



**I-66 Eastbound Widening
Inside the Beltway
Financial Plan Annual Update**

November 8, 2019

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.

The project is currently under construction with widening on the left (inside, towards Metro tracks) completed in August 2019 for the first half of the project (ending just east of Exit 69/Lee Highway). Construction on the remaining half of the project (between Exit 69 and 71) continues on the left side. Noise wall construction on the eastbound side of I-66 started in September 2019. The project is currently on-track to be completed (excluding landscaping, traffic signal work, and I-66 Eastbound Direct Access to Metro) by the Interim Milestone date of November 10, 2020. Construction Final Completion and VDOT acceptance is anticipated October 1, 2021. The Design-Builder has obtained final design plan approval for all work packages except for trail plans, landscaping plans, and the I-66 Eastbound Direct Access to Metro portion of 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 is a need to obtain a permanent easement on one Arlington County property for which a temporary construction easement was previously obtained. The permanent easement is anticipated to be obtained in the Fall of 2019.

The current total project cost estimate is \$125,018,704, which includes an increase of \$18,704 since the Initial Financial Plan. The increase was due to the preference of Arlington County to extend signal mast arms above and beyond VDOT standards at two intersections, which has been funded 100% by Arlington County (see addition of local funds noted in paragraph below). The scope validation period expired in May 2018. Four work orders have been negotiated to date, totaling \$380,023. 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.

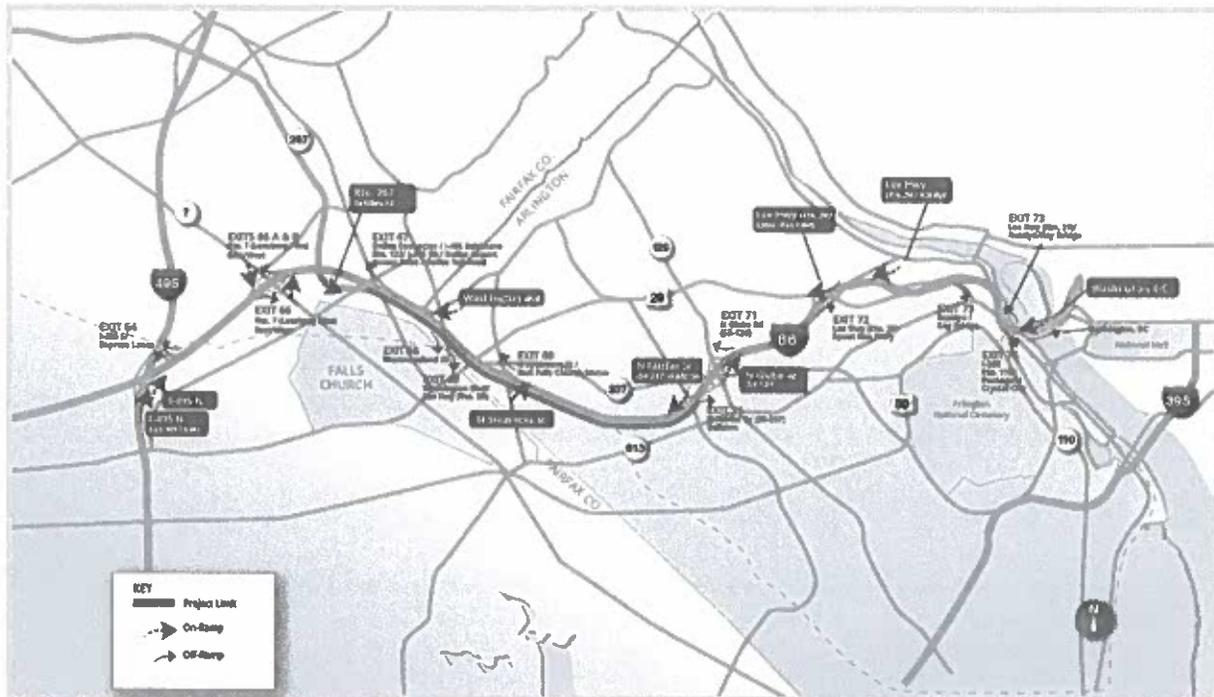
VDOT released the Request for Proposals (RFP) on April 7, 2017, and awarded for construction by the Commonwealth Transportation Board (CTB) on December 6, 2017 to the Lane Construction Corporation, with a Notice to Proceed date of January 8, 2018.

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.

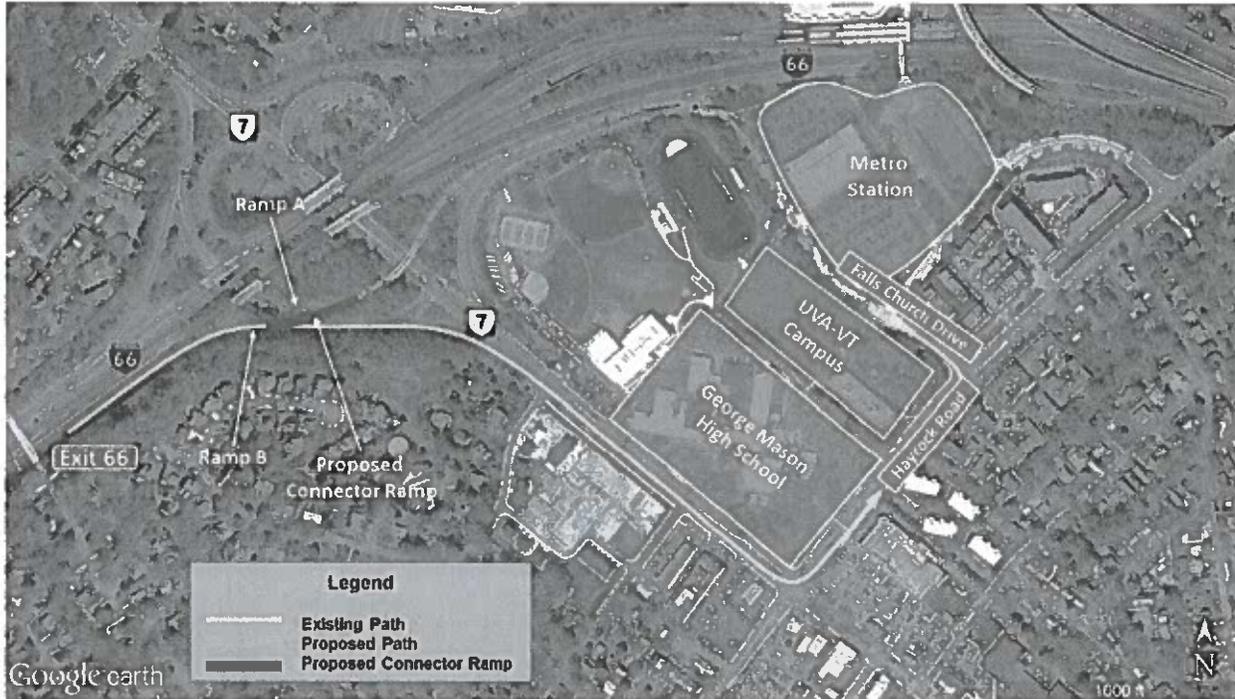
In accordance with the requirements of the National Environmental Policy Act (NEPA), VDOT completed an Environmental Assessment (EA), and made it available for public review and comment on November 17, 2016. A Revised EA and request for a Finding of No Significant Impact (FONSI) was submitted for FHWA approval on March 30, 2017 and was approved 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 will in fact be built. 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 has prepared a Categorical Exclusion (CE) for the I-66 Eastbound Direct Access project dated June 6, 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), 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 except for trail plans, landscaping plans, and the I-66 Eastbound Direct Access to Metro portion of 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 is a need to obtain a permanent easement on one Arlington County property for which a temporary construction easement was previously obtained. The permanent easement is anticipated to be obtained by late 2019. There is only minor utility relocation involved on this project. Construction activities began June 2018. The majority of project construction (excluding landscaping, traffic signal work, and I-66 Eastbound Direct Access to Metro) is anticipated to be completed on-time by the Interim Milestone date of November 10, 2020. Construction Final Completion and VDOT acceptance is anticipated 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	10/2021							

Construction Interim Milestone: 11/2020

Construction Final Completion: 10/2021

3. PROJECT COST

The total project cost is \$125,018,704. 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 plus a construction increase of \$18,704. 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 and construction engineering and inspection. The preliminary engineering phase has been 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.

Project Cost Estimate by Phase

Include a table with Initial Financial Plan Estimate and the Estimate on 8/31/2019

Phase	Initial Financial Plan Estimate	Estimate 8/31/2019
PE	\$12,800,000	\$12,815,086
RW	\$4,800,000	\$4,800,000
CN	\$107,400,000	\$107,403,618
Total	\$125,000,000	\$125,018,704

COMPARISON OF PROJECT ESTIMATE AND EXPENDITURES

UPC # 108424 (I-66 Eastbound Widening)

UPC	Phase	Current Estimate	Current Expenditures (8/31/2019)	Balance to Complete
108424	PE	\$ 12,520,000	\$ 12,520,000	\$ -
	RW	\$ 4,800,000	\$ 405,492	\$ 4,394,508
	CN	\$ 102,898,704	\$ 35,261,745	\$ 67,636,959
	TOTAL	\$ 120,218,704	\$ 48,187,237	\$ 72,031,467

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

UPC	Phase	Current Estimate	Current Expenditures (8/31/2019)	Balance to Complete
110629	PE	\$ 295,086	\$ 295,086	\$ -
	RW	\$ -	\$ -	\$ -
	CN	\$ 4,504,914	\$ 443,667	\$ 4,061,247
	TOTAL	\$ 4,800,000	\$ 738,753	\$ 4,061,247

Grand Total – UPC# 108424 & 110629

UPC	Phase	Current Estimate	Current Expenditures (8/31/2019)	Balance to Complete
108424 & 110629	PE	\$ 12,815,086	\$ 12,815,086	\$ -
	RW	\$ 4,800,000	\$ 405,492	\$ 4,394,508
	CN	\$ 107,403,618	\$ 35,705,412	\$ 71,698,206
	GRAND TOTAL	\$ 125,018,704	\$ 48,925,989	\$ 76,092,714

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	FY21	FY22	FY23	TOTAL
UPC # 108424 & 110629	State					
	State - Priority Transportation Funds: Access PTF (CNS246)	\$4,800				\$4,800
	State - Dedicated State Funding: Dedicated State Funding (CS0100)	\$25,000				\$25,000
	Other					
	State - Bond Proceeds: GARVEE (CNB296) – UPC 108424	\$97,673				\$97,673
	Local Project Contributions - Interstate (NPL323)	\$19				\$19
	TOTAL	\$127,492				\$127,492

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 11/19/18					
Federal Project	UPC(s)	Phase	Total Estimated Cost	Federal Funds	Advance Construction
NHPP-066-1(356)	108424*	PE	\$12,520,208	\$6,377,699	\$5,528,258
	108424*	RW	\$4,779,792	\$0	\$4,779,792
	108424*	CN	\$102,900,000	\$0	\$102,900,000
	110629	PE	\$300,000	\$0	\$300,000
	110629	Other	\$3,000,000	\$0	\$3,000,000
Project Subtotal			\$123,500,000	\$6,377,699	\$116,508,050
	110392*	Debt Service	\$32,156,863	\$6,238,195	\$25,918,668
Total**			\$155,656,863	\$12,615,894	\$142,426,718

*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 \$12,615,894. 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 FY19	FY20	FY21	FY22	TOTAL
UPC# 108424 & 110629	PE	\$12,815	\$0	\$0	\$0	\$12,815
	Right of Way	\$371	\$3,721	\$707	\$0	\$4,799
	Construction	\$32,544	\$48,168	\$24,515	\$2,177	\$107,404
Cumulative Expenditures		\$45,730	\$97,619	\$122,841	\$125,018	\$125,018
Total Annual Allocations		\$127,492	\$0	\$0	\$0	\$127,492
Cumulative Allocations		\$127,492	\$127,492	\$127,492	\$127,492	\$127,492
Cash Flow per Year		\$81,762	\$29,873	\$4,651	\$2,474	\$2,474

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, 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: Approved 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 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 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, 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.

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.

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 8, 2018 and was 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.

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

The current total project cost estimate increased by \$18,704 since the last annual update of the Financial Plan. The increase was due to the preference of Arlington County to extend signal mast arms above and beyond VDOT standards at two intersections, which has been funded 100% by Arlington County.

11. COST AND FUNDING TRENDS SINCE INITIAL FINANCIAL PLAN

Through FY19, construction expenditures were approximately \$12.5 million less than anticipated. The construction expenditures are lagging due to delays in the widening of two bridges (B678 I-66 Eastbound over Sycamore Street due to complications with adjacent WMATA facilities and B679 I-66 Eastbound over Bon Air Park / Custis Trail due to non-traditional design methodology to widen the existing structure. The Design-Builder has revised their schedule versus the baseline schedule, now depicting a significant portion of work to be completed Fall 2019 through Spring 2020. The project team anticipates that the overall project schedule will be met, and a corresponding increase in expenditures over these months will account for the difference in anticipated expenditures versus actual expenditures.

Through FY19, right-of-way expenditures were \$4.8 million less than anticipated (although the right-of-way estimate since the Initial Financial Plan was decreased by \$400,000). There are additional right-of-way expenditures that have not been charged to the project at the time of this annual update. Additionally, the project team believes that the right-of-way costs were overestimated during the preliminary phase of the project due to uncertainties, particularly with regard to both the NOVA Parks property (for the new W&OD Trail Bridge over Lee Highway) and the Arlington County properties that the Preliminary Noise Analysis indicated warranted noise walls (and Final Noise Analysis has since verified). It was later determined during final design phase that the proposed right-of-way limits could be pulled in closer to I-66 for portions of the new noise walls.

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

The 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 schedule since the initial financial plan.