



**US Route 460 (Corridor Q) Poplar
Creek Phase B
Initial Financial Plan**

July 31, 2021

UPC	State Project No.
117808	0460-013-986, P101, R201
117788	0460-013-988, C501, P101, R201
118490	0460-013-979, B639, C501, P101, R201

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1. PROJECT DESCRIPTION

The Poplar Creek Phase B (PCPB) project, shown in Figure 1, is a 2.07-mile segment of Route 121-460 extending from Route 604 at Poplar Creek Phase A to existing Route 460 in the Town of Grundy. The proposed roadway is a limited access, rural principal arterial on new alignment, and will be constructed as an undivided two-lane roadway with climbing lanes where necessary. The project includes a bridge over the Levisa Fork and Norfolk Southern Railroad. The NEPA doc was initiated very early in design and captured only the portions of the project on RW proposed to be newly acquired with this project showing 1.79 miles. Subsequent design indicated that existing RW on both ends of the job will be used to facilitate paving of the total project length of 2.07 miles.

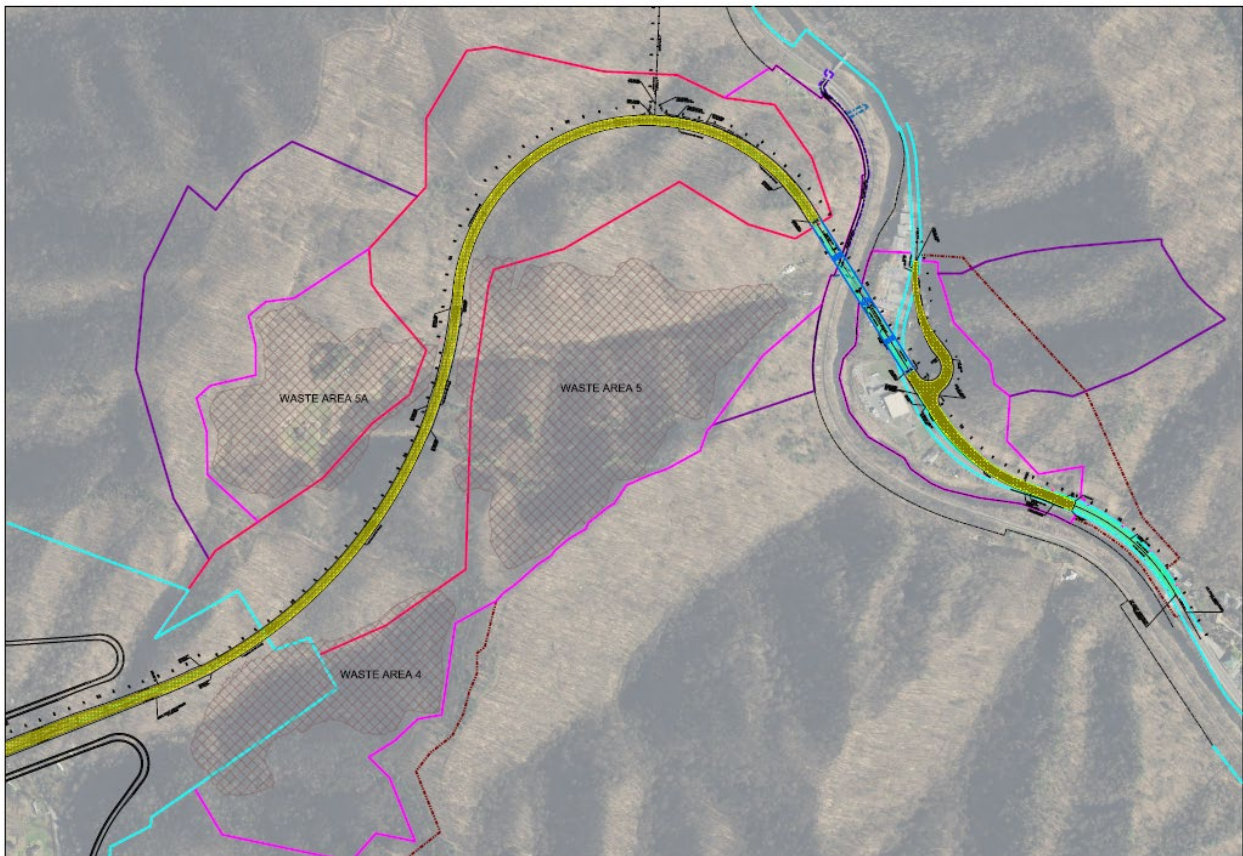


Figure 1 – Project Alignment and Design Features

The project is part of the Appalachian Development Highway System's (ADHS) Corridor Q. A portion of the project alignment overlaps the proposed Route 121/Coalfields Expressway. PCPB will be developed and delivered by Bizzack Construction under the design-build concept and procured using the Amended and Restated Comprehensive Agreement (ARCA) for Route 121/Coalfields Expressway. Individual 401 and 404 permits will be obtained by the design-builder. Construction will proceed under a subsequent contract pending design approval.

The Route 121-460 Poplar Creek Phase B (PCPB) project was evaluated as part of the Alternative F1 alignment in the 2001 Final Environmental Impact Statement / Record Of Decision for the entire Coalfields Expressway (CFX/Route 121) alignment. There are eight (8) construction segments along the US Route 121 alignment within the five (5) NEPA Sections. Figure 2 below depicts the NEPA Sections that were determined in coordination with FHWA. The PCPB project falls within environmental study section IIIB (Route 614 to Route 643). In 2014, VDOT prepared an environmental studies document for modifications to the corridor location. FHWA approved the location of Alternative F1 Modified within 4.1-mile Section IIIB/Corridor Q Overlap in 2015.

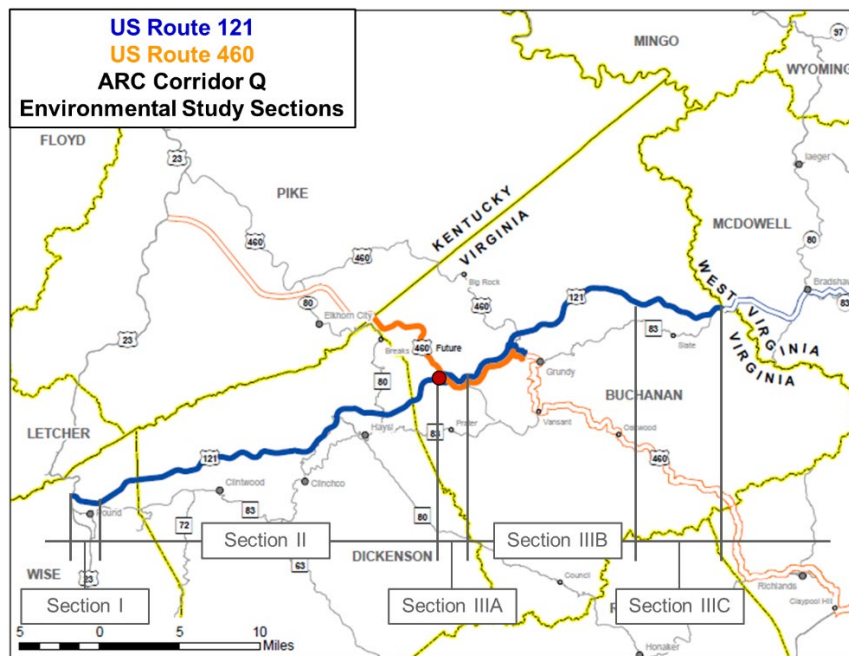


Figure 2 – Environmental Study Sections

Table 1 provides the UPCs, State Project Numbers, and the NEPA Section and Status for Poplar Creek Phases A and B. The NEPA was combined because the two sections were initiated as one project. Due to funding constraints, they were divided into two separate construction projects. A NEPA Reevaluation for design is currently underway for the Route 121-460 Poplar Creek Phase B project with an anticipated approval of 2021. The NEPA Reevaluation was advertised concurrently with the Public Hearing in Spring 2021.

Table 1 – US Route 460

Project Section	UPC	State Project No.	Length (miles)	NEPA Section	NEPA Status
Poplar Creek Phase A	90282	0121-013-793,C501,P101, P102,R201	2.9	NEPA Section IIIB Corridor Q Overlap	<ul style="list-style-type: none"> ▪ Includes Route 121 Elkins and Poplar Creek Sections ▪ September 23, 2014 – Public Hearing for Environmental Studies Document ▪ Feb. 18, 2015 – CTB approved location of the Modified F1 Alignment for the 4.1-mile IIIB/Corridor Q section only Poplar Creek Section (A and B) ▪ July 20, 2015 – FHWA concurred that an SEIS was not necessary for the Modified F1 Alignment for the 4.1-mile IIIB/ Poplar Creek Section (A and B) ▪ April 17, 2017 – NEPA reevaluation for design modifications to Poplar Creek Phase A submitted to FHWA ▪ April 19, 2017 - FHWA concurs with the reevaluation that SEIS is not warranted for the Poplar Creek Phase A section ▪ Feb 7, 2017 – Public Hearing to present information on proposed design changes to Poplar Creek Phase A section ▪ June 27, 2017 – Design Public Hearing (Poplar Creek Section Phase A) ▪ June 2020 – NEPA Reevaluation initiated for Section IIIB Corridor Q Overlap / Poplar Creek Phase B
	104094	0121-013-902,C501,P101,R201			
Poplar Creek Phase B	117808	0460-013-986, P101, R201	2.07		
	118490	0460-013-979, P101, R201, C501			
	117788	0460-013-988, P101, R201, C501			

Additional information on the US Route 460 projects can be found on VDOT’s public website at:

https://www.viriniadot.org/projects/bristol/corridor_q_route_460-121_poplar_creek_phase_b_buchanan_county

2. SCHEDULE

The Preliminary Design and Engineering Services Agreement was executed on December 1, 2020 with a term of 22 months. The PDESA advances the project through RW plans and RW acquisition. The Public Hearing was held on May 18, 2021. The NEPA Reevaluation was advertised as part of the Public Hearing and final concurrence from FHWA for the environmental document is pending. A Joint Permit Application for impacts to streams and wetlands was submitted in January 2021 with permit issuance expected at the end of 2021.

The final design and construction contract for the paved road is under development with execution anticipated in later summer 2021. Negotiations with the Design Builder are ongoing. RW acquisition will begin in 2021, with residential and commercial relocations, demolition, and utility relocation to follow as properties are acquired. Project construction will be completed in work packages, beginning in 2022 and ending in 2026. Construction will begin with excavation of the large cuts west of the Levisa Fork. Bridge construction is scheduled for mid-2022 through mid-2025. Two-way traffic will be maintained along existing Route 460 for the duration of the project. Final completion is anticipated in mid-2027

Table 2 below is an approximate anticipated schedules for the project. The schedules will be adjusted accordingly after the construction contract is executed and the Design-Builder’s baseline schedules are accepted.

Table 2 - Project Schedule Overview

UP C	Phase	Begin	End	Calendar Year																			
				2020	2021	2022	2023	2024	2025	2026	2027												
117788	NTP	12/20																					
	Oversight																						
	PE - Design	8/1/2020	7/1/2024																				
	RW/Utilites	3/1/2021	11/2/2026																				
	Construction	7/1/2021	11/2/2026																				
117808	PE and RW																						
	NTP	12/20																					
	PE - Design	6/23/2020	8/10/2021																				
	RW/Utilites	8/10/2021	8/10/2021																				
118490	NTP	8/21																					
	PE - Design	7/21/2021	10/17/2024																				
	RW/Utilites	7/30/2021	8/10/2021																				
	Construction	8/10/2021	3/2/2027																				

3. PROJECT COST

The current total cost estimate for US Route 460 Poplar Creek Phase B is \$205,000,000 dollars. This project cost covers preliminary engineering design activities, right of way acquisition, utility relocation, environmental and design permits/approval, survey and geotechnical investigations and construction. Table 3.1 includes the current estimate of the project and the remaining cost to complete in year-of-espendiutre dollars. The table below depicts the project expenditures as of April 30, 2021. Although the schedule dates for UPC 117788 show the project underway for several month, the project did not incur RW charges prior to the Public Hearing; however, RW Total Take plans were submitted in May and subsequently approved. RW charges will begin in May 2021.

Table 3.1-- Project Cost Estimate (Initial Finance Plan) by UPC

UPC	Phase	Estimate	Current Expenditures as of April 30, 2021	Balance to Complete
117788	PE	\$2,075,221	\$564,752	\$1,510,469
	RW	\$16,286,730	\$0	\$16,286,730
	CN	\$6,737,744	\$0	\$6,737,744
	TOTAL	\$25,099,695	\$564,752	\$24,534,943
117808	PE	\$9,013,263	\$4,279,245	\$4,734,018
	RW	\$1,660,000	\$288,549	\$1,371,451
	TOTAL	\$10,673,263	\$4,567,794	\$6,105,469
118490	PE	\$2,118,088	\$0	\$2,118,088
	RW	\$2,435,047	\$0	\$2,435,047
	CN	\$164,673,907	\$0	\$164,673,907
	TOTAL	\$169,227,042	\$0	\$169,227,042
GRAND TOTAL		\$205,000,000	\$5,132,546	\$199,867,454

Cost Estimate Methodology

The cost-to-complete estimates developed for the 121/460 program uses the most recent and detailed information available to develop costs for the design, construction, management, and administration of each route segment of the program. The cost data used in the estimates for both transportation initiatives is planning level information based on a variety of sources. These reports provide the best available data for the cost synergy aspects of the proposed projects. They also include important cost factors for key items such as excavation. Other important sources of information are: The Route 460 Phase II Public Private Partnership (P3) contract that was negotiated and executed as a design-build contract for the design and construction to rough grade on July 30, 2013; the Poplar Creek Phase A contract was negotiated and executed as a design build contract for the design and construction on June 6, 2016; and, the 460 Connector Intersection contract was negotiated and executed as a design and construction to rough grade on November 1, 2017. All of these are in very similar terrain and should be a good indication of the costs for 460 alignments.

Further, a bottom up independent engineering and independent construction estimate was conducted for the project to support contract negotiations. A breakdown of each engineering and construction item was agreed upon and later a price developed by both VDOT and the Design Builder. VDOT used third-party contractors and consultants to evaluate PE, roadway and bridge construction, QA/QC and IA/IV services. VDOT also developed estimates for leveled project items including right-of-way, environmental permitting, environmental mitigation, public outreach and costs of external third party work such as utility relocations and railroad coordination.

The cost data has been normalized to reflect 2021 costs as the basis for the estimate in accordance with VDOT’s policy. Escalation factors have been applied to reflect the impacts of inflation for advertisement of projects for any year between 2021 and 2026.

4. PROJECT FUNDS

The project is funded with Appalachian Development Highway System funds and Route 58 Corridor bond proceeds.

A Summary of Project Funding by Source for FY22-28 is included in Table 4.1 for each of the US Route 460 project Poplar Creek Phase B and associated UPC.

Table 4.1 – Funding Sources

Funding Source		Previous	FY23	FY24	TOTAL
117788	58 Bond Funds	\$21,295,003	\$7,552,624	\$1,152,373	\$30,000,000
117808	58 Bond Funds	\$10,673,263	\$0	\$0	\$10,673,263
118490	58 Bond Funds	\$60,000,000	\$84,139,482	\$3,043,135	\$147,182,617
	Appalachian Funds	\$17,144,120	\$0	\$0	
GRAND TOTAL		\$109,112,386	\$91,692,106	\$4,195,508	\$205,000,000

Project funding for the following UPCs are demonstrated in the Transportation Improvement Program (TIP) as well as the Commonwealth's Statewide Transportation Improvement Program (STIP):

- Poplar Creek Phase B Design-PE & RW (UPC 117808); STP-013-1(086)
- Poplar Creek Phase B VDOT Oversight (UPC 117788); STP-013-1(088)
- Poplar Creek Phase B Design-Build CN (UPC 118490); NHPP-013-1(089)

UPC 117788 and UPC 117808 were authorized by the Federal Highway Administration (FHWA) on November 2, 2020. A request for fund verification and federal authorization on UPC 118490 is in process as of April 30, 2021. These project authorizations are summarized in Table 4.2 below.

Table 4.2 SUMMARY OF PROJECT AUTHORIZATIONS

Project Authorization Summary as of (April 30, 2021)					
Federal Project	UPC(s)	Phase Classification	Cost	Federal Funds	Advance Construction
STP-013-1(088)	117788	PE, RW	\$25,099,695	\$	\$
STP-013-1(086)	117808	PE, RW	\$10,673,263	\$	\$
NHPP-013-1(089)	118490	PE, RW, CN	\$169,227,042	\$	\$0
Total			\$205,000,000	\$	\$

5. FINANCING ISSUES

The project is fully funded. There are no financing issues on the project.

6. CASH FLOW

The Cash Flow Analysis for Poplar Creek Phase B is included in Table 6 and reflects the final submission estimate of \$205 million.

Table 6 – Cash Flow Analysis
(Amounts in \$000's)

Expenditures	Thru FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	Total	
117788	PE	\$565	\$500	\$450	\$310	\$250	\$0	\$6	\$2,075
	RW	\$0	\$3,000	\$6,000	\$6,000	\$1,287	\$0	\$0	\$16,287
	CN	\$0	\$1,700	\$1,500	\$1,000	\$1,000	\$800	\$738	\$6,738
117808	PE	\$4,279	\$800	\$1,000	\$1,500	\$1,000	\$434	\$0	\$9,013
	RW	\$289	\$800	\$400	\$140	\$31	\$0	\$0	\$1,660
118490	PE	\$0	\$500	\$500	\$500	\$500	\$118	\$0	\$2,118
	RW	\$0	\$500	\$550	\$550	\$550	\$285	\$0	\$2,435
	CN	\$0	\$1,000	\$50,000	\$68,000	\$10,000	\$27,327	\$8,347	\$164,674
Cumulative Expenditures	\$5,133	\$13,933	\$74,332	\$152,332	\$166,951	\$195,915	\$205,000	\$205,000	
Total Annual Allocations	\$109,112	\$91,692	\$4,195,508	\$0	\$0	\$0	\$0	\$205,000	
Cumulative Allocations	\$109,112	\$200,804	\$205,000	\$205,000	\$205,000	\$205,000	\$205,000	\$205,000	
Cash Flow per Year	\$103,980	\$186,871,947	\$130,667,455	\$52,667,455	\$38,048,810	\$9,084,920	\$0	\$0	

7. P3 ASSESSMENT

The Comprehensive Agreement (CA) was executed on January 11, 2002 between KBR and the Department for the design, construction and maintenance of US Route 121. Negotiations to amend and restate the CA to incorporate the Coal Synergy approach were ongoing with Bizzack and Alpha until Alpha filed Chapter 11 Bankruptcy. However, on August, 3, 2015, the Bankruptcy Court approved a purchase agreement for Contura Energy to purchase Alpha on June 7, 2016, which included Contura assuming the roles and responsibilities of Alpha under the CA. VDOT has been in close coordination with Contura regarding the Assumption by Contura of the CA. The Amended and Restated Comprehensive Agreement (ARCA) was executed on May 1, 2017. All remaining US Route 121 projects (three are dually designated US Route 460 Projects) will be developed under the ARCA using Coal Synergy to reduce the construction costs.

The ARCA executed on May 1, 2017 will provide for the following benefits:

1. **Assures no Liability for the Department**– Provides no obligatory requirements to enter into any contract.
 - a. Provides VDOT right to develop a Project Section with own personnel/separate contractor.
 - b. Provides Department the right to terminate for convenience at no cost to Department.
2. **Provides Contract Templates**- Provides models for phased development to facilitate future funding of Project Sections:
 - a. Preliminary Design and Engineering Services Agreement (“PDESA”)
 - b. Design Build Agreement (Rough Grade Roadbed)
 - c. Design Build Agreement (Paved Road)
3. **Facilitates Completion of US Route 460 (Corridor Q)** – Provides procurement and contract template.
 - a. 121/460 Intersection and Paving Hawks Nest – Funded
4. **Separates Contura and Bizzack** – Provides rights to develop and negotiate without involvement from other entity.
 - a. Provides transfer of rights for project sections between Contura and Bizzack

As part of the Route 121 Coalfields Expressway project, the PCPB construction segment will be procured using the P3 Amended and Restated Comprehensive Agreement (ARCA) between VDOT, Bizzack and Contura. Preliminary design and construction contracts will use the previously negotiated Design – Build contract template established in the ARCA. Bizzack construction is assigned the right and obligation to design and build the PCPB segment per the ARCA.

Risk and Response Strategies

A detailed risk assessment was prepared by the project team on 06/01/2021 with input from the P3 office and technical divisions.

Table 8.1 is a summary of the top ten risk items identified and discussed during the risk management exercise along with the associated mitigation strategies. These risks are considered the Highest Risk Items for the project; however, as previously stated, the highest scores remained within the “medium” severity category. A complete risk management worksheet for the project is provided in the attached matrix. The risk register, in particular the Highest Risk Items, will be updated on a regular basis throughout procurement to ensure the project team are prioritizing their efforts to gain value for the project.

Table 8.1: Summary of Highest Risk Items

1	Budget Constraints
Risk Register Item	MGT-01
Overall Risk Rating	15
Category	Contract/Management
Risk Description	Budget constraints and the contracts availability for Change Orders, especially compensatory mitigation, and ROW, could lead to an overrun of funds.
Responsible Party	VDOT
Mitigation Strategy	Mitigation Costs should be known prior to contract execution. RW estimate more detailed than previous projects and relies on known costs from adjacent projects within Corridor. These costs should be worked into the budget. Additional monies in DB UPC should be available to cover additional change orders.
Notes:	The Project team completed several estimating exercises including seeking input from mineral experts, district, and central office estimators to best estimate ROW costs for the project

2	Schedule – CTB Approvals
Risk Register Item	MGT-08
Overall Risk Rating	15
Category	Contract/Management
Risk Description	Failure to be scheduled on the July 2021 CTB Agenda would result in funding and contract execution being delayed, missing the summer 2021 construction target
Responsible Party	VDOT
Mitigation Party	The Project team completed several estimating exercises including seeking input from mineral experts, district, and central office estimators to best estimate ROW costs for the project

3	Schedule – Funding
Risk Register Item	MGT-09
Overall Risk Rating	15
Category	Contract/Management
Risk Description	Failure to obtain timely funding and authorizations of funding thus resulting in contract execution being delayed, missing the summer 2021 construction target
Responsible Party	VDOT
Mitigation Strategy	The project team will continue to work closely with FPMD/PIMs group to achieve authorizations and understand requirements. Additionally, the team will engage in early and ongoing coordination/reviews with FHWA for approvals

4	Blasting
Risk Register Item	STG-09
Overall Risk Rating	15
Category	Structures Geotechnical
Risk Description	The potential for blasting to cause rocks falling onto the railroad tracks during blasting operations.
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will require a hold point in the schedule prior to blasting near railroad facilities to discuss safety and proximity concerns. Additionally, VDOT/DBT will proactively develop an action plan with NSRR to better react if an incident does occur.

5	QA/QC
Risk Register Item	MGT-03
Overall Risk Rating	12
Category	Contract/Management
Risk Description	QA/QC insufficient and not audited
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will require a robust QA/QC Plan, in compliance with July 2018 update, which tracks, reviews, and changes. VDOT will have sufficient IA/IV staff to monitor operations as well as QA/QC staff performance.

6	Drilled Shaft Testing
Risk Register Item	STG-17
Overall Risk Rating	12
Category	Structures/Geotechnical
Risk Description	Drilled shaft CSL testing shows irregularity (voids, segregation) in the concrete.
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will discuss with Design-Builder and request that a mitigation strategy be incorporated into the QA/QC plan as a proactive approach to address any irregularities that may be discovered during testing.

7	Drilled Shaft Vertical Alignment
Risk Register Item	STG-18
Overall Risk Item	12
Category	Structures/Geotechnical
Risk Description	The risk that the drilled shaft vertical alignment is out of tolerance.
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will discuss with Design-Builder and request that a mitigation strategy be incorporated into the QA/QC plan as a proactive approach to address any tolerance issues that may be discovered.

8	Pier Height
Risk Item	STG-26
Overall Risk Rating	12
Category	Structures/Geotechnical
Risk Description	Variable risks associated with the proposed Pier height (variation as well as total height).
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will require Constructability Review and Peer Review to be performed and incorporated into design.

9	Column Shape
Risk Register Item	STG-27
Overall Risk Rating	12
Category	Structures/Geotechnical
Risk Description	Risks associated with column shape transitioning from wider to narrower.
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will require Constructability Review and Peer Review to be performed and incorporated into design.

10	Seismic Response
Risk Register Item	STG-28
Overall Risk Rating	12
Category	Structures/Geotechnical
Risk Description	Risks associated with seismic response for unequal layout
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will require Constructability Review and Peer Review to be performed and incorporated into design

8. ANNUAL UPDATE CYCLE

The submission date of the Initial Financial Plan is July 31, 2021. The first annual update will be submitted by July 31, 2022 and will be based on a "data as of" date of April 30. Future annual updates will be submitted by July 31 of that year, with a "data as of" date of April 30 of that year.