



I-66 Eastbound Widening Inside the Beltway

Initial Financial Plan

November 8, 2017

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

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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, ramp modifications at Exits 69 and 71, bridge rehabilitations and/or repairs, 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; park property and trail modifications; landscaping; stormwater management and drainage improvements; and signing and lighting. Currently, toll facilities are being installed along I-66 inside the Beltway, as part of a separate project. These tolling facilities will be operational by the beginning of construction of the widening project and tolling 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 18, 2016. A Revised EA and request for a Finding of No Significant Impact (FONSI) was submitted for FHWA approval and was approved 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 Preliminary Noise Analysis has been conducted; and the final barrier location(s) and dimension(s) will be determined during the final design noise analysis and a Noise Abatement Design Report (NADR), both of which will be completed by the Design-Builder. VDOT has prepared a Categorical Exclusion (CE) for the I-66 Eastbound Direct Access project (UPC# 110629), with Documentation of FHWA Review dated June 7, 2017.

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), and contact information for the project team.

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) includes an “Option” to construct a nearby improvement under a “linked UPC” # 110629, Project # 0066-96A-493, P101, C501. 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 will be separated from UPC# 108424 and applied to UPC# 110629, however, the Design-Build contract will include both UPC’s.

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

Location Map (UPC# 110629)



2. SCHEDULE

As noted above, this project is 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. Project Award is anticipated in December 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.

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

The Design-Builder will start final design soon after Award in December 2017. Right of way acquisition and utility relocation are anticipated to begin in April 2018, with construction activities to begin approximately May 2018. Construction completion and VDOT acceptance is anticipated October 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 | 10/2021 | | | | | | | |

Construction Interim Milestone: 11/2020

Construction Final Completion: 10/2021

3. PROJECT COST

The total project cost is \$125,000,000. The project cost by phase can be found in the table below, in year-of-expenditure dollars. 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 using TRNS*PORT, and includes necessary contingency and construction engineering and inspection. The preliminary engineering phase is nearing completion for purposes of charges (after award, all charges are made to the right-of-way and/or construction phases), and expenditures are approaching the preliminary engineering phase estimate. The right-of-way phase was estimated using VDOT’s PCES system, with contingency included.

PROJECT COST BY PHASE

UPC # 108424 (I-66 Eastbound Widening)

| UPC | Phase | Estimate | Current Expenditures (8/31/2017) | Balance to Complete |
|--------|-------|---------------|-------------------------------------|---------------------|
| 108424 | PE | \$12,500,000 | \$12,174,357 | \$325,643 |
| | RW | \$4,800,000 | \$0 | \$4,800,000 |
| | CN | \$104,400,000 | \$0 | \$104,400,000 |
| | TOTAL | \$121,700,000 | \$12,174,357 | \$109,525,643 |

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

| UPC | Phase | Estimate | Current Expenditures (8/31/2017) | Balance to Complete |
|--------|-------|-------------|-------------------------------------|---------------------|
| 110629 | PE | \$300,000 | \$48,590 | \$251,410 |
| | RW | \$0 | \$0 | \$0 |
| | CN | \$3,000,000 | \$0 | \$3,000,000 |
| | TOTAL | \$3,300,000 | \$48,590 | \$3,251,410 |

Grand Total – UPC# 108424 & 110629

| UPC | Phase | Estimate | Current Expenditures (8/31/2017) | Balance to Complete |
|--------------------|--------------------|----------------------|-------------------------------------|----------------------|
| 108424 & 110629 | PE | \$12,800,000 | \$12,222,947 | \$577,053 |
| | RW | \$4,800,000 | \$0 | \$4,800,000 |
| | CN | \$107,400,000 | \$0 | \$107,400,000 |
| | GRAND TOTAL | \$125,000,000 | \$12,222,947 | \$112,777,053 |

4. PROJECT FUNDS

This project is currently funded with Bond Proceeds: GARVEE (CNB296), Priority Transportation Funds: Access PTF (CNS246), and Dedicated State Funding: Dedicated State Funding (CS0100). 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 | FY19 | FY20 | FY21 | FY22 | FY23 | TOTAL |
|-----------------------|--|----------------|--------------|--------------|------|------|----------------|
| UPC # 108424 & 110629 | State | | | | | | |
| | State - Priority Transportation Funds: Access PTF (CNS246) – UPC 108424 | 1,700 | 2,500 | 4,500 | | | 8,700 |
| | State - Priority Transportation Funds: Access PTF (CNS246) – UPC 110629 | 3,300 | | | | | 3,300 |
| | State - Dedicated State Funding: Dedicated State Funding (CS0100) – UPC 108424 | 25,000 | 0 | 0 | | | 25,000 |
| | State Subtotal | 30,000 | 2,500 | 4,500 | | | 37,000 |
| | Other | | | | | | |
| | State - Bond Proceeds: GARVEE (CNB296) – UPC 108424 | 88,000 | 0 | 0 | | | 88,000 |
| | TOTAL | 118,000 | 2,500 | 4,500 | | | 125,000 |

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, 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 21, 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 (date) | | | | | |
|---|---------|----------------------|----------------------|--------------------|----------------------|
| Federal Project | UPC(s) | Phase Classification | Cost | Federal Funds | Advance Construction |
| NHPP-066-1(356) | 108424* | PE | \$12,100,000 | \$5,033,649 | \$6,359,716 |
| | 108424* | RW | \$5,200,000 | \$0 | \$5,200,000 |
| | 108424* | CN | \$104,400,000 | \$0 | \$104,400,000 |
| | 110629 | PE | \$300,000 | \$0 | \$300,000 |
| | 110629 | Other | \$3,000,000 | \$0 | \$3,000,000 |
| Project Subtotal | | | \$122,000,000 | \$0 | \$119,259,716 |
| | 110392* | Debt Service | \$30,418,116 | \$3,796,521 | \$26,621,595 |
| | | | | | |
| Total** | | | \$155,418,116 | \$8,830,170 | \$145,881,310 |

*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 Bond Proceeds: GARVEE (CNB296), Priority Transportation Fund: Access PTF (CNS246), and Dedicated State Funding: Dedicated State Funding (CS0100). 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 \$2,105,865 (not included in the UPC# 108424 expenditures to-date).

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 FY18 | FY19 | FY20 | FY21 | TOTAL |
|--------------------------|--------------|--------------------|---------|---------|---------|---------|
| UPC# 108424 & 110629 | PE | 12,400 | 0 | 0 | 0 | 12,400 |
| | Right of Way | 3,100 | 2,100 | 0 | 0 | 5,200 |
| | Construction | 5,000 | 40,000 | 40,000 | 22,400 | 107,400 |
| Cumulative Expenditures | | 20,500 | 62,600 | 102,600 | 125,000 | 125,000 |
| Total Annual Allocations | | 118,000 | 2,500 | 4,500 | 0 | 10,000 |
| Cumulative Allocations | | 118,000 | 120,500 | 125,000 | 125,000 | 125,000 |
| Cash Flow per Year | | 97,500 | 57,900 | 22,400 | 0 | 0 |

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 will be tolled during peak hours (eastbound in AM, westbound in PM), with tolling to begin December 2017, which coincides with the anticipated award date of the I-66 Eastbound Widening Project. Tolling will be managed by VDOT.

8. RISK AND RESPONSE STRATEGIES

A risk assessment workshop has been conducted and associated mitigation strategies have been 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, retro-fitting 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. (NOTE: Potential noise barrier wall locations have not yet been finalized.) A significant number of trees will have to be 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 will indicate that tree clearing will be limited to only those areas where it is necessary for construction. Tree replacement will be 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 or the Design-Builder may alter the conceptual design thereby crossing 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. 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 will define the WMATA requirements. An updated survey, including underground utility designation, was completed in October 2016, and will be 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 will be conducting 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 is anticipated to qualify for the Regional Programmatic General Permit, 12-SPGP-01, part II.B. Linear Transportation Activities. The work may also qualify for one or more Nationwide Permits.

Additional coordination with the agencies will ultimately determine the permit requirements; however, at this time VDOT does not anticipate problems acquiring permits for the Project improvements being considered.

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

9. ANNUAL UPDATE CYCLE

The submission date of the Initial Financial Plan is November 8, 2017. The first annual update will be submitted by November 8, 2018 and will be based on a "data as of" date of August 31 2018. Future annual updates will be submitted by November 8th of that year, with a "data as of" date of August 31 of that year.