FREQUENTLY ASKED QUESTIONS

This document answers frequently asked questions about the Virginia Department of Transportation (VDOT) 5th Street Corridor Study. It contains four key sections, listed below. CTRL + click any heading below to navigate to your desired section within the Frequently Asked Questions document.

About the study

What process was used to develop the alternatives?

The Virginia Department of Transportation (VDOT) funded the 5th Street Corridor Study to engage the City of Charlottesville, Albemarle County, and other stakeholders[1] to evaluate automobile, transit, bicycle, and pedestrian travel conditions along the 5th Street corridor. The study collected information on existing multimodal travel demand[2], crash history, and projected future traffic and development patterns[3].

In addition to engaging the stakeholder group, the study team met with the 5th and Avon Community Advisory Committee and Southwood Community. A survey was conducted in February/March of 2020 to hear from the community. The survey received 1,280 responses.

The information from the stakeholders and the public was used along with the traffic and crash analysis to develop goals and objectives for the project and the preliminary alternatives to address these goals. The preliminary alternatives were presented during a June 2020 public meeting. These alternatives will be refined based on public input and prioritized based on the study goals and objectives.

What is the timeline for this study?

The 5th Street Corridor Study kicked off by evaluating existing and future no-build conditions[4] in winter 2019. Refined transportation alternatives and planning-level cost estimates will be completed by the end of summer 2020.

Who are the decision makers after this study?

This planning study will recommend a series of short- and long- term investments for 5th Street. The recommendations will be implemented through several projects that will require prioritization, funding, and engineering. The Virginia Department of Transportation (VDOT) will continue to work with Charlottesville, Albemarle County, Charlottesville-Albemarle Metropolitan Planning Organization, and Thomas Jefferson Planning District Commission to further refine and implement recommendations. Each project to move forward from this planning study will involve additional public engagement to inform the final design.

What is the process for taking this study to construction?

The 5th Street Corridor Study will define a set of improvement strategies that are implementable and supported by the local governments, major stakeholders, and the community. After completing this study, the

[1] The study is supported by a stakeholder group made up of representatives from the City of Charlottesville, Albemarle County, the Thomas Jefferson Planning District Commission (TJPDC), the Charlottesville-Albemarle Metropolitan Planning Organization (CA-MPO), Charlottesville Area Transit (CAT), and the 5th and Avon Community Advisory Committee.
[2] Existing multimodal travel demand includes pedestrian and bicyclist activity during the A.M. and P.M. rush hours at eleven study intersections on the corridor.
[3] Future traffic and development patterns include the new and projected residential and commercial developments coming to the corridor, including the Southwood development.
[4] A future no-build conditions analysis considers leaving 5th Street unchanged aside from routine maintenance. It then estimates future travel demand and calculating future delays and travel times. This analysis models how travel conditions on 5th Street would change if no modifications are made to the roadway aside from routine maintenance.

next step is to secure funding for the project(s). After funding is secured, VDOT will take the concepts developed through this study and further refine alternatives, determine the environmental impacts of the alternatives, and engage the community to gain more feedback on the alternatives. The refined and funded alternatives will then move to construction. Each of the projects identified through this study will have a different timeline for construction, which will depend on: the priority given to the project by the local governments; the cost of the project; the amount of land needed for the project; and the environmental impacts.

About the alternatives

General

How will the alternatives be funded?

Funding will depend on the type of improvements identified. Some of the intersection or safety improvements may be completed by the Virginia Department of Transportation (VDOT) with available funds. Additional funds can be obtained through Virginia's SMART SCALE program. This program requires regional entities, including Metropolitan Planning Organizations (MPO), Planning District Commissions (PDC), and public transit agencies to apply for funding. Localities (e.g., Albemarle County and the City of Charlottesville) can also submit projects within their jurisdictions. The Charlottesville-Albemarle Metropolitan Planning Organization and Thomas Jefferson Planning District Commission work with representatives from VDOT, Albemarle, and Charlottesville to select and submit projects for funding through VDOT's SMART SCALE program. Funding is prioritized for projects that improve the Corridors of Statewide Significance, enhance the Regional Transportation Network, compliment an Urban Development Area, and address Safety concerns. More information is available on Virginia's SMART SCALE website: http://vasmartscale.org/

Considering costs and available funding, how feasible are the preliminary alternatives?

Following the online public meeting, the study team will develop planning-level cost estimates for each alternative. The study team will use each alternative's planning-level cost estimates to estimate each alternative's performance in VDOT's SMART SCALE funding evaluation process. This information will be shared in the final report for the study.

Alternatives along 5th Street

Did the study team test the feasibility of repurposing lanes on 5th Street from vehicular travel lanes to multimodal (i.e., bus, bike, pedestrian) travel lanes?

The study team tested the feasibility of repurposing lanes on 5th Street and found that most intersections along the corridor would not be able to adequately process through traffic on 5th Street via one travel lane in each direction. However, the study team did find that a lane repurposing could take place on 5th Street for

approximately 0.5 miles between Old Lynchburg Road and Hickory Street. The team is developing a planning-level cost estimate for this lane repurposing, which will be shared in the final report for the study.

Why is a physically separated bike lane not included as an alternative between 5th Street Station Parkway and Harris Road?

A physically separated bicycle lane was not shown as an alternative between 5th Street Station Parkway and Harris Road due to the constrained public right-of-way and topographical challenges along that section of 5th Street. The inclusion of a comfortable physically separated bicycle lane on this section would entail the purchase of right-of-way from property owners along 5th Street.

How will this study ensure the continuity of multimodal options beyond the 5th Street corridor?

The study proposes consistent, continuous multimodal facilities along the length of the 5th Street corridor. The intersection alternative at 5th Street and Harris Road will show how new facilities can transition to existing multimodal facilities on 5th Street, north of Harris Road. Since the roadway character changes from urban/suburban to rural south of Ambrose Commons Drive, bicyclists will transition onto 5th Street south of Ambrose Commons Drive. By establishing consistent, continuous multimodal facilities along 5th Street, the study will provide a model for any future changes to local roads that intersect the study corridor.

Isn't it illegal to bike on the sidewalk? How will the multimodal alternatives included in the study accommodate e-bikes and other new and emerging micro-mobility technologies?

Under current state law, non-motorized bicycles and micro-mobility modes, such as e-bikes or e-scooters, may be ridden on sidewalks unless prohibited by local ordinance or traffic control devices. Charlottesville has passed a local ordinance prohibiting all non-motorized bicycles and micro-mobility modes from operating on City sidewalks. Albemarle County has not prohibited non-motorized bicycles and micro-mobility modes from operating on sidewalks.

The preliminary alternatives presented in the study include separated bicycle lanes and twelve-foot multi-use paths. The separated bicycle lane option would accommodate micro-mobility modes and non-motorized bicycles, providing pedestrians with full access to standard sidewalks. The multi-use path options would provide an off-road accommodation for pedestrians, non-motorized bicycles, and micro-mobility modes. If one of the multi-use path options is preferred by the public, the multi-use path would include clear signing and marking to communicate that multi-use paths are meant for pedestrians, bicyclists, and micro-mobility modes.

Intersection Alternatives

Is it possible to improve traffic conditions by modifying traffic signal timing?

While minor improvements could be made to individual movements with modifications to traffic signal timing, these signal timing adjustments would come with corresponding longer delays and queues of opposing movements. For example, further prioritizing north-south travel along 5th Street would result in potentially dangerous queue spillback of the I-64 off-ramps onto I-64.

The study team conducted a future no-build traffic analysis of the study corridor to understand projected future traffic and development patterns. The team then expanded upon the future no-build traffic analysis by testing modifications to existing signals along the corridor. This analysis confirmed that modifications to existing signals alone will not manage congestion and meet other study goals.

What are the potential right-of-way impacts of the preliminary alternatives at the intersection of 5th Street and 5th Street Station Parkway? Will these alternatives modify access for properties adjoining the intersection?

Both preliminary alternatives for 5th Street and 5th Street Station Parkway would have moderate right-of-way impacts and affect existing properties adjoining the intersection. If either of the preliminary alternatives are advanced by VDOT and the study stakeholders, a new study would further refine the alternative, determine the alternative's environmental impacts, and engage the community to obtain more feedback.

The follow-up study would fully test and determine any changes to public right-of-way and property access in the vicinity of the intersection.

Did the study team test the viability of conventional traffic signals for intersections south of I-64?

The study team conducted a future no-build traffic analysis of the study corridor to understand projected future traffic and development patterns. Building on the future no-build traffic analysis, the study team tested converting unsignalized intersections south of I-64 to signalized intersections. At the intersection with Stagecoach Road, traffic signal warrants are not projected to be met under future conditions, but the existing unsignalized configuration would result in the Stagecoach Road approach being over capacity and experiencing very long delays and queues. At the intersection with Old Lynchburg Road, traffic signal warrants are projected to be met in the future; however, the safety and multimodal benefits of a roundabout or restricted crossing U-turn intersection were preferred for this location. Overall, the team's analysis confirmed that converting unsignalized intersections to signalized intersections would not help to manage congestion and meet other study goals, and that other intersection control forms would produce better operations and enhanced safety performance.

Would the introduction of roundabouts come with an increased crash risk since many people may not have encountered them before and may be unsure how to navigate them? How will VDOT mitigate this risk?

Based on research collected both internationally and domestically, converting a two-way stop control intersection to a multilane roundabout typically results in a reduced number of crashes, especially severe and fatal crashes.[5] Immediately upon opening, some roundabouts have seen a temporary uptick in the number of crashes, particularly property-damage-only crashes (fender benders).

VDOT will mitigate this risk by developing construction phasing plans based on industry-wide best practice, providing increased driver education and public awareness, and designing the roundabout consistent with the roundabout design principles in NCHRP Report 672: Roundabouts an Informational Guide.

Would the roundabouts at Old Lynchburg Road and Stagecoach Road be spaced too closely to each other? How would they function together?

These intersections are approximately 1,700 feet apart. The longest 95th percentile queue on 5th Street, which is located between these two intersections, is 175 ft. Based on an analysis of both intersections, there would be sufficient queueing space for vehicles between the two roundabouts at Old Lynchburg Road and Stagecoach Road.

In addition to reducing delay for motorists and buses, the two roundabouts would calm traffic on 5th Street, south of Stagecoach Road. They would also provide ADA-accessible, dedicated pedestrian crosswalks. Today, there are no dedicated pedestrian crosswalks on 5th Street, south of 5th Street Station Parkway.

Are there any modifications being considered for the intersection of 5th Street and Sunset Avenue Extended? How would preliminary alternatives at Old Lynchburg Road and Stagecoach Road affect traffic driving to and from Sunset Avenue Extended?

The study team did not consider specific alternatives for the intersection of 5th Street and Sunset Avenue Extended. Today, the intersection operates under capacity, which means that delay is low and travel conditions are comfortable for motorists. The intersection also experienced a low number of crashes over the last five years based on available data.

By reducing delay for vehicles accessing 5th Street from Old Lynchburg Road, preliminary alternatives such as a roundabout or a restricted crossing U-Turn (RCUT) could alleviate future demand on Sunset Avenue Extended.

[5] Before-and-after conversion data summarized in NCHRP Report 572 showed that all crashes were reduced by 35% percent and injury crashes were reduced by 76%, following conversion of signalized, all-way stop, and two-way stop intersections to a roundabout. A focused review of before-and-after conversion data for two-way stop control intersections revealed greater safety benefits, with all crashes reduced by 44% and injury crashes reduced by 82%, following conversion to a roundabout.

Did the study team consider adding slip lanes at the I-64 interchange ramps as a near-term solution?

The study team conducted a future no-build traffic analysis of the study corridor to understand projected future traffic and development patterns. The study team then tested how near-term modifications to the I-64 interchange ramps would perform under traffic conditions in the future no-build traffic analysis. The team's analysis confirmed that near- to mid-term modifications such as adding slip lanes would not help to manage congestion and meet other study goals.

What is a diverging diamond interchange? How do bicyclists and pedestrians navigate a diverging diamond interchange?

A diverging diamond interchange (DDI) is a grade-separated interchange design that would make it simpler and safer for motorists to enter and exit I-64 from 5th Street. Motorists turning right onto a freeway ramp would use right turn lanes like at a conventional interchange. Motorists turning left onto a freeway ramp would follow 5th Street from the right side of the road to the left side of the road where motorists would be able to turn left onto the ramp. Motorists continuing straight through the interchange would follow 5th Street from the right side of the road to the left side of the road and back to the right side of the road after passing through the interchange.

Bicyclists and pedestrians would enter a diverging diamond interchange via a separated multi-use path running along both sides of 5th Street. Bicyclists and pedestrians would cross a ramp and 5th Street to reach the center of the interchange (i.e., between the northbound and southbound lanes of 5th Street). They would follow the separated multi-use path down the center of the interchange and then cross 5th Street and a ramp to exit the interchange and continue along their preferred side of 5th Street. People walking and biking would have dedicated time to cross 5th Street at signals and reduced crossing distances to minimize the chance for vehicular conflicts.

For more information about how diverging diamond interchanges work, including an infographic and video, please see VDOT's innovative intersections web page:
https://www.virginiadot.org/info/innovative_intersections_and_interchanges/ddi.asp

How would the neighborhoods near the I-64 interchange be affected if a Diverging Diamond Interchange were to be constructed?

Since there would be no left-turn lanes on 5th Street, a diverging diamond intersection at 5th Street and I-64 could have a narrower cross section and fewer right-of-way impacts. However, if the long-term diverging diamond interchange alternative is advanced by VDOT and the study stakeholders, a new study would be conducted to refine this alternative and evaluate impacts. While our current study simply shows examples of diverging diamond interchanges in other locations, the new study would develop a design specific to the 5th Street and I-64 interchange. It would include a thorough investigation of environmental and property impacts and an extensive public engagement process.

Other questions

How will drainage impacts be mitigated with increased pavement along the corridor?

Some of the preliminary alternatives presented at the June 4 online meeting, such as the roundabout alternatives at Stagecoach Road and Old Lynchburg Road, would reduce drainage impacts through increased permeable landscaping. Alternatives that would increase drainage impacts, such as continuous and consistent bicycle and pedestrian facilities, would require mitigation in compliance with State standards. Options to mitigate drainage impacts along 5th Street could include the addition of stepped bioretention facilities in the landscaped buffer between travel lanes and multimodal facilities.

If any of the preliminary alternatives are advanced by VDOT and the study stakeholders, future studies and design phases would fully evaluate and select appropriate drainage mitigation techniques for each alternative.

What is a traffic signal warrant?

A traffic signal warrant is a set of conditions that an unsignalized intersection must meet to justify installing a signal at the intersection. Traffic signal warrants help traffic engineers determine if a new traffic signal will be beneficial. In Virginia, new traffic signals cannot be installed without the completion of a signal justification report that includes warrant analyses in accordance with National and State warrants. Traffic signal warrants can be related to the number of vehicles entering the intersection from the main street and side streets, the number of pedestrians trying to cross the intersection, and the intersection's crash history.

For other frequently asked questions on traffic signals, please see the VDOT web page on traffic signals:

https://www.virginiadot.org/info/faq-trafficsignals.asp

Is it feasible to lower the speed limit along the corridor?

While the 5th Street study did not conduct a speed study on 5th Street, many of the preliminary alternatives have the potential to improve driver compliance with posted speeds on 5th Street. Alternatives such as the roundabouts at Old Lynchburg Road and Stagecoach Road would calm traffic and reduce speeds through the intersection. The addition of continuous, consistent walking and biking facilities with increased landscaping along the corridor would modify the character of the roadway and influence driver compliance with posted speeds.

If you believe there is a need to change a speed limit or if you have other questions regarding speed, contact your local VDOT residency office. The local VDOT District Traffic Engineer has the authority to increase or decrease speed limits and considers whether a review of a particular speed limit is warranted based on VDOT's "Speed Limit Change Process" policy. See the policy here for details.

For other frequently asked questions on speed limits, please see the VDOT web page on speed limits: http://www.virginiadot.org/info/faq-speedlimits.asp

Will the recommendations from this study include additional CAT bus stops along the corridor?

The 5th Street study will defer to Charlottesville Area Transit's (CAT) current transit development plan for FY 2019 to FY 2028. The transit development plan outlines recommended updates to CAT routes and standards for bus stop spacing. The latest version of the CAT Transit Development Plan can be found on Charlottesville's website:

https://www.charlottesville.gov/DocumentCenter/View/3094/CAT---Transit-Development-Plan---Oct-2018

More information

Who do I contact for more information?

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How can I stay engaged?

The study team is conducting a second survey on specific transportation options for 5th Street. The survey will be available from May 28, 2020 through June 26, 2020. You can visit the project website to access the survey for the 5th Street Corridor Study: http://www.virginiadot.org/projects/culpeper/5th-st-corridor-study.asp.

Other documents with information about the 5th Street study may be accessed on the website, including:

- Existing and Future No-Build Condition Report: https://www.virginiadot.org/projects/resources/Culpeper/5th_Street_Corridor_Study/21605.027_VDOT_5thSt_Existing_Conditions_Technical_Memorandum_FINAL.pdf
- Phase 1 Public Engagement Report: https://www.virginiadot.org/projects/resources/Culpeper/5th_Street_Corridor_Study/21605.027_VDOT_5thSt_Ph1_Engagement_Tech_Memo_FINAL.pdf