

AGENDA

For Remote Participation in Compliance with Adopted Remote Meeting Policy, Guest Speakers, and Members of Public

Join Zoom Meeting

<https://us02web.zoom.us/j/84890573710>

Meeting ID: 848 9057 3710

Item	Description	Time
1	Call to Order and Attendance – Ben Chambers, Chair	10:00 - 10:05
2	Matters from the Public – Ben Chambers, Chair Members of the public are welcome to provide comment on any public-interest, transportation-related topic, including items listed on this agenda – <i>(limit three minutes per speaker)</i>	10:05 - 10:10
3	*General Administration – Ben Chambers, Chair a. *Review and Acceptance of Agenda b. *Approval of August 20, 2024, Meeting Minutes	10:10 - 10:20
4	*New Business a. Federal Functional Classification Revision Adoption – <i>Gorjan Gjorgjievski</i> i. FFC 2024 CAMPO Proposed Revisions – Final Map ii. Staff Memo on Federal Functional Classification – Revised iii. **FFC Resolution of Support – Revised – Final Recommendation	10:20 – 10:30
5	VDOT Project Updates – Charles Proctor a. 5 th Street Detailed Cost Estimate – Proposed DDI at Interstate 64, Exit 120 & 5th Street (Route 631) – Discussion i. SSVI 5th Street DDI Cost Estimate 101524 – Presentation b. Ivy Corridor – Update c. STARS and Pipeline Studies – Locations and Process	10:30 – 11:30
6	Staff Updates – Gorjan Gjorgjievski a. SS4A – Update b. December Meeting Date/Time – December 10, 2024 – 10am-12pm	11:30 – 11:40
7	Roundtable Updates a. City of Charlottesville b. Albemarle County c. RideShare d. Virginia Department of Transportation (VDOT) e. Department of Rail and Public Transportation (DRPT) f. Federal Highways Administration (FHWA) g. Federal Transit Administration (FTA) h. Charlottesville Area Transit (CAT) i. Jaunt j. University of Virginia (UVA)	11:40 – 11:55
8	Matters from the Public Members of the public are welcome to provide comment on any public-interest, transportation-related topic, including items listed on this agenda – limit three minutes per speaker	11:55 – 12:00
9	Adjourn	12:00 pm

(*) A vote is required for this item (**) A recommendation to the MPO Policy Board is expected for this item

TJPDPC fully complies with Title VI of the Civil Rights Act of 1964 in all programs and activities. TJPDPC provides reasonable accommodations for persons who require special assistance to participate in public involvement opportunities. For more information, to request translation services or other accommodations, or to obtain a Discrimination Complaint Form, contact (434) 979-7310 or www.tjpdpc.org.

VOTING MEMBERS (13) & ALTERNATES (3)	STAFF (7)
James Freas, Charlottesville	Christine Jacobs, TJPDC
Tommy Safranek, Charlottesville Alternate	Lucinda Shannon, TJPDC
Ben Chambers, Charlottesville	Gretchen Thomas, TJPDC
Rory Stolzenberg, Charlottesville PC	Ruth Emerick, TJPDC
Jessica Hersh-Ballering, Albemarle	Sarah Simba, TJPDC
Alberic Karina-Plun, Albemarle	Gorjan Gjorgjevski, TJPDC
Luis Carrazana, Albemarle PC	Logan Ende, TJPDC
Charles Proctor, VDOT	NON-VOTING MEMBERS (3)
Sandy Shackelford, VDOT Alternate	Tony Cho FTA
Christine Jacobs, TJPDC	Stephen Minor, FHWA
Sarah Simba, TJPDC Alternate	Donna Chen, CTAC Liaison
Jason Espie, Jaunt	
Bill Palmer, UVA, Office of the Architect	
Wood Hudson, DRPT	GUESTS/PUBLIC
Sara Pennington, Rideshare	
Garland Williams, Charlottesville Area Transit	

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MPO Technical Committee Meeting

Draft Minutes, August 20, 2024

A recording of this morning can be found here:

[https://www.youtube.com/watch?v= Z-eRCN1fNc&t=3s](https://www.youtube.com/watch?v=Z-eRCN1fNc&t=3s)

VOTING MEMBERS & ALTERNATES		STAFF	
Ben Chambers, Charlottesville	x	Gretchen Thomas, TJPDC	x
Rory Stolzenberg, Cville PC	x	Sarah Simba, TJPDC	x
Jessica Hersh-Ballering, Alb Co		Gorjan Gjorgjievski, TJPDC	x
Alberic Karina-Plun, Albemarle		Lucinda Shannon, TJPDC	x
Luis Carrazana, Albemarle PC	x		
Charles Proctor, VDOT *	x	NON-VOTING MEMBERS	
Christine Jacobs, TJPDC	x	Tony Cho FTA	
Jason Espie, Jaunt		Donna Chen, CTAC Liaison *	x
Bill Palmer, UVA Ofc of Architect*	x		
Wood Hudson, DRPT *	x	GUESTS/PUBLIC	
Sara Pennington, Rideshare	x	Peter Krebs, PEC	x
Steven Minor, FHWA *	x	Sean Tubbs *	x
Tommy Safranek, Charlottesville	x		
Garland Williams, CAT			
Sandy Shackelford, VDOT	x		
James Freas, Charlottesville			
Daniel Wagner, DRPT			

* attended online via Zoom

1. **CALL TO ORDER:**

Rory Stolzenberg called the meeting to order at 10:06 a.m. Christine Jacobs called roll. Those online stated their reason for participating online.

Staffing Update – Christine Jacobs introduced Gorjan Gjorgjievski, lead staff member for MPO Tech, and Sarah Simba, lead staff member for both Policy Board and for CTAC, to the committee.

2. **MATTERS FROM THE PUBLIC (MINUTE 2:50)**

- a. **Comments by the Public:** Peter Krebs presented the committee with the joint mobility social to celebrate Waynesboro's new trail park with the Shenandoah Valley Bicycle Coalition and Piedmont Mobility alliance on Thursday, August 29 from 6:00 – 7:30 P.M. There will be a tour of Sunset Park from Waynesboro's Director of Planning. The Director will also be discussing



assembling a large, landscaped park network in Waynesboro as well as shared-use path connecting Waynesboro to the Blue Ridge Tunnel and increasing access to the national park.

He also reported that the Mobility Alliance's next meeting is on September 30 from 4 – 6 p.m. at the Water Street Center.

He continued by saying the Mobility Alliance is also going to be sponsoring "Easy Routes" which is a program that will help present a more simplified way to move across Charlottesville and Albemarle on foot or bicycle.

b. Comments provided via email, online, web site, etc.: None

3. GENERAL ADMINISTRATION

Approval of June 18, 2024 Minutes (Minute 5:35)

Motion/Action: Ben Chambers made a motion to approve the minutes, Tommy Safranik seconded the motion, and the motion passed unanimously.

Election of Officers (Minute 6:00)

Ben Chambers accepted the nomination for the Chair and Alberic Karina-Plun agreed to the position of Vice Chair.

Motion/Action: Rory Stolzenberg made a motion to elect the two into their respective offices, Tommy Safranik seconded, and the motion passed unanimously.

Ben Chambers took over the meeting as Chair.

4. NEW BUSINESS

Remote Electronic Participation and All-Virtual Meeting Policy (Minute 6:57)

Christine Jacobs explained the new regulations adopted by the General Assembly for remote participation and virtual meetings. She noted that once the MPO Policy Board adopts the policy next week, and as an advisory committee to the Policy Board, the MPO Tech committee will abide by that policy. There is no motion or action needed by MPO Tech at this time.

She explained the policy allows for 50% of the meetings to be virtual, but two virtual meetings may not be held back-to-back. If the meeting is all virtual, there is no requirement for an in-person quorum. All meetings must be posted publicly whether it is in person or all virtual. When the all-virtual meeting is in session, the members must have his/her camera and sound on to consider the member as "present." If a member leaves the camera or turns it off, they will be considered "absent" during that time, which may affect quorum, and that person will not be allowed to vote.

She also noted that the policy must be adopted every year.

There was a brief discussion about the pros and cons of virtual meetings. Ms. Jacobs said she would work directly with the Chair to determine a schedule for all-virtual meetings.

Rory Stolzenberg noted that the members online were not yet allowed to join virtually. Wood Hudson said he was joining from Richmond, Virginia, which is 60 miles from the meeting location. Chuck Proctor said he was in his office in Culpeper which is 60 miles from the meeting location, but noted that Sandy Shackelford is there in person as the VDOT representative. Bill Palmer noted that he is sick and didn't want to expose the group.

Motion/Action: Christine Jacobs made a motion that they be allowed to participate in the meeting. Ben Chambers seconded the motion, and the motion passed unanimously.

TIP Adjustment (Minute 13:06)

Lucinda Shannon explained the TIP adjustments for FY25. There were adjustments for CAT transit changing the numbers from budgetary to actual amounts for both operating and capital expenditures. There was also an adjustment adding FTA funding to DRPT's FY24 budget for the Mobility Management program. She noted that these are administrative adjustments and no action is necessary.

Federal Functional Classification Recommendation (Minute 14:28)

Ms. Jacobs reviewed the statewide update that VDOT has underway for the federal functional classifications for roadways which occurs after the census. These new recommendations were shared to the MPO in May and stakeholders had until June to make comments. The MPO committees, TJPDC staff and staff from local jurisdictions shared their thoughts and sent them to VDOT who consolidated them and sent them to FHWA. She reported that the final recommendations will be ready in September 2024.

She continued saying that there is a recommended resolution in the packet with a suggested revision attached for the committee to consider. She said that because there are changes being suggested to the resolution, she didn't want to have a resolution approved without the changes being considered by FHWA. She noted that other MPOs want to wait for a final map from FHWA before they vote to approve the classification recommendations.

Sandy Shackelford said she is looking to central office for clarification on how they are going to handle reviewing the revisions and feedback received, and the deadline for MPOs.

Motion/Action: Luis made a motion to recommend that the MPO Policy Board defer a decision on the resolution approving the proposed updates to the FFC until a thorough review by VDOT and FHWA occurs, and a final revised map is available for consideration and final approval. Jason Espie seconded. Motion passed with Sandy Shackelford abstaining.

VDOT Project Updates (Minute 20:36)

Charles Proctor presented the committee with updates from VDOT's pipeline and Smart Scale projects. He started with the Ivy Road Corridor Study and identified needs. He reviewed the Ivy Road Corridor preferred scenario. Ms. Jacobs said she would forward the shared slide with the committee after receiving it this morning.

Mr. Proctor also resented the potential long-term western, middle and eastern corridor scenarios. He noted that those will be included for future consideration. Lastly, he reviewed the next steps for the Ivy Corridor improvements. There was a discussion to get clarity on these projects.

He continued by reviewing the CAMPO Smart Scale Round 6 project list, starting with 5th Street/I-64 intersection improvements and the two parts of the projects US250 at Pantops. It was noted that the cost for the Pantops improvements is estimated at \$36 million.

He continued with the Barracks Road corridor improvement. He noted that the project was estimated at just over \$129 million.

It was noted that cost estimates are given after the fact, and VDOT may try to work on that in the future. There was a concern voiced by Ben Chambers that having the estimate ahead of submitting the project(s) may change what projects are submitted in the future.

Ms. Jacobs noted that VDOT would probably not go through the project estimating if it is not a priority to submit. Mr. Proctor noted that the Barracks Road modeling and estimating cost nearly \$300k.

Mr. Proctor noted that at pre-application time, there is a rough estimate given so the localities can determine if they want to move forward, but final estimate would not be available until after the project has been submitted as a priority project.

Mr. Proctor shared that the Barracks Road interchange improvements at Emmet Street are estimated to cost \$92.5 million.

There was a conversation about the cost of portioning out the pieces of the project.

He continued by reviewing the US250 at Old Trail/WAHS intersection improvement. The cost estimate is \$16.7 million.

He reviewed the Rio Road-Hillsdale/Old Brook Road intersection improvements. He noted that the estimate is under review.

Mr. Proctor continued with the Albemarle County improvements at Barracks Road. The cost estimate is \$37.6 million.

He noted that everyone who has submitted applications have seen an escalation in cost.

He went on to review the US29/Plank Road intersection improvement. The cost estimate is still under review.

Tommy Safranek left the meeting.

There was additional discussion about some of the projects.

5. STAFF UPDATES

SS4A Update (Minute 1:14:00)

Gorjan Gjorgievski gave a brief background of the project. He noted that it is a regional project that covers the entirety of Region 10. He also presented the processes and action items of the project to date. Mr. Gjorgievski reported that the comprehensive safety action plan is the last step in the process. He said he would be happy to present the committee with a more formal presentation in the future.

December Meeting Date/Time (Minute 1:17:05)

Ms. Jacobs noted that the regular meeting time for this committee in December falls on Christmas day. She recommended that the meeting be moved to earlier in the month (December 10) and that it be a virtual meeting. It was noted that there may be a conflict with the date suggested. Ms. Jacobs said she will discuss the meeting date with the Policy Board and ask that the MPO Tech committee follow suit with what they decide.

7. ROUNDTABLE UPDATES (MINUTE 1:20:31)

Charlottesville

Ben Chambers said the City is going after a SS4A demonstration grant for state and local roads. He said the City would put up an 80/20 match to determine traffic calming interventions.

He also noted that Loop de Cville is upcoming on September 28. There will be celebration after the walk. The rain date is September 29.

Albemarle

There was no report.

Rideshare

Sara Pennington said she is wrapping up the past fiscal year and starting the new one. She reported that she returned from the ACT conference and reported on the sessions she attended and knowledge she gained from that experience.

She said work on the Commuter Assistance Plan (CAP) Strategic Plan continues and reported that it will be finished in the next couple of months. She said due to some funding issues, their deadline has been extended through the end of the year to get that completed.

DRPT is kicking off a campaign for Connecting Communities starting on September 1. It will mostly focus on transit. She said it ties in nicely with the anniversary of the Afton Express.

VDOT

Ms. Shackelford and Mr. Proctor noted that there was nothing more to add. Chuck Proctor said this Fall they will begin a TAP and revenue share outreach to see if the jurisdictions need any assistance with it.

DRPT

Wood Hudson shared to grant opportunities. The first is a railroad crossing elimination program NOFO (notice of funding opportunity) grant. Applications for that are due September 23.

The second opportunity he mentioned is the Reconnecting Communities Pilot Planning grant. He said there is more than \$600 million available for capital construction and community planning grants. Applications due Sept 30 for this grant. He noted that USDOT is offering grant writing clinics and having office hours if you need help.

FHWA

There was no report.

FTA

There was no report.

CAT

Ben Chambers said there are no updates.

Jaunt

Jason Espie said Jaunt is wrapping up their three studies. He said he would like to present the Rural Transit Needs Assessment study to the RTP and perhaps at this committee. Ms. Pennington said the Rural Tech Advisory committee would be interested in hearing the presentation as well.

UVA

Bill Palmer said school is in session next week, so the bus schedule will be back to normal. He noted that there is now a scramble crossing at JPA and Brandon Avenue.

Ms. Palmer noted that there will be two new upper-class housing buildings opening on Brandon next week, so the population will be at approximately 1,000 students.

8. ADDITIONAL MATTERS FROM THE PUBLIC (MINUTE 1:30:24)

None.

ADJOURNMENT: Mr. Chambers adjourned the meeting at 11:37 a.m.

Proposed Functional Classification Revisions - Charlottesville Albemarle MPO

Segment	Requesting Locality	Current Classification	Requested Classification	VDOT Culpeper District Notes	Proposed Classification	Comment
Avon Street Extended (Route 742) - City Limits to Route 20	Albemarle/Charlottesville	Major Collector	Minor Arterial	Approved for FC change in late 2022; not reflected in the map produced for review	Minor Arterial	Both segments have AADT's within the Minor Arterial threshold (12,657 & 11,570)
Barracks Road (Route 654) - City limits to Georgetown Road	Albemarle	Major Collector	Minor Arterial	Approved for FC change in late 2022; not reflected in the map produced for review	Minor Arterial	Segments have AADT's within the Minor Arterial threshold (23,323)
Thomas Jefferson Parkway (Route 53) - Rt. 20 to Fluvanna County line/Rt. 795	Albemarle	Major Collector	Minor Arterial	Approved for FC change in late 2022; not reflected in the map produced for review	Minor Arterial	Segments have AADT's within the Minor Arterial threshold (9,594 & 9,594 & 11,238)
Old Lynchburg Road (Route 631) - Sunset Ave. (Route 781) to Hickory Street	Albemarle	Major Collector	Minor Arterial	Approved for FC change in late 2022; not reflected in the map produced for review	Minor Arterial	Segment compliments other connecting Minor Arterial
9th St SW (segment south of W. Main Street) - dead end segment	Charlottesville	Minor Collector	Local Road	District supports this request.	Local Road	Agree with comment
9th St SW - Estes to King	Charlottesville	Minor Collector	Local Road	District supports this request.	Local Road	Agree with comment
Hillsdale Drive - Hydraulic Road to Greenbrier in Alb Co	Charlottesville	Local Road	Major Collector	District supports this request.	Major Collector	Road seems to serve as a collector taking traffic out of shopping area
Cherry Avenue - Roosevelt Brown Blvd to 5th Street SW/Ridge St	Charlottesville	Major Collector	Minor Arterial	District supports this request.	Minor Arterial	Segment compliments other connecting Minor Arterial
Chesapeake St - segment east of Meade	Charlottesville	Local Road	Minor Collector	District supports this request.	Major Collector	Road serves as a collector taking traffic from Riverview park
E. Market St - segment east of Meade	Charlottesville	Local Road	Minor Collector	District supports this request.	Major Collector	Road serves as a collector taking traffic from Riverview park
Franklin St - Meade to Carlton Avenue		Local Road	Minor Collector	District recommends as complementary to E. Market Street segment east of Meade classification change.	Local Road	Collector would be channeling traffic from one neighborhood to the another. Should be from a local road to an Arterial.
Carlton Avenue - Monticello Rd to Franklin Street	Charlottesville	Local Road	Minor Collector	District supports this request.	Minor Collector	Road seems to serve as a collector taking traffic out of neighborhood areas
Prospect Avenue - 9th St SW to Bailey Road	Charlottesville	Local Road	Minor Collector	District supports this request.	Minor Collector	Makes connection, carries bus route
Bailey Road - Prospect Ave to 5th St SW	Charlottesville	Local Road	Minor Collector	District supports this request.	Minor Collector	Makes connection, carries bus route
Rose Hill Drive - Oakleaf Ln to Rugby Ave	Charlottesville	Local Road	Major/Minor Collector	District supports this request.	Minor Collector	Carries bus route, connects to minor collector on Gentry Ln
Oakleaf Ln - Rose Hill Drive to Del Mar Dr		Local Road	Minor Collector	District recommends as complementary to Rose Hill Drive between Oakleaf Ln and Rugby Avenue classification change.	Local Road	Made this change, but moved it to Del mar Dr which follows the CAT bus route
Del Mar Drive - Oakleaf Ln to Greenleaf Ln		Local Road	Minor Collector	District recommends as complementary to Rose Hill Drive between Oakleaf Ln and Rugby Avenue classification change.	Minor Collector	Extended from Rose Hill Dr to Greenleaf Ln to follow bus route. Minor collector for continuity with Gentry Ln
Greenleaf Ln - Del Mar Dr to Gentry Ln		Local Road	Minor Collector	District recommends as complementary to Rose Hill Drive between Oakleaf Ln and Rugby Avenue classification change.	Minor Collector	
Water Street - 10th St NE Carlton Rd	Charlottesville	Local Road	Minor Collector	District supports this request.	Minor Collector	Makes connection
Mill Creek Drive - Avon Street Ext to Rt. 20	Charlottesville	Local Road	Major Collector	District supports this request; fire station and school served by road. Albemarle County also support the request.	Minor Collector	
Monticello Road - Carlton Road to Levy Ave	Charlottesville	Local Road	Minor Collector	District supports this request	Minor collector	Edited - MC follows Monticello Rd from Carlton to Hinton, and then Follows Hinton to Avon St. Monticello Ave North of Hinton is a one way road.
Meridian Street - Monticello Ave to Monticello Rd		Local Road	Minor Collector	District recommends as complementary to Monticello Road between Carlton Road and Levy Ave classification change.	Minor collector	
Levy Ave - Monticello Road to Avon St	Charlottesville	Local Road	Minor Collector	District supports this request.	Local Road	Connects to one-way road, moved to Hinton Ave
Locust Ave - Calhoun St to River Road	Charlottesville	Local Road	Minor Collector	District supports this request.	Minor Collector	
River Road - Locust Ave to Coleman St	Charlottesville	Local Road	Minor Collector	District supports this request.	Minor Collector	
Rugby Road - Rugby Rd/Dairy Rd/Gentry Ln intersection to US 250	Charlottesville	Major Collector	Minor Collector	District supports this request.	Minor Collector	
Garrett St - 2nd St SE to Dead End West of Gleason St		Major Collector	Minor Collector		Minor Collector	

Memorandum

To: Charlottesville-Albemarle Metropolitan Planning Organization's (CA-MPO) Committees
From: Christine Jacobs, Executive Director, TJPDC/CA-MPO
Date: October 15, 2024
Reference: Federal Functional Classification – VDOT Culpeper District

Background:

The Virginia Department of Transportation (VDOT) is conducting a major statewide update to the Federal Functional Classification (FFC), which historically has occurred following a decennial Census. The most recent update, the 2010 Functional Classification for Virginia, was approved in 2014 by the Federal Highway Administration (FHWA). In March 2022, the US Census released the 2020 Census data, which serves as the basis for the current statewide update.

Per VDOT's Open Data Portal, Virginia Roads, *"Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way but serve as part of an overall network. Most travel involves movement throughout the network of roadways. It becomes necessary to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network. The Virginia Department of Transportation's (VDOT) Transportation and Mobility Planning Division (TMPD) is responsible for maintaining the Commonwealth's official Federal Functional Classification System. TMPD determines the functional classification of the road by type of trips, expected volume, what systems the roadway connects and whether the proposed functional classification falls within the mileage percentage thresholds established by the Federal Highway Administration (FHWA)."*ⁱ

Discussion:

VDOT District Staff coordinated the review of the proposed functional class with Virginia's MPOs. At the conclusion of the MPO review process, VDOT requests that each MPO approve a resolution acknowledging the coordination effort within Virginia on the FFC update. The resolution will serve to document VDOT's cooperation with local officials to FHWA on the effort. Following the MPO review throughout the state, VDOT will submit the updated functional classification to FHWA for their review and approval. The effort is anticipated to be finalized by September 2024.

In May, CA-MPO staff presented the topic to the CA-MPO Tech and CA-MPO Policy Board meetings as an informational item. CA-MPO staff then forwarded a request for review to local staff and technical committee members. Stakeholders had until Monday, June 17th to provide any comments. CA-MPO

staff received additional suggested revisions from technical staff and locality staff which were in turn forwarded on to VDOT district staff. At the time of the August 20, 2024, CA-MPO Technical Committee and the August 28, 2024, CA-MPO Policy Board meeting, VDOT's Transportation and Mobility Planning Division (TMPD) had not, yet conducted a full review of the proposed revisions and a revised draft map was not available for the Technical Committee and Policy Board to review. As such, the CA-MPO staff and the Technical Committee recommended that the Policy Board defer a decision to adopt the resolution approving the proposed updates to the highway system federal functional classification.

Following the August policy board meeting, CA-MPO staff received notice from VDOT staff that TMPD had responded to the requested changes to the Functional Classification system. There were a few items they did not recommend including, but they did move forward most of the local staff's recommendations. VDOT staff reviewed the recommended changes as well as the final draft FFC map to ensure the inclusion of the changes. CA-MPO staff then forwarded TMPD's response to local staff for a final review.

The updated FFC is now before the CA-MPO Technical Committee and the CA-MPO Policy Board committee in their October meetings for final review and consideration for approval. Included in the meeting materials is a draft resolution approving the proposed updates to the Highway System Federal Functional Classification. Included as an attachment to the resolution is a copy of the recommended staff changes and TMPD's response. Finally, a link to the final draft map of the FCC can be found at: <https://arcg.is/81qij1>.

Following the Policy Board's final consideration of a resolution of support for the statewide FFC map that incorporates the revisions as attached, the state will send the statewide FFC map recommendations to the Federal Highways Administration (FHWA) for review. FHWA will complete a review of the statewide map and finalize the functional classification map.

Recommended Action:

MPO Technical Committee Recommendation: CA-MPO staff recommends that the CA-MPO Technical Committee moves to recommend that the Policy Board adopt a resolution to approve the proposed updates to the highway system functional classifications presented in the accompanying summary map.

MPO Policy Board: The CA-MPO staff recommends that the Policy Board moves to adopt a resolution to approve the proposed updates to the highway system functional classifications presented in the accompanying summary map.

ⁱ <https://www.virginiaroads.org/maps/VDOT::functional-classification-web-map-1/about>



**RESOLUTION APPROVING THE PROPOSED UPDATES
TO THE HIGHWAY SYSTEM FEDERAL FUNCTIONAL CLASSIFICATION**

WHEREAS, functional classifications of highway systems affect transportation planning in that the categories (local, minor collector, major collector, minor arterial, principle arterial, principle arterial freeway, or principle arterial interstate) are used with highway design standards, highway construction funds or maintenance payments, access management standards, traffic calming eligibility, statistical reporting, and certain outdoor advertising controls; and

WHEREAS, periodic reviews and, as appropriate, updates of urban/urbanized area boundaries and/or functional classifications of highway systems generally are warranted in concert with U.S. Census updates for urbanized areas; and

WHEREAS, the Bureau of the Census March 17, 2022, Notice issued decennial 2020 urbanized area information, and each State is federally directed (FHWA 23 CFR 450.312, 470.105 and 109, and guidance) to use the information and undertake a thorough update, as appropriate, of urban/urbanized area boundaries and/or highway system functional classifications in cooperation with Metropolitan Planning Organizations and/or localities; and

WHEREAS, the state has proposed updates in coordination with the Charlottesville-Albemarle Metropolitan Planning Organization (CA-MPO) to the functional classification of highways that reflect the 2020 Census information, and the CA-MPO technical committee has reviewed the updates presented in the accompanying summary map by this policy Board; and

WHEREAS, at the request of the CA-MPO technical committee and locality staff, the CA-MPO staff submitted suggested additional revisions to the original proposed draft map; and

WHEREAS, the Virginia Department of Transportation's (VDOT) Transportation and Mobility Planning Division (TMPD) reviewed the suggested revisions and incorporated several of them as detailed in the Proposed Functional Classifications Revisions list attached; and

NOW, THEREFORE, BE IT RESOLVED that the Charlottesville-Albemarle Metropolitan Planning Organization approves the proposed updates to the highway system functional classifications presented in the final accompanying summary map: <https://arcg.is/81qij1>.

BE IT FURTHER RESOLVED that a copy of this approved resolution and the accompanying final summary map shall be provided to the Federal Highway Administration Virginia Division Office for information purposes, and as documentation of the CA-MPO's participation in the federal functional classification update process.

ADOPTED this 23rd day of October 2024 by the Charlottesville-Albemarle Metropolitan Policy Organization's Policy Board being duly assembled.

ATTESTED:

Ned Gallaway, Chair
Charlottesville-Albemarle MPO Policy Board

Proposed DDI at Interstate 64, Exit 120 & 5 th Street (Route 631)	
South of Charlottesville, Albemarle County	
APPLICATION INFORMATION	DRAWING OVERVIEW
Funding	SMART SCALE FY2026
Applicant	CAMPO
District ID	2024SS-0064-0631
Portal ID	11675
Tier/Phases	Tier 2 PE/RW/CN w/ Bridge
Expected NEPA	CE
L&D P.O.C.	John Rose, P.E.
Planning P.O.C.	Chuck Proctor
Design By	Michael Baker International
Estimate By	Michael Baker International VDOT – Kevin Pope
	
Updated: 8/28/2024	
REVIEW & APPROVAL	
District Project Development Engineer Signature:	
State Location & Design Engineer Signature:	

PROPOSED ESTIMATE					PROPOSED SCHEDULE	
Phase	Base	% Cont.	Uninflated Total (2024)	Inflated Total	Phase (Task)	Target Date
PE	\$6,270,000	12%	\$7,022,400	\$8,207,079	PE Start (12)	9/1/2027
RW/UT	\$510,000	41%	\$719,100	\$954,318	RW Start (52)	5/8/2031
CN (Cont)	\$31,600,000	38%	\$49,612,000	\$69,848,735	CN Start (80)	7/13/2032
CN (CEI)		19%			CN End (91)	5/1/2034
Total Estimate			\$57,353,500	\$79,010,131		

SCOPE DESCRIPTION
- Convert existing traditional diamond interchange to a Diverging Diamond Interchange. - Include a shared use path across the interchange to tie into existing pedestrian facilities to the northeast and southwest. - A bridge replacement is likely required due to the proposed changes to the superstructure.

DESIGN ASSUMPTIONS

Scope Assumptions:

- **Identified Problems to Address:**
 - Lack of pedestrian and bicycle connectivity between the southern section of 5th Street and the City of Charlottesville.
 - Congestion during peak hours heading into the City in the AM peak and away from the City during PM peak.
 - Queues along I-64 exit ramps in the AM peak.
- Note: Proposed scope is currently anticipated as the best way to address existing problems at this location, subject to further traffic analysis, environmental review, and public feedback.
- **Site Visit** was performed on 3/28/2024 and attended by Ray Wright, PE and Tom Walsh, PE.
- **Traffic Analysis:** Completed as part of a planning study in 2024 by Michael Baker Int.
- **Design Standard:** Roadway design shall be in accordance with GS-5 and GS-R standards in the Road Design Manual. Interchange design will be in accordance with the DDI standards in Appendix A3. Shared use path design shall be in accordance with the Road Design Manual, Appendix A(1).
- **Design Speed:**
 - The posted speed on 5th Street (Route 631) is 45 mph. A speed reduction was used for the interchange and 30 mph was used as the design speed.
 - The existing suggested speed along the exit ramps is 35 mph. A speed reduction was done for ramps to be designed to 25 mph.
 - The two entrance ramps with tight curves (SB on 5th St to EB I-64, NB on 5th St to WB I-64) can only meet 20 mph design speed due to the angles of the bridge and I-64.
- **Design Vehicle:** WB-67 in roadway and on all ramps.
- **Typical Section:**
 - Route 631 (5th Street) will conform to Urban Principal Arterial (GS-5) Standards. Widening and alignment will be dictated by design standards for DDIs.
 - I-66 ramps shall conform to Interchange Ramps (GS-R) design standards with 16' travel lane, 10' right shoulder (8' paved), 6' left shoulder (4' paved).
- **Project Estimate:** Most Complex
 - The PE Estimate was developed based on man-hour norms using the Culpeper P.E. Estimate Tool. Individual estimates were requested for Environmental, Survey, and Bridge.
 - The R/W and Utilities estimate was prepared by Regional R/W estimators based on their expertise and in accordance with the VDOT Right of Way Cost Estimate Guide, and entered into a PCES worksheet. Impacts were assumed based on the project's conceptual sketch and preliminary fee take and easement areas provided by the designer.
 - The Construction Estimate was developed as a hybrid preliminary bid-based estimate using the Culpeper Concept Estimate Workbook. Quantities were derived from the conceptual sketch and unit costs determined by bid tab histories or using District norms. Some items were determined by historical percentages and are documented in the Workbook. Non-bid costs, adjustments and assumptions are included in the Estimate Workbook.

- Discipline-based Percentage Contingency estimates were used and selected with the guidance included in the Culpeper Concept Estimate Workbook
 - A deterministic contingency was not completed, due to the conceptual nature of the project and high number of “unknown-unknowns”, which was approved by the District L&D Engineer.
- Inflation is in accordance with the Department’s inflation memorandum dated 6/3/2024.
- See attached estimate workbook for additional estimate assumptions

Roadway Assumptions:

- Additional mill & overlay is needed to the north and south along Route 631 to provide a smooth pavement tie.
- Additional guardrail is likely beyond what is shown in the drawing. See the detailed estimate for more information.

Bicycle/Pedestrian Assumptions:

- The northern leg of the shared use path will tie into the proposed 5th Street Trail.
- The southern leg of the shared use path will taper down to 5’ to tie into the existing sidewalk system. The bikes heading southbound will be required to merge into the right lane of traffic and will share the right lane with vehicles. There are proposed projects that will extend a shared use path to Afton Pond Ct.
- The County is proposing a shared use path adjacent to the interstate that would tie into the median shared use path from the northwest corner of the interchange. If the proposed SUP is funded and constructed, it will require an additional crossing of 5th Street to the median of the bridge.

Hydraulic Assumptions:

- The proposed design will increase imperviousness by 68,900 Sq Ft.
- Credits will need to be purchased for water quality as there is no feasible location to add a stormwater quality pond.
- Due to site constraints and limited footprint, a SWM pond has been placed adjacent to the I-64 EB exit ramp.

Maintenance of Traffic Assumptions:

- MOT will require lane and ramp closures along 5th Street.
- Police, nightwork, and Interstate lane closures are likely due to the bridge replacement
- Significant diversions and phased construction may be needed.

Traffic Control Devices Assumptions:

- New signals will be required at both intersections.
- Traffic signs have been shown to assist with bicycles merging into the right lane.
- Final treatment of any unsignalized pedestrian crossing will be determined during design in accordance with IIM-TE-384.
- Partial interchange lighting has been included in the estimate per DTE recommendation

Environmental Assumptions:

- Environmental studies and assessments can be achieved with a budget of \$81,000.
- A noise study is needed but it is assumed that no noise walls will be required.

Structure/Bridge Assumptions:

- The estimate for this project includes full bridge replacement over I-64.
- Regarding full bridge replacement (substructure replacement):
 - District Bridge recommends a full bridge replacement for the subject project
 - The existing span arrangement is 63'-112'-112'-46'. Our current Manual of S&B requires the elimination of joints for new superstructures. When considering this for a similar span bridge the design was insufficient due to uplift, which would likely be the same case here.
 - The existing longitudinal deck joint also carries down to the substructure. As it follows the mountable median barrier on the deck today, the joint is located at the same spot transversely on the first 2 piers but is at a different location on the third pier. Without analyzing the existing substructure units, there is a high risk that a continuous superstructure would adversely affect the substructure units.
- Regarding the deck replacement:
 - Approximately 40% of the deck would need to be replaced to install the proposed barriers (exterior and interior). This would also create 6 longitudinal construction joints in the deck which is not desirable. Further, the deck will be further deteriorated by this time this project is under construction in 2036. For these reasons, a full deck replacement will be required. The full deck replacement will be less expensive than all the hand work needed to cut and retain rebar for the cuts proposed and overlay that would be required.
 - Deck replacement should consider joint elimination in accordance with Chapter 32 of the Manual of the Structure and Bridge Division.
 - The longitudinal joint in the shared use path would cause a safety concern for bicycles and wheelchair users. It will also collect more water than existing conditions because it will no longer be on top of a raised median. If this joint cannot be eliminated with the deck replacement, the joint will need to be sealed with an ADA compliant joint type.
 - A load rating must be performed for the proposed conditions to ensure the structure can carry the loads. There is a BPB-4 in the bridge standards which is an F-shape barrier that most closely resembles the MP-7F in shape and meets the 42" minimum height for protecting pedestrian traffic.
 - The approximately 9" thick safety walk and sidewalk would have to be removed. This would require removing and replacing the existing bridge railings since they would no longer meet the standards they were originally built for. To do this, the deck overhang (portion of deck below railing over to the first exterior beam) would have to be removed and replaced.

Materials/Geotechnical Assumptions:

- Recommend pavement design of 1.5" SM-9.5D; 2.0" IM-19.0A; 6.0" B M-25.0A; 8.0" 21-B. Preliminary pavement designs based on AASHTO 1993 guideline. In order to provide a final pavement design recommendation, we would need lab data and AASHTO MEPDG would be used for a final pavement recommendation.

Right of Way Assumptions:

- RW Estimate completed based on preliminary, unapproved Aerial Photo sketch and RW Data spreadsheet and a Parcel Count of 2.
- Line 7 on RW Tab includes estimated costs for RW Administrative/Staff costs and for Condemnation court costs.
- Parcel 001 appears to have public water service so well assumed to not be required anymore.
- See estimate for additional assumptions.

Utilities Assumptions:

- No water, sanitary sewer, or gas appear to be within the project limits. If they are present there may be additional utility costs.

DESIGN DEVIATION SUMMARY

Design Element	Description/Location	Status	Approved
	None identified at this time.		

RISK LISTING**Roadway Risks:**

- Additional requirements for pedestrian safety related to bridge crossing.
- Public acceptance of a DDI at the designated location.
- Increase in project limits due to unknown existing conditions.

Hydraulic Risks:

- Significant existing storm sewer within the project limits, condition of the existing storm sewer is unknown.

Structure & Bridge Risks:

- Unknown structural concerns with reconfiguring lanes on the bridge.
- Additional retaining walls could be required in areas with deep cuts or fills.
- Bridge conditions continually change, additional repairs or modifications may be identified as the project progress.
- Additional deadload added to the bridge.
- Most risks mitigated by assuming full replacement at this stage.

Maintenance of Traffic Risks:

- Reconfiguring bridge lanes will require multiple phases of construction.

Traffic Control Devices Risks:

- Additional signing required for the DDI.
- Changes to lighting requirements

Environmental Risks:

- Changes in existing environmental regulations or addition of new regulations could impact the project.

Right of Way Risks:

- Additional parcels could be added due to drainage or grading. Risk is high relative to scope of R/W acquisition, but low relative to total project.

Utility Risks:

- Unidentified utilities or the installation of new utilities within the project limits



Virginia Department
of Transportation

5th Street

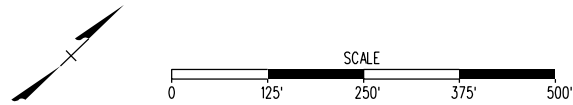
Diverging Diamond Interchange

Project Location



CHARLOTTESVILLE, VA

North Arrow & Scale



Legend

- Existing Edge of Pavement
- 5th Street Trail (to be constructed as part of a separate project)
- Property Lines
- Proposed ROW
- Proposed TCE
- Proposed Utility Easement
- Proposed Guardrail
- Proposed Median Barrier, MB-7F
- Proposed Curb and Gutter CG-6
- Proposed Curb CG-2
- Proposed 10' Wide Shared Use Path
- Proposed Pavement Improvements

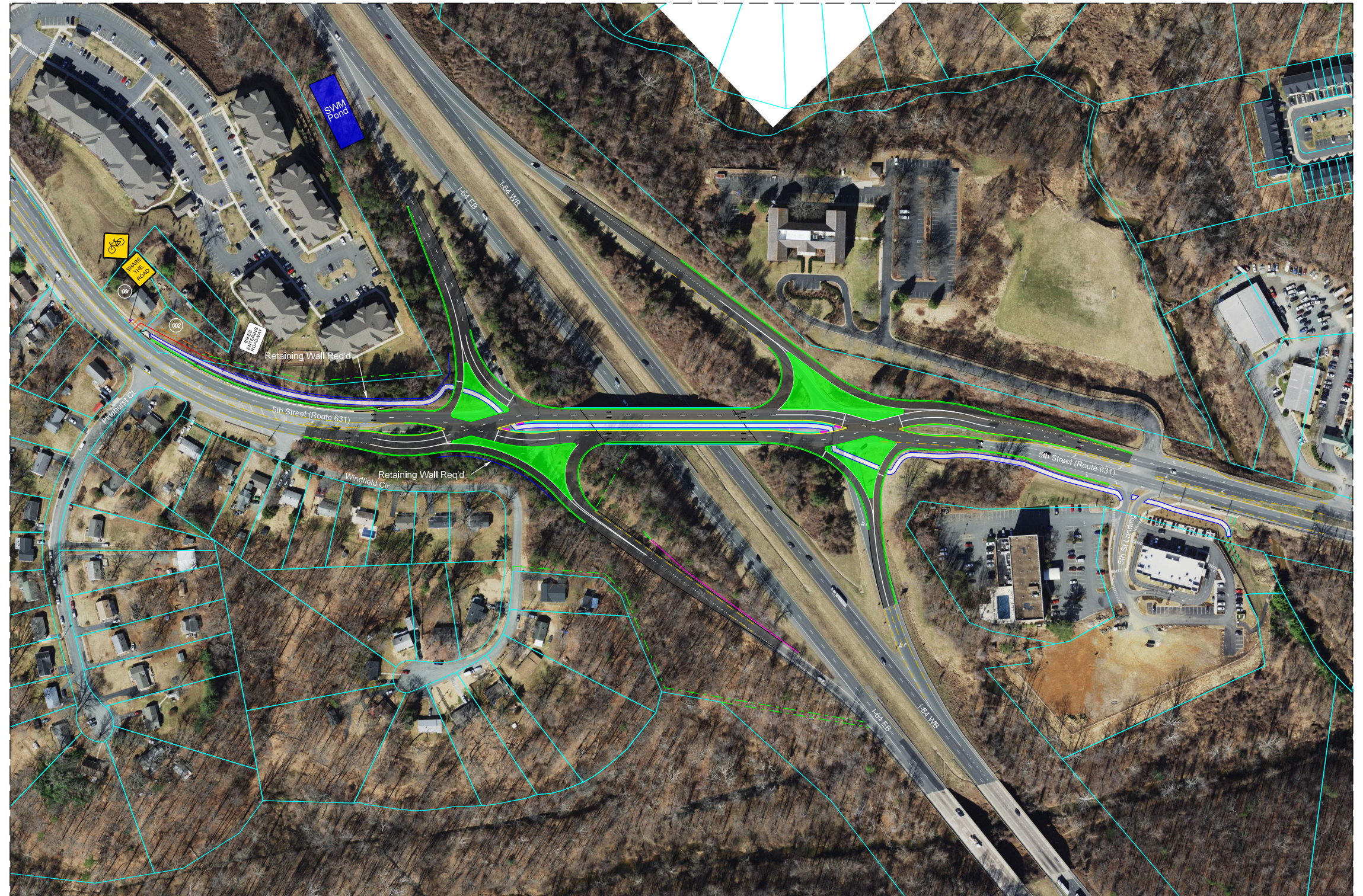
Date

7/8/2024

Michael Baker
INTERNATIONAL

These plans are unfinished and unapproved and are not to be used for any type of construction or the acquisition of right of way. Additional easements for utility relocations may be required beyond the proposed right-of-way shown on these plans.

Imagery Courtesy of the Commonwealth of Virginia copyright 2021, 2022, and 2023.



SYIP PROJECTS

DETAILED PROJECT COST ESTIMATE SUMMARY

(Version 3.1: 6/3/2024)

Portal ID:

11675

Prepared By:

Kevin Pope

Reviewed By:

Kevin Pope/Justin Warfield

Project Location:

Locality

Albemarle County (02)

Project Complexity Classification

Most Complex (Major)

Project UPC:

Milestone

Creation/Pre Scope

N/A

Preliminary Engineering Phase

7

Do not enter a negative value for defined or allowance; Ensure input where required. If no value then enter "0"

Project Estimate Component

Discipline	Source	Defined(\$)	Allowance*		Total
Project Management	Culpeper Tool	\$ 172,676.93	\$ -		\$ 172,676.93
Roadway	Culpeper Tool	\$ 1,088,745.00	\$ -		\$ 1,088,745.00
Hydraulics	Culpeper Tool	\$ 494,919.42	\$ -		\$ 494,919.42
Utilities	Culpeper Tool	\$ -	\$ -		\$ -
Traffic	Culpeper Tool	\$ 559,200.00	\$ -		\$ 559,200.00
Structures/Bridges	Culpeper Tool	\$ 3,203,829.18	\$ -		\$ 3,203,829.18
Materials/Geotech	Culpeper Tool	\$ 141,750.00	\$ -		\$ 141,750.00
Survey/SUE/Quality Level A SUE	Culpeper Tool	\$ 437,572.65	\$ -		\$ 437,572.65
Environmental	Culpeper Tool	\$ 83,106.82	\$ -		\$ 83,106.82
Right of Way	Culpeper Tool	\$ 88,200.00	\$ -		\$ 88,200.00
Other	Culpeper Tool	\$ -	\$ -		\$ -
VDOT PE Oversight on Local Assistance Projects	Total entered from LAD Spreadsheet				
	SUBTOTAL PE PHASE ESTIMATE (Without Contingency)	\$ 6,270,000.00	\$ -	Select Phase Risk Type Below	Contingency % (Value of Risk)
Phase Risk Type and Contingency (Value of Risk): For Type 1 enter % amount; For Type 2 enter \$ amount				Type 1 Percentage	12.00%
TOTAL PE PHASE ESTIMATE				\$	7,022,400.00
Phase dates (XX/XX/XXXX)	PE Base Estimate Date	8/16/2024			
	Start Date	9/1/2027			
	End Date	5/8/2031			

Right-of-Way & Utilities Phase

Do not enter a negative value for defined or allowance costs; For Contingency Values please refer to the ROW Cost Estimate Guide Section 8

Discipline	Source	Defined (\$)	Allowance*	Type 1 Percentage	Contingency [% of Risk]	Total
Right-of-Way Acquisition	Aerial Photo	\$ 199,817.58	\$ -		41.00%	\$ 281,742.78
Utilities	Aerial Photo	\$ 310,182.42	\$ -		41.00%	\$ 437,357.22
VDOT Project RW/UT Oversight	Culpeper Tool	\$ -	\$ -		0.00%	\$ -
VDOT RW/UT Oversight on Local Assistance Projects	Total entered from LAD Spreadsheet					
SUBTOTAL RW PHASE ESTIMATE (Without Contingency)		\$ 510,000.00	\$ -	RW Contingency:	41.00%	
Phase Risk Type and Contingency (Value of Risk): Use only if applying one contingency to entire phase. For Type 1 enter % amount; For Type 2 enter \$ amount				Select Phase Risk Type Here (when using one phase contingency value)	0	\$ 209,100.00
TOTAL RW PHASE ESTIMATE				\$	719,100.00	
Phase dates (XX/XX/XXXX)	RW Base Estimate Date	7/1/2024				
	Start Date	5/8/2031				
	End Date	7/13/2032				

Construction Phase

Do not enter a negative value for defined or allowance costs; Ensure input where required. If no value then enter "0"; "0" will result in a gray cell; Total shown is dependent on Risk Type (Phase or Discipline)

Discipline	Source	Defined (\$)	Allowance*	Discipline Risk Type (Use when selecting many)	Contingency (Value of or % of Risk)	Total
Mobilization/Construction Support	Culpeper Tool	\$ 2,085,470.95	\$ -	Type 1 Percentage	25.7283%	\$ 2,622,027.02
MOT	Culpeper Tool	\$ -	\$ 2,138,706.02	Type 1 Percentage	30.2712%	\$ 2,786,118.16
Roadway	Culpeper Tool	\$ 4,897,298.33	\$ -	Type 1 Percentage	27.4602%	\$ 6,242,106.48
Hydraulics	Culpeper Tool	\$ 957,479.34	\$ -	Type 1 Percentage	30.2712%	\$ 1,247,319.90
In-plan Utilities	Culpeper Tool	\$ -	\$ -	Type 1 Percentage	0.00%	\$ -
Traffic	Culpeper Tool	\$ -	\$ 2,675,566.28	Type 1 Percentage	25.226%	\$ 3,350,504.79
Structures/Bridges	Culpeper Tool	\$ 16,571,606.43	\$ -	Type 1 Percentage	25.226%	\$ 20,751,960.89
Earthwork/Geotech	Culpeper Tool	\$ 1,491,701.61	\$ -	Type 1 Percentage	25.226%	\$ 1,867,998.35
Environmental/Soundwalls	Culpeper Tool	\$ -	\$ -	Type 1 Percentage	0.00%	\$ -
Other	Culpeper Tool	\$ 172,350.86	\$ -	Type 1 Percentage	25.226%	\$ 215,828.10
Total Bid Items		\$ 26,175,907.53	\$ 4,814,272.30			\$ 39,083,863.70
VDOT Project CN Oversight	Culpeper Tool	\$ -	\$ -	Type 1 Percentage	0.00%	\$ -
VDOT CN Oversight on Local Assistance Projects	Total entered from LAD Spreadsheet					\$ -
				Oversight Total	\$	-
Management Reserve / Construction Contract Contingency Per IIM-LD-249	10.00%	Cell C61 is multiplied by the Total Bid Items Cost (H57) to get H61				\$ 3,908,386.37
Railroad Flagging/Coordination		\$0.00	\$ -	Type 1 Percentage	0.00%	\$ -
State Forces		\$3,509.27	\$ -	Type 1 Percentage	25.1664%	\$ 4,392.42
State Police		\$20,052.95	\$ -	Type 1 Percentage	25.1664%	\$ 25,099.55
Contract Requirements (Incentive/Disincentive; 5% max)	1.50%	Cell C65 is multiplied by the Total Bid Items Cost (H57) to get H65				\$ 586,257.96
Total Non-Bid Items		\$ 23,562.22	\$ -			\$ 4,524,136.30
Phase Risk Type and Contingency (Value of Risk): Use only if applying one contingency to entire phase. For Type 1 enter % amount; For Type 2 enter \$ amount				Select	0	\$ -
See Section 5.4.3 in PreCON Manual				Total CN Estimate without CEI		\$ 43,608,000.00
Construction Engineering (CEI) Source:		Percentage	CEI is calculated as a Percentage value of the Total Bid Items Cost (H57)			
CEI Environmental Inspection (Enter %)	0.00%	\$ -		Type 1 Percentage	0.00%	\$ -
CEI VDOT or Locality (Enter %)	12.2033%	\$ 4,769,510.36		Type 1 Percentage	25.8829%	\$ 6,004,000.00
CEI Oversight Costs (Enter %)	0.00%	\$ -		Type 1 Percentage	0.00%	\$ -
Total CEI						\$ 6,004,000.00
Total CN Estimate						\$ 49,612,000.00
Phase dates (XX/XX/XXXX)	CN Base Estimate Date	8/6/2024				
	Start Date	7/13/2032				
	End Date	5/1/2034				
TOTAL PROJECT COST ESTIMATE (excluding inflation) (PE+RW+CN)						\$ 57,353,500.00

Total Project Cost Estimate Summary

Date of Current Cost

8/6/2024

Phase	Estimate (\$) without LAP OVERSIGHT COST	Contingency (\$)	Total Phase*
PE Phase Estimate	\$ 6,270,000.00	\$ 752,400.00	\$ 7,022,400
RW Phase Estimate	\$ 510,000.00	\$ 209,100.00	\$ 719,100
CN Phase Estimate(without CEI)	\$ 35,508,386.37	\$ 8,099,613.63	\$ 43,608,000
Total CEI	\$ 4,769,510.36	\$ 1,234,489.64	\$ 6,004,000
CN Phase Estimate(with CEI)	\$ 40,277,896.73	\$ 9,334,103.27	\$ 49,612,000
Total Estimate	\$ 47,057,896.73	\$ 10,295,603.27	\$ 57,353,500

* Use combined Defined, Allowance, Contingency Costs and LAP Oversight. Total Phase includes Oversight Costs and Contract Requirements.

Base Estimate Dollar amounts for SMART PORTAL entry:	Risks/Contingency/Unknowns Dollar amounts for SMART PORTAL entry
PE Base Estimate = \$ 6,270,000	PE Phase Risk/Contingency/Unknowns = \$ 752,400
RW Base Estimate = \$ 510,000	RW Phase Risk/Contingency/Unknowns = \$ 209,100
CN Base Estimate = \$ 35,508,386	CN Phase Estimate Risk/Contingency = \$ 8,099,614
	CEI amount = \$ 6,004,000

Green Cells require input. Allowance / Contingency are not necessarily required. All others are auto calculating. Estimate to be entered based on current dollars and inflation will be applied at the bottom of this workbook for informational purposes only.

Assumptions

See PE Estimate Tool tab.

See PE Estimate Tool tab.

See PE Estimate Tool tab.

See PE Estimate Tool tab.

See PE Estimate Tool tab.

See PE Estimate Tool tab.

See PE Estimate Tool tab.

See PE Estimate Tool tab.

See PE Estimate Tool tab.

See PE Estimate Tool tab.

See PE Estimate Tool tab.

See PE Estimate Tool tab.

Assumptions

See separate PCES estimate document for details and assumptions.

See separate PCES estimate document for details and assumptions.

See separate PCES estimate document for details and assumptions.

See separate PCES estimate document for details and assumptions.

Assumptions

See CN Estimate Tool tabs.

See CN Estimate Tool tabs.

See CN Estimate Tool tabs.

See CN Estimate Tool tabs.

See CN Estimate Tool tabs.

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See CN Estimate Tool tabs.

See CN Estimate Tool tabs.

Assumptions

See CN Estimate Tool tabs.

See CN Estimate Tool tabs.

See CN Estimate Tool tabs.

See CN Estimate Tool tabs.

See CN Estimate Tool tabs.

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	Inflation Factors	Future Cost (including inflation)
	Inflation**	Total Cost***
PE Phase Estimate	1.1687	\$ 8,207,079
RW Phase Estimate	1.3271	\$ 954,318
CN Phase Estimate(without CEI)	1.4079	\$ 61,395,703
Total CEI	1.4079	\$ 8,453,032
CN Phase Estimate(with CEI)	1.4079	\$ 69,848,735
Total Estimate	Total:	\$ 79,010,131

** Inflation rates taken from VDOT Inflation/Escalation Memorandum, Dated 6/3/2024

*** Total Costs should match with total costs output from SMART Portal.

CULPEPER ESTIMATE TOOL - CET	
DISTRICT:	Culpeper

Rev: 24.07.25

PROJECT INFORMATION	
Project Description	5th Street (631) Diverging Diamond
Application ID	11675
County/City/Town	Albemarle County
Estimate Date	8/6/2024
Estimate Compiler	Kevin Pope
Reviewed By	Kevin Pope/Justin Warfield
Estimate Stage	Funding
Complexity	Most Complex (Major)
Contingency Type	Type 1 Percentage
PE Estimate By	Kevin Pope
PE Estimate Date	8/16/2024
RW Acq. Estimate By	TSA / TD
Utility Estimate By	E Roach
RW Estimate Date	7/1/2024
CN Estimate By	Kevin Pope
CN Estimate Date	8/6/2024
Other Remarks	

PROJECT SCHEDULE	
PE Start Date	9/1/2027
RW Start Date	5/8/2031
CN Start Date	7/13/2032
CN Finish Date	5/1/2034

ROUND TYPE
Portal
ROUND VALUE
Default

TIER
2

PROJECT ESTIMATE					
	Uninflated Base	% Cont. & CEI	\$ Cont. & CEI	Uninflated Total	Contingency Assumptions / Notes
Total Estimate	\$38,380,000	49.4%	\$18,973,500	\$57,353,500	
PE Estimate	\$6,270,000	12%	\$752,400	\$7,022,400	See PE Estimate tab
RW Property Acq.	\$199,818	41.0%	\$81,925	\$281,743	See RW Estimate tab
RW Utility Reloc.	\$310,182	41.0%	\$127,175	\$437,357	See Utilities Estimate tab
RW Estimate Total	\$510,000	41%	\$209,100	\$719,100	
CN Estimate	\$31,600,000	57%	\$18,012,000	\$49,612,000	See Construction Estimate tabs
-Contingency		38%	\$12,008,000		
-CEI		19%	\$6,004,000		

CONTINGENCIES & ROUNDING

Culpeper Estimate Tool - CET
Rev: 24.07.25

PROJECT INFORMATION	
5th Street (631) Diverging Diamond	
Application ID	11675
District	Culpeper
County/City/Town	Albemarle County
Estimate Stage	Funding
Estimate Date	8/6/2024
Estimator Name	Kevin Pope
Reviewed By	Kevin Pope/Justin Warfield
Complexity	Most Complex (Major)
Contingency Type	Type 1 Percentage
Other Remarks	

ROUNDING
On the Project Summary tab.

	Low	MLE	High
OVERALL CONTINGENCY %			
All contingencies & rounding.	33-40%	50-60%	75-100%
PE	12.1%	Compare project contingency to sliding scale contingencies in the VDOT Cost Estimating <- Manual.	
RW	41.7%		
CN	37.2%		
Project	33.6%		

TOTAL SUMMARY	Base Estimate	Conting. %	Conting. Amount	Total Estimate	% of Contract
Grand Total (No Inflation)	\$39,123,909	25.88%	\$10,126,212	\$49,250,121	
Construction Claims/W.O.	\$3,090,941	25.88%	\$800,027	\$3,890,968	10.0%
CEI	\$4,636,412	25.88%	\$1,200,040	\$5,836,452	15.0%
Incentives	\$463,641	25.88%	\$120,004	\$583,645	1.5%
Other State Forces	\$3,500	25.00%	\$875	\$4,375	
State Police	\$20,000	25.00%	\$5,000	\$25,000	
Railroad Forces	\$0	0.00%	\$0	\$0	
Contract Total	\$30,909,415	25.88%	\$8,000,266	\$38,909,681	
Mobilization	\$1,500,448	25.39%	\$380,965	\$1,881,413	
Construction Survey	\$579,588	25.78%	\$149,398	\$728,986	
CN Bid Sub-total (All areas)	\$28,829,379	25.91%	\$7,469,903	\$36,299,282	
CN Bid Sub-total (2nd Workbk)	\$0	0.00%	\$0	\$0	not used

CATEGORY SUMMARY	Contingency Assumptions / Notes	Estimate	Recommended Contingency	Design Conting.	Design Conting.	Category Total
PRELIM. ENGINEERING						
Preliminary Engineering		\$6,266,594	12.00%		\$751,991	\$7,018,585
RIGHT OF WAY						
Right of Way	Increased due to potential for minor additional parcels	\$198,880	30.00%	50.00%	\$99,440	\$298,320
Out of Plan Utilities	Increased to minimum for most-complex projects	\$308,727	15.00%	35.00%	\$108,054	\$416,781
CONSTRUCTION						
	BID SUB-TOTAL	\$28,829,379		25.91%	\$7,469,903	\$36,299,282
Grading Items		\$1,487,814	N/A	25.00%	\$371,954	\$1,859,768
Drainage Items	Additional risk due to limited detail in concept design	\$954,984	N/A	30.00%	\$286,495	\$1,241,479
Pavement Items		\$2,721,485	N/A	25.00%	\$680,371	\$3,401,856
Roadway Incidentals	Additional risk due to limited detail in concept design	\$2,163,050	N/A	30.00%	\$648,915	\$2,811,965
Bridge Items		\$16,528,418	N/A	25.00%	\$4,132,105	\$20,660,523
Temp. Traffic & Construction	Additional items likely due to scope. Bridge MOT	\$2,133,132	N/A	30.00%	\$639,940	\$2,773,072
Planting Items		\$171,902	N/A	25.00%	\$42,975	\$214,877
Traffic Control Devices		\$2,668,593	N/A	25.00%	\$667,148	\$3,335,742
Utility Items		\$0	0.00%		\$0	\$0
Environmental Items		\$0	N/A	25.00%	\$0	\$0
NON-BID						
Non-Bid Items		\$23,500	N/A	25.00%	\$5,875	\$29,375

PROJECT INFORMATION		
Project Description	5th Street (631) Diverging Diamond	
Application ID	11675	
District	Culpeper	
County/City/Town	Albemarle County	
Estimate Stage	Funding	
Estimate Date	8/6/2024	
Estimator Name	Kevin Pope	
Section/Company	VDOT	
Original Estimate has been Modified or Updated?		Yes
Modified Date	8/27/2024	
Modified By	Justin Warfield	
Explanation of Modifications		
Various adjustments: additional mill & overlay, guardrail, etc. MOT under traffic.		

SUMMARY & SUPPORT ITEMS

Total Construction Category	Base Estimate	Cont. %	Contingency Amt	Base + Contingency	% Contr.
Grand Total (No Inflation)	\$39,123,909	25.88%	\$10,126,212	\$49,250,121	
Management Reserve	\$3,090,941	25.88%	\$800,027	\$3,890,968	10.00%
CEI	\$4,636,412	25.88%	\$1,200,040	\$5,836,452	15.00%
Incentives	\$463,641	25.88%	\$120,004	\$583,645	1.50%
State Forces/Non-bid Items	\$3,500	25.00%	\$875	\$4,375	
State Police	\$20,000	25.00%	\$5,000	\$25,000	
Railroad Forces	\$0	25.00%	\$0	\$0	
Contract Total	\$30,909,415	25.88%	\$8,000,266	\$38,909,681	
Mobilization	\$1,500,448	25.39%	\$380,965	\$1,881,413	
Construction Survey	\$579,588	25.78%	\$149,398	\$728,986	
CN Bid Sub-Total	\$28,829,379	25.91%	\$7,469,903	\$36,299,282	
Bid Item Category	Base Estimate	Cont. %	Contingency Amt	Base + Contingency	
Grading Items	\$1,487,814	25.00%	\$371,954	\$1,859,768	
Drainage Items	\$954,984	30.00%	\$286,495	\$1,241,479	
Pavement Items	\$2,721,485	25.00%	\$680,371	\$3,401,856	
Roadway Incidentals	\$2,163,050	30.00%	\$648,915	\$2,811,965	
Bridge Items	\$16,528,418	25.00%	\$4,132,105	\$20,660,523	
Temp. Traffic & Construction	\$2,133,132	30.00%	\$639,940	\$2,773,072	
Planting Items	\$171,902	25.00%	\$42,975	\$214,877	
Traffic Control Devices	\$2,668,593	25.00%	\$667,148	\$3,335,742	
Utility Items	\$0	0.00%	\$0	\$0	
Environmental Items	\$0	25.00%	\$0	\$0	
OVERRIDE CONSTRUCTION ADDITIVES					
Recommended Management Reserve	10 %				
Override Management Reserve	%				
Recommended Constr. Eng./Inspection (CEI)	15 %				
Override CEI	%				
Recommended Incentives	1.5 %				
Override Incentives	%				

ADDITIONAL COMMENTS AND ASSUMPTIONS

EARTHWORK ITEMS

EARTHWORK TYPICAL SECTIONS								
Description	Case	Location	Section	Drainage	Length FT	Width (W)	Depth (D)	Slope (G:1)
64WB On Ramp	Widen Fill	Average	Half Sect	Curbing	425	10	3	4:1
64WB On Ramp from Rt 631SB	New Fill	Average	Half Sect	Curbing	525	15	6	4:1
64WB On Ramp from Rt 631NB	New Fill	Average	Half Sect	Curbing	125	60	2	4:1
64WB Off Ramp to Rt 631 NB	New Fill	Average	Half Sect	Curbing	175	35	2	4:1
631 Median North of 64	New Fill	Average	Half Sect	Curbing	100	20	3	4:1
64EB On Ramp from Rt 631SB	New Cut	Average	Half Sect	Curbing	125	35	2	4:1
64 EB On Ramp	New Cut	Average	Half Sect	4:1 Ditch	425	10	4	4:1
64 EB On Ramp from 631NB	Widen Cut	Average	Half Sect	Curbing	300	25	4	Ret. Wall
631 NB South of Ramp to 64EB	Widen Cut	Average	Half Sect	Curbing	215	8	4	4:1
631 SB South of Ramp from 64WB	Widen Fill	Average	Half Sect	Curbing	675	12	2	4:1
64EB Off Ramp to 631 SB	New Cut	Average	Half Sect	Curbing	250	50	4	4:1
64 EB off Ramp	Widen Cut	Average	Half Sect	Curbing	200	10	4	4:1

Subbase Course Type	No. 21B	8 IN
Total Depth		17.5 IN
Average Variable Overlay Depth	6 IN	
Pavement Design Provided by:	VDOT Materials	
Pavement Design Date:	SS24	
Pavement Quantities		
Full Depth Pavement	72500 SF	
Full Depth Shoulders	SF	
Replace Base w/ Subbase on Shoulders?	?	
Mill & Overlay	177665 SF	
Temporary Pavement	25000 SF	
1' WP-2 for Pvmt Widening or C&G Narrowing	9900 LF	
Curbing Quantities		Conc. D.
Curb Type	Mountable ?	(IN)
Length of Concrete Curb	4300 LF	12
Length of Curb & Gutter	5600 LF	7
Length of Shoulder Gutter	LF	10
ROADWAY #2		
Use:	No	?
ROADWAY #3		
Use:	No	?
ENTRANCES		
Private Entrance Method?	Count ?	
Private Entrances - Rural (shoulder section)	EA	
Private Entrances - Urban (w/ concrete apron)	1 EA	
Commercial Entrances/Parking Lots	SF	
MISCELLANEOUS PAVEMENTS		Conc. D.
Shared Use Path	16000 SF	(IN)
Concrete Truck Apron	0 SF	9
AGGREGATE BASE FOR ADDITIONAL INCIDENTAL ITEMS		
Curbing	0 SF	12
Curb and Gutter	0 SF	7
PAVEMENT REMOVAL & MODIFICATION		
Demolition of Pavement from WP-2	9900 SF	
Additional Demolition of Pavement	9600 SF	
Saw Cut from WP-2	9900 LF	
Additional Saw Cut (Full Depth or 1.5" Depth)	LF	
Obscuring Roadway	SF	
Rumble Strips	LF	
PAVEMENT SPECIFICATIONS		
Surface Course Type	SM-9.5D	?
Intermediate Course Type	IM-19.0D	?
Base Course Type	BM-25.0A	?
Subbase Course Type	No. 21B	?
Location for Asphalt Weight	C'ville	?
QUANTITY TOTALS		
Surface Course SM-9.5D	4032.691667 TON	229.1667 TON
Intermediate Course IM-19.0D	3826.495139 TON	305.5556 TON
Base Course BM-25.0A	3516.014861 TON	983.3333 TON
Aggregate Base Mat'l No. 21B	7116.103889 TON	1413.333 TON
9" Concrete Truck Apron	0 SY	
Flexible Pavement Planing	19740.55556 SY	
Saw Cut (Variable Depth Asphalt)	9900 LF	
Demolition of Pavement	2166.666667 SY	2777.778 SY
Obscuring Roadway	0 UNIT	
Rumble Strip (Asphalt)	0 LF	
ADDITIONAL CUSTOM PAY ITEMS		
Description	Quantity	Units
ADDITIONAL COMMENTS AND ASSUMPTIONS		
Added additional mill and overlay to logical end points.		
ROADWAY INCIDENTAL ITEMS		
CURBING		
Concrete Curb (Vertical) from above	0 LF	
Concrete Curb (Mountable) from above	4300 LF	
Curb & Gutter (Vertical) from above	0 LF	
Curb & Gutter (Mountable) from above	5600 LF	
Additional Length of Concrete Curb	LF	
Additional Length of Curb & Gutter	LF	
Curb Type for Additional Curb	?	
Length of Shoulder Gutter	0 LF	
Length of Asphalt Curb	LF	
Area of Sign Island & Concrete Median	SF	
Area of Concrete Entrance Aprons	275 SF	

Number of Proposed Bridge Structures	1	EA
Bridge Engineer's Estimate for Perm. Bridges	\$15,723,818	LS
REHABILITATED BRIDGES		
Number of Rehabilitated Bridges	0	EA
Bridge Engineer's Estimate for Rehab. Bridges		LS
TEMPORARY BRIDGES		
Number of Temporary Bridges	0	EA
Bridge Engineer's Estimate for Temp. Bridges		LS
BARRIER		
Pier Protection System (54" assumed)		LF

QUANTITY TOTALS		
Permanent Bridges	\$15,723,818	LS
Rehabilitated Bridges	\$0	LS
Temporary Bridges	\$0	LS
Concrete Retaining Wall (RW-2)	0	CY
Conc. Retaining Wall Live Load (RW-3)	563.3333333	CY
Retaining Wall Excavation	1286.666667	CY
Porous Backfill for Wall	148.8888889	CY
Alternative Retaining Wall	0	SF

ADDITIONAL CUSTOM PAY ITEMS		
Description	Quantity	Units

ADDITIONAL COMMENTS AND ASSUMPTIONS

Separate Bridge Estimated proved by B. Chapman 8-19-24

TEMPORARY TRAFFIC & CONSTRUCTION ITEMS

MOT Estimate Method	CU Duration	?
Predicted Constr. Duration	25	MO
% Bridge/wall construction away from traffic		%
Adjusted Constr. Duration	25	MO
Override Constr. Duration		MO
Proposed Lane-Feet > 6' from Ex. Traffic	1550	LN-FT
Proposed Lane-Feet < 6' from Ex. Traffic	16200	LN-FT
No. of Phases with Temp. Markings	3	EA
% >= 45 MPH and Multilane	100	%
% Road Closure / Detour	0	%
Estimated \$/Month	\$36,557	\$/MO
Base MOT Cost Estimate	\$913,916	LS

ADDITIONAL TRAFFIC CONTROL		
Estimated Cost for Police Patrols	\$20,000	LS
Temporary Signalization	\$130,000	LS
Signal Estimate Provided by:	Norm	
Signal Estimate Date:		

TEMPORARY CONSTRUCTION ITEMS		
Duration of Construction	25	MO
Field Office Needed?	Yes	?
Months of Field Office	25	MO
Temporary Sheet Piling		SF
Temporary Concrete Barrier (MB-7D)	6400	LF
Temporary Impact Attenuators	10	EA

TOTAL MOT COMPARISON		
Base Cost	\$26,524,345	
Expected Percentage MOT Cost	9.2%	
Expected MOT Total Cost	\$2,451,280	
Actual MOT Total Cost	\$2,133,132	

Review estimate and consider increasing MOT costs.

TEMPORARY PAVEMENT AND GRADING		
Additional Temporary Regular Excavation	0	CY
Additional Temporary Borrow	0	CY
Temp. Surface Course SM-9.5D	229.1666667	TON
Temp. Intermediate Course IM-19.0D	305.5555556	TON
Temp. Base Course BM-25.0A	983.3333333	TON
Temp. Aggregate Base No. 21B	1413.333333	TON
Demolition of Temporary Pavement	2777.777778	SY
Temporary Bridges	\$0	LS

ADDITIONAL CUSTOM PAY ITEMS		
Description	Quantity	Units

ADDITIONAL COMMENTS AND ASSUMPTIONS

Roadway Sub-Total	\$7,327,333
Structure Sub-Total	\$16,528,418
Adjusted Sub-Total	\$23,855,751
Inflation Factor	1.491935484
Ln-Ft Factor	775
Ln-Ft Factor	16200
Ln-Ft Factor	24300
Ln-Ft Factor	8100
Ln-Ft Factor	0
Adjusted Ln-Ft	49375.0000
Complexity Factor	2.7817

Adjustment Factor	5.6437
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PLANTING ITEMS

PLANTING ITEMS

ROADSIDE DEVELOPMENT (SEEDING)		
Seeding Estimate Method	Area	?
Area of Land to Seed	150000	SF
Seeding total area	3.443526171	AC
Assumed normal seeding rate	160	LB/AC
Fertilizer N	225.981405	LB
Fertilizer P	451.9628099	LB
Fertilizer K	225.981405	LB

LANDSCAPING		
Landscaping Estimate Method	None	?

QUANTITY TOTALS		
Regular Seed	688.7052342	LB
Overseeding	550.9641873	LB
Temporary Seed	344.3526171	LB
Topsoil Class A (2" Depth)	3.443526171	AC
Lime	12.0523416	TON
Fertilizer N, P, & K	903.9256198	LB
HECP Type 3 (assumed for average slope)	37500	SY
Landscaping	\$0	LS

ADDITIONAL CUSTOM PAY ITEMS		
Description	Quantity	Units

ADDITIONAL COMMENTS AND ASSUMPTIONS

PERMANENT TRAFFIC CONTROL DEVICE ITEMS

SIGNING		
Signing Estimate Method	Percent	?
Signing Percentage	3	%
Signing Base Cost	\$219,820	LS
Additional Overhead Signing		LS

Contract Sub-Total \$7,327,333

PAVEMENT MARKINGS		
Pavement Markings Estimate Method	Percent	?
Pavement Markings Percentage	1	%
Pavement Markings Total Cost	\$73,273	LS
4" Type B1 Pavement Marking	0	LF

Contract Sub-Total \$7,327,333

SIGNALS		
Signal Estimate	\$1,700,000	LS
Signal Removal Estimate	\$60,000	LS
Signal Estimate Provided by:	Baker	
Signal Estimate Date:	7/9/24	
Rapid Flashing Beacons (RRFBs) (# signs)	4	EA
Ped. Hybrid Beacons (PHB/HAWK) (# arms)		EA

LIGHTING		
Lighting Estimate	\$587,500	LS
Lighting Estimate Provided by:	District Norm X2.5	
Lighting Estimate Date:		

ITS COMPONENTS		
ITS Estimate		LS

ADDITIONAL CUSTOM PAY ITEMS		
Description	Quantity	Units

ADDITIONAL COMMENTS AND ASSUMPTIONS

Full Signal on each side of the interchange. Parial lighting included in estimate, assumed cost 2.5 cost of Roundabout lighting.

IN-PLAN UTILITIES

In-Plan Utility Estimate Method:	None	?
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ADDITIONAL CUSTOM PAY ITEMS		
Description	Quantity	Units

ADDITIONAL COMMENTS AND ASSUMPTIONS

ENVIRONMENTAL MITIGATION CONSTRUCTION

Noise wall area		SF
Stream or Wetland Restoration		LS

Contaminated Soil Disposal / Tank Removal		LS
ADDITIONAL CUSTOM PAY ITEMS		
Description	Quantity	Units
ADDITIONAL COMMENTS AND ASSUMPTIONS		
NON-BID INCIDENTAL COSTS		
PROPERTY IMPACTS		
R/W Monuments	10	EA
Estimated Cost for Police Patrols	\$20,000	LS
Railroad Flagging and Construction (Force Ac't)		LS
ADDITIONAL CUSTOM PAY ITEMS		
Description	Quantity	Units
ADDITIONAL COMMENTS AND ASSUMPTIONS		

PROJECT INFORMATION	
Project Description	5th Street (631) Diverging Diamond
Application ID	11675
District	Culpeper
County/City/Town	Albemarle County
Estimate Stage	Funding
CN Estimate Date	8/6/2024
CN Estimator Name	Kevin Pope
Reviewed/Updated By	

							Unit Cost Correction:	0.0%	Norms Updated:
							4/22/2024		
							Culpeper Unit Norm		
							\$150000 with 0.2-0.6 AC		
							\$66 with 1400-2600 CY		
							\$60 with 1400-2600 CY		
							Culpeper Cost Norm		
							#N/A		
							#N/A		
							#N/A		
							Culpeper Cost Norm		
							\$55 with 1400-2600 TON		
							\$170 with 500-1100 TON		
							\$15 with 2500-3500 SY		
							\$175 with 500-1500 TON		
							\$165 with 500-1500 TON		
							\$8 with 1200-3000 LF		
							\$20 with 1000-3000 SY		
							Culpeper Cost Norm		
							\$65 with 100-400 LF		
							\$50 with 1000-3000 LF		
							\$250 with 15-60 SY		
							\$775 with 10-30 SY		
							\$140 with 100-500 SY		
							\$60 with 200-700 LF		
							\$6100 with 1-2 EA		
							\$2700 with 1-2 EA		
							\$4200 with 1-2 EA		
							\$270 with 100-500 LF		
							\$43000 with 1-2 EA		
							\$18 with 300-800 LF		
							\$425 with 50-300 LF		
							\$475 with 50-300 LF		
							Culpeper Cost Norm		
							#N/A		
							\$3000 with 10-50 CY		
							\$350 with 3-10 CY		
							\$180 with 50-200 CY		
							Culpeper Cost Norm		

LS	General Maintenance of Traffic	1	LS	\$913,916	Culpeper Norm		\$913,916	#N/A
LS	Temporary Signalization	1	LS	\$130,000	Culpeper Norm		\$130,000	#N/A
308SD20-0012	Aggr. Base Matl. Ty. I No. 21B	1413.333	TON	\$60	Culpeper Norm		\$84,800	\$55 with 1400-2600 TON
315SD20-0005	Asphalt Concrete Ty. IM-19.0D	305.5556	TON	\$170	Culpeper Norm		\$51,944	\$170 with 500-1100 TON
315SD20-0008	Asphalt Conc. Ty. SM-9.5D	229.1667	TON	\$160	Culpeper Norm		\$36,667	\$175 with 500-1500 TON
315SD20-0010	Asphalt Concrete Ty. BM-25.0A	983.3333	TON	\$165	Culpeper Norm		\$162,250	\$165 with 500-1500 TON
512SD20-0007	Impact Attenuator Service Ty. 1 TL-3	10	EA	\$13,000	Bid Tab Review		\$130,000	\$22000 with 1 EA
512SD20-0066	Traffic Barrier Service Concrete	6400	LF	\$70	Bid Tab Review		\$448,000	\$80 with 100-600 LF
508SD20-0004	Demolition of Pavement (Flexible)	2777.778	SY	\$20	Culpeper Norm		\$55,556	\$20 with 1000-3000 SY
514SD20-0001 or 514SX	Field Office Type 1 or Type 1 Modified	25	MO	\$4,800	Culpeper Norm		\$120,000	\$4800 with 7-15 MO
PLANTING ITEMS		---					Estimate	Culpeper
Item Code	Description	Quantity	Units	Unit Cost	Price Source	Remarks	\$171,902	Cost Norm
602SD20-0001	Topsoil Class A 2"	3.443526	ACRE	\$22,000	Culpeper Norm		\$75,758	\$22000 with 1-3 ACRE
603SD20-0002	Temporary Seed	344.3526	LB	\$21	Culpeper Norm		\$7,231	\$21 with 100-400 LB
603SD20-0003	Regular Seed	688.7052	LB	\$17	Culpeper Norm		\$11,708	\$17 with 500-3000 LB
603SD20-0004	Overseeding	550.9642	LB	\$14	Culpeper Norm		\$7,713	\$14 with 500-3000 LB
603SD20-0009	Hydraulic Erosion Control Product Type 3	37500	SY	\$2	Culpeper Norm		\$60,000	\$1.6 with 10k-30k SY
603SD20-0014/15/16	Fertilizer N-P-K	903.9256	LB	\$5	Culpeper Norm		\$4,068	\$4.5 with 400-1500 LB
603SD20-0017	Lime	12.05234	TON	\$450	Culpeper Norm		\$5,424	\$450 with 4-20 TON
TRAFFIC CONTROL DEVICE ITEMS		---					Estimate	Culpeper
Item Code	Description	Quantity	Units	Unit Cost	Price Source	Remarks	\$2,668,593	Cost Norm
LS	Signing	1	LS	\$219,820	Culpeper Norm		\$219,820	#N/A
700SX20-0010	Rectangular Rapid Flashing Beacon (RRFB) Assemblies	4	EA	\$22,000	Culpeper Norm		\$88,000	\$22000 with 2-8 EA
LS	Pavement Markings	1	LS	\$73,273	Culpeper Norm		\$73,273	#N/A
LS	Signals	1	LS	\$1,700,000	Culpeper Norm		\$1,700,000	#N/A
LS	Lighting	1	LS	\$587,500	Culpeper Norm		\$587,500	#N/A
UTILITY ITEMS		---					Estimate	Culpeper
Item Code	Description	Quantity	Units	Unit Cost	Price Source	Remarks	\$0	Cost Norm
ENVIRONMENTAL MITIGATION ITEMS		---					Estimate	Culpeper
Item Code	Description	Quantity	Units	Unit Cost	Price Source	Remarks	\$0	Cost Norm
NON-BID INCIDENTAL ITEMS		---					Estimate	Culpeper
Item Code	Description	Quantity	Units	Unit Cost	Price Source	Remarks	\$23,500	Cost Norm
503SD20-0002	R/W Monument RM-2	10	EA	\$350	Culpeper Norm		\$3,500	\$350 with 15 EA
00TEC20-0004 or 512SX	Police Patrol	1	TEC	\$20,000	Judgement		\$20,000	\$10000 with TEC

							Roadway Sub-total	\$7,327,333
							Disruptive Construction Sub-total	\$26,524,345
							Project Construction Sub-total	\$28,657,477
							Contract Quantity Total	\$28,829,379
							Non-bid Total	\$23,500
							Total Item Cost	\$28,852,879

RIGHT OF WAY ACQUISITION ESTIMATE

Culpeper Estimate Tool - CET
Workbook Rev: 24.07.25

PROJECT INFORMATION	
Project Description	5th Street (631) Diverging Diamond
Application ID	11675
District	Culpeper
County/City/Town	Albemarle County
Estimate Stage	Funding
Estimate Date	7/24/2024
Estimator Name	TSA / TD
Section/Company	VDOT RW
Original Estimate has been Modified or Updated?	No

ESTIMATE SUMMARY				
	Base Cost	% Cont.	Total Contingency	Uninflated Total
R/W Acquisition	\$198,880	30.0%	\$59,664	\$258,544
Contingency Method:		Type 1 Percent		
Recommended R/W Contingency		30.0%		
Contingency Remarks:				
ROW Contingency of 30%.				

GENERAL

R/W Estimate Method	By Parcel	?
Estimate Based On:	Concept Drawing & GIS	
Number of Parcels	2	EA
Number of Relocations	0	EA
Property Acquisition Costs	\$86,800	
Administrative Costs	\$112,080	
Reloc. & Demo. Costs (RW Phase)	\$0	
Reloc. & Demo. Costs (CN Phase)	\$0	
Remarks		

PROPERTY COSTS

Total Property Acquisition Costs		\$86,800					
ACQUISITION SUMMARY							
Number of Parcels	2	Override Parcel Count?	No				
Land to Acquire	\$77,800						
Buildings to Acquire	\$0						
Other Improvements to Acquire	\$7,000						
Damages to Remainder	\$2,000						
R/W AND EASEMENTS							
Name	Type	Value	Area- SF	\$/SF	Total Value	Total Area SF	Total \$/SF
Total Land					\$77,800	12164	\$6.40
Fee R/W	Fee RW	\$48,400	4455	\$10.86	\$48,400	4455	\$10.86
Prescriptive R/W	Prescriptive	\$0	0	\$0.00			
Permanent Esmt	Perm Esmt	\$0	0	\$0.00	\$0	0	\$0.00
Utility Esmt	Utility Esmt	\$24,600	5334	\$4.61	\$24,600	5334	\$4.61
Temporary Esmt	Temp Esmt	\$4,800	2375	\$2.02	\$4,800	2375	\$2.02
Temp. Entr. Esmt	T. Entr Esmt	\$0	0	\$0.00			
Perm. Drain Esmt	Perm Esmt	\$0	0	\$0.00			

		\$0	0	\$0.00
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ADMINISTRATIVE COSTS

Total Administrative Costs	\$112,080		
Number of Parcels	2	Total Property Costs	\$86,800

ADMINISTRATIVE SETTLEMENTS

Calculation Method	Percent	?
Percent of Property Costs	20%	%
Total Administrative Settlements	\$17,360	\$

Remarks

CONDEMNATION INCREMENT

Calculation Method	Percent	?
Percent of Property Costs	40%	%
Total Condemnation Increment	\$34,720	\$

Remarks

COURT COSTS

Calculation Method	Lump Sum	?
Total Court Costs	\$20,000	\$

Remarks

\$10,000 per parcel.

ADMINISTRATIVE & INCIDENTAL COSTS

Calculation Method	\$ per Parcel	?
Number of Residential Parcels	2	EA
Avg. Admin Costs per Resid. Parcel	\$20,000	\$/Parcel
Number of Commercial Parcels	0	EA
Total Administrative Costs	\$40,000	\$

Remarks

RELOCATION & DEMOLITION COSTS

Total Reloc. & Demo Costs (RW)	\$0
Total Reloc. & Demo Costs (CN)	\$0

DEMOLITION COSTS

Calculation Method		?
Residential Demo's in RW Phase	\$0	\$
Commercial Demo's in RW Phase	\$0	\$
Demolitions in CN Phase	\$0	\$

Remarks

HAZARDOUS MATERIALS REMOVAL

Calculation Method		?
Total Hazmat Costs to RW Phase	\$0	\$
Total Hazmat Costs to CN Phase	\$0	\$

Remarks

PROPERTY MANAGEMENT

Calculation Method		?
Total Property Management Costs	\$0	\$

Remarks

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RELOCATION ASSISTANCE

Calculation Method		?
Residential Relocation Costs	\$0	\$
Commercial Relocation Costs	\$0	\$

Remarks

--

PARCEL CALCULATIONS

UTILITIES ESTIMATECulpeper Estimate Tool - CET
Workbook Rev: 24.07.25**PROJECT INFORMATION****Project Description**

5th Street (631) Diverging Diamond

Application ID	11675
District	Culpeper
County/City/Town	Albemarle County
Estimate Stage	Funding
Estimate Date	7/1/2024
Estimator Name	E Roach
Section/Company	
Original Estimate has been Modified or Updated?	No

ESTIMATE SUMMARY

	Base Cost	% Cont.	Total Cont.	Uninflated Total
Utilities in R/W Phase	\$308,727	15.0%	\$46,309	\$355,036
In-Plan Utilities in CN Phase	\$0	0.0%	\$0	\$0
Contingency Method	Type 1 Percent			
Recommended RW Cont.	15.0%	%		
Contingency Remarks:				

GENERAL UTILITIES

Utility Estimate Method	Lump Sum	
Estimate Based On	Concept Drawing & GIS	
Estimator Name	E Roach	
Estimate Date	7/1/2024	
Lump Sum Type	Separate Detailed Estimate	
Utility Estimate (RW Phase)	\$308,727	\$
In-Plan Utility Est (CN Phase)	\$0	\$

Remarks

Per PCES estimate + \$35,000 for utility administration.

CONCEPTUAL PE ESTIMATE

Culpeper Estimate Tool - CET
Workbook Rev: 24.07.25

PROJECT INFORMATION		
Project Description		
5th Street (631) Diverging Diamond		
Application ID	11675	
District	Culpeper	
County/City/Town	Albemarle County	
Estimate Stage	Funding	
Estimate Date	8/16/2024	
Estimator Name	Kevin Pope	
Section/Company	VDOT / L&D Estimator	
Estimate Changed/Updated?	Yes	
Modified Date	8/27/2024	
Modified By	Justin Warfield	
Explanation of Modifications		
Reduced project length from 9000' divided. Other revisions as well.		
Administered by	VDOT	?
Project Lengths		
Undivided Road		LF
Divided Rd / Ramps	4900	LF
Bike/Ped Trails	250	LF
Adj. Align. Length	6545	LF
Total Project Length	5150	LF
Estimated # Sheets	8	Sheets
Project Tier	Tier 2	
# of Connections	4	EA
# of Exist. Bridges	1	Bridges
# of Prop. Bridges	1	Bridges
Survey Length	8150	LF
Other Remarks		
2300' divided 631, 250' extra path, 2600' ramps		

Estimator data
 Calculated data
 Descriptive
 Estimate totals

Show/Hide Manhours:

Hide

Sources for manhour norms vary in reliability and scope. See the "PE Hour Norms" tab for hour sources. The "Moderate" complexity level matches the norms. Simple and Complex levels are a judgement by the estimator to adjust the manhour norms. Avoid using the "Simple" level for low-hours tasks. The total estimate should be compared to similar projects or a %-based method for validation.

TOTAL CALCULATIONS							GRAND TOTAL		\$7,018,585			
SUB-TOTAL					\$6,266,594		12.0%		\$751,991		\$7,018,585	
Contingency Remarks	Scope risk lower than similarly sized projects.											
Discipline									Total Base \$	Total Conting.	Total	
TOTAL									\$6,266,594	\$751,991	\$7,018,585	
Project Mgmt-									\$169,270	\$20,312	\$189,583	
Roadway-									\$1,088,745	\$130,649	\$1,219,394	
Hydraulics-									\$494,919	\$59,390	\$554,310	
In-Plan Utilities-									\$0	\$0	\$0	
Traffic-									\$559,200	\$67,104	\$626,304	
Structures/Bridges-									\$3,203,829	\$384,460	\$3,588,289	
Materials/Geotech-									\$141,750	\$17,010	\$158,760	
Survey-									\$437,573	\$52,509	\$490,081	
Environmental-									\$83,107	\$9,973	\$93,080	
Right of Way-									\$88,200	\$10,584	\$98,784	
Other-									\$0	\$0	\$0	
LAP Oversight-									\$0	\$0	\$0	

PROJECT MANAGEMENT							Subtotal	\$169,270
# of Public Meetings	2							
Roundabout?	No							
	Personnel	Level						Total Cost
Project Mgmt	District	Complex						\$79,670
Construction Review	Consultant	Moderate						\$32,400
Programming	District	Moderate						\$9,000
V.E. Study	District	Moderate						\$21,600
C.O. Review	Central Office	Complex						\$21,600
Roundabout Comm.	Central Office	Moderate						\$0
Public Meetings			2 Meetings	\$2,500	\$/Mtg		\$/Mtg	\$5,000
Misc. Cost #1								\$0
Misc. Cost #2								\$0

Remarks	
---------	--

ROADWAY DESIGN								Subtotal	\$1,088,745
Urban vs. Rural	Urban								
	Personnel	Level							Total Cost
Road Plans	Consultant	Moderate							\$800,063
TMP Plans	Consultant	Complex							\$133,685
Indep. Plan Review	Consultant	Moderate							\$154,998
Misc. Cost #1									\$0
Misc. Cost #2									\$0
Remarks									

HYDRAULICS DESIGN								Subtotal	\$494,919
Urban vs. Rural	Urban								
# of Prop. Bridges	1								
# of BMPs	1								
# of Large Culverts	0								
Floodplain Encroach.	No								
	Personnel	Level							Total Cost
Drainage Design	Consultant	Moderate							\$237,182
E&SC Design	Consultant	Moderate							\$97,200
SWM Design	Consultant	Moderate							\$43,200
Bridge H&HA	Consultant	None							\$0
River Mechanics	Consultant	Moderate							\$0
Indep. Plan Review	District	Moderate							\$42,338
Nutrient Credits	Estimate Provided By:	S. Ikenberry				Date of Estimate:	8/13/2024		\$75,000
Misc. Cost #1									\$0
Misc. Cost #2									\$0
Remarks									

UTILITY DESIGN								Subtotal	\$0
# of In-Plan Utilities	0	utilities							
Default Length	5150	ft/utility							
Override Length		ft/utility							
Utility Sheets	0	sheets							
	Personnel	Level							Total Cost
Utility Design	Consultant	Moderate							\$0
Misc. Cost #1									\$0
Misc. Cost #2									\$0
Remarks									

TRAFFIC DESIGN/ENGINEERING/ANALYSIS								Subtotal	\$559,200
# of Signals	2								
Signals in MOT	2								
# of Intersections	5	intx							
# of Interchanges	1	intx							
Study Complete?	Yes								
Interchange Report?	Interst. OSAR								
	Personnel	Level							Total Cost
Sign/PM Plans	Consultant	Complex							\$120,000
Signal Plans	Consultant	Moderate							\$103,500
Lighting Plans	Consultant	Moderate							\$81,900
ITS Plans	Consultant	None							\$0
Full Traffic Study	Consultant	Moderate							\$0
Update Traffic Study	Consultant	Moderate							\$72,000
IUR/IMR	Consultant	Moderate							\$165,600
Traffic Eng. Review	District	Moderate							\$16,200
Misc. Cost #1									\$0
Misc. Cost #2									\$0
Remarks									

STRUCTURE & BRIDGE DESIGN								Subtotal	\$3,203,829
# of Prop. Bridges	1	Bridges							
								Off	Lump Sum
Length of Ret. Wall	850	ft							
Length of Noise Wall	0	ft							
	Personnel	Level							Total Cost
Bridge Design	Estimate Provided By:	B. Chapman				Date of Estimate:	8/19/2024		\$3,144,736
									\$3,144,736
Retaining Walls	Consultant	Moderate							\$44,693
Noise Walls	Consultant	Moderate							\$0
Indep. Plan Review	Consultant	Complex							\$14,400
Misc. Cost #1									\$0

Misc. Cost #2		\$0
Remarks	Bridge PE estimated at 20% of \$15,723,818 bridge cost	

MATERIALS/GEOTECHNICAL DESIGN								Subtotal	\$141,750
Length of Walls	850	ft							
Cuts/Fills > 25'?	No								
# of Large Culverts	0	Culverts							
# of BMPs	1	Ponds							
# of Prop. Bridges	1	Bridges							
# of Soil Borings	49.75	Borings							
	Personnel	Level							Total Cost
Materials Review	Consultant	Moderate							\$32,400
Soils Investigation	Consultant	Moderate							\$109,350
Misc. Cost #1									\$0
Misc. Cost #2									\$0
Remarks									

SURVEY								Subtotal	\$437,573
Base Survey Est Type	Lump Sum								
Survey Location Type	Urban								
# Existing Utilities	7	Lines							
LF Utility in Limits	36050	LF							
LF Location Survey	8150	LF							
LF Utility Survey	57050	LF							
# of Test Holes	45.0625	Holes							
# of Existing Bridges	1	Bridges							
	Personnel	Level							Total Cost
Base Survey	Estimate Provided By:	M. Mauro				Date of Estimate:	7/11/2024		\$220,000
Photogrammetry	Consultant	Moderate							\$0
Location Survey/Rev	Consultant	Moderate							\$0
Bridge Survey	Consultant	Moderate							\$0
Base Survey Total									\$220,000
Subsurface Utility	Consultant	Moderate							\$108,825
RW Sheets	Consultant	Simple							\$42,878
Test Holes	Consultant	Moderate							\$51,870
RW/UT Staking	Consultant	Simple							\$14,000
Misc. Cost #1									\$0
Misc. Cost #2									\$0
Remarks									

ENVIRONMENTAL								Subtotal	\$83,107
	Personnel	Level							Total Cost
Environmental Costs	Estimate Provided By:	C. Perryman				Date of Estimate:	8/16/2024		\$81,000
ECP Sheets/Sketches	Consultant	Moderate							\$2,107
Misc. Cost #1									\$0
Misc. Cost #2									\$0
Remarks									

RIGHT OF WAY								Subtotal	\$88,200
Railroad Impact?	No								
	Personnel	Level							Total Cost
Right of Way	District	Simple							\$37,800
Utility Coordination	District	Moderate							\$50,400
Railroad Review	Consultant	Moderate							\$0
Misc. Cost #1									\$0
Misc. Cost #2									\$0
Remarks									

OTHER P.E. COSTS								Subtotal	\$0
	Personnel	Level							Total Cost
Landscape Design	Consultant	None							\$0
Misc. Cost #1									\$0
Misc. Cost #2									\$0
Misc. Cost #3									\$0
Misc. Cost #4									\$0
Remarks									

PROJECT COST ESTIMATE

8/28/2024
2:32 PM

PROJ.: 5th Street Station - Full Replacement Option
SITE:

2.98

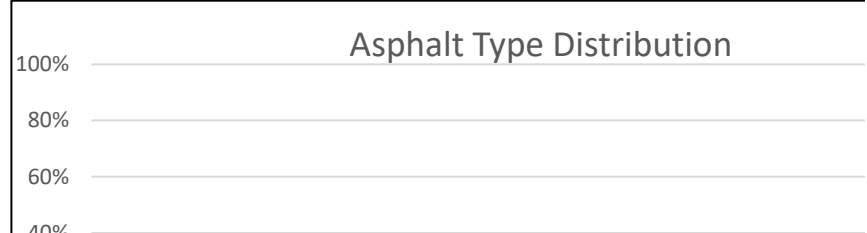
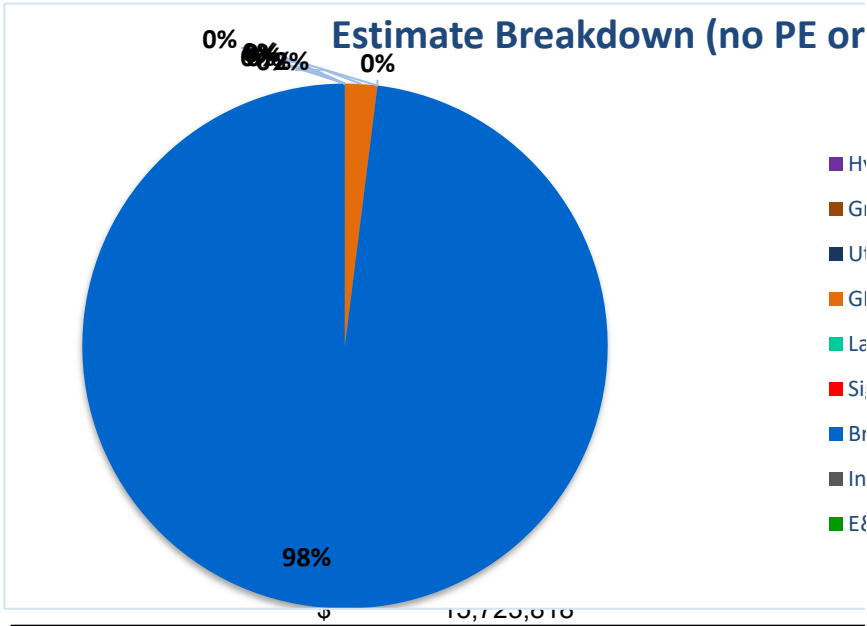
PROJ.: 5th Street Station - Full Replacement Option
SITE: 0

8/28/2024

		Item Code:		New Item Codes			
ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked	CEWB ID
			Estimated				
Item Code	Item Description	Units	Qty	Unit Price			
506SD20-0002	RETAINING WALL RW-3	CY	170	\$1,475.40	\$ 250,817.19	Locked	3
512SD20-0008	IMPACT ATTEN.SER.TY.1 TL-2,<40 MPH	EA	4	\$15,000.00	\$ 60,000.00	Locked	3
316SD20-0037	CONC. CLASS A-4 BRIDGE APPR. SLAB	CY	105	\$1,291.45	\$ 135,602.27	Locked	7
316SD20-0038	REINF. STEEL BRIDGE APPR. SLAB	LB	29400	\$3.85	\$ 113,160.60	Locked	7
401SD20-0002	SELECT BACKFILL ABUTMENT ZONE	TON	3500	\$75.98	\$ 265,941.20	Locked	7
401SD20-0009	STRUCTURE EXCAVATION	CY	2500	\$116.90	\$ 292,261.26	Locked	7
402SD20-0004	TEMPORARY SHEET PILING	SF	6000	\$76.19	\$ 457,153.79	Locked	7
403SD20-0004	DYNAMIC PILE TEST	EA	4	\$6,549.81	\$ 26,199.24	Locked	7
403SD20-0006	STEEL PILES 12"	LF	1600	\$148.32	\$ 237,305.44	Locked	7
403SD20-0034	PILE POINT FOR 12" STEEL PILE	EA	68	\$337.27	\$ 22,934.07	Locked	7
404SD20-0005	CONC. CLASS A4 MOD. LOW SHRINKAGE	CY	699	\$2,560.61	\$ 1,789,866.81	Locked	7
404SD20-0009	BRIDGE DECK GROOVING	SY	1817	\$15.40	\$ 27,981.80	Locked	7
404SD20-0010	COVER DEPTH SURVEY	SY	1817	\$9.80	\$ 17,806.60	Locked	7
404SD20-0021	CONCRETE CLASS A3	CY	1000	\$2,400.00	\$ 2,400,000.00	Locked	7
406SD20-0003	CORROSION RESISTANT REINF.STEEL CL. I	LB	100000	\$4.42	\$ 441,940.02	Locked	7
406SD20-0005	CORROSION RESISTANT REINF.STEEL CL. III	LB	107357	\$7.67	\$ 823,342.30	Locked	7
407SD20-0006	STR.STEEL PLATE GIRDER ASTM A709 GRADE50	LS	1040000	\$5.12	\$ 5,323,552.17	Locked	7
410SD20-0011	RAILING, CPSR 2 RAIL	LF	668	\$584.57	\$ 390,491.30	Locked	7
410SD20-0012	RAILING, CPSR 3 RAIL	LF	668	\$759.11	\$ 507,082.94	Locked	7
413SX20-0003	NS ENV.& WORKER PROTECT.	LS	1	\$63,000.00	\$ 63,000.00	Locked	7
413SX20-0004	NS MATERIAL DISPOSAL	LS	1	\$15,000.00	\$ 15,000.00	Locked	7
413SX20-0005	NS REM. PORT.OF EX.STR.	LS	1	\$1,800,000.00	\$ 1,800,000.00	Locked	7
415SD20-0004	CONC. SLAB SLOPE PROTECTION 4"	SY	1,050.000	\$211.27	\$ 221,835.19	Locked	7
427SD20-0003	SILICONE JOINT SEALANT 2"	LF	362.000	\$112.00	\$ 40,544.00	Locked	7

Total Number of Bid items = 24

Use Formula for Mobilization			
MOBILIZATION	\$	816,190.91	= \$80,000 + 5% OF (T
SUBTOTAL	\$	15,723,818.20	
ENGINEERING	\$	3,144,763.64	20.0%
CONTINGENCIES	\$	1,572,381.82	10.0%
Inflation:	\$	-	
TOTAL	\$	20,440,963.66	
Regression Model:	Non-Linear	Netwo	
District:	Statewide	Enhance	
Pricing Model Date:	6/27/2024	Current To 5/2024	Le



5th St. DDI SSRD6 Concept Estimate

8/13/2024

ITEM	UNIT	QUANT.	UN.PRICE	INF. PRICE	COST	INFL COST
15" Pipe (1150)	LF	0	73.39	174.38	0	0
15" SS Pipe (1156)	LF	1182	105	168.66	124110	199356.1
18" Pipe (1180)	LF	0	92.05	126.77	0	0
18" SS Pipe (1186)	LF	0	123	188.39	0	0
24" Pipe (1240)	LF	0	138.02	162.49	0	0
24" SS Pipe (1246)	LF	0	134	245.88	0	0
30"Pipe (1300)	LF	0	166.37	179.02	0	0
30" SS Pipe (1306)	LF	0	155	422.98	0	0
36"Pipe (1360)	LF	0	176.24	208.36	0	0
36" SS Pipe (1366)	LF	0	214	323.76	0	0
42" Pipe (1420)	LF	0	220.41	303.92	0	0
42"SS Pipe (1426)	LF	0	258.8	352.96	0	0
48" Pipe (1480)	LF	0	258.06	455.74	0	0
48" SS Pipe (1486)	LF	0	269.72	553.41	0	0
60" SS Pipe (1606)	LF	0	348.27	652.76	0	0
MH-2 (9055)	VF	0	1115	1761.85	0	0
MH-1 F&C (9057)	EA	0	770	1164.39	0	0
DI-5 (7506)	EA	1	5154.96	7768	5154.96	7768
DI-7 (7508)	EA	0	6119.92	8177	0	0
DI-3, L=8' (6819)	EA	29	6348.68	10360	184111.72	300440
NS Slot Drain (20' Length)	EA	0	4996.44	6349.18	0	0
ES-1 or 2 (15") (6150)	EA	18	1066.63	1432	19199.34	25776
ES-1 or 2 (18") (6180)	EA	0	1073.41	1580	0	0
ES-1 or 2 (24") (6240)	EA	0	1418.77	2036	0	0
ES-1 or 2 (30") (6300)	EA	0	1781.69	3015	0	0
ES-1 or 2 (36") (6360)	EA	0	220	4016	0	0
ES-1 or 2 (42") (6420)	EA	0	3025.67	49992	0	0
ES-1 or 2 (48") (6480)	EA	0	4800	6941	0	0
EW-11A Grate & Frame (574)	EA	0	2883.33	8883	0	0
Conc. Class A3 (525) EW-1 or EW-2	CY	0	1519.25	1370	0	0
Conc. Class A3 (525) PG-5	CY	0	1250	1370	0	0
Conc. Class A4 Box Culvert (522)	CY	0	2102.41	1823	0	0
Rein. Steel (540)	LB	0	4.88	5.27	0	0
EW-11 Pipe Grate (571)	LF	0	130	362	0	0
Paved Ditch PG-5 (9215)	SY	0	180	195.18	0	0
EC-1 Cl. I (9150)	TON	36	127.14	190	4577.04	6840
Dry Riprap Class I 18" (26119)	TON	0	97.26	158.82	0	0
SWM Basin (Quantity only)	LS	1	200000	200000	200000	200000
SWM Basin Fencing FE-W1 (22501)	LFx1.5	0	22.7	41	0	0
SWM Basin As-Built	EA	1	3200	3200	3200	3200
Nutrient Credits (Ivy Creek)	LB	3	25000	25000	75000	75000
Minor Str. Excavation Pipe (211)	CY	0	68.2	89.42	0.00	0
Minor Str. Excavation Box (212)	CY	0	68.2	124.13	0	0
EW-12 (596)	EA	1	990.15	1259.38	990.15	1259.38
Underdrain UD-4 (588)	LF	3997	18.9	22.84	75543.3	91291.48

EC-2 (27321)	SY	992	7	5.26	6944	5217.92
EC-3 (27325)	SY	0	6.45	7.6	0	0
Temp. Silt Fence (27505)	LF	2302	5.56	6.28	12799.12	14456.56
Rock Check Dam Ty-1 (27410)	EA	90	581.02	650.33	52291.8	58529.7
Inlet Protection A (27451)	EA	1	471.79	551.91	471.79	551.91
Inlet Protection B (27461)	EA	29	423.74	520.59	12288.46	15097.11
Siltation Contl. Ex. (27430)	CY	580.14	15.28	17.9	8864.5392	10384.51
Turbidity Curtain	LF	0	35.7		0	0
Temporary Diversion Dike(27345)	LF	0	11.48	13.88	0	0
96" Pipe (01962)	LF	0	2628.35	2966.09	0	0
NS Remove Exist DI/MH (24801/2)	EA	4	1681.33	2504.23	6725.32	10016.92
NS Remove Exist. Endwall(24803)	EA	0	1016.66	1210.12	0	0
Flowable Fill (00529)	CY	6	656.66	799.65	3939.96	4797.9
Total					796211.5	1029984



Project Cost Estimating System RIGHT-OF-WAY ESTIMATE



Project No.:

** MISSING DATA **

VDOT Construction District :

** MISSING DATA **

0

Select Project Area Real Estate Costs :

Average

Define Project Land Use Characteristics :

Agricultural :

Residential :

100%

Industrial :

Commercial :

0%

100%

Instructions: Please fill-in all applicable White Boxes
or make a choice from the Drop-down Lists

Enter the Approximate Number
of Parcels on the Project :

2

1. LAND VALUE

Prop. Right-of-Way

Temp. Ease.

Perm. & Util. Ease.

Total Right-of-Way Project Length (ML + Connections)

Average width of Existing RW

Average width of Proposed RW

Total area of all additional Prop. Right-of-Way

ft

ft

ft

sf

Computed RW Cost per sq ft =

\$0.00

Enter Right-of-Way Estimator's Right-of-Way Cost

per sq ft :

\$10.86

Enter total sq ft (override calculation):

4,455

4,455 sq ft =

0.000

Ac.

Approx. % of Prop. CL within

ft

of Exist. CL

100%

Approx. % of Prop. CL between

ft

& ft

of Exist. CL

Approx. % of Prop. CL greater than

ft

from Exist. CL

Average Width of parallel Temporary Easements Left

ft

Total Length of parallel Temporary Easements Left

ft

Average Width of parallel Temporary Easements Right

ft

Total Length of parallel Temporary Easements Right

ft

Comp. Temp. Ease. Cost / sq ft =

\$0.00

Enter Right-of-Way Estimator's Temp. Ease. Cost

per sq ft :

\$2.02

Enter total sq ft (override calculation):

2,375

2,375 sq ft =

0.055

Ac.

Total Area of All Replacement Utility Easements

5,334

sf

AND Select % of RW Cost for Util. Ease.

Comp. Utility Ease. Cost / sq ft =

\$0.00

RW Est's. Utility Ease. Cost per sq ft :

\$4.61

5,334 sq ft =

0.122

Ac.

This Box Must Be Empty >

ea

Comp. Perm. Ease. Cost / sq ft =

\$0.00

RW Est's. Perm. Ease. Cost per sq ft :

Total area of All Permanent Easements

sf

0 sq ft =

0.000

Ac.

COST OF LAND (Item # 1)

\$77,800

2. BUILDING VALUE

Based upon comparison to similar, occupied **Residential Dwellings**

in the Project Area, enter the Number of:

Computed:

A. Low Cost Residential Dwellings :

\$0

B. Moderately Low Cost Dwellings :

\$0

C. Average Cost Residential Dwellings :

\$0

D. Moderately High Cost Dwellings :

\$0

E. High Cost Residential Dwellings :

\$0

Computed Total Residential Dwelling Costs :

\$0

Estimator's Total Residential Dwelling Costs :

\$0

Enter the total estimated cost of ALL **COMMERCIAL & INDUSTRIAL BUILDINGS** to be taken:

Note: No Computed Costs Available. Use User Defined Costs Below:

Estimator's Total Commercial / Industrial Buildings Costs :

\$0

3. OTHER IMPROVEMENTS

Enter the estimated cost of ALL **OTHER IMPROVEMENTS** on the Project:

Computed Total Other Improvements Costs :

\$7,780

Estimator's Total Other Improvements Costs :

\$7,000

4. DAMAGES

Anticipated % of Parcels Affected by Damages to Remainder :

Anticipated Relative Cost Impact of Damages to Remainder :

Very Low

Approximate Number of Parcels Affected :

0

Computed Cost of Damages to Remainder :

\$0

Estimator's Total Cost of Damages to Remainder :

\$2,000

TOTAL ACQUISITIONS (Items # 1 - 4)

\$86,800

5. ADMINISTRATIVE SETTLEMENTS

Anticipated % of Parcels Affected by Administrative Settlements :	20%
Anticipated Relative Cost Impact of Administrative Settlements :	
Approximate Number of Parcels Affected :	1
Computed Cost of Administrative Settlements :	\$0
Estimator's Total Cost of Administrative Settlements :	\$17,360

6. CONDEMNATION INCREASES

Anticipated % of Parcels Affected by Condemnation Increases :	40%
Anticipated Relative Cost Impact of Condemnation Increases :	
Approximate Number of Parcels Affected :	1
Computed Cost of Condemnation Increases :	\$0
Estimator's Total Cost of Condemnation Increases :	\$34,720

7. ADMINISTRATIVE COSTS & INCIDENTAL EXPENSES

Anticipated Relative Cost Impact of Admin. Costs & Incidental Expenses :	
Computed Administrative Costs & Incidental Expenses :	\$0
Estimator's Total Administrative Costs & Incidental Expenses :	\$95,000

8. DEMOLITION CONTRACTS

Anticipated Relative Cost Impact of Demolition Contracts :	
Computed Costs of Demolition Contracts :	\$0
Estimator's Total Cost of Demolition Contracts :	\$0

9. HAZARDOUS MATERIALS REMOVAL

Anticipated Number of Demolished Buildings Requiring Asbestos Removal :	
Anticipated Relative Cost of Asbestos Removal from Demolished Buildings :	
Anticipated Number of Other Hazardous Materials Removal Sites :	
Anticipated Relative Cost Impact of Other Hazardous Materials Removal :	
Computed Cost of Hazardous Materials Removal :	\$0
Estimator's Total Costs of Hazardous Materials Removal :	\$0

10. PROPERTY MANAGEMENT

Anticipated Relative Cost Impact of Property Management :	
Computed Costs of Property Management :	\$0
Estimator's Total Cost of Property Management :	\$111,000

TOTAL OTHER ITEMS (Items # 5 - 10) \$258,080

11. RELOCATION ASSISTANCE**Residential Relocation Costs:**

Anticipated Relative Cost Impact of Residential Relocation Expenses :	
Computed Residential Relocation Costs :	\$0
Estimator's Total Residential Relocation Costs :	\$0

Commercial Relocation Costs:

Note: No Computed Costs Available. Use User Defined Costs Below:

Estimator's Total Comm/Indust Relocation Costs :	\$0
--	-----

Total Displacements:

Farms:

Families:

Non-Profit:

Businesses:

Personal Property Only:

TOTAL RELOCATION ASSISTANCE (Item # 11) \$0

12. YEAR OF RIGHT-OF-WAY AUTHORIZATION	FY2023	FY2023
--	--------	--------

13. MANUAL INFLATION RATE	0.00%
---------------------------	-------

	Today's Cost	Factor	Inflated Cost
SUB-TOTAL RIGHT-OF-WAY COSTS	\$344,880	N/A	\$344,880
UTILITY COSTS TO RIGHT-OF-WAY PROJECT * (PCES)	\$273,727	N/A	\$273,727
TOTAL RIGHT-OF-WAY COSTS (PCES)	\$618,607		\$618,607

* Utility Data display requires completion of Utilities Estimate Worksheet (tab below)

COMMENTS:

* See comments on the Comments Tab.

RW-238 Data :

Right-of-Way Estimate Date : 07/25/24

Based on Approved / Unapproved Plans ? : Unapproved Plans

Participating Cost / Non-Participating Cost ? : Participating Cost

Today's Date : 08/28/24



Project Cost Estimating System UTILITIES ESTIMATE



Project No.:

** MISSING DATA **

A. ELECTRICAL

Transmission

	Computed or User	RW or Const	Type of Pole	No Entry Required	Number of Poles	Rural or Urban	Percent VDOT	Total Cost	to RW Project	to Const Project
A	Computed	RW				Rural	100%	\$0	\$0	\$0
B	Computed	RW				Rural	100%	\$0	\$0	\$0
C	Computed	RW				Rural	100%	\$0	\$0	\$0
D	Computed	RW				Rural	100%	\$0	\$0	\$0
								\$0	\$0	\$0

Distribution - Aerial

	Computed or User	RW or Const	Type of Pole	No Entry Required	Number of Poles	Rural or Urban	Percent VDOT	Total Cost	to RW Project	to Const Project
E	Computed	RW	Single Phase		1	Rural	100%	\$6,727	\$6,727	\$0
F	Computed	RW				Rural	100%	\$0	\$0	\$0
G	Computed	RW				Rural	100%	\$0	\$0	\$0
H	Computed	RW				Rural	100%	\$0	\$0	\$0
I	Computed	RW				Rural	100%	\$0	\$0	\$0
J	Computed	RW				Rural	100%	\$0	\$0	\$0
								\$6,727	\$6,727	\$0

Distribution - Underground - by Linear Foot

	Computed or User	RW or Const	Type of Service	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
K	Computed	RW	Single Phase		500	100%	\$57,000	\$57,000	\$0
L	Computed	RW				100%	\$0	\$0	\$0
M	Computed	RW				100%	\$0	\$0	\$0
N	Computed	RW				100%	\$0	\$0	\$0
							\$57,000	\$57,000	\$0

Distribution - Underground - by Pole Equivalent

	Computed or User	RW or Const	Equivalent Type of Pole	No Entry Required	Equiv. # of Poles	Percent VDOT	Total Cost	to RW Project	to Const Project
O	Computed	RW				100%	\$0	\$0	\$0
P	Computed	RW				100%	\$0	\$0	\$0
Q	Computed	RW				100%	\$0	\$0	\$0
R	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Distribution - Conduit for Underground Electrical

Computed or User		RW or Const	Type of Service	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
S T	Computed	RW				100%	\$0	\$0	\$0
	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Distribution - Underground - Manholes

	Computed or User	RW or Const	Size / Price Range of Manhole	No Entry Required	Number of MH's	Percent VDOT	Total Cost	to RW Project	to Const Project
U	Computed	RW				100%	\$0	\$0	\$0
V	Computed	RW				100%	\$0	\$0	\$0
W	Computed	RW				100%	\$0	\$0	\$0
X	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Misc. Electrical Costs

		TOTAL ELECTRICAL		Total to RW Proj	Total to Const Proj
Y	Misc. Electrical Costs Charged to RW Project:				
Z	Misc. Electrical Costs Charged to Const. Project:		\$63,727	\$63,727	\$0

B. TELEPHONE

Aerial - Copper Wire

	Computed or User	RW or Const	Type of Cable (Pair Cable)	No Entry Required	Number of Poles	Percent VDOT	Total Cost	to RW Project	to Const Project
A	Computed	RW				100%	\$0	\$0	\$0
B	Computed	RW				100%	\$0	\$0	\$0
C	Computed	RW				100%	\$0	\$0	\$0
D	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Aerial - Fiber Optic

	Computed or User	RW or Const	Type of Cable (Optical Fiber)	No Entry Required	Number of Poles	Percent VDOT	Total Cost	to RW Project	to Const Project
E	Computed	RW				100%	\$0	\$0	\$0
F	Computed	RW				100%	\$0	\$0	\$0
G	Computed	RW				100%	\$0	\$0	\$0
H	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Underground - Copper Wire

	Computed or User	RW or Const	Type of Cable (Pair Cable)	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
I	Computed	RW				100%	\$0	\$0	\$0
J	Computed	RW				100%	\$0	\$0	\$0
K	Computed	RW				100%	\$0	\$0	\$0
L	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Underground - Fiber Optic

	Computed or User	RW or Const	Type of Cable (Optical Fiber)	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
M	Computed	RW				100%	\$0	\$0	\$0
N	Computed	RW				100%	\$0	\$0	\$0
O	Computed	RW				100%	\$0	\$0	\$0
P	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Underground - Copper Wire - In Conduit

	Computed or User	RW or Const	Type of Cable (Pair Cable)	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
Q	Computed	RW				100%	\$0	\$0	\$0
R	Computed	RW				100%	\$0	\$0	\$0
S	Computed	RW				100%	\$0	\$0	\$0
T	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Underground - Fiber Optic - In Conduit

	Computed or User	RW or Const	Type of Cable (Optical Fiber)	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
U	Computed	RW	64		2,000	100%	\$210,000	\$210,000	\$0
V	Computed	RW				100%	\$0	\$0	\$0
W	Computed	RW				100%	\$0	\$0	\$0
X	Computed	RW				100%	\$0	\$0	\$0
							\$210,000	\$210,000	\$0

Manholes for UG Telephone Service

	Computed or User	RW or Const	Item	No Entry Required	Quantity	Percent VDOT	Total Cost	to RW Project	to Const Project
Y	Computed	RW	Telephone Manhole			100%	\$0	\$0	\$0
Z	Computed	RW	Telephone Manhole			100%	\$0	\$0	\$0

Misc. Telephone Costs

AA	Misc. Telephone Costs Charged to RW Project:	
BB	Misc. Telephone Costs Charged to Const. Project:	

TOTAL TELEPHONE	Total to RW Proj	Total to Const Proj
\$210,000	\$210,000	\$0

C. CATV

Aerial CATV

	Computed or User	RW or Const	Type of Service	No Entry Required	Number of Pole Att'mnts	Percent VDOT	Total Cost	to RW Project	to Const Project
A	Computed	RW				100%	\$0	\$0	\$0
B	Computed	RW				100%	\$0	\$0	\$0
C	Computed	RW				100%	\$0	\$0	\$0
D	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Underground CATV

	Computed or User	RW or Const	Type of Service	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
E	Computed	RW				100%	\$0	\$0	\$0
F	Computed	RW				100%	\$0	\$0	\$0
G	Computed	RW				100%	\$0	\$0	\$0
H	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Power Units

	Computed or User	RW or Const	Item	No Entry Required	Quantity	Percent VDOT	Total Cost	to RW Project	to Const Project
I	Computed	RW	CATV Power Supply			100%	\$0	\$0	\$0
J	Computed	RW	CATV Power Supply			100%	\$0	\$0	\$0

Misc. CATV Costs

Misc. CATV Costs Charged to RW Project:

Misc. CATV Costs Charged to Const. Project:

TOTAL CATV	Total to RW Proj	Total to Const Proj
\$0	\$0	\$0

D. WATER

Water Line

	Computed or User	RW or Const	Diameter of Water Pipe (in)	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
A	Computed	Const				100%	\$0	\$0	\$0
B	Computed	Const				100%	\$0	\$0	\$0
C	Computed	Const				100%	\$0	\$0	\$0
D	Computed	Const				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Misc. Water Costs

E Misc. Water Costs Charged to Const. Project:

F Misc. Water Costs Charged to RW Project:

TOTAL WATER	Total to RW Proj	Total to Const Proj
\$0	\$0	\$0

E. SANITARY SEWER

Sewer Line

	Computed or User	RW or Const	Diameter of Sewer Pipe (in)	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
A	Computed	Const				100%	\$0	\$0	\$0
B	Computed	Const				100%	\$0	\$0	\$0
C	Computed	Const				100%	\$0	\$0	\$0
D	Computed	Const				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Misc. Sewer Costs

E Misc. Sewer Costs Charged to Const. Project:

F Misc. Sewer Costs Charged to RW Project:

TOTAL SEWER	Total to RW Proj	Total to Const Proj
\$0	\$0	\$0

F. NATURAL GAS / PROPANE

Distribution

	Computed or User	RW or Const	Diameter of Gas Line (in)	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
A	Computed	RW				100%	\$0	\$0	\$0
B	Computed	RW				100%	\$0	\$0	\$0
C	Computed	RW				100%	\$0	\$0	\$0
D	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Transmission

	Computed or User	RW or Const	Diameter of Gas Line (in)	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
E	Computed	RW				100%	\$0	\$0	\$0
F	Computed	RW				100%	\$0	\$0	\$0
G	Computed	RW				100%	\$0	\$0	\$0
H	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Misc. Natural Gas / Propane Costs

I	Misc. Gas / Pro Costs Charged to RW Project:		TOTAL GAS / PROPANE	Total to RW Proj	Total to Const Proj
J	Misc. Gas / Pro Costs Charged to Const. Project:		\$0	\$0	\$0

G. PETROLEUM

Transmission

	Computed or User	RW or Const	Diameter of Gas Line (in)	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	to RW Project	to Const Project
A	Computed	RW				100%	\$0	\$0	\$0
B	Computed	RW				100%	\$0	\$0	\$0
C	Computed	RW				100%	\$0	\$0	\$0
D	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Misc. Petroleum Costs

E	Misc. Petroleum Costs Charged to RW Project:		TOTAL PETROLEUM	Total to RW Proj	Total to Const Proj
F	Misc. Petroleum Costs Charged to Const. Project:		\$0	\$0	\$0

H. CELLULAR

Cellular Telephone Costs

A	Total Cellular Costs Charged to RW Project:		TOTAL CELLULAR	Total to RW Proj	Total to Const Proj
B	Total Cellular Costs Charged to Const. Project:		\$0	\$0	\$0

I. ADDITIONAL COSTS

	Additional Utility Costs to <u>Right-of-Way Project</u> :	
Comments:		
	Additional Utility Costs to <u>Construction Project</u> :	
Comments:		
	Additional Utility Costs to <u>Utility Owners/Others</u> :	
Comments:		

TOTAL UTILITY COST - <u>RIGHT-OF-WAY PROJECT</u>	\$273,727
TOTAL UTILITY COST - <u>CONSTRUCTION PROJECT</u>	\$0
TOTAL UTILITY COST - <u>UTILITY OWNER / OTHERS</u>	\$0
GRAND TOTAL UTILITY COSTS (PCES)	\$273,727

Version 12.00



Project Cost Estimating System COMMENTS



General / Miscellaneous Comments from CONST, RW, & UTILITY Worksheets

Team Member and Section

Date Entered

1	No water, sanitary sewer or gas seem present at the site. If any of these utilities are existing, there may additional cost.	ELR/Util	07/01/24
2	Please add \$35,000 for Utility Administration cost.	ELR/Util	07/01/24
3	Please add 15% for Utility contingency cost.	ELR/Util	07/01/24
4	ROW estimate completed based on preliminary, unapproved aerial sketch and on a Parcel Count of 2 parcels.	Terri Dimino, ROW	07/25/24
5	Line 7 on the RW Tab includes estimated costs for: RW Admin, Court costs and \$35,000 for Utility Admin.	Terri Dimino, ROW	07/25/24
6	Parcel 001: There appears to be public water; so, well was assumed to no longer be needed.	Terri Dimino, ROW	07/25/24
7	Line 10 on the RW Tab includes a 30% Right of Way Contingency (\$70,000).	Terri Dimino, ROW	07/25/24
8	Line 10 on the RW Tab includes a 15% Utility Contingency (\$41,000).	Terri Dimino, ROW	07/25/24
9			
10			
11			
12			
13			
14			
15			



64/5TH STREET DIVERGING DIAMOND INTERCHANGE PROJECT SCOPE DEVELOPMENT AND COST ESTIMATE

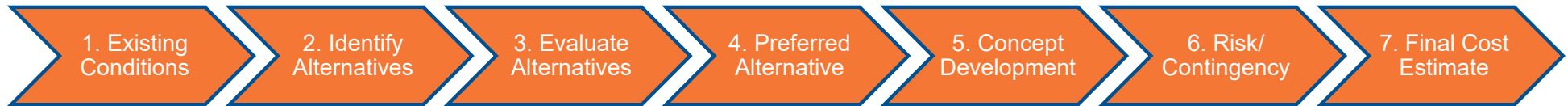
MPO Tech

 Charles Proctor & Sandy Shackelford

October 15, 2024

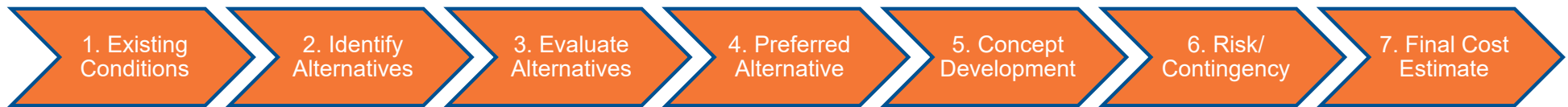
Outline

- **Application Development Process Overview**
- **Process Constraints**
- **Alternative Selection**
- **Cost Estimate**
- **Application Timeline**
- **Next Steps**



Application Development Process

- 1. Assess Existing Conditions**
- 2. Identify Alternatives**
- 3. Evaluate Alternatives**
- 4. Select Preferred Alternative**
- 5. Develop concept/base cost estimate/application materials**
- 6. Identify risks/contingencies**
- 7. Final Cost Estimate**



Application Development Constraints

- **Compressed schedule due to SMART SCALE program review process**
- **Additional project readiness requirements introduced**
- **Conceptual design development iterative process involving multiple disciplines**

Planning	Environment	Structure & Bridge
Location & Design	Traffic	Estimator
Utilities	Right of Way	Consultants
- **Concepts developed in-house or by consultants**
 - **Consultant-developed work reviewed/approved by VDOT**
- **Limited time/resources to conduct pre-scoping activities**
 - **Competing priorities for VDOT staff impacts review turnaround**
- **Cost estimates have limited shelf lives**
 - **Estimates have to be re-developed each round**



- **Issues identified during the 5th Street Corridor Study/updated in late 2023/early 2024:**
 - High crash volumes
 - Long queues
 - Operational concerns
 - Lack of multimodal connections
- **Project goals:**
 - Improve interchange operations and safety
 - Enhance multimodal accessibility and connectivity for pedestrians, bicyclists, and transit users
- **Identified alternatives included:**
 - Optimized Diamond Interchange
 - Single Point Urban Interchange
 - Diverging Diamond Interchange
 - Existing Condition + Sidewalk



Intersection Improvement Alternatives							
Interchange		Measure of Effectiveness	Existing Condition	Optimized Diamond	DDI	SPUI	Sidewalk-Only Concept
1	Exit 120 - I-64 at 5th Street	VJuST Volume-to-Capacity (V/C) Analysis	1.18	0.89	0.74	0.67	---
		Crash Modification Factor (CMF)	---	0.97	0.37	0.60	0.12*
		Relative Cost	---	1-2	3-4	5	1

*Sidewalk-Only CMF value specifically for bike/pedestrian crashes



Optimized Diamond Interchange

- Negligible safety benefits
- Minor operational improvements
- Low relative cost

Diverging Diamond Interchange

- Substantive safety benefits
- Moderate operational benefits
- Moderate-high relative cost

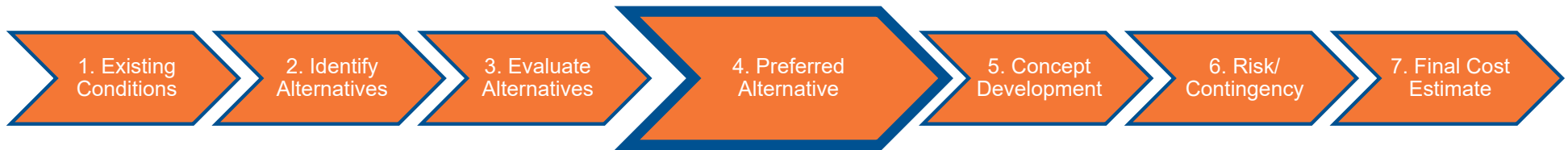
Single Point Urban Interchange

- Limited safety benefits
- Highest operational benefits
- Highest relative cost

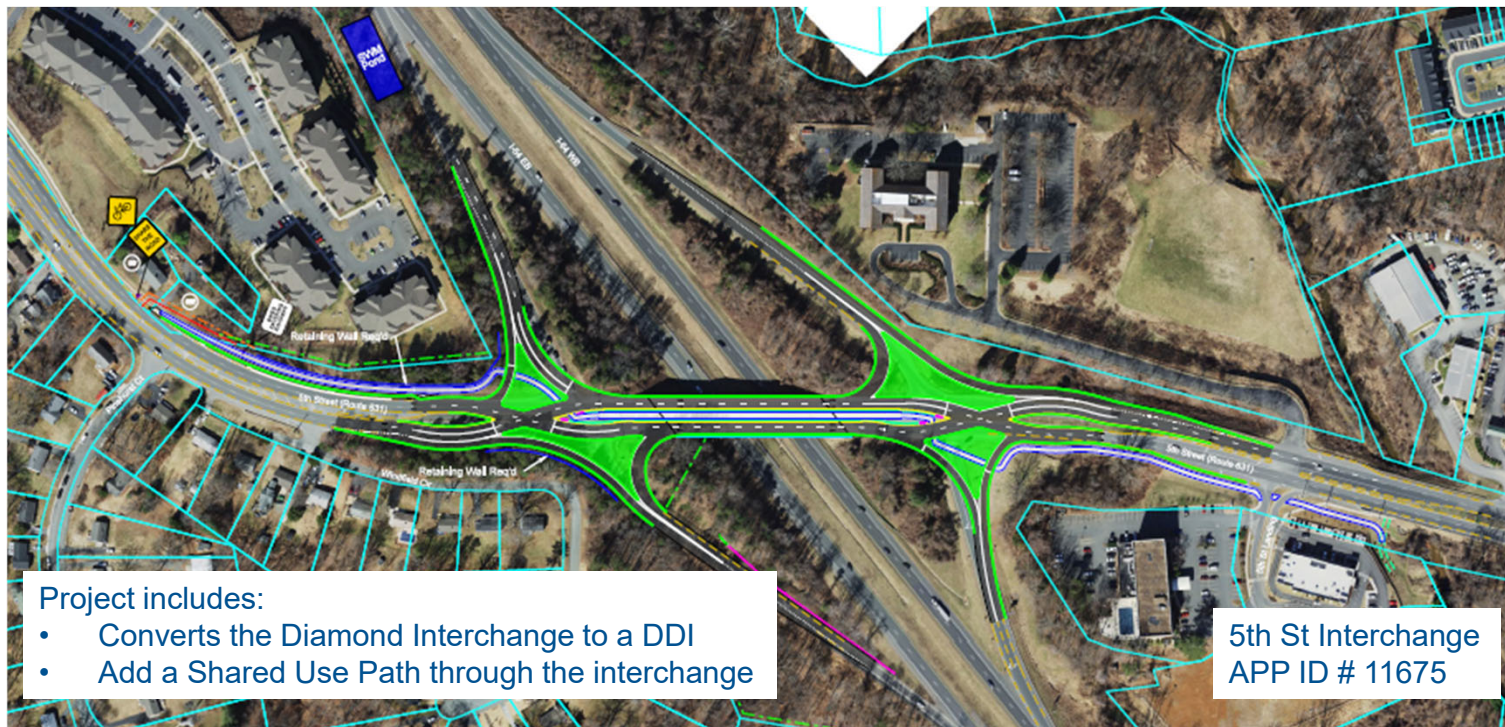
Existing Condition + Sidewalk

- Not eligible MPO/PDC application
- Safety benefits only apply to pedestrian-related crashes

Factor	Safety	Congestion Mitigation	Accessibility	Land Use	Economic Development	Environmental Quality
Category B – Round 5	20%	15%	20%	15%	20%	10%
Category B – Round 6	20%	25%	25%	Multiplier	20%	10%



- Public feedback favored DDI
- DDI selected as preferred alternative





PROPOSED ESTIMATE					PROPOSED SCHEDULE	
Phase	Base	% Cont.	Uninflated Total (2024)	Inflated Total	Phase (Task)	Target Date
PE	\$6,270,000	12%	\$7,022,400	\$8,207,079	PE Start (12)	9/1/2027
RW/UT	\$510,000	41%	\$719,100	\$954,318	RW Start (52)	5/8/2031
CN (Cont)	\$31,600,000	38%	\$49,612,000	\$69,848,735	CN Start (80)	7/13/2032
CN (CEI)		19%			CN End (91)	5/1/2034
Total Estimate			\$57,353,500	\$79,010,131		

SCOPE DESCRIPTION
• Convert existing traditional diamond interchange to a Diverging Diamond Interchange. • Include a shared use path across the interchange to tie into existing pedestrian facilities to the northeast and southwest. • A bridge replacement is likely required due to the proposed changes to the superstructure.

Bridge specific line items (uninflated):

- **PE: \$3,203,829 (51% of uninflated total)**
- **CN: \$16,571,606 (52% of uninflated total)**

5th Street/64 DDI Application Development Timeline



Round 5/Round 6* Comparisons (Statewide)

Round 5

- 285 HPP-eligible applications
- 81 HPP-only applications
- HPP-only average project cost:
 - \$21,708,311
- 71.6% of HPP-only applications were requests for less than \$20 million

	All HPP Eligible Projects		Only HPP Eligible Projects	
	Request	Total Cost	Request	Total Cost
>\$100 million	4.6%	5.6%	2.5%	3.7%
>\$50 million	7.0%	8.8%	4.9%	6.2%
>\$20 million	30.9%	34.7%	28.4%	30.9%

Round 6*

- 147 HPP-eligible applications
- 40 HPP-only applications
- HPP-only average project cost:
 - \$64,962,528*
- 20% of HPP-only applications were requests for less than \$20 million

	All HPP Eligible Projects		Only HPP Eligible Projects	
	Request	Total Cost	Request	Total Cost
>\$100 million	5.4%	10.2%	15.0%	15.0%
>\$50 million	17.7%	22.4%	40.0%	40.0%
>\$20 million	55.1%	63.3%	80.0%	85.0%

*Round 6 funding data is preliminary and subject to change

Round 5/Round 6* Comparisons (Culpeper District)

Round 5

- **38 applications submitted total**
 - 20 HPP-eligible applications (52.6%)
 - 30 DGP-eligible applications (78.9%)
 - 8 HPP-only applications (21.1%)
- **Average project cost**
 - All projects: \$14,233,759
 - DGP-eligible: \$12,896,717
 - HPP-eligible: \$15,538,578
 - HPP-only: \$19,247,666
- **50% of HPP-only applications were requests for more than \$20 million**
 - 1 application >\$23 million

Round 6*

- **24 applications submitted total**
 - 5 HPP-eligible applications (20.8%)
 - 19 DGP-eligible applications (79.2%)
 - 4 HPP-only applications (16.7%)
- **Average project cost**
 - All projects: \$30,926,488
 - DGP-eligible: \$21,623,973
 - HPP-eligible: \$67,202,261
 - HPP-only: \$77,439,063
- **100% of HPP-only applications were requests for more than \$20 million**
 - 1 application <\$34 million

*Round 6 funding data is preliminary and subject to change

Next Steps

- **Wait on SMART SCALE funding award announcements**
 - Difficult to predict likely funding outcomes due to SMART SCALE program changes
- **If not funded, can evaluate other alternatives**
 - Build off of information discovered during Round 6 application development
 - **DDI provides best safety outcomes and improves operations**
 - Safety improvements more than double compared to next best alternative (SPUI, Optimized Diamond, Sidewalk-Only)
 - Had strongest public support
 - **Submitted concept required significant changes to deck configuration due to addition of shared use path**
 - Reconfigure bridge to DDI without the shared use path on existing structure
 - Add a second bike/ped structure adjacent to existing bridge

Questions?





IVY ROAD STUDY UPDATE

MPO Tech Meeting

 Charles Proctor

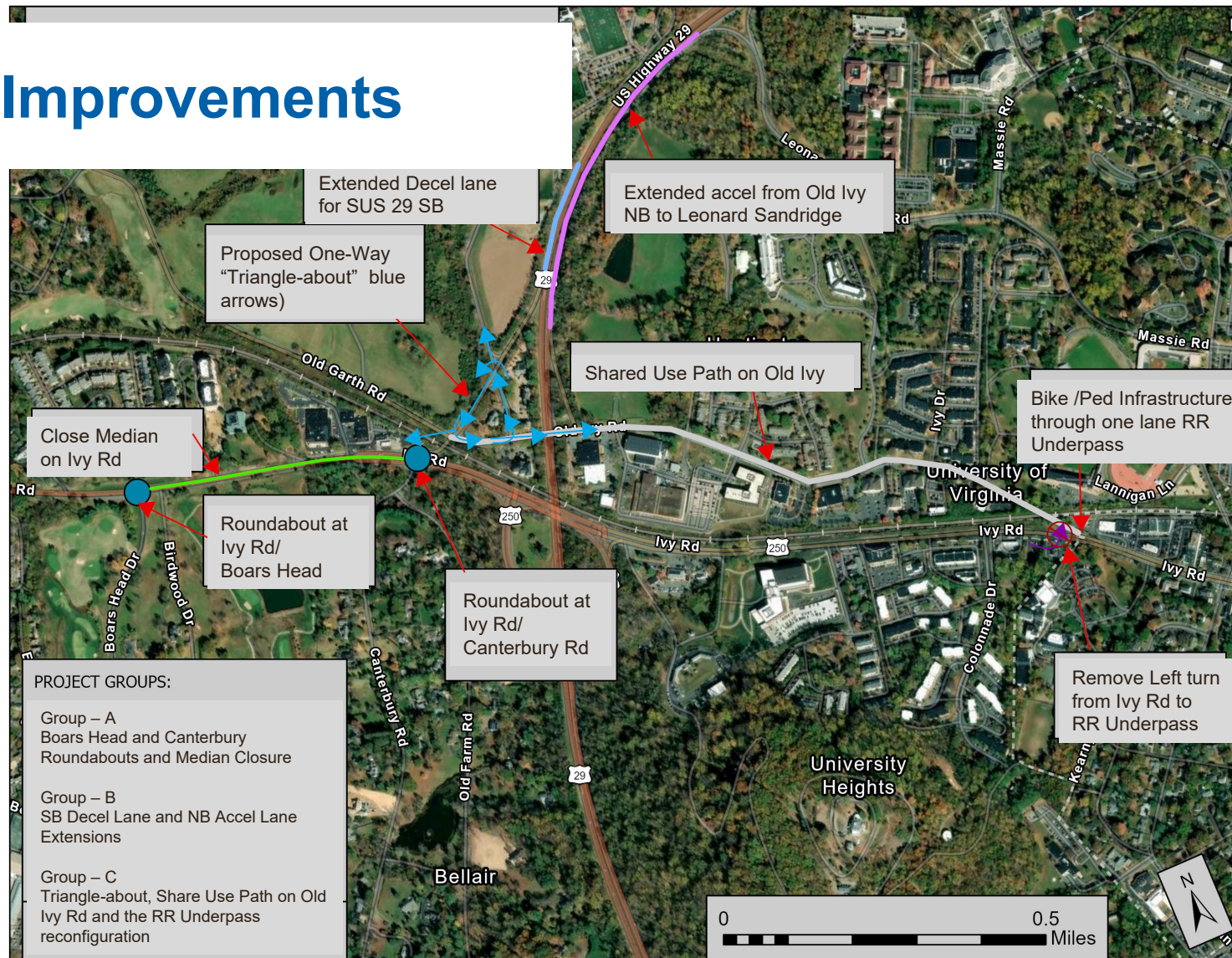
October 15, 2024

Meeting Agenda

1. Ivy Rd Corridor and US 29/250 Bypass Interchange Pipeline Study
 - Proposed Scenario Plan
 - Recommendation Strategy

Ivy Rd Corridor Improvements

Preferred
Scenario



Ivy Rd Corridor Improvements

Potential Long
Term Western
Corridor Scenario

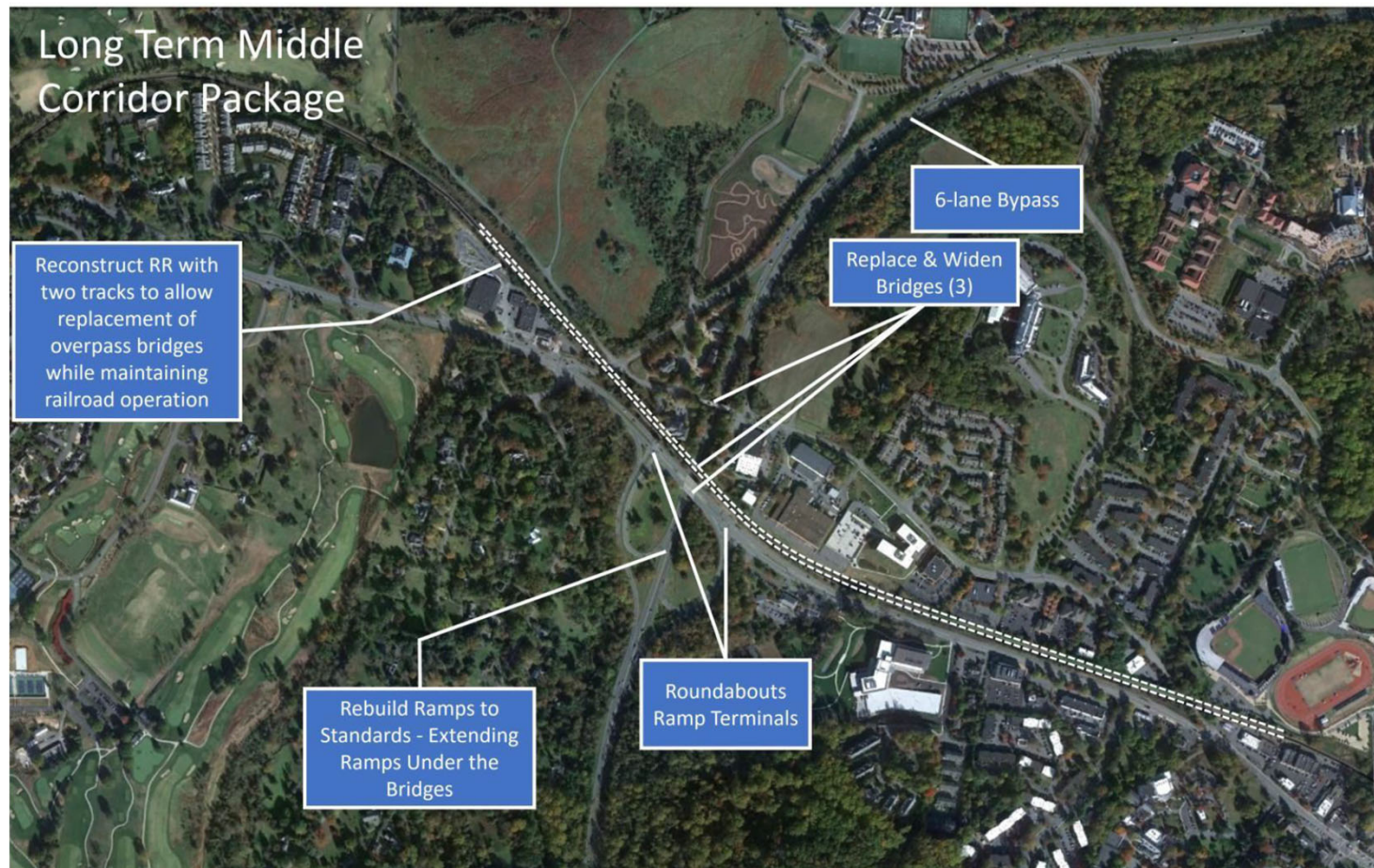
These will be
included for
future
consideration as
needs changes



Ivy Rd Corridor Improvements

Potential Long
Term Middle
Corridor
Scenario

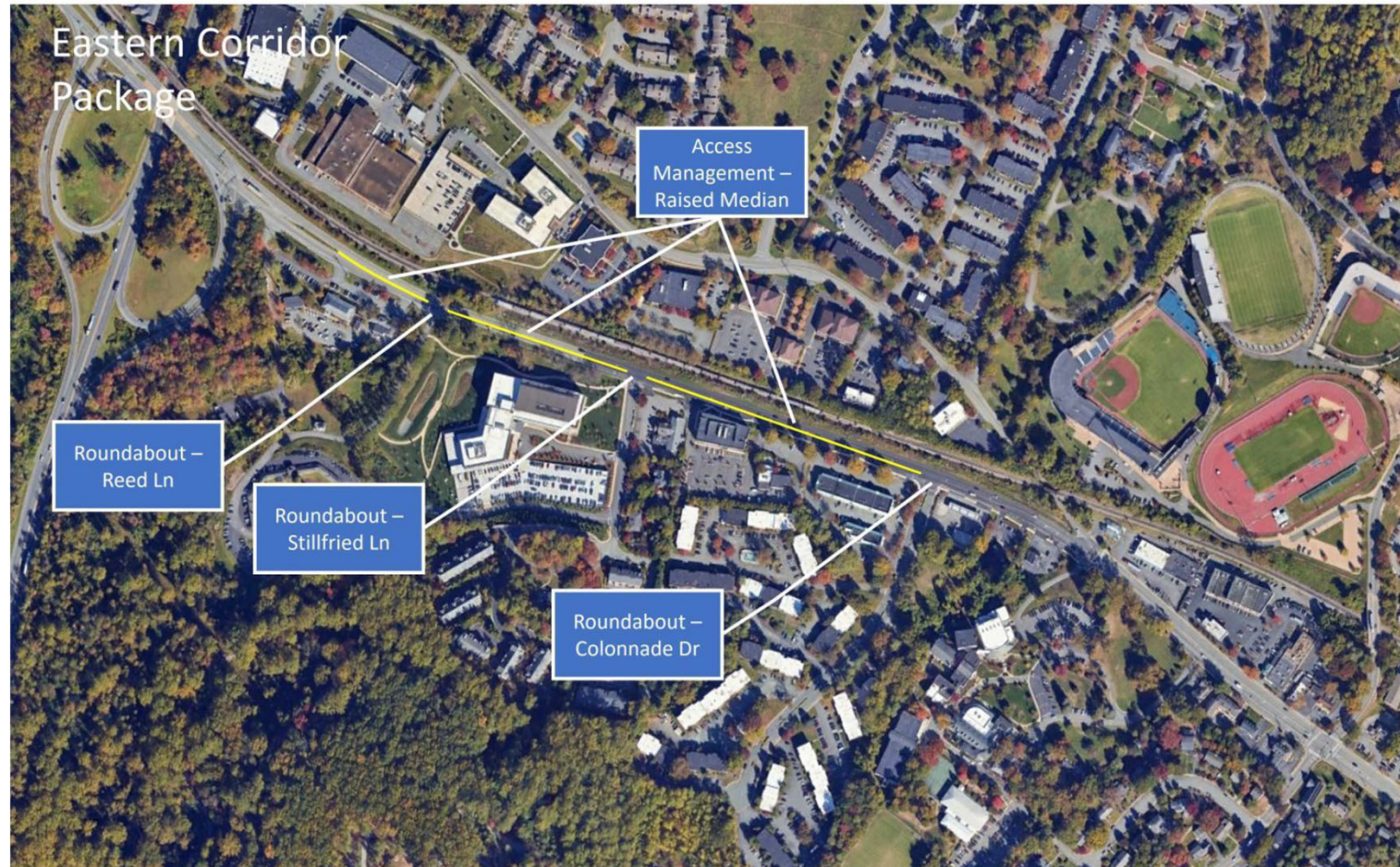
These will be
included for
future
consideration
as needs
changes



Ivy Road Corridor Improvements

Potential Eastern Corridor Scenario

These will be included for future consideration as needs changes



Ivy Road Corridor Improvements

Next Steps

- Reviewing the analysis for the Eastern underpass scenario to ensure it will not overly impact travel on BUS 250 to validate the preferred solution;
- Developing Planning Level Cost estimates for the Preferred Scenarios;
- Compile the final report.



STARS AND PROJECT PIPELINE STUDIES

MPO Tech

 Charles Proctor & Sandy Shackelford

October 15, 2024

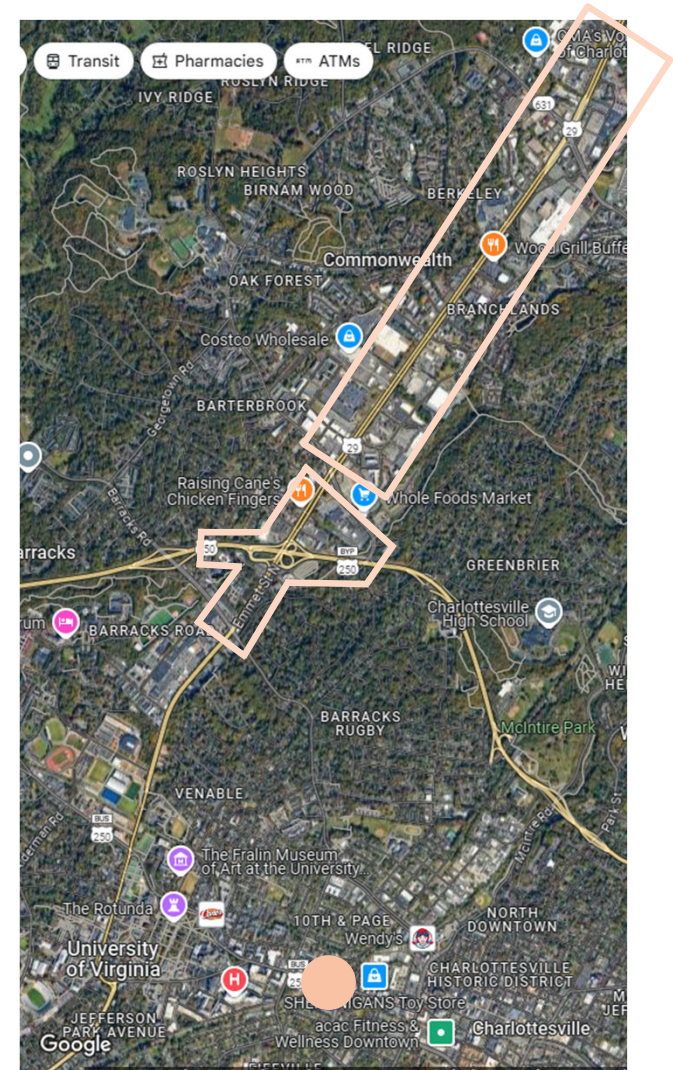
Agenda

- **Program Guidelines Overview**
- **STARS Study Locations**
- **Proposed Project Pipeline Study Locations**

	STARS Program Guidelines	Project Pipeline Program Guidelines
Administration	Transportation & Mobility Planning Division (TMPD)	Office of Intermodal Planning & Investment (OIPI)
Purpose	Provide a continuous stream of transportation improvement recommendations eligible for programming/funding	Performance-based planning program to identify cost-effective solutions to multimodal transportation needs
Project Goals	Identify multi-modal solutions that improve safety and reduce congestion	Identify multi-modal solutions that address CTB-adopted VTrans needs
Suggested Study Work Group Members	• VDOT District & CO Planning • Local/Regional Stakeholders • Location & Design Engineers • Residency Engineers • Transit Operators • Traffic Operations • Environmental	• Local/Regional Stakeholders • Design Engineers • District Subject Matter Experts • Residency Engineers • Transit Operators • Communications Staff • Local Law Enforcement/EMS Personnel
Program Cycle	Annual	Biennial
Study Process/ Phasing	1. Framework Phase • Kickoff and Diagnosis 2. Study Phase • Data Collection & Public Feedback • Alternatives Evaluation • Preferred Alternatives Selection	1. Kickoff, Diagnosis, and Preliminary Alternatives 2. Alternatives Evaluation, Public Feedback, and Preferred Alternative Selection 3. Preferred Alternative Development, Risk Assessment, and Investment Strategy + Application

STARS Study Locations

1. **Emmet Street/US 29 between Barracks Rd and Hydraulic Rd**
 - Will include the 250 interchange
2. **US 29 between Hydraulic Rd and Woodbrook Dr**
3. **W. Main/Ridge McIntire/W Water St/South Street Intersection**



Project Pipeline Proposed Locations

1. 5th Street

- Further analysis on 5th Street/I-64 DDI
- Re-examine the 5th Street/5th Street Station intersection

2. US 29 at the I-64 Exit 118 interchange

*An alternative solution at Barracks Road was developed in the previous Project Pipeline study and could be submitted as a Round 7 SMART SCALE project

