
A Note from Rappahannock County:

“The Rappahannock County Board of Supervisors held a public hearing on August 1, 2022 to receive input from citizens and other interested parties regarding the July 15, 2022 and significantly updated July 28, 2022 draft memorandums. While a robust discussion occurred, the project timeline practically precluded effective formal review and feedback by the Board and interested Citizens. As such, the county is unable to formally endorse the findings of the memorandum, but will use the work to springboard to future community outreach and investigation.”

TECHNICAL MEMORANDUM

TO: Garrey Curry, Rappahannock County Administrator
FROM: Meghan McMullen, Phil Veasley, Alia Anderson, and Larry McGoogin, Toole Design Group
(providing technical assistance on behalf of the Office of Intermodal Planning and Investment)
SUBJECT: Rappahannock County’s Flint Hill and Sperryville Pedestrian Infrastructure Evaluation Memorandum
DATE: August 5, 2022

1: INTRODUCTION

Rappahannock County’s *Flint Hill and Sperryville Pedestrian Infrastructure Evaluation* is a planning-level memorandum focused on identifying sidewalk gaps and potential improvements to improve roadway safety in these villages to support their visions of becoming more walkable places. The scope of work included on-site observations; review of available GIS data; conceptual plans for sidewalks on specified streets, crossings, trailheads, and safety recommendations; and planning-level cost estimates. This memorandum includes:

- A. Flint Hill
 - 1. Sidewalk conceptual plans
- B. Sperryville
 - 1. Sidewalk conceptual plans
 - 2. Safety improvement conceptual plans
 - 3. Trailhead concepts
- C. Planning level cost estimates

Additional background information can be found in the supporting document, *Flint Hill and Sperryville Field Work Summary*, which outlines findings from field work conducted in April 2022 and informed the recommendations in this memorandum. A survey and right-of-way assessment were not included in this scope of work, and additional information will be needed as these projects move into design to verify feasibility and design recommendations.

The opinions and conclusions expressed or implied in this report are those of the authors and are not necessarily those of the Office of Intermodal Planning and Investment (OIP). OIP does not endorse products or manufacturers. Any trade or manufacturers' names that appear herein are solely because they are considered essential to the object of the report.

2: FLINT HILL SIDEWALKS

Three routes were identified in the scope for sidewalk evaluation, including:

1. Route 522 (Oaklands Lane to Fodderstack Road)
2. Crest Hill Road (Route 522 to Vista Hermosa Lane)
3. Fodderstack Road (Route 522 to Fire Station)

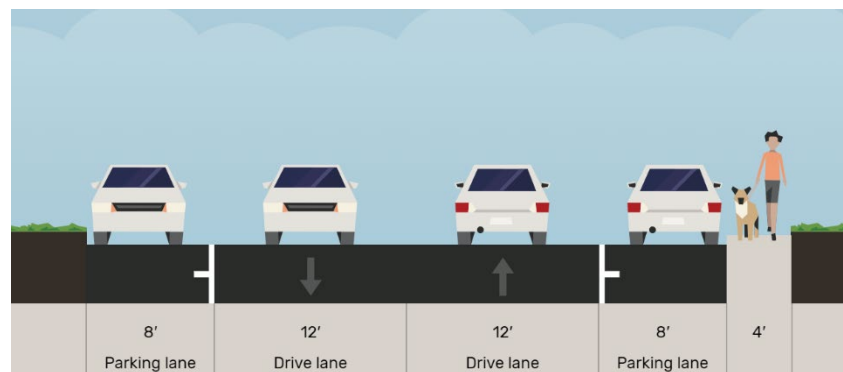
Route 522 Sidewalk (Oaklands Lane to Fodderstack Road)

Route 522 is the primary thoroughfare in Flint Hill and has intermittent, discontinuous sidewalks that alternate between both sides of the street today. To provide a continuous pedestrian path, new sidewalks and crossings are recommended to take reasonable advantage of existing sidewalk segments while minimizing the number of times pedestrians are required to cross the street to remain on a sidewalk and connecting to pedestrian attractors like the gas station, post office, and shops. On the north end, the sidewalk is recommended on the east side, transitioning to the west side on the south end where a sidewalk already exists beginning at 617 Route 522.

A new sidewalk is recommended on the east side of Route 522 beginning at Oaklands Lane on the north end of the village. A crosswalk with a Rectangular Rapid Flashing Beacon (RRFB) is also recommended at the intersection to allow residents from the west side neighborhoods to access the sidewalk, improve pedestrian visibility, and encourage yielding to pedestrians.

Curb and gutter or other drainage accommodations will be necessary where sidewalks are installed due to the presence of an existing drainage ditch approximately four feet from the edge of pavement on the east side of the street. Right of way or easements may be necessary to meet the VDOT standard sidewalk width of five feet. If the sidewalk width must be reduced to four feet in some locations due to site

Figure 1. Typical Proposed Street Section – Facing North (Varies by Context)



Example of a rectangular rapid-flashing beacon (RRFB), a pedestrian-activated device that can be placed at crosswalks to increase compliance of vehicles yielding to pedestrians. They have two rectangular-shaped yellow indications, each with an LED-array-based light source that flash with high frequency when activated. When the lights are activated by pedestrians, drivers should stop like a stop sign.

constraints, a waiver from VDOT would be required, as it would not meet the 5-foot minimum width for a pedestrian walkway.

At the gas station, pavement markings are recommended to formally designate two entrances and exits and a pedestrian zone, as shown in Figure 3. Representatives from the County reported the property owner is not amenable to raised curb options for delineation. Alternatives such as mountable islands, or other vertical elements that still allow for deliveries to be made should be explored. Additional businesses should be evaluated for the possibility of additional striping to formalize entrances and exits in the future. The recommended sidewalk would continue along the eastern side of Route 522 down to Crest Hill Road, where it would connect to the existing sidewalk. Additional marked crosswalks are recommended at West Lane to connect to the existing sidewalk segment on the west side of the street.

At the intersection of Crest Hill Road and Route 522, crosswalks should be added in both directions. While a formal Engineering Study may be required in the design phase, an all-way stop should be considered. Current volumes are around 3,100 vehicles per day on Route 522 and 500 vehicles per day on Crest Hill Road. The addition of an all-way stop condition would enhance safety conditions through Flint Hill by slowing vehicles and creating a sense of that intersection being the village center. It would also create a more comfortable environment and help minimize risk for people crossing and vehicles turning as they enter and exit Crest Hill Road. Given existing traffic volumes, this recommendation is not expected to cause any queuing issues on Route 522. A similar all-way stop condition exists at Main Street and Porter Street in Washington. If an all-way stop condition is opposed, an RRFB could be used as an alternative to still improve safety and comfort for pedestrian movements.

There is an existing sidewalk segment on the east side of Route 522 south of Crest Hill Road. Approximately 100 feet of sidewalk is recommended on the east side of the street beginning where this existing sidewalk terminates until the point where it aligns with the terminus of the sidewalk on the west side, near 588 Route 522, to fill the missing gap. This new sidewalk would be located within the current shoulder, which is informally used as on-street parking, to avoid disturbing the historic stone wall. About four on-street parking spaces would be lost to accommodate this sidewalk segment. A mid-block crosswalk and RRFB would be provided to connect the sidewalks on the east and west sides of the street.

South of Fodderstack Road, a future extension to Ben Venue Road should be considered to connect to the Macedonia Baptist Church, shown as a dashed line on the map in Figure 6.

If additional sidewalks and pedestrian crossings are installed, a speed limit evaluation and supporting traffic calming measures are recommended on the northern end of Flint Hill along Route 522. Other traffic calming measures within Flint Hill should be determined during the design process. These could include but are not limited to:

- Raised textured intersections where pedestrian facilities are installed
- Raised pedestrian crossings
- Striping enhancements to formalize entrances and exits at businesses
- Speed readout feedback signs
- RRFB crossings
- Striping to narrow lanes
- Striped curb extensions
- Chicanes
- Median refuge islands
- Street trees
- Streetlights
- Monument gateway signage

Figure 2. Proposed Sidewalks on Route 522 in Flint Hill (North End)



Figure 3. Proposed Striping and Vertical Delineation at Settle's Grocery and Garage in Flint Hill



Crest Hill Road and Fodderstack Road Sidewalks

According to the scope, four of the six potential projects were to be advanced to concepts with cost estimates. While pedestrian accommodations and safety improvements are necessary on Crest Hill Road and Fodderstack Road, both streets have low-density residential land uses with very few commercial or community facilities that would generate significant pedestrian activity. For this reason, Crest Hill Road and Fodderstack Road are lower priority routes and are recommended to be evaluated as future projects, while other streets are higher priorities for near term investments. This assessment was agreed to by the client during field work and subsequent meetings. Concepts and cost estimates were not developed for these streets as part of this report.

Due to their topographies and contexts, there will likely be significant grading, retaining walls, and right-of-way acquisition required to install sidewalks on these roads in the future. Interim solutions such as the evaluation of speed limit reductions and the evaluation of other traffic calming measures should also be explored.

Figure 4. Route 522 at Crest Hill Road



Figure 5. Route 522 in Flint Hill Sidewalk Crossover from East Side to West Side



Figure 6. Flint Hill Proposed Sidewalks (Oaklands Lane to Crest Hill Road)



Figure 7. Route 522 Sidewalks in Flint Hill (Cowgillmiller Lane to Betty Stuart Lane)



3: SPERRYVILLE SIDEWALKS

Three routes were identified in the scope for sidewalk evaluation, including:

1. Lee Highway / Route 211 (Old Hollow Road to the boundary park sign)
2. Main Street (Route 211 to Route 522)
3. Route 522 (0.25 Miles East of F.T. Valley Road / Route 231 to Lee Highway / Route 211)

Lee Highway/US 211 Sidewalks

A new 5-foot sidewalk is recommended on the north side of Lee Highway/Route 211 between Atkins Road and Route 522, where the highest concentrations of pedestrian activity generating destinations on this street are located. Right-of-way acquisition or easements may be needed in some locations, particularly to avoid obstacles like utility poles, and fences and mailboxes may need to be relocated in a few locations and some earth work and retaining walls would be needed near Route 522. Curb and gutter will be installed when reasonable buffer is not able to be obtained for drainage features. A sidewalk is not recommended on the south side because Thornton River runs parallel to Route 211 on the south side, which would complicate the installation of a sidewalk and has also minimized the number of destinations on the south side.

There are two proposed new pedestrian crossings on Route 211 at the intersections of Route 522 and Main Street. A crosswalk with an RRFB is recommended to improve the safety of crossing in both of these locations. Additional details about the possible intersection concepts and crossing treatments are provided in the Safety Considerations section below. As the County considers potential phasing of investments, the proposed crossings of Route 211 at Main Street and Route 522 should be considered higher priority crossings than at Atkins Road because they connect to higher concentrations of pedestrian activity generating destinations; a crossing at Atkins Road may be considered in a potential future phase.

A sidewalk is not recommended on Route 211 east of the intersection of Route 522 at this time. The lack of destinations in this area will likely not result in a positive benefit to cost ratio. On Route 211 west of Atkins Road, a sidewalk is also not recommended at this time due to topographic constraints and lack of continuous destinations. There are some sporadically spaced destinations to the west, and a sidewalk extension in this direction could be considered in a future phase.

Main Street (Route 211 to Route 522) Sidewalks

There is an existing sidewalk on most of Main Street today, with a small gap on the northwest end near the Thornton River crossing. However, it is not up to current Americans with Disabilities Act (ADA) standards and has reported flooding issues, so reconstruction is recommended, including improved drainage.

On the northwest end, new sidewalk is proposed to connect Main Street to the proposed sidewalk on Route 211. There is no space to add a sidewalk on the existing bridge over the Thornton River, so a bridge replacement or pedestrian bridge is needed. The client reported this aging bridge may be a candidate for full reconstruction in the coming years, which would be dependent on an assessment and determination of need by VDOT. Because Thornton River is a floodway and the existing bridge has a center pier, the client noted full bridge replacement that includes pedestrian accommodations and does not have a center pier would be preferable to help manage flows. If the bridge is reconstructed in the future, it should also be designed to connect to Route 211 at a perpendicular angle to improve pedestrian visibility and slow turning vehicles. In the meantime, if the state does not plan to reconstruct the existing bridge, a standalone pedestrian bridge could be constructed south of the existing bridge. This alternative has been included in the cost estimate.

A marked mid-block crosswalk is recommended at 31 Main Street to connect the sidewalk on the south side to the Sperryville trail network on the north side. The existing connection to the trail at Main Street is made of flagstone and aggregate and is not ADA compliant; additional work will be needed on this property to ensure proper access to the trailhead area along the Thornton River behind the Before and After cafe. During field work, the owner indicated a willingness to upgrade this connection to be ADA accessible if a crosswalk is installed.

Further Engineering study in line with VDOT IIM-TE-384 will be required during the design phase to determine whether active warning devices are necessary at crossings.

Route 522 Sidewalks

Route 211 to Main Street

The only existing sidewalk on this part of Route 522 is on the west side between Main Street and the Thornton River. New sidewalks are recommended to create a continuous pedestrian path between Route 211 and Main Street and to connect to the Sperryville trail. Because the existing pedestrian bridge over Thornton River is located on the east side of the street, the sidewalk on the north end is recommended to tie into the Route 522 / Route 211 intersection on the east side and follow the topography down to the Sperryville trail and pedestrian bridge. ADA upgrades are necessary for the 150 feet of the trail that would serve as the Route 522 sidewalk.

Main Street to Wastewater Treatment Access Road (Miller Property Driveway)

There are no existing sidewalks on this part of Route 522. A new sidewalk is recommended on the south side of Route 522 to provide access to the businesses, homes, and churches and to connect to the Sperryville trail to form a complete walking loop. There are existing drainage ditches on the south side today; curb and gutter are recommended to manage stormwater when the sidewalk is installed. Due to right of way constraints and utility pole conflicts, the sidewalk will likely need to be constructed directly behind curb and gutter in most places. A new crosswalk with an RRFB is recommended at the Water Treatment Access Road and to connect to the trailhead on the north side of the street.

A sidewalk is not recommended between the Wastewater Treatment Access Road and Route 231 at this time due to the lack of destinations on this part of the street.

Further Engineering study in line with VDOT IIM-TE-384 will be required during the design phase to determine whether active warning devices are necessary at crossings.

Figure 8. Map of Proposed Sidewalks in Sperryville



4: SPERRYVILLE SAFETY CONSIDERATIONS

Additional treatments are recommended to improve safety for users of all modes in Sperryville, including changes to the intersections of Route 211 and Route 522, Route 211 and Main Street, and Route 522 and Main Street, as well as proposed changes to the speed limit and target operating speed. Several new pedestrian crossings are recommended to accommodate safe movement between pedestrian activity generators and support the village’s vision to become a more walkable place.

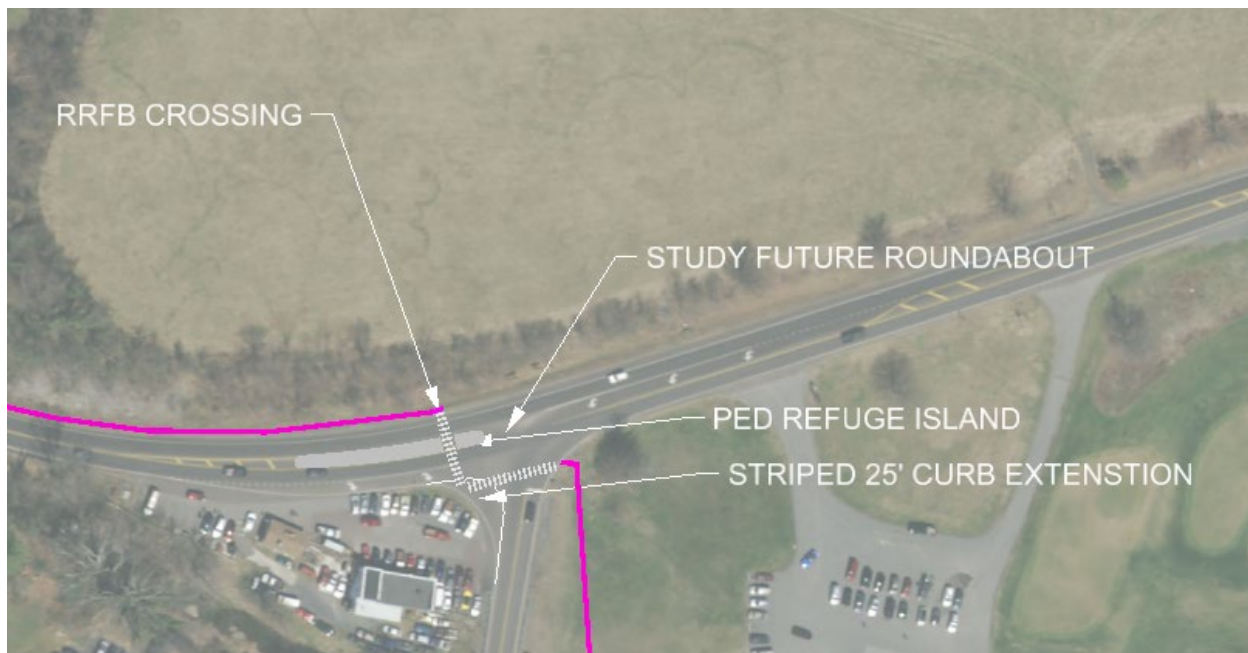
Route 211 and Route 522 Intersection

The following changes are proposed at the intersection of Route 211 and Route 522, as illustrated in Figure 9:

- Crosswalks with RRFB warning device
- Addition of concrete pedestrian refuge island in the current striped splitter island on Route 211
- Striped curb extension to 25-foot radius to reduce speed of turning vehicles and reduce crossing length
- Recommendation to VDOT to study potential future roundabout

Additional possible traffic calming elements are described later in this document.

Figure 9. Proposed Treatments at the Intersection of Route 211 and Route 522



Route 522 and Sperryville Pike / Main Street Intersection

This intersection is the center of the Sperryville village. Currently, there is an atypical, two-way stop condition at this T intersection, with stop signs for eastbound and southbound drivers and free-flowing westbound approach. This may lead to driver confusion, with drivers expecting a more standard configuration in which all directions stop. Representatives from the County also reported that drivers often fail to yield to pedestrians in the crosswalks in this area. Research shows that driver yield rates decline as speed increases ([Geruschat, D.R., & Hassan, S.E. 2005](#)).

As part of the design phase, changes to the intersection of Route 522, Main Street, and Sperryville Pike are recommended to:

- Increase predictability;
- Align with user expectations;
- Eliminate the atypical two-way stop condition;
- Slow vehicular turning movements;
- Encourage yielding to pedestrians in crosswalks;
- Reduce risk of conflicts for left-turning movement from equally high movement onto Sperryville Pike;
- Increase visibility of trail crosswalk 150 feet north on Route 522 due to slower right-turn movements; and
- Improve safety and comfort for crosswalk users crossing Main Street.

Potential treatments should be further evaluated in the design phase. These may include:

- Adding a stop sign (R1-1) for westbound drivers on Sperryville Pike to create an all-way stop condition;
- Modifying the corner radius with striping or a truck apron to encourage slower vehicular turning movements;
- Installing a raised intersection; or
- Installing a mini roundabout.

Additional possible traffic calming elements are described later in this document.

Figure 10. Proposed All-way Stop at Route 522 ad Main Street Intersection



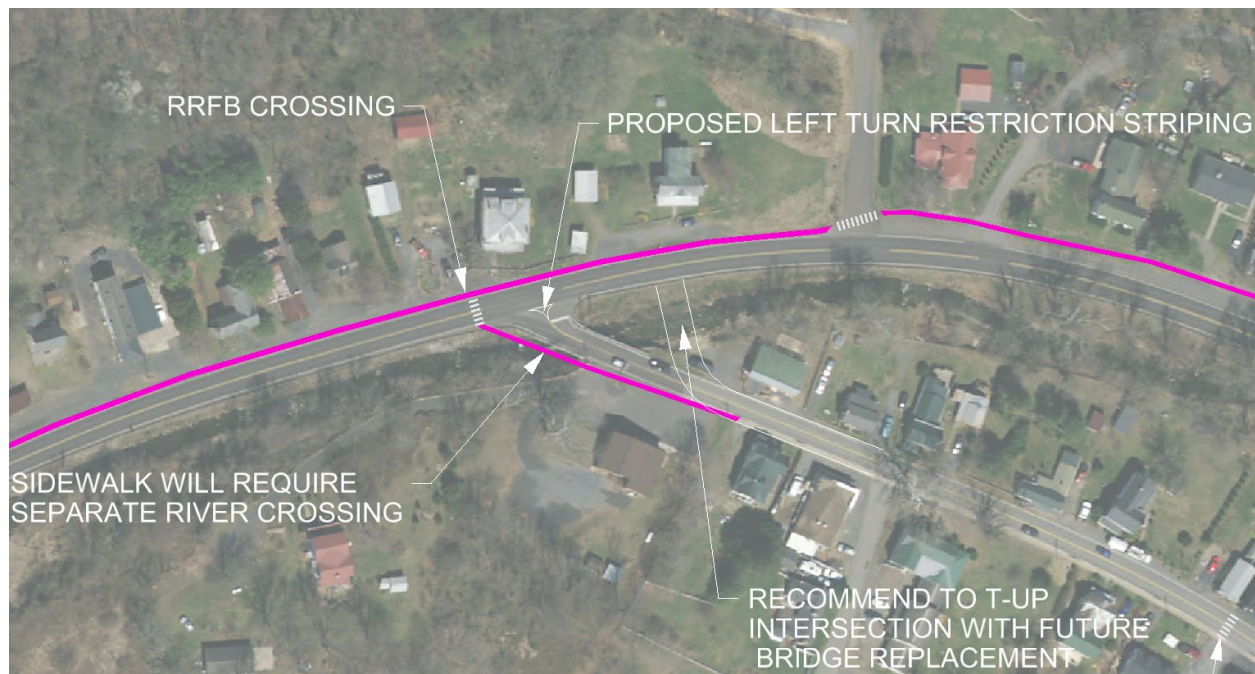
Route 211 at Main Street Intersection

The following changes at the intersection of Route 211 and Main Street are proposed to address issues with historic crashes, as illustrated in Figure 11:

- Right-In-Right-Out conversion to eliminate left turn crossing conditions
- Install RRFB at new crosswalk
- If bridge is replaced, realign intersection at a right angle to slow turning vehicles

Additional possible traffic calming elements are described later in this document.

Figure 11. Proposed Intersection of Route 211 and Main Street



Additional Traffic Calming Elements

Higher speeds, particularly around curves, may be a contributing factor for crashes, are associated with an increase in the severity of crashes, and can reduce comfort and increase risk for pedestrians ([NHTSA Traffic Safety Facts, October 2021](#)). If new sidewalks and pedestrian crossings are installed on Route 211 as part of Sperryville's vision to be a more walkable place, it is recommended that as part of the design process this area should be reevaluated for a potential speed limit reduction and traffic calming features to encourage slower driving behaviors.

This evaluation to reduce speeds is particularly important because the conceptual crosswalk locations on Route 211 at Main Street and at Route 522 do not meet Sight Distance requirements as published in [VDOT IIM-TE-384](#) with the current 45 mph speed limit and typical operating speeds due to the roadway curvature and topography, but would likely meet the requirements at a target operating speed of 25 mph. Reducing vehicle operating speeds would improve the visibility of the proposed crosswalk locations and give drivers enough time to stop for pedestrians in the crosswalk. If the speed limit is reduced as part of an effort to reduce operating speeds, it should include a gradual tapering down of the speed limit approaching the village to facilitate a smooth transition.

Reduced posted speed limits do not necessarily equate to reduced vehicular operating speeds if driver behaviors do not change. Additional context-sensitive design changes should be incorporated as part of the design process to encourage drivers to operate at a lower posted speed limit through design cues that set an expectation for lower speeds as they approach the Sperryville village. Based on VDOT [TE-374.1](#), areas with high pedestrian orientation and where the 85th percentile speed exceeds the posted speed limit by at least 10 mph are good candidates for speed feedback signs, which should be considered as one mechanism to encourage slower driving in this area. Other traffic calming elements that may be explored further during the design phase include:

- Streetlights
- Raised textured intersections where pedestrian facilities are installed
- Raised pedestrian crossings
- Striping enhancements to formalize entrances and exits at businesses (i.e., access management)
- RRFB crossings
- Edge striping to narrow lanes
- Curb extensions
- Chicanes
- Median refuge islands
- Street trees
- Monument gateway signage
- Realignment of intersection

5: TRAILHEAD CONCEPTS

The Sperryville Community Alliance has already constructed part of a pedestrian footpath through the downtown Sperryville area and is currently in the process of developing a design to extend the path east to Pen Druid Brewing along the Thornton River and through a field, as shown in Figure 13. The County requested that this report not include recommendations for the path itself to avoid conflicts with that design and to focus on recommendations for trailheads and crossing treatments.

The following locations are proposed as trailheads:

- Trailhead 1: Route 522 at Water Street & Thornton River
- Trailhead 2: Sperryville Pike/Route 522 at Miller Property Driveway
- Trailhead 3: Water Street near Sperryville Artist Cooperative and Copper Fox Distillery

Concept level drawings and key design features are outlined for each of these trailhead locations on the following pages. Additional detail will be developed as they move into the design phase. In addition to these trailhead locations, additional recommended wayfinding elements include custom signage to indicate cross streets and distances throughout the path.

Figure 12. Map of Proposed Sperryville Projects



Trailhead 1: Route 522 at Water Street & Thornton River

This is the primary trailhead in downtown Sperryville and connects to an existing crosswalk with existing segments of the path on both sides of the street. Recommendations are illustrated in Figure 14 and include:

- Monument signs facing both directions of travel
- Benches
- Trash and recycling bins
- System map
- Locations to install public art in the center of the trailhead and along the path
- Extension of existing fence on west side to discourage trail users from entering parking lot
- Planters as buffers and recognizable placemaking elements

This recommendation includes changes to the intersection of Route 522/Sperryville Pike at Main Street to encourage vehicles to slow down as they approach the trail crossing. Several potential design changes could support this goal, as described on page 14, and should be selected during the design phase.

Figure 13. Trailhead 1 Concept at Route 522 and Water Street



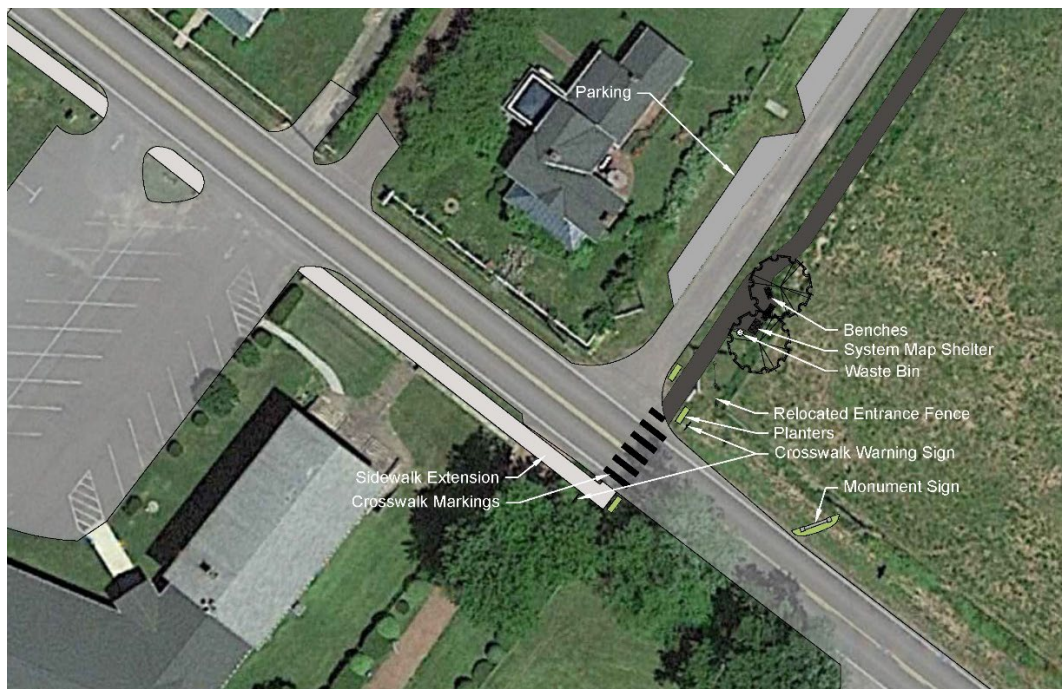
Trailhead 2: Sperryville Pike/Route 522 at Miller Property Driveway

This trailhead is located on the eastern edge of Sperryville, as Route 522 transitions from an agricultural setting to a village. It will connect the planned pedestrian path along the Miller Property driveway to the proposed sidewalk on the south side of Sperryville Pike/Route 522. Recommendations are illustrated in Figure 15 and include:

- A crosswalk to connect the sidewalk and pedestrian path
- Benches
- Shade trees
- Planters at trailhead and optionally as a sidewalk buffer on Route 522
- Monument sign
- System map
- Trash and recycling bins
- Parallel parking spaces along the driveway for trail users
- Relocated entrance fence

Representatives from the County reported that the County has an easement along this driveway to access its Wastewater Treatment Plant. As a next step, this concept should be discussed with the property owner and it should be confirmed that the proposed uses align with the parameters of the existing easement or if a modification needs to be made.

Figure 14. Trailhead 2 Concept at Route 522/Sperryville Pike and Miller Property Driveway



Trailhead 3: Water Street near Sperryville Artist Cooperative and Copper Fox Distillery

This trailhead will be the most accessible for visitors driving in via Lee Highway/Route 211 and will connect trail users to businesses in focus area for economic development in the village, like the distillery and artists’ studios. Recommendations are illustrated in Figure 16 and include:

- Monument sign
- Wayside pull-off area
- Benches
- System map
- Art installations, potentially in collaboration with the artists on site
- Shade trees
- Trash and recycling bins

The existing adjacent parking lot appears to have excess capacity and could potentially be used by trail users if an agreement is reached with the property owner. Additionally, it is recommended that the existing wayfinding sign on Route 211 that highlights the adjacent businesses be updated to include a plaque for the trail.

Figure 15. Trailhead 3 Concept at Water Street and Copper Fox Distillery



Trailhead Design Elements

Specific design elements, such as materials and furnishings, will be selected as each project moves into the design phase. The reference images below provide general direction to illustrate the types of elements that could be incorporated into the trailheads. Using cohesive design elements and materials at each trailhead will help build recognition of the path system and can express Sperryville’s character using recurring local design elements like low stone walls and roughhewn wood fences.

System Map	Bench	Monument Sign
		
Fencing	Planters	Wayside Pull-off
		
Mileage Markers	Directional Signs	Art Installation
		

6: DESIGN CONSIDERATIONS

Documents used in selecting preferred design considerations included:

- [VDOT Complete Streets: Bicycle and Pedestrian Facility Guidelines](#)
- [VDOT Traffic Engineering Memorandum-376.1](#)
- [VDOT Traffic Engineering Memorandum -TE=384](#)
- [VDOT Policy for Integrating Bicycle and Pedestrian Accommodations](#)
- [VDOT Preliminary Engineering Plan Design Standards](#)
- [VDOT Road Design Manual Appendix A-1](#)
- [Virginia Subdivision Street Design Guide](#)
- Virginia Riparian Buffers standards
- [NACO National Trail Surfaces Study](#)
- [USAB Outdoor Developed Areas accessibility standards](#)
- [Guide to the ABA Accessibility Standards Chapter 10](#)
- [USDOT FHWA Achieving Multimodal Networks: Applying Design Flexibility and Reducing Conflicts](#)

All drawings are conceptual in nature. A survey and right-of-way assessment were not included in this scope of work, and additional information will be needed as these projects move into design to verify feasibility and design recommendations. In some cases, waivers from VDOT may be required to implement projects, such as in locations where a 5-foot sidewalk or a minimum buffer width cannot be accommodated due to historic structures.

7: PLANNING LEVEL COST ESTIMATE SUMMARY

The following is a planning level cost estimate for the construction of the proposed sidewalk sections and pedestrian path. During the Engineering Design process, these values will likely change as the design is finalized. The estimated values are based on VDOT prices for rural settings, adjusted for inflation. Using the VDOT Cost Estimating Tool, the estimates are presented below as ranges, with a low-end and high-end estimate for each project. Estimated costs for crossing treatments, curb and gutter or other drainage improvements, right-of-way/utility allowances, and contingencies are included in the overall sidewalk cost estimates. The range in estimates accounts for additional expenses that may be needed for some projects, such as retaining walls or other features. Additional detail about the cost estimate assumptions is available in the attached Planning Level Cost Opinion. These cost estimates do not include the additional traffic calming elements for Sperryville on Route 211 or at the intersection of Route 522/Main Street/Sperryville Pike described within this document as options for consideration in the design phase; those features would be an additional cost that would be included in the design phase cost estimate.

Figure 16. Flint Hill Sidewalk Cost Estimate Summary

	Route 522	
	Low	High
Project Length (Miles)	0.19	
Subtotal Roadway Cost	\$168,750	\$422,538
Right-of-way and Utilities Cost ¹	\$59,063	\$147,888
Total Roadway Cost ²	\$396,563	\$992,964
TOTAL PROJECT COST³	\$495,703	\$1,241,205

¹ Low end estimate assumes 25% and high end assumes 35% ² Includes crossings ³Includes contingency

Figure 17. Sperryville New Sidewalks Cost Estimate Summary

	Route 211		Main Street		Route 522	
	Low	High	Low	High	Low	High
Project Length (Miles)	0.50		0.03		0.27	
Subtotal Roadway Cost	\$262,188	\$749,725	\$30,313	\$73,381	\$136,250	\$391,553
Right-of-way and Utilities Cost ¹	\$91,766	\$262,404	\$10,609	\$25,683	\$47,688	\$137,044
Total Roadway Cost ²	\$616,141	\$1,761,855	\$71,234	\$172,445	\$320,188	\$920,150
Total Pedestrian Bridge Cost	N/A	N/A	\$155,000	\$275,000	N/A	N/A
TOTAL PROJECT COST³	\$770,176	\$2,202,318	\$244,043	\$490,556	\$400,234	\$1,150,187

¹ Low end estimate assumes 25% and high end assumes 35% ² Includes crossings ³Includes contingency

Figure 19. Sperryville Sidewalk Reconstruction Cost Estimate Summary

	Main Street Sidewalk Reconstruction	
	Low	High
Project Length (Miles)	0.19	
Subtotal Roadway Cost	\$88,750	\$262,538
Right-of-way and Utilities Cost ¹	\$31,063	\$91,888
Total Roadway Cost ²	\$208,563	\$616,964
TOTAL PROJECT COST³	\$260,703	\$771,205

¹ Low end estimate assumes 25% and high end assumes 35% ² Includes crossings ³Includes contingency

Figure 18. Sperryville Trailheads Cost Estimate Summary

	Trailheads	
	Low	High
Number of Trailheads	3	
Subtotal Trailhead Cost	\$75,000	\$225,000
Right-of-way and Utilities Cost ¹	\$26,250	\$78,750
Total Trailhead Cost	\$101,250	\$303,750
TOTAL PROJECT COST²	\$126,563	\$379,688

¹ Low end estimate assumes 25% and high end assumes 35% ² Includes contingency

8: ATTACHMENTS

Attached is a Sidewalks Conceptual Plan Set (MicroStation drawings), Trailhead Conceptual Plan Set (CAD drawings), and Planning Level Cost Opinion.

NOTE: Information contained in this document is for planning purposes and should not be used for final design of any project. All results, recommendations, concept drawings, cost opinions, and commentary contained herein are based on limited data and information and on existing conditions that are subject to change. Further analysis and engineering design are necessary prior to implementing any of the recommendations contained herein.