary Engineering budget included in the total project estimate. The Department will seek to keep the project within budget with value engineering efforts, final scope determination and construction cost savings opportunities.

Section 5: Risk Identification and Mitigation Factors

The Department's current budget in the Six-Year Improvement Program for Fiscal Years 2015-2020 is \$144 million for I-64 Capacity Improvements – Segment I project.

The scope of work required for the Project has been identified as the Base Scope, Option 1, Option 2 and a Pavement Reconstruction Alternative. The Base Scope consists of, but is not limited to, widening of Interstate 64 to the median side, widening and rehabilitation of six (6) existing bridges within the Project corridor, repair of existing distressed pavement, and application of a thin hot mix asphalt concrete overlay (THMACO) to the existing and new travel lanes and shoulders. Option 1 consists of asphalt overlay of the existing travel lanes and shoulders in both directions. Option 2 consists of extending the non-cloverleaf acceleration and deceleration lanes on I-64 for the Fort Eustis Blvd Interchange. The Pavement Reconstruction Alternative may be initiated after the Notice of Intent to Award is issued. At this time, the Successful Offeror will have the opportunity to provide reconstruction of the existing concrete travel lanes within the Project corridor for an additional amount of \$4,600,000. The Successful Offeror is not obligated to undertake this Pavement Reconstruction Alternative. Should the Successful Offeror wish to take advantage of the Pavement Reconstruction Alternative any and all work required for the reconstruction alternative shall be included for the additional \$4,600,000.

It is anticipated that the project's contingency budget included in the project estimate will mitigate the project risks.

Design exceptions to FHWA and AASHTO criteria have been acquired for the roadway, due to the geometry of the existing alignment. Although the existing horizontal curves on I-64 are adequate for the proposed design speed of 70 mph, there are several locations where the existing cross slope and superelevation are inadequate by current standards. However, the proposed pavement will be designed in accordance with current VDOT and AASHTO standards, and it is anticipated that the slope of the existing pavement will be corrected during the future 8 lane widening project or with future pavement rehabilitation projects.

Right of way acquisition is one area where the Department has exposure for a cost increase. The Department remains responsible for the actual cost of the purchase of remaining right-of-way, all easements, and miscellaneous fees associated with closing. While the current right-of-way cost estimate includes costs for potential condemnations, escalation and other associated costs, there is the possibility that actual acquisition costs may fluctuate prior to final settlement. Potential additional costs can be mitigated through the identification of opportunities to reduce right of way impacts through design modifications and value engineering opportunities that may develop during final design and right of way negotiations. Interchange modifications will not be included in this project. In order to minimize right-of way and property impacts, the additional 12' lane and 12' shoulder will be added towards the median in each direction. Significant right-of-way and easements may be required for the stormwater management facilities, channel improvements, and outfalls. Although the existing right-of-way is limited along most of the corridor, there are several particularly challenging areas.

Approximately twelve stormwater management basins will be required for the project base scope. In addition to the basins required for quality and quantity control, regulations also require improvements to the existing channels and outfalls along the interstate. Jurisdictional streams and wetlands will also be affected by this project, which will require stream and wetland

mitigation as well as coordination with the U.S. Army Corps of Engineers. Wetland credits cannot be purchased for impacts due to stormwater management basins. The large number of basins required will have a significant impact on right-of-way acquisition. VSMP regulations allow the use of offsite options and the purchase of certified nutrient credits, which may be used in some areas to reduce property and right-of-way impacts.

Section 6: Involvement of Private Enterprise and Private Capital

I-64 Capacity Improvements – Segment I project will be procured through a design-build process and is funded with a combination of state and federal funds. No private capital is involved with this project.

Section 7: Updates and Resources

Future Updates

Any required adjustments to the cost estimate will be computed in a manner consistent with the methodology established in the Initial Financial Plan and Annual Financial Plan updates.

The Financial Plan will be updated annually upon completion of the state fiscal year and will be based on the information contained in the annual update of the SYIP. The Financial Plan will also be updated as needed based on significant changes to anticipated project costs.

Internally, VDOT will continue to monitor the project and issue weekly progress reports to update the status of work underway and provide advanced warning of potential issues.

VDOT Resources

Table 7 below lists VDOT resources associated with the I-64 Capacity Improvements project.

Table 7: VDOT Resources

Central Office	Hampton Roads District
<p>Garrett W. Moore, P.E. Chief Engineer (804) 786-4798</p>	<p>James S. Utterback, PMP District Administrator (757) 925-2511</p>
<p>John W. Lawson Chief Financial Officer (804) 786-2707</p>	<p>Beth Arnold, P.E. Deputy District Administrator (757) 925-2504</p>
<p>Diane Mitchell Federal Programs Management Director (804) 786-2741</p>	<p>Emmanuel Darko, P.E. District Location and Design Engineer (757) 925-2561</p>
<p>Mohammad Mirshahi, P.E. Deputy Chief Engineer (804) 786-1475</p>	<p>Bud Morgan, P.E. Area Construction Engineer (757) 376-2606</p>
<p>Barton A. Thrasher, P.E. State Location and Design Engineer (804) 786-5869</p>	<p>Janet Hedrick, P.E. Design Project Manager (757) 494-5478</p>
<p>Joseph Clarke, P.E. Alternate Project Delivery Program Manager (804) 371-4316</p>	