



I-66 Eastbound Widening Inside the Beltway

Financial Plan Annual Update

October 24, 2022

State Project #: 0066-96A-417, P101, R201, C501;
0066-96A-493, P101, C501, B686
UPC #: 108424, 110629

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EXECUTIVE SUMMARY

This Design-Build project serves to increase capacity in a highly congested segment of I-66 Inside the Beltway. The project includes construction of an additional through lane along approximately four miles of eastbound I-66 between the Dulles Connector Road (Route 267) in Fairfax County and Fairfax Drive (Route 237) in the Ballston area of Arlington County, Virginia. Tolling of the I-66 Express Lanes is being maintained uninterrupted through the duration of construction. The project also includes construction of a new bridge along the Washington & Old Dominion (“W&OD”) Trail at Route 29 (Lee Highway) and modifications to the existing Route 7 interchange (Exit 66) in order to provide I-66 eastbound direct access to the West Falls Church Metro station.

Construction Final Completion was achieved on September 24, 2021, one week prior to the contractual Final Completion date of October 1, 2021. The current total project cost estimate is \$116,000,000. Twenty-five work orders have been negotiated to date, totaling \$1,988,086. There is no apparent risk at this time of exceeding the project contingency.

This project is fully funded with a combination of GARVEE Bond Proceeds, Priority Transportation Funds, Dedicated State Funding, and Local Project Contributions. This project has been developed utilizing the federal process. The current funds may be converted to federal funds (Advance Construction) at a future date.

1. PROJECT DESCRIPTION

I-66 Eastbound Widening – UPC# 108424 (Fairfax & Arlington Counties)

Interstate 66 (“I-66”) serves as one of the main thoroughfares into Washington, D.C. and the surrounding metropolitan region from points west. The section of I-66 east of the Capital Beltway, or Interstate 495 (“I-495”), is one of the two interstate highways that lead directly into Washington, DC. The section of I-66, that is subject of this Project, is a heavily traveled route for a growing number of reverse commuters who live in Arlington, Alexandria, and the District of Columbia and commute to jobs in the Tysons area and the Dulles Corridor. In addition, this section of I-66 serves as a primary route for many people who live and/or work in Northern Virginia who are bound for destinations in Washington, D.C. The current HOV restrictions limit travel during the AM peak period, but traffic volumes and demands are high for most of the day, notably from 9 AM to 10 PM (outside the HOV restriction). In the majority of the study area, there are only two lanes (2.7 miles), with one auxiliary lane within a portion of the project study area (1.3 miles), in the eastbound direction on I-66 that carry the high eastbound traffic volumes generated from several feeder roads.

Location Map (UPC# 108424)



The Project involves constructing an additional through lane along approximately four miles of eastbound Interstate 66 (I-66) between the Dulles Connector Road (Route 267) in Fairfax County and Fairfax Drive (Route 237) in the Ballston area of Arlington County, Virginia. The project also involves, among other things, modifying ramps at Exits 69 and 71, rehabilitating and/or repairing bridges, widening bridges, constructing new grade separated crossing of the Washington & Old Dominion (“W&OD”) Trail at Route 29/Lee Highway, replacing and/or constructing new sound barriers; modifying park property and trails; landscaping; stormwater management and drainage improvements; and signing and lighting. Toll facilities are operational along I-66 inside the Beltway, as a result of a separate project. Toll operations shall be maintained uninterrupted through the duration of construction. This project will be completed via Design-Build delivery method.

In accordance with the requirements of the National Environmental Policy Act (NEPA), VDOT completed an Environmental Assessment (EA), and made it available for public review and comment on November 17, 2016. A Revised EA and request for a Finding of No Significant Impact (FONSI) was submitted for FHWA approval on March 30, 2017, and was approved by the FHWA on April 3, 2017. A preliminary jurisdictional determination, identifying the location of wetlands and streams along the project corridor, has been obtained from the U.S. Army Corps of Engineers. A Final Noise Analysis has been completed by the Design-Builder, and the final barrier locations and dimensions have been finalized and depicted in the Released for Construction Plans. The change in the final design noise analysis was approved by VDOT and FHWA in March 2019.

I-66 Eastbound Direct Access to Metro Garage at Route 7 – UPC# 110629 (Fairfax Co)

This project is being advanced via Design-Build delivery. The Request for Proposals (RFP) included an “Option” to construct a nearby improvement under a “linked UPC” 110629, Project # 0066-96A-493, P101, C501. VDOT decided to move forward with the “Option” and this project is being constructed as part of the I-66 Eastbound Widening project. The project provides an additional auxiliary lane to the existing I-66 eastbound exit ramp and constructing a new slip ramp from the I-66 eastbound exit ramp to the Route 7 southbound entrance flyover ramp. The proposed connector ramp will provide more direct access from I-66 eastbound to the West Falls Church Metro garage. The limits of UPC# 110629 are from approximately 0.34 miles west of Route 7 to 0.08 miles east of Route 7, for a total length of approximately 0.42 miles. Charges for this project are being separated from UPC 108424 and applied to UPC 110629, however, the Design-Build contract (Contract No. C00108424DB92) includes both UPC’s.

VDOT prepared a Categorical Exclusion (CE) for the I-66 Eastbound Direct Access project dated March 29, 2017, with Documentation of FHWA Review dated June 7, 2017.

Location Map (UPC# 110629)



Project Websites – UPC# 108424 and 110629

A project website (<http://inside.transform66.org/>) has been established, which includes project background, preliminary design exhibits, information presented at the Public Information Meeting and Design Public Hearings in 2016 (including the Environmental Assessment documentation/technical reports), updates during construction, and contact information for the project team.

2. SCHEDULE

As noted above, these projects are being advanced via Design-Build delivery. A Request for Qualifications (RFQ) was released on November 18, 2016 (corresponds to Advertisement date for project). VDOT released the Request for Proposals (RFP) on April 7, 2017.

Two Design Public Hearings were held for the I-66 Eastbound Widening on December 5 and 8, 2016. Design Approval was obtained October 13, 2017. Additional public workshops were held for the proposed W&OD Trail Bridge over Lee Highway portion of the project on April 5, 2017, May 2, 2017, June 13, 2017, and October 11, 2018.

Design Willingness Approval for the I-66 Eastbound Direct Access to Metro Garage at Route 7 was obtained September 25, 2017.

The Design-Build contract for these projects was awarded to the Lane Construction Corporation on December 6, 2017, with a Notice to Proceed date of January 8, 2018.

The Design-Builder has obtained final design plan approval for all work packages on the project. Right of Way plans were approved in August 2018. Right of way for the 11 parcels was cleared by August 2019, however, there was a need to obtain a permanent easement on one Arlington County property for which a temporary construction easement was previously obtained. The permanent easement was obtained in late 2020. There is only minor utility relocation involved on this project, which has been completed. Construction activities began June 2018 and was completed in September 2021. The project Interim Milestone (excludes landscaping, traffic signal work, and I-66 Eastbound Direct Access to Metro) was shifted from November 10, 2020, to February 18, 2021, through Change Order 14 due to unanticipated bridge repairs on I-66 Eastbound over the Custis Trail in Bon Air Park. The Design-Builder completed the Interim Milestone on March 5, 2021. Construction Final Completion was achieved on September 24, 2021, one week prior to the contractual Final Completion date of October 1, 2021.

Project Schedule Overview

Task	Start	Finish	2016	2017	2018	2019	2020	2021
PE Authorization	4/2016	4/2016	◆					
UPC# 108424 & 110629	PE- Design	4/2016						
	RW/Utilities	4/2018						
	CN	5/2018						
Construction Complete		9/2021						

Construction Interim Milestone achieved: 3/2021 (shifted from 11/2020 via Change Order 14)
 Construction Final Completion achieved: 9/2021

3. PROJECT COST

The total project cost is \$116,000,000. The project cost by phase can be found in the table below, in year-of-expenditure dollars. The estimates have been updated for each UPC based on Award amount and reduction in Contingency as the project progressed over time. The estimate includes all costs necessary to perform the preliminary engineering (including the cost of NEPA and other environmental documentation), right-of-way, environmental mitigation, construction, project management, public outreach, traffic management system (TMS) improvements, congestion management plans, and costs of external third-party work, including utility relocations. The construction cost estimate was prepared based upon the contractor’s bid, and includes necessary contingency, construction engineering, and inspection. The preliminary engineering phase was closed to charges (after award, all charges are made to the right-of-way and/or construction phases). The right-of-way phase was estimated using VDOT’s PCES system, with contingency included, and has been closed to charges in 2021.

The table below compares the Initial Financial Plan Estimate and the current Estimate

Project Cost Estimate by Phase

Phase	Initial Financial Plan Estimate	Estimate 8/31/2022
PE	\$12,800,000	\$12,815,086
RW	\$4,800,000	\$1,000,000
CN	\$107,400,000	\$102,184,914
Total	\$125,000,000	\$116,000,000

COMPARISON OF PROJECT ESTIMATE AND EXPENDITURES

UPC 108424 (I-66 Eastbound Widening)

UPC	Phase	Current Estimate	Current Expenditures (8/31/2022)	Balance to Complete
108424	PE	\$ 12,520,000	\$ 12,520,000	\$ -
	RW	\$ 1,000,000	\$ 576,816	\$ 423,184
	CN	\$ 97,680,000	\$ 91,503,197	\$ 6,176,803
	TOTAL	\$ 111,200,000	\$ 104,600,013	\$ 6,599,987

UPC 110629 (I-66 Eastbound Direct Access to Metro Garage at Route 7)

UPC	Phase	Current Estimate	Current Expenditures (8/31/2022)	Balance to Complete
110629	PE	\$ 295,086	\$ 295,086	\$ -
	RW	\$ -	\$ -	\$ -
	CN	\$ 4,504,914	\$ 3,903,668	\$ 601,246
	TOTAL	\$ 4,800,000	\$ 4,198,754	\$ 601,246

Grand Total – UPCs 108424 & 110629

UPC	Phase	Current Estimate	Current Expenditures (8/31/2022)	Balance to Complete
108424 & 110629	PE	\$ 12,815,086	\$ 12,815,086	\$ -
	RW	\$ 1,000,000	\$ 576,816	\$ 423,184
	CN	\$ 102,184,914	\$ 95,406,865	\$ 6,778,049
	GRAND TOTAL	\$ 116,000,000	\$ 108,798,767	\$ 7,201,233

4. PROJECT FUNDS

This project is currently funded with GARVEE Bond Proceeds, Priority Transportation Funds, Dedicated State Funding, and Local Project Contributions. This project has been developed utilizing the federal process. The current funds may be converted to federal funds (Advance Construction) at a future date.

Summary of Project Funding by Source
 (Amounts in 000's)

Funding Source		Previous	FY23	FY24	FY25	TOTAL
UPC # 108424 & 110629	State					
	State - Priority Transportation Funds: Access PTF (CNS246)	\$4,800				\$4,800
	State - Dedicated State Funding: Dedicated State Funding (CS0100)	\$13,508				\$13,508
	Other					
	State - Bond Proceeds: GARVEE (CNB296) – UPC 108424	\$97,673				\$97,673
	Local Project Contributions - Interstate (CNL222)	\$19				\$19
	TOTAL	\$116,000				\$116,000

Federal Fund Sources and Special Funding Techniques

As summarized in the Summary of Project Authorizations Table 1 below, the preliminary engineering (PE) phases for UPC 108424, UPC 110392 (debt service for the GARVEE bonds), and UPC 110629 were authorized by the Federal Highway Administration (FHWA) on April 20, 2016, under federal project number NHPP-066-1(356). The Project was authorized for GARVEE Debt Service on September 20, 2016. The Right of Way (RW) and Construction (CN) phases for UPC 108424 and the CN phase of UPC 110629 were all authorized on April 7, 2017, under federal project number NHPP-066-1(356).

SUMMARY OF PROJECT AUTHORIZATIONS

Table 1					
Project Authorization Summary as of 10/24/2022					
Federal Project	UPC(s)	Phase	Total Estimated Cost	Federal Funds	Advance Construction
NHPP-066-1(356)	108424*	PE	\$0	\$0	\$0
	108424*	RW	\$0	\$0	\$0
	108424*	CN	\$35,025,554	\$0	\$35,025,553
	110629	PE	\$295,086	\$0	\$295,086
	110629	Other	\$4,504,914	\$0	\$4,504,914
Project Subtotal			\$39,825,554	\$0	\$39,825,553
	110392*	Debt Service	\$113,320,231	\$34,540,258	\$78,622,894
Total**			\$153,145,785	\$34,540,2585	\$118,448,447

*Includes costs and obligations associated with GARVEE Debt Service Principal

**Project costs to be modified at award

5. FINANCING ISSUES

This project is currently funded with GARVEE Bond Proceeds, Priority Transportation Fund, Dedicated State Funding, and Local Project Contributions. VDOT does not anticipate any issues with the funding sources for the project.

This project has been developed utilizing the federal process.

The debt service for the GARVEE bonds is covered under UPC# 110392, with current expenditures of \$22,865,238. The current estimated debt service for the project is \$113.2 million.

VDOT will be issuing GARVEE Bonds to fund its obligation to the project. Based on the current spending plan shown in Table 2 below, GARVEE bond proceeds will be available with no financing issues anticipated at this time. If any issues arise with funding timing, GARVEE bond sale amounts can be changed year-to-year to provide additional flexibility in the funding schedule. Table 6 shows that 100% of the funding will be VDOT/Federal funding.

6. CASH FLOW

An annual schedule of cash revenues and expenditures, through project completion, can be found in the table below:

Cash Flow Analysis
 (Amounts in 000's)

Expenditures		Previous Thru FY22	FY23	TOTAL
UPC# 108424 & 110629	PE	\$12,815	\$0	\$12,815
	Right of Way	\$577	\$0	\$577
	Construction	\$95,407	\$0	\$95,407
Cumulative Expenditures		\$108,799	\$108,799	\$108,799
Total Annual Allocations		\$116,000	\$0	\$116,000
Cumulative Allocations		\$116,000	\$116,000	\$116,000
Cash Flow per Year		\$7,201	\$7,201	\$7,201

7. P3 ASSESSMENT

A P3 delivery was not pursued for this project due to the relatively lower level of project complexity. Design-Build delivery, however, is being utilized for project delivery in order to accelerate project completion to meet public expectation.

I-66 Inside the Beltway is currently being tolled during peak hours (eastbound in AM, westbound in PM). Tolling began December 2017, which coincides with the award of the I-66 Eastbound Widening Project. Tolling is being managed by VDOT.

8. RISK AND RESPONSE STRATEGIES

A risk assessment workshop was conducted, and associated mitigation strategies were developed to address the significant risks identified for this project. The most significant risk categories are as follows:

Risks Related to Technical Issues

Construction Impacts to Existing Structures

Construction activities have the potential to compromise the condition of existing facilities. For example, retrofitting of existing structural components (e.g., noise barrier walls, retaining walls, and bridges), new retaining wall and noise barrier wall construction in close proximity to existing structures, and excavation adjacent to existing retaining walls/noise barrier walls throughout the project corridor all entail cost and schedule risks. As the project progresses, the need for additional repairs to existing facilities, above and beyond those currently anticipated, may be identified. The Design-Builder may also propose designs that eliminate the need to retrofit.

Construction of the Grade Separated Structure at W&OD Trail

The project includes a proposed bridge carrying the Washington & Old Dominion (W&OD) Trail over N. Washington St/Lee Highway (Route 29) near the I-66 eastbound exit ramp terminus to improve operations and safety for vehicular and pedestrian/bicyclist traffic. The proposed bridge is located within close proximity to Dominion Virginia Power's high voltage transmission towers, which will impose restrictions on construction operations. VDOT has coordinated with Dominion to develop requirements that have been specified in the RFP. VDOT, in coordination with the Federal Highway Administration, will also continue to coordinate closely with Northern Virginia Regional Park Authority (NVRPA) and will engage the State Historic Preservation Office (SHPO) and the Virginia Department of Historic Resources (VDHR) in the development of conceptual plans and technical requirements of the trail bridge. Furthermore, VDOT has committed to avoiding impacts to the Benjamin Elliott's Coal Trestle, a contributing element to the W&OD Railroad trail property and will ensure that VDHR is provided an opportunity to review and comment on final design plans in that area.

Right of Way

One of the primary project goals is to utilize existing VDOT right of way to the maximum extent possible. Preliminary design plans show that stormwater management needs can be met within existing right of way; however, additional right of way impacts may arise as the design is developed. Additional right of way / easements may be required to construct new noise barrier walls and replace existing noise barrier walls. A significant number of trees were cleared to construct noise barriers throughout the corridor, as well as to construct the proposed improvements at Bon Air Park. Property owner resistance to the acquisition of right of way may lead to schedule impacts. As the RFP conceptual plans are further developed, VDOT will evaluate opportunities to mitigate right of way impacts. Tree clearing could be subject to certain environmental restrictions depending on the severity and location of the clearing. The RFP

Technical Requirements indicate that tree clearing will be limited to only those areas where it is necessary for construction. Tree replacement is required of the Design-Builder to mitigate tree loss.

Risks Influenced by External Factors

WMATA

WMATA's easement is generally located at the fence/concrete barrier line in the median of I-66 within the project limits. The conceptual plans for the widening project provide a buffer of approximately two feet between the face of the existing WMATA barrier and the excavation required to construct the project, to avoid WMATA's easement. There are some locations, however, where construction activity immediately adjacent to the face of the WMATA barrier will be required, immediately adjacent to the WMATA easement. In these cases, WMATA will have to be involved in the review and approval of the design, which may lead to schedule delays, although current plans do not impact WMATA's easement. WMATA would require a permit, to be obtained by the Design-Builder, for construction work that extends onto their easement in the median of I-66. In addition, there may be utility-related items (e.g., electric grounding rods) located under the I-66 pavement outside of the WMATA easement that will have to be located prior to beginning excavation and relocated / replaced during construction. VDOT has coordinated the Project's conceptual design with WMATA and the RFP defines the WMATA requirements. An updated survey, including underground utility designation, was completed in October 2016, and was provided to the Design-Builder in order to reduce the likelihood of impacting WMATA utilities.

Wetlands/US Army Corps of Engineers Permit

VDOT has performed the fieldwork necessary to ascertain wetland and stream impacts for the Project and has conducted early coordination with state and federal regulatory agencies, including the USACE, to confirm the jurisdictional extent of wetlands and streams regulated, by Section 404/401 of the Clean Water Act, which may be impacted by the Project improvements. Based on comments received from the USACE on the EA, the eastbound widening qualifies for the Regional Programmatic General Permit, 12-SPGP-01, part II.B. Linear Transportation Activities. The work also qualifies for one or more Nationwide Permits.

The proposed mitigation strategies are expected to address the risk items currently identified to ensure the Project is successful.

The design-builder's final design refinements avoided impacts to Waters of the US and, consequently, no Section 401 and/or Section 404 permits are required.

9. ANNUAL UPDATE CYCLE

The submission date of the Initial Financial Plan was November 8, 2017. The first annual update was submitted on November 30, 2018 and was based on a "data as of" date of August 31 2018.

Future annual updates will be submitted by November 30th of that year, with a "data as of" date of August 31 of that year.

10. SUMMARY OF COST CHANGES SINCE LAST YEAR'S FINANCIAL PLAN

The total project cost was reduced from \$125,018,704 to \$116,000,000 during last year's Financial Plan update. The overall project contingency for both right-of-way and construction was reduced as the project progressed since the last update.

11. COST AND FUNDING TRENDS SINCE INITIAL FINANCIAL PLAN

In the previous Financial Plan Annual Update (through FY21), construction expenditures were approximately \$5 million less than anticipated and right-of-way expenditures approximately \$4 million less than anticipated. During this Annual Update period (through FY22), construction expenditures were approximately \$6 million less than anticipated.

The project team will update the PCES system to reduce the estimate to expenditures after the final payment is made to the Design-Builder and closeout is completed, anticipated in late 2022/early 2023.

12. SUMMARY OF SCHEDULE CHANGES SINCE LAST YEAR'S FINANCIAL PLAN

The Final Completion date for the project has not changed since the initial financial plan.

13. SCHEDULE TRENDS SINCE INITIAL FINANCIAL PLAN

There has been no impact to the project's Final Completion since the initial financial plan.