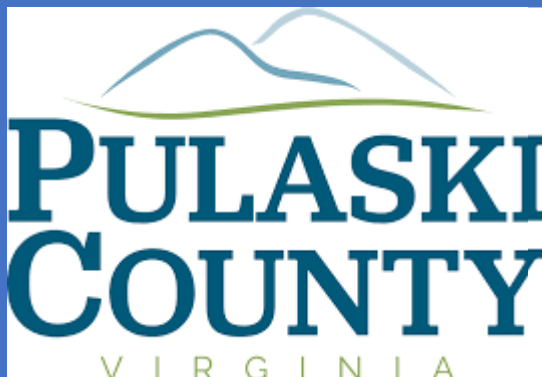


VISCOE ROAD CORRIDOR STUDY

Technical
Memo
October
2023

Approved
Nov. 2, 2023



New River Valley



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Executive Summary

This document presents the results of the of the Viscoe Road Corridor Study, which has been prepared at the request of the New River Valley Metropolitan Planning Organization (MPO), initiated in part due to public concerns with the proposed Highbridge Development of Heron's Landing property. The study corridor is located in Pulaski County, Virginia and includes the entire length of Viscoe Road and all the intersections along Viscoe Road from its northern terminus at Peppers Ferry Road to its southern terminus at the entrance to Camrett Logistics.

This study identifies existing safety concerns along the Viscoe Road corridor, develops potential mitigation strategies and evaluates ability of those mitigation strategies to support the future of the road. Identification of vegetation removal needs, line of sight obstructions, restricted shoulder width, and emergency pull-off area availability are included. In accordance with the Pulaski County Comprehensive Plan 2030, a multimodal approach is used to evaluate the proposed mitigation strategies, taking into consideration opportunities for improving multimodal interconnectivity with the transportation network on Viscoe Road and Viscoe Road's connections to adjacent existing and planned transportation, residential, educational, and recreational facilities in the surrounding community. The significant number of tractor-trailers that utilize Viscoe Road to access Camrett Logistics is also taken into consideration along with input from key stakeholders including Pulaski County, VDOT, the New River Valley MPO, and the public.

After analyzing the study corridor as described above, proposed short-term and mid-term mitigation strategies are recommended for improving safety throughout the corridor. Additionally, the study identifies opportunities for improving intermodal connectivity that warrant further exploration. These recommendations are as follows:

Recommended short-term solutions include:

- Vegetative trimming
- Installation of additional pavement to correct truck over-tracking issues.

Recommended mid-term solutions include:

- Installation of a 4' paved shoulder.

Long-term mitigation solutions recommended for future consideration:

- School Zone expansion.
- Installation of a 10' shared use path with a 4' buffer on one side of Viscoe Road.
- Installing speed display signs on Viscoe Road.
- Increased speed limit enforcement by police.
- Possible extension of Viscoe Road through the Camrett Logistics property to connect to the proposed Highbridge Development.

I. Introduction

New River Valley Metropolitan Planning Organization (MPO) retained RK&K to conduct a corridor study of Viscoe Road in Pulaski County, Virginia. The study corridor includes the entire length of Viscoe Road and all the intersections along Viscoe Road. The need for this corridor study was initially brought about by the proposed rezoning of a new residential development - Highbridge Development of the Heron's Landing property. The subject property is 66 acres in size and is located at the eastern terminus of Herons Landing Drive, just east of the terminus of Viscoe Road. The rezoning proposes to construct approximately 150 residential units. Pulaski County desires to connect existing and planned recreational areas and trails in this community with other assets/residential areas/school via bike/ped, consider semi and tractor trailers use of the road, develop safety improvements including line of sight and additional shoulder width, identify pull-offs for emergency vehicles to pass, and identify vegetation removal needs. The goal of the study is to identify a multimodal approach to improving the transportation network on Viscoe Road and Viscoe Road's connections to adjacent transportation facilities.

The study has included monthly progress meetings with the study team - Pulaski County, the New River Valley MPO, and VDOT. Two Citizen Information meetings were also included as a part of this study. The RK&K team conducted a site visit at the beginning of the study to assess the corridor's existing conditions. The study reviewed background information, including but not limited to the Highbridge Development rezoning information, recent traffic studies, and the Comprehensive Plan. Crash analysis was conducted on the corridor to identify potential safety issues. The culmination of the study was developing alternatives to mitigate deficiencies found along the corridor and planning for future needs.

Viscoe Road (Route 679) is a two-lane undivided road with a posted speed limit of 40 MPH. Viscoe Road has rolling terrain and numerous horizontal curves throughout its length. It is functionally classified as a local road by VDOT. It is approximately 22 feet wide, has no shoulders, and has open channel drainage. It is approximately 1.45 miles long, beginning at Peppers Ferry Road and terminating at the entrance to Camrett Logistics. A study area map, **Figure 1**, was developed to display the study corridor and significant features of the corridor.

The latest published VDOT daily volume (2021) was 2,400 from Peppers Ferry Road to River Course Drive and 1,800 from River Course Drive to the terminus. The daily percentage of truck volume is 10%. VDOT conducted daily traffic counts for this study on Wednesday, April 19, 2023, and Thursday, April 20, 2023. The results of the counts are presented below:

- 4,036 ADT (8% heavy vehicle) - North of Beth Nelson Drive
- 3,337 ADT - Brooklyn Road to Bradley Road
- 417 ADT - South of Herons Landing Drive

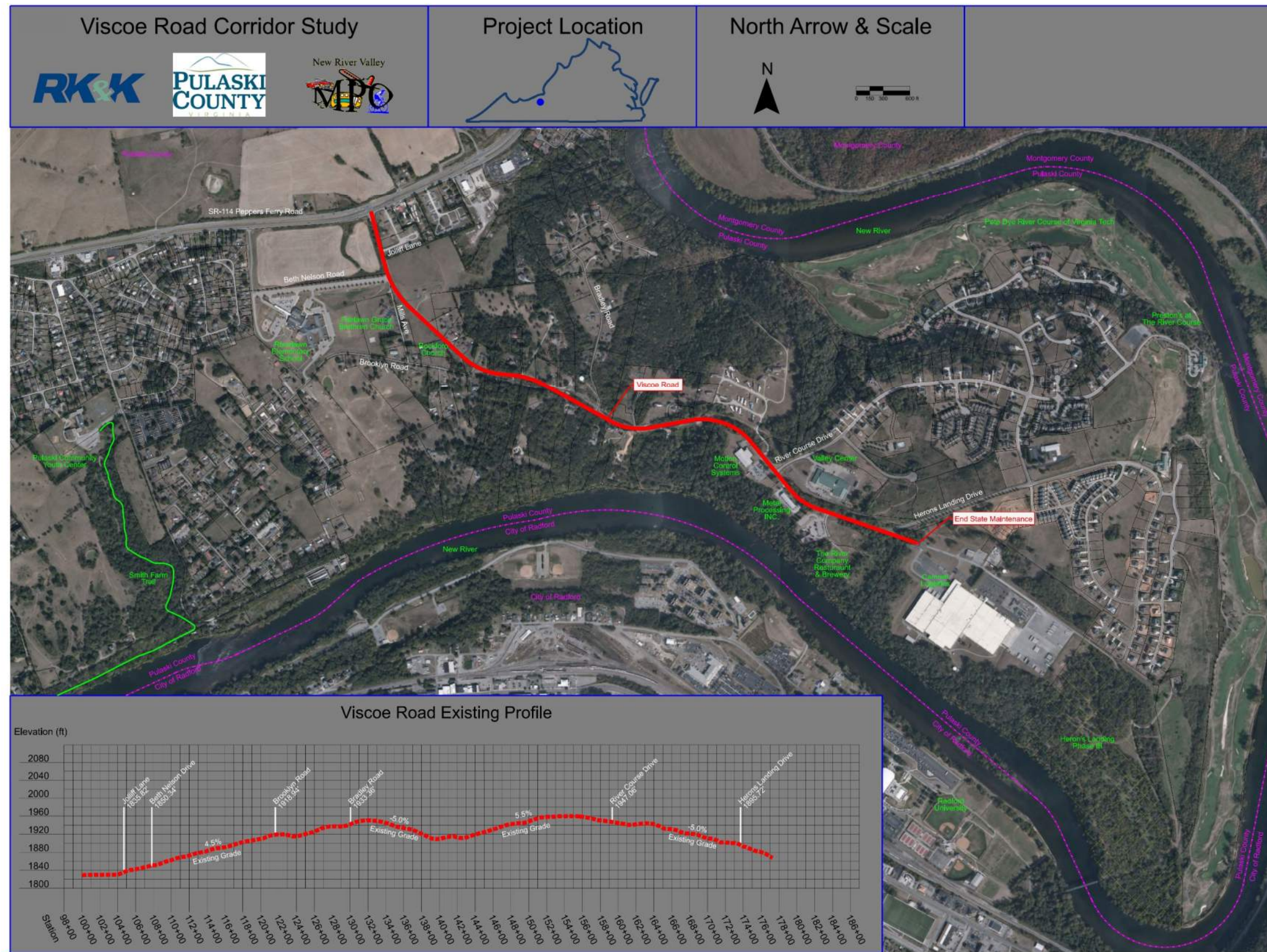
As part of the alternatives development process, two community information meetings (CIMs) were held. During the first CIM, the public mentioned speeding as a corridor issue to study team members. Considering this claim, StreetLight data was reviewed to gauge the extent of the problem. Speeds were pulled from the Fall of 2022 (September through November). 85th percentile speeds, the speed at which 85% of the traffic is traveling below, was the focus of the

data, as that is normally the particular speed statistic considered when setting speed limits. The StreetLight data showed the following 85th-percentile speeds:

- 38/38 MPH (NB/SB) - Peppers Ferry Road to Beth Nelson Drive
- 47/46 MPH (NB/SB) - Beth Nelson Drive to Brooklyn Road
- 47/47 MPH (NB/SB) - Brooklyn Road to Bradley Road
- 44/45 MPH (NB/SB) - Bradley Road to River Course Drive
- No data - River Course Drive to Herons Landing Drive

When compared with the 40 MPH posted speed limit, the StreetLight data indicates a moderate speeding problem.

Figure 1: Viscoe Road Corridor Map



II. Site Visit

RK&K conducted a site visit on Thursday, January 5, 2023, to gather general information about the corridor and surrounding land uses. During the site visit, the following types of information were gathered: traffic behaviors, pedestrian activity, pedestrian connections, existing signing and striping, heavy vehicle activity, sight distance, and a review of typical sections (including pavement widths). The site visit included videoing the corridor and taking pictures throughout the study area; the site visit photos, videos, and field notes are provided in **Appendix A**.

Some of the pertinent field notes collected included the following (see **Appendix A** for more details):

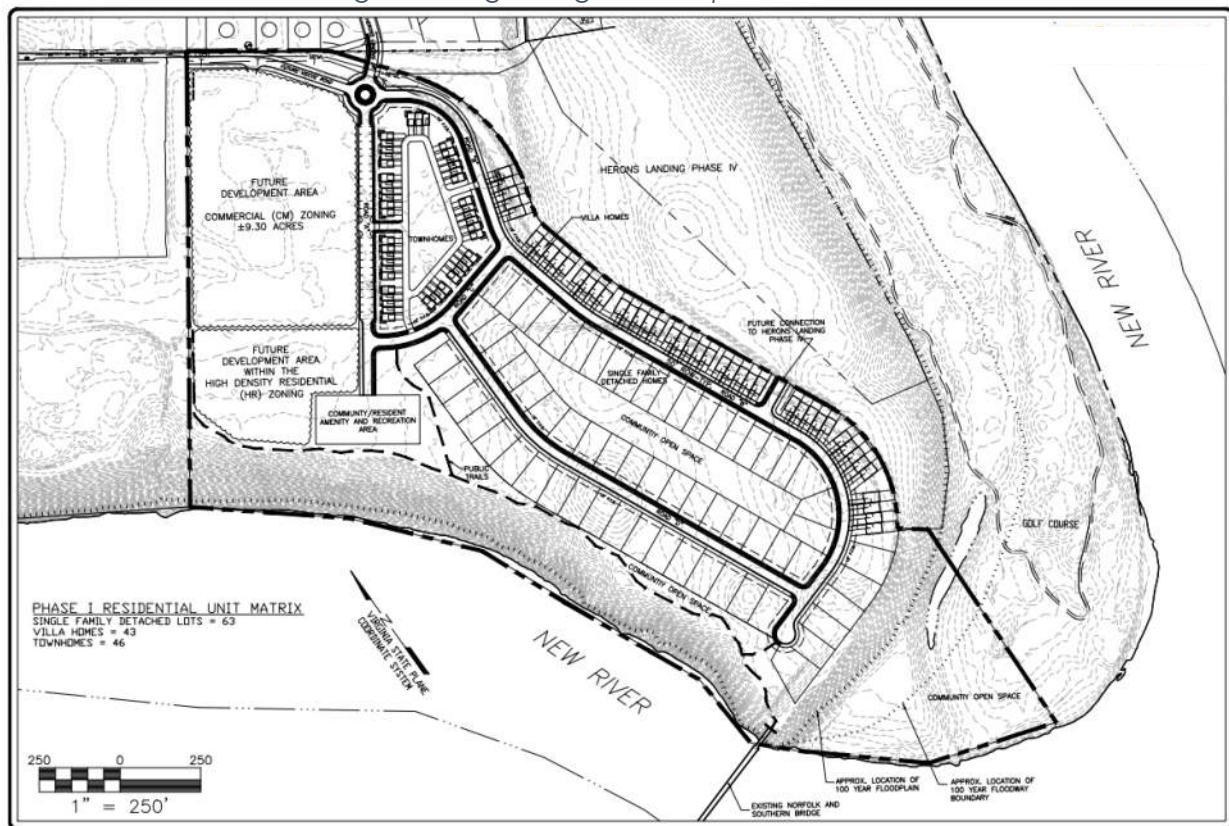
- Suggested expanding the pavement at the Peppers Ferry Road intersection with Viscoe Road on the northbound right turn and the westbound right turn to support truck over-tracking (may require relocation of utilities).
- School bus drivers complained of traffic backups on the Viscoe Road approach to Peppers Ferry Road. Consider extending the right turn lane (there are some impediments to this potential improvement).
- Viscoe Road width just west of Brooklyn Road is approximately 22'5", the rest of the corridor is of similar width.
- Brooklyn Road has extremely poor intersection sight distance at Viscoe Road due to vegetation; sight distance is only approximately 165', that is less than half the recommended sight distance needed based on the posted speed limit of 40 mph.
- Consider the need for a right turn lane or taper from Viscoe Road into Beth Nelson Road (to elementary school)
- Numerous areas of overgrown vegetation that limit sight distance (see notes in **Appendix A**)
- Guardrail is substandard - terminal ends aren't standard, guardrail could be set back further from the road
- Old foundation adjacent to the road should be removed as it is a roadside hazard
- Poor sight distance for multiple residential driveways
- Pull-off areas exist on the corridor
- Recommend installing shoulders on the corridor to help with the curvilinear (vertical and horizontal) nature, which also impacts sight distance.
- Bicycle and pedestrian connectivity from Pulaski Community Youth Center/Smith Farm Park to Viscoe Road appears to have significant impediments along Brooklyn Road and Dudley Ferry Road. Impediments include numerous homes fronting Brooklyn Road in very close proximity to the road (i.e., 30-50 feet), utilities, and grade difficulties.
- Striping on Beth Nelson Road is heavily faded and needs to be refreshed (including "School" pavement markings).
- May want to consider adding school zone signage with flashers, potentially having a reduced speed zone.
- School buses have difficulty egressing with a left turn movement from Beth Nelson Road to Viscoe Road during school arrival and departure. PM peak hour is worse than AM peak hour.
- Bamboo obscures sight distance leaving school onto Brooklyn Road.
- Very low pedestrian and bicycle traffic observed on Viscoe Road (less than five over several hours).

III. Review of Background Information

Background information related to the Viscoe Road corridor was reviewed to understand the area's current status and the plans for the future. The reviewed information included the Highbridge Development rezoning information, recent traffic studies, and the Comprehensive Plan.

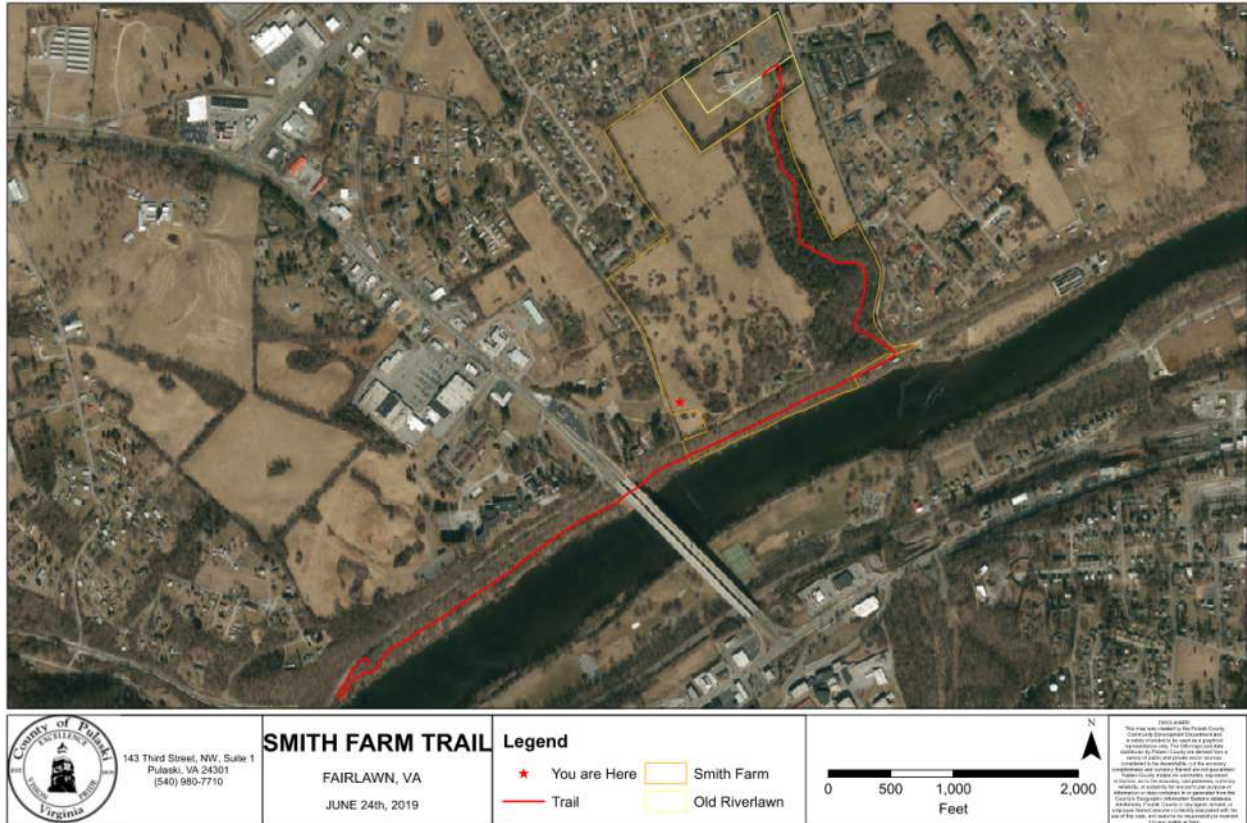
The impetus of this study was the proposed Highbridge Development of Heron's Landing. The developer proposes constructing 152 single-family detached homes and townhomes south of the current Heron's Landing development on 65.84 acres. **Figure 2** displays the proposed Highbridge site plan. The development requires a rezoning from light industrial to high density residential and a portion from light industrial to commercial. The rezoning information indicates that the proposed development will add 1,160 daily weekday trips to Viscoe Road, with 84 new AM peak hour trips and 106 PM peak hour trips. This additional traffic on Viscoe Road will have a negligible impact on traffic operations. The property is designated as Fairlawn Growth Area in the 2019 Pulaski County Comprehensive Plan. The Code of Virginia defines growth areas as areas designated by the locality that are appropriate for higher density development. Moreover, designated growth areas are proposed and anticipated to meet the County's projected residential and commercial growth for at least 10-20 years.

Figure 2: Highbridge Development Site Plan



A new park was recently established near the Viscoe Road corridor – Smith Farm was recently donated to the County to be a park. In 2019 the land was donated to the County for the park. The 100-acre property is immediately adjacent to the Pulaski County Community Youth Center. The property has a planned trail that will run along the New River. **Figure 3** outlines the Smith Farm property and the planned trail.

Figure 3: Smith Farm Trail



IV. Crash Analysis

Crash records on Viscoe Road were reviewed for the past seven years of historical crash data (2015-2021). **Table 1** summarizes the Viscoe Road crash history. Crash data was pulled from publicly available VDOT sources. There were sixteen (16) reported crashes over the 7-year crash history, an average of 3.2 per year. The highlights of the crash data include the following:

- Eight (8) crashes, 50%, occurred at the Peppers Ferry Road intersection with Viscoe Road. Seven (7) of these crashes were rear end crashes.
- Nine (9) crashes, 56%, were rear end crashes, most of which occurred at the Peppers Ferry Road intersection.
- Four (4) crashes, 25%, resulted in visible injuries.
- Eleven (11) crashes, 69%, occurred between 12 PM and 6 PM.
- Two (2) crashes, 13%, occurred at the Beth Nelson Drive intersection.
- Three (3) crashes, 19%, occurred at the Brooklyn Road intersection

Figure 4 displays a map of the crashes by location, and **Figure 5** displays a map by severity.

Table 1: Viscoe Road Crash History (2015-2021)

Viscoe Road		Number of Crashes Year							7 Year Total Crashes	Mean Crashes Per Year	%
		2015	2016	2017	2018	2019	2020	2021			
CRASH TYPE	1. Rear End	2	1	1	2	1	1	1	9	1.8	56.3%
	2. Angle	0	0	0	0	0	0	1	1	0.2	6.3%
	4. Sideswipe - Same Direction	0	0	0	1	0	0	0	1	0.2	6.3%
	9. Fixed Object - Off Road	0	2	0	1	0	0	0	3	0.6	18.8%
	10. Deer	0	0	0	0	2	0	0	2	0.4	12.5%
	12. Ped	0	0	0	0	0	0	0	0	0.0	0.0%
	Total Crashes	2	3	1	4	3	1	2	16	3.2	100.0%
SEVERITY	A. Severe Injury	0	0	0	0	0	0	0	0	0.0	0.0%
	B. Visible Injury	0	1	1	1	0	0	1	4	0.8	25.0%
	C. Nonvisible Injury	0	0	0	0	0	0	0	0	0.0	0.0%
	K. Fatal Injury	0	0	0	0	0	0	0	0	0.0	0.0%
	PDO. Property Damage Only	2	2	0	3	3	1	1	12	2.4	75.0%
	KAB	0	1	1	1	0	0	1	4	0.8	25.0%
LIGHTING CONDITION	1. Dawn	0	0	0	0	0	0	0	0	0.0	0.0%
	2. Daylight	1	2	1	3	3	1	2	13	2.6	81.3%
	3. Dusk	0	0	0	0	0	0	0	0	0.0	0.0%
	4. Darkness - Road Lighted	0	0	0	0	0	0	0	0	0.0	0.0%
	5. Darkness - Road Not Lighted	1	1	0	1	0	0	0	3	0.6	18.8%
	6. Darkness - Unknown Road Lighting	0	0	0	0	0	0	0	0	0.0	0.0%
SURFACE CONDITION	1. No Adverse Condition (Clear/Cloudy)	1	3	1	3	1	1	1	11	2.2	68.8%
	5. Rain	0	0	0	1	2	0	1	4	0.8	25.0%
	6. Snow	1	0	0	0	0	0	0	1	0.2	6.3%
Time Slicing	0 AM TO 3 AM	0	0	0	0	0	0	0	0	0.0	0.0%
	3 AM TO 6 AM	0	0	0	0	0	1	0	1	0.2	6.3%
	6 AM TO 9 AM	0	0	0	0	0	0	0	0	0.0	0.0%
	9 AM TO 12 PM	0	0	0	0	1	0	0	1	0.2	6.3%
	12 PM TO 3 PM	1	2	1	0	2	0	0	6	1.2	37.5%
	3 PM TO 6 PM	0	1	0	2	0	0	2	5	1.0	31.3%
	6 PM TO 9 PM	1	0	0	2	0	0	0	3	0.6	18.8%
	9 PM TO 12 AM	0	0	0	0	0	0	0	0	0.0	0.0%

Figure 4: Viscoe Road Crash Type Map

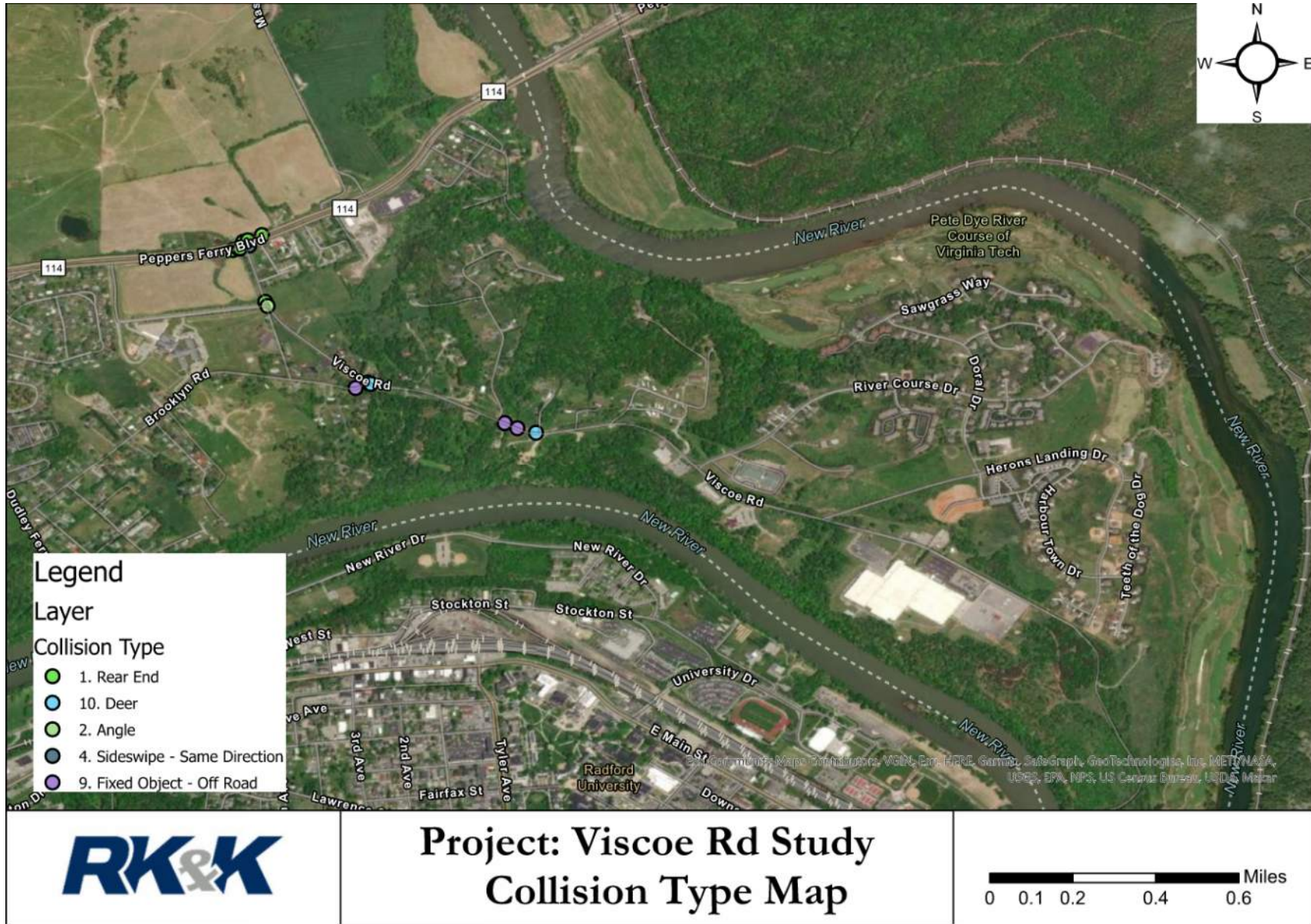
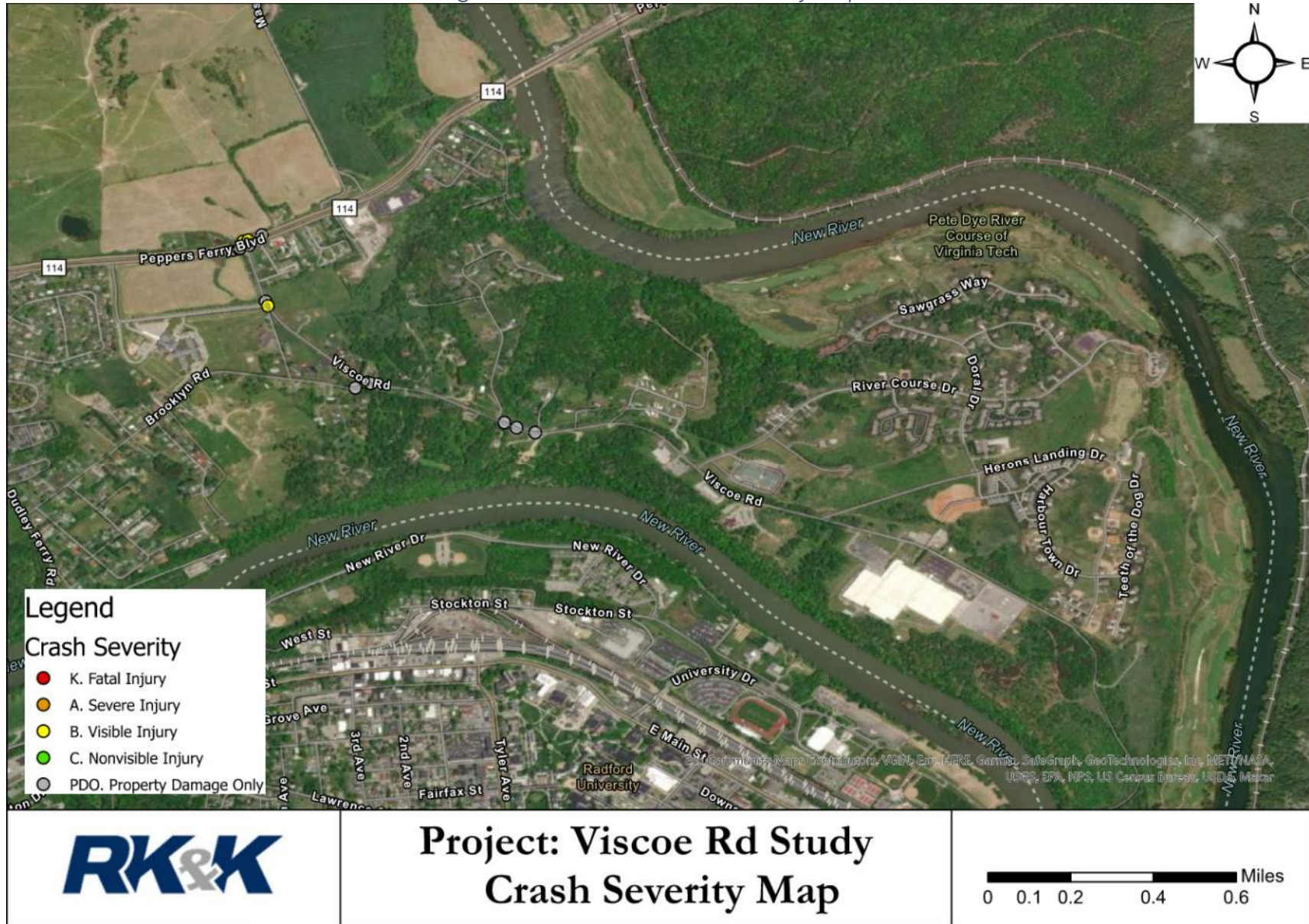


Figure 5: Viscoe Road Crash Severity Map



V. Alternative Development

This Corridor Study has identified existing roadway deficiencies, including all modes of travel, and identified mitigation for these deficiencies to support the future of the road. A variety of information was used to identify deficiencies and develop mitigation. Information was gathered from regional stakeholders (VDOT, Pulaski County, New River Valley MPO) and the public, and supplemented background information, crash analysis data, and the site visit to identify deficiencies. The study developed a list of improvements to mitigate existing safety issues and other deficiencies, such as a lack of non-motorized network connectivity.

There were no severe crash patterns identified in the crash analysis. However, moderate speeding and limited sight distance throughout the corridor cause safety concerns.

The initial improvements developed for the corridor are listed in **Table 2**; they included spot improvements and systemic treatments such as shoulders or shared use paths. The following was presented to the public for feedback during the first CIM (see Section VI):

- A range of feasible typical sections, including:
 - Viscoe Road existing conditions - 2 - 11' lanes (no shoulders)
 - 2-11' lanes with 4' paved shoulders (buffers) and a 10' shared use path
 - 2-11' lanes with 6' paved shoulders to be used as bike lanes
 - 2-11' lanes with 4' paved shoulders (wide shoulders) that can be used as bike lanes
 - 2-11' lanes with 4' buffer space and a 5' sidewalk on one side of the road
 - Brooklyn Road existing conditions - 2-10' lanes (no shoulders)
 - 2-10' lanes with a 5' sidewalk immediately adjacent to the road on one side
- Viscoe Road Corridor Aerial Map, including:
 - County line
 - Parcel lines
 - Significant Landowner labels
- Potential Viscoe Road Improvements Table, including:
 - High level cost estimate
 - Improvement Descriptions
 - Pros
 - Cons
- Crash maps for 2015-2021
 - Collision Type Map
 - Crash Severity Map

Four Viscoe Road typical sections were presented at the initial meeting (see **Figure 6**). Citizens were asked to select their preferred option. The majority (52%) choose 6A - 2-11' lanes with 4' paved shoulders and a 10' shared use path on one side of the road. The second most popular typical section was 6B, with 22%, 2-11' lanes with 6' paved shoulders for bike lanes. In general, citizen support for improving non-motorized transportation was moderate.

After consultation with the study team and consideration of public feedback, the list was amended, and a more extensive list of improvements was opened for consideration, displayed in **Table 3**.

Figure 6: Initial Viscoe Road Typical Sections

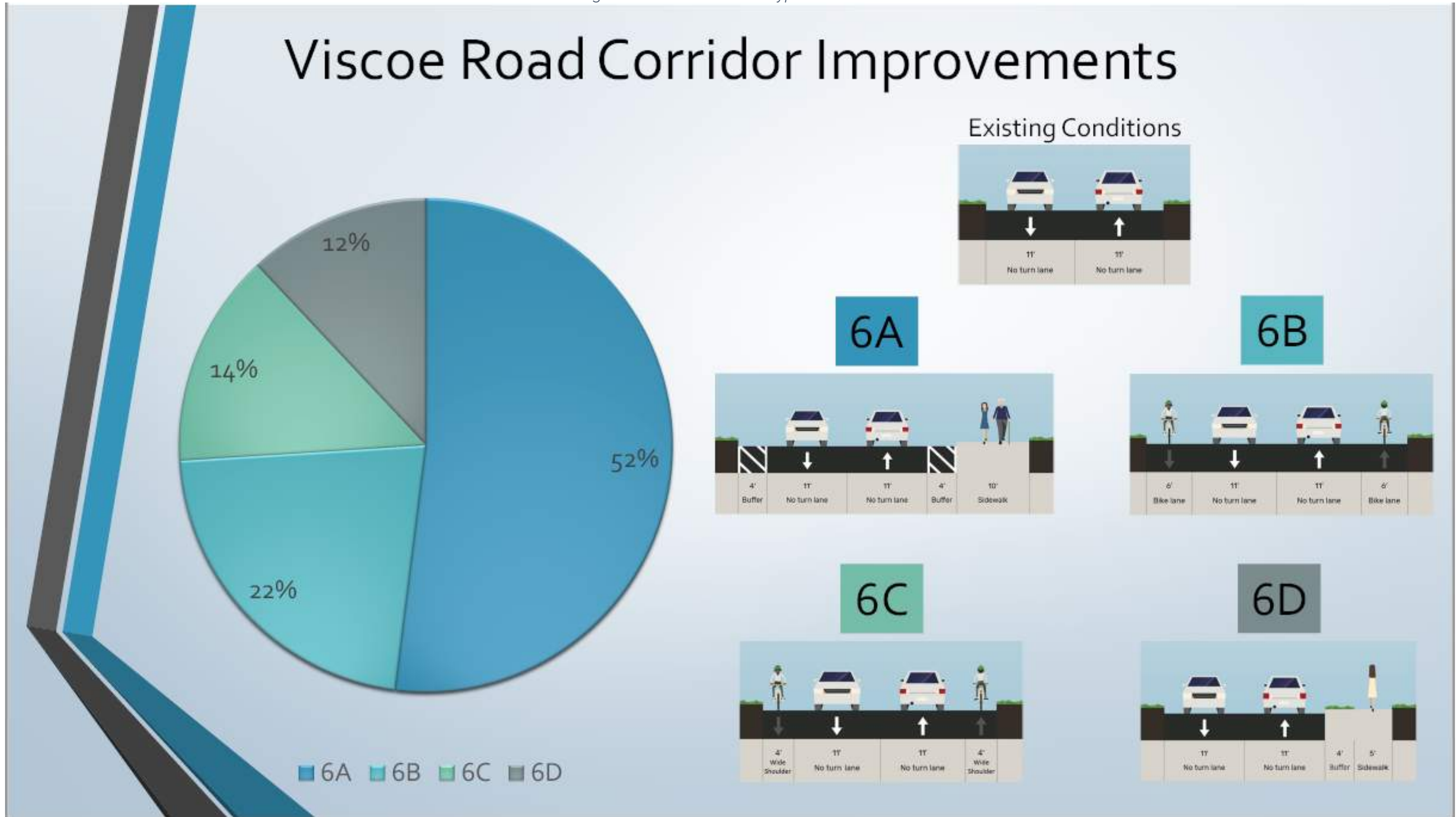


Table 2: Original Viscoe Road Improvement Ideas

Viscoe Road Improvement Ideas				
#	High Level Planning Cost Estimate	Improvement Description	Pros	Cons
1	\$	School Zone on Viscoe Road (with or without School Speed Limit Zone)	<ul style="list-style-type: none"> • Low Cost 	<ul style="list-style-type: none"> • School traffic impact on Viscoe is not severe
2	\$\$	Tree Trimming for sight distance improvement at various locations on the corridor	<ul style="list-style-type: none"> • Moderate Cost • Improves Sight Distance/Improves Safety 	
3	\$\$	Extend northbound right turn lane length at Peppers Ferry Road	<ul style="list-style-type: none"> • Moderate Cost • Minor Increase in Capacity/Operations 	<ul style="list-style-type: none"> • Only needed for short school periods
4	\$	Install additional pavement for eastbound right turn movements by trucks onto Viscoe Road	<ul style="list-style-type: none"> • Low Cost 	
5	\$	Modify Elementary School internal traffic flow	<ul style="list-style-type: none"> • Low Cost 	<ul style="list-style-type: none"> • School traffic impact on Viscoe is not severe • Requires school cooperation
6	\$\$\$\$\$	Install Bicycle/Pedestrian Facilities on Viscoe Road	<ul style="list-style-type: none"> • Provides an asset that doesn't exist • Connects Heron's Ridge with Elementary School and potentially the Community Center • May Improve Vehicular Safety 	<ul style="list-style-type: none"> • Very High Costs • Right-of-Way Acquisition Required for the entire corridor
6a		a. 10' Shared Use Path on north side of Viscoe Road with 4' buffers	<ul style="list-style-type: none"> • Provides an adequate facility for bicycles and pedestrians 	
6b		b. 6' wide shoulder for bicycle use in both directions of Viscoe Road	<ul style="list-style-type: none"> • Provides refuge for vehicle breakdowns 	<ul style="list-style-type: none"> • Only provides for bicycle accommodations
6c		c. 4' wide shoulder for bicycle use in both directions of Viscoe Road		<ul style="list-style-type: none"> • Only provides for bicycle accommodations
6d		d. 5' Sidewalk with 4' buffer on north side of Viscoe road		<ul style="list-style-type: none"> • Potentially mixes bicycle and pedestrian traffic on a narrow facility
7	\$\$\$\$\$	Install Bicycle/Pedestrian Facilities on Brooklyn Road.	<ul style="list-style-type: none"> • Provides an asset that doesn't exist • Provides Connection to Smith Farm Trail and Community Center 	<ul style="list-style-type: none"> • Very High Costs • Right-of-Way Acquisition Required for the entire corridor • Encroaches close to many residences
7a		a. 5' Sidewalk with no buffer		
8	\$	Modify Traffic Control at Heron's Landing Drive and Viscoe Road to make the path to/from Heron's Landing Drive free-flow and the northbound Viscoe Road approach stop controlled.	<ul style="list-style-type: none"> • Creates direct flow for higher volume movements 	<ul style="list-style-type: none"> • Trucks exiting Camrett Logistics will have to stop when exiting
	\$ 0-25,000 \$\$ 25,001-100,000 \$\$\$ 100,001-500,000 \$\$\$\$ 500,000-2,000,000 \$\$\$\$\$ 2,000,001-5,000,000+			

Table 3: Revised Viscoe Road Improvement Ideas

Viscoe Road Improvement Ideas				
#	High Level Planning Cost Estimate	Improvement Description	Pros	Cons
1	\$	School Zone on Viscoe Road (with or without School Speed Limit Zone)	<ul style="list-style-type: none"> • Low Cost 	<ul style="list-style-type: none"> • School traffic impact on Viscoe is not severe
2	\$\$	Tree Trimming for sight distance improvement at various locations on the corridor	<ul style="list-style-type: none"> • Moderate Cost • Improves Sight Distance/Improves Safety 	
3	\$\$	Extend Northbound right turn lane length at Peppers Ferry Road	<ul style="list-style-type: none"> • Moderate Cost • Minor Increase in Capacity/Operations 	<ul style="list-style-type: none"> • Only needed for short school periods
4	\$	Install additional pavement for eastbound right turn movements by trucks onto Peppers Ferry Road and Viscoe Road	<ul style="list-style-type: none"> • Low Cost 	
5	\$	Modify Elementary School internal traffic flow	<ul style="list-style-type: none"> • Low Cost 	<ul style="list-style-type: none"> • School traffic impact on Viscoe is not severe • Requires school cooperation
6	\$\$\$\$\$	Install Bicycle/Pedestrian Facilities on Viscoe Road	<ul style="list-style-type: none"> • Provides an asset that doesn't exist • Connects Heron's Ridge with Elementary School and potentially the Community Center • May Improve Vehicular Safety 	<ul style="list-style-type: none"> • Very High Costs • Right-of-Way Acquisition Required for the entire corridor
6a		a. 10' Shared Use Path on north side of Viscoe Road with 4' buffers	<ul style="list-style-type: none"> • Provides an adequate facility for bicycles and pedestrians 	
6b		b. 6' wide shoulder for bicycle use in both directions of Viscoe Road	<ul style="list-style-type: none"> • Provides refuge for vehicle breakdowns 	<ul style="list-style-type: none"> • Only provides for bicycle accommodations
6c		c. 4' wide shoulder for bicycle use in both directions of Viscoe Road		<ul style="list-style-type: none"> • Only provides for bicycle accommodations
6d		d. 5' Sidewalk with 4' buffer on north side of Viscoe road		<ul style="list-style-type: none"> • Potentially mixes bicycle and pedestrian traffic on a narrow facility
7	\$\$\$\$\$	Install Bicycle/Pedestrian Facilities on Brooklyn Road	<ul style="list-style-type: none"> • Provides an asset that doesn't exist • Provides Connection to Smith Farm Trail and Community Center 	<ul style="list-style-type: none"> • Very High Costs • Right-of-Way Acquisition Required for the entire corridor • Encroaches close to many residences
7a		a. 5' Sidewalk with no buffer		
8	\$	Modify Traffic Control at Heron's Landing Drive and Viscoe Road to make the path to/from Heron's Landing Drive free-flow and the northbound Viscoe Road approach stop controlled.	<ul style="list-style-type: none"> • Creates direct flow for higher volume movements 	<ul style="list-style-type: none"> • Trucks exiting Camrett Logistics will have to stop when exiting
9	\$\$\$	Sidewalk along Viscoe Road Between Heron's Landing Drive and River Course Drive (0.25 mi)	<ul style="list-style-type: none"> • Improves pedestrian safety • Provides logical residential connection and creates a walking loop 	
10	\$\$\$\$\$	Acquire property from Camrett Logistics and Continue Viscoe Road into the New Highbridge development (0.5 mi)	<ul style="list-style-type: none"> • Decreases traffic through Heron's Landing • Creates direct route to Highbridge development 	<ul style="list-style-type: none"> • Requires acquisition of ROW
11	\$	Install speed display signs along Viscoe Road	<ul style="list-style-type: none"> • May decrease average speed • Low Cost 	
12	\$	Increase police enforcement along Viscoe Road	<ul style="list-style-type: none"> • May decrease average speed 	<ul style="list-style-type: none"> • Temporary effectiveness
13	\$	Limit speed to 25 MPH along the entirety of Viscoe Road	<ul style="list-style-type: none"> • May decrease average speed • Low Cost 	<ul style="list-style-type: none"> • Speed study may recommend keeping the existing speed limit
14	\$\$\$	Install pull-off areas along Viscoe Road	<ul style="list-style-type: none"> • Modest Improvement in vehicular safety 	<ul style="list-style-type: none"> • May not be necessary for a short corridor
	\$ 0-25,000 \$\$ 25,001-100,000 \$\$\$ 100,001-500,000 \$\$\$\$ 500,000-2,000,000 \$\$\$\$\$ 2,000,001-5,000,000+			

Further consideration by the study team leads to the recommendations presented in **Table 4**. Further details on the reasoning for each considered improvement are provided below (numbering follows Table 4):

1. School Zone - further consideration of this is necessary. The school traffic impacts on Viscoe are limited in duration and severity. Riverlawn Elementary School is located approximately 900 feet off Viscoe Road on Beth Nelson Road, which provides a degree of isolation, limiting the severity of the traffic impacts on Viscoe Road.
2. Vegetative trimming is recommended in the short term throughout the corridor to improve the sight distance. The horizontal and vertical curvature of Viscoe Road exacerbate sight distance limitations; therefore, vegetation must be kept trimmed to provide adequate sight distance. See field notes for vegetation trimming locations (**Appendix A**).
3. Extending the northbound Viscoe Road right turn lane length has been dropped from further consideration. Right-of-way and utility relocation costs will make this improvement expensive relative to the modest benefit of improving school egress periods.
4. Installing additional pavement at the Peppers Ferry Road and Viscoe Road intersection is **recommended in the short term** to correct the truck over-tracking issues for the right turn movements on both Peppers Ferry Road and Viscoe Road.
5. Modifying the internal circulation pattern at Riverlawn Elementary School has been dropped from consideration. The school traffic patterns have a limited impact on Viscoe Road, and the school must approve the changes.
6. Installing systemic bicycle/pedestrian facilities on Viscoe Road:
 - a. Further consideration is needed for installing a 10' shared use path with a 4' buffer on one side of Viscoe Road. The public expressed some interest in this amenity at the public meeting and through written comments; however, the interest was not considered strong. This improvement would be expensive and likely require right-of-way acquisition in certain corridor segments.
 - b. A 6' paved shoulder has been dropped from consideration. Wider shoulders could potentially increase corridor speeds because the wider overall pavement section promotes driver comfort leading to higher speeds.
 - c. A 4' paved shoulder is a **mid-term recommendation** to provide additional room for passing the high percentage of heavy vehicles on the corridor and also to provide an area for use as a bike lane.
 - d. A 5' sidewalk with a 4' buffer has been dropped from further consideration. This improvement would be relatively expensive, and that expense didn't match the level of interest from the public, which is described as moderate interest.
7. Installing systemic bicycle/pedestrian facilities on Brooklyn Road:
 - a. Installing a 5' sidewalk with no buffer has been dropped from consideration. Brooklyn Road is very narrow, and many homes front very close to the road (30-50'), which was considered too close to the homes.
8. Modifying the traffic control at Herons Ridge Landing Drive and Viscoe Road intersection has been dropped from consideration due to a lack of public interest. The idea was to make movements to and from Herons Ridge free-flow and make the northbound Viscoe Road approach stop controlled.
9. Sidewalk along Viscoe Road between Herons Landing Drive and River Course Drive has been dropped from further consideration due to a lack of strong public interest.

10. Further consideration is needed for purchasing property or right-of-way from Camrett Logistics to continue Viscoe Road through the property to the proposed Highbridge development. This proposed segment is a direct connection to Highbridge instead of the circuitous Herons Landing Route through residential. This road segment should be pursued in coordination with Highbridge developers and the County.
11. Further consideration is needed for installing speed display signs on Viscoe Road. It has the potential to decrease speeds on the corridor marginally.
12. Further consideration is needed for increased police enforcement of speed along Viscoe Road. Generally, increased police enforcement only has a temporary impact on speeds.
13. Decreasing the speed limit on Viscoe Road to 25 MPH has been dropped from consideration. A formal speed study would need to be completed before serious consideration of this proposal could happen by VDOT. Moreover, a decrease in the speed limit is unlikely from the existing 40 MPH down to 25 MPH, especially given the lack of severe crash history.
14. Installing pull-off areas on Viscoe Road has been dropped from consideration. Viscoe Road is relatively short, only approximately 1.5 miles; therefore, the need for pull-offs would be an aberration. Moreover, it is likely that they may not be in a location where they are needed (i.e., vehicle breakdown).

Regional stakeholders desire a separate bicycle/pedestrian facility, such as a shared use path, in order to increase safety, develop greater public interest (usage), and provide potential connections to other local bicycle and pedestrian facilities. The power line easements along parts of the Viscoe Road corridor may present an opportunity for a future trail and should be explored in future evaluations of the feasibility of developing a shared use path along Viscoe Road.

VI. Public Outreach

First Citizen Information Meeting (CIM)

The Consultant team prepared for and attended a CIM on Wednesday, March 22, 2023, from 5-7 PM at Pulaski County Innovation Center, New River Room, 6580 Valley Center Drive, Suite 305, Fairlawn, Virginia. The CIM was advertised through an advertisement in the Roanoke Times, through the NRV MPO's website, and by contacting the businesses, HOAs, and school along Viscoe Road via email. The CIM was conducted in the Town Hall format with information boards displayed around the room and study team members roaming the room answering questions. **Figure 7** presents a picture of the meeting.

Figure 7: First CIM Picture



Attendees were asked to sign in at the meeting, and they were asked to provide written comments on a prepared written comment sheet. The meeting was attended by 30 people (based on the number of people that signed in). Approximately 20 citizens provided written comments online. The comment form asked the following questions:

- Attendee Information (name, address, email)
- What are your concerns about the Viscoe Road corridor?
- What improvements do you suggest for the Viscoe Road corridor?
- Would you support bicycle and pedestrian facilities on Viscoe Road if they require right-of-way acquisition?
- Do you support bicycle and pedestrian facilities on Brooklyn Road assuming they will require right-of-way acquisition?
- Additional Comments -

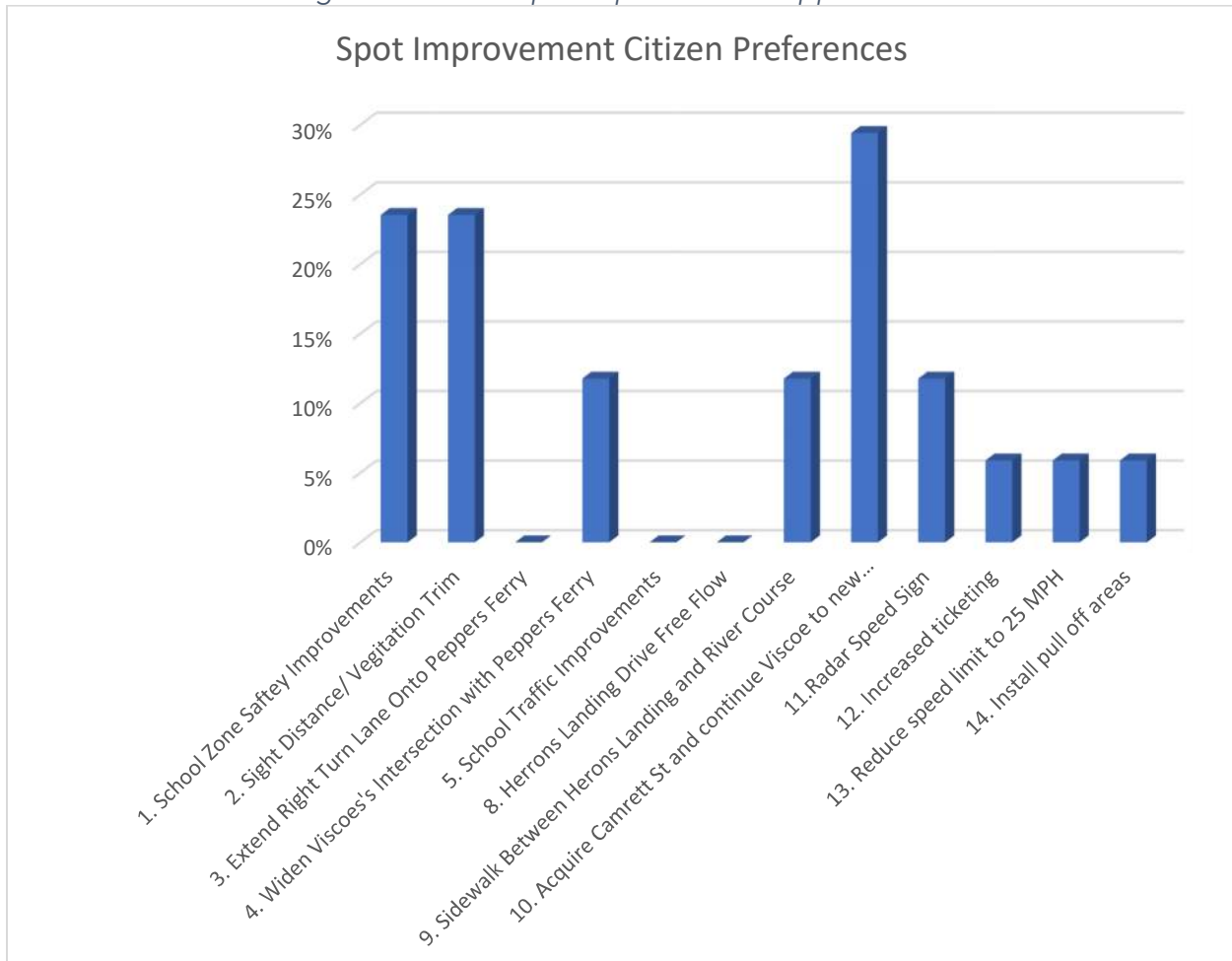
The public meeting attendees were comprised of 73% of citizens residing in Herons' Landing, 20% live on Viscoe Road, and 7% other.

One of the information boards presented a large table of potential improvements along the corridor providing general high-level cost estimates, descriptions of the improvements, and a pros and cons list. The potential improvements list initially displayed at the public meeting is discussed in **Section V - Alternative Development**.

After hearing feedback at the CIM, the list of improvement ideas was amended to create a more extensive list, which is also discussed in **Section V**.

During the CIM, citizen support for proposed spot improvements was recorded. Citizens supported the spot improvements (excluding the systemic sidewalk or shoulder widening) shown in Table 2 at the rates displayed in **Figure 8**. The strongest public support was for acquiring the private road owned by Camrett Logistics to continue Viscoe Road through to the proposed Highbridge development, with 29% of the citizens supporting that idea. The next two most supported improvements, with 24% support, are school zone safety improvements and sight distance improvements by trimming vegetation.

Figure 8: Citizen Spot Improvement Support Rates



There was limited stakeholder input provided regarding Brooklyn Road improvements to support non-motorized transportation improvements. However, citizens who did respond to this idea generally supported the proposed 5' sidewalk on one side of Brooklyn Road.

Second Citizen Information Meeting (CIM)

The Consultant team prepared for and attended a second CIM on Wednesday, August 16, 2023, from 4-6 PM at Pulaski County Innovation Center, New River Room, 6580 Valley Center Drive, Suite 305, Fairlawn, Virginia. The CIM was advertised through in the Roanoke Times, through the NRV MPO's website, and by emailing various stakeholders along the corridor

(businesses, HOAs, the elementary school along Viscoe Road, etc.). The CIM was conducted in a roundtable format with information boards displayed around the room and a large table for discussion set up in the center of the room. **Figure 9** presents an image of the meeting.

Figure 9: Second CIM Picture



Attendees were asked to sign in at the meeting, and they were asked to provide written comments on a prepared written comment sheet. The meeting was attended by 27 people (based on the number of people that signed in). 1 citizen provided written comments online. The comment form asked the following questions:

- Attendee Information (name, address, email)
- Do you agree with the recommendations in the Viscoe Road Corridor Study Memo? If you disagree, what would you like to see changed in the recommendations?
- The Viscoe Road Corridor Study Memo recommends short-term, mid-term, and long-term solutions; are there items in the mid-term and long-term solutions that you would like to see prioritized?
- Additional Comments -

The public meeting attendees were comprised of 70% of citizens residing in Herons' Landing, 26% living along Viscoe Road, and 4% other.

At the meeting, the study team presented an updated version of the preferred typical section for Viscoe Road with 2-11' lanes and 2-4' paved shoulders as well as an optional 10' shared use path 4' from the edge of shoulder depicted in **Figure 10**. The team also displayed an updated alternatives matrix containing a high-level cost estimate, pros, cons, and a final recommendation for each option. The table is displayed in **Table 4**.

Figure 10: Preferred Typical Section
Viscoe Road

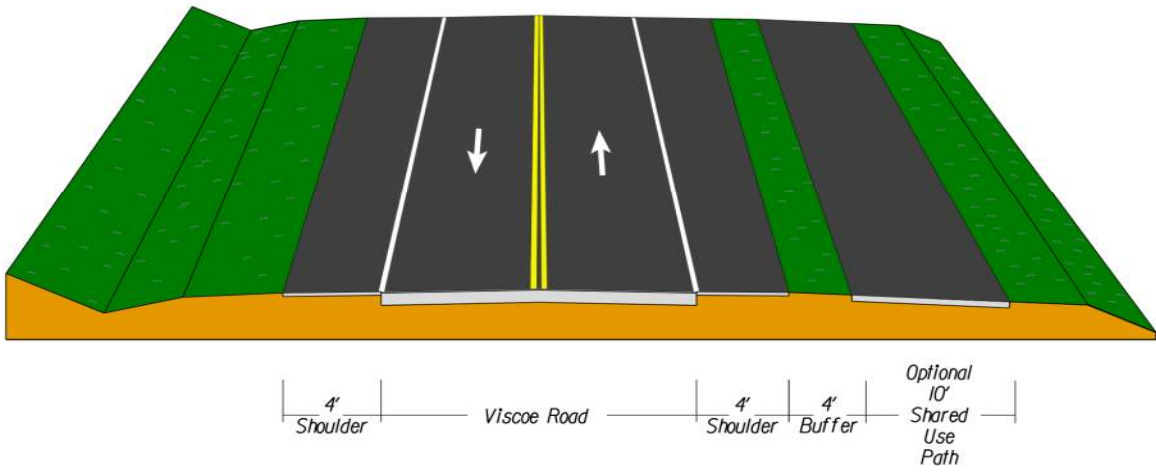


Table 4: Recommended Viscoe Road Improvements

Viscoe Road Improvement Ideas					
#	Final Recommendation	High Level Planning Cost Estimate	Improvement Description	Pros	Cons
1	Further consideration needed	\$	School Zone on Viscoe Road (with or without School Speed Limit Zone)	<ul style="list-style-type: none"> • Low Cost 	<ul style="list-style-type: none"> • School traffic impact on Viscoe is not severe
2	Short Term Recommendation	\$\$	Tree Trimming for sight distance improvement at various locations on the corridor	<ul style="list-style-type: none"> • Moderate Cost • Improves Sight Distance/Improves Safety 	
3	Dropped from consideration	\$\$	Extend northbound right turn lane length at Peppers Ferry Road	<ul style="list-style-type: none"> • Moderate Cost • Minor Increase in Capacity/Operations 	<ul style="list-style-type: none"> • Only needed for short school periods
4	Short Term Recommendation	\$	Install additional pavement for eastbound right turn movements by trucks onto Viscoe Road	<ul style="list-style-type: none"> • Low Cost 	
5	Dropped from consideration	\$	Modify Elementary School internal traffic flow	<ul style="list-style-type: none"> • Low Cost 	<ul style="list-style-type: none"> • School traffic impact on Viscoe is not severe • Requires school cooperation
6	See below	\$\$\$\$\$	Install Bicycle/Pedestrian Facilities on Viscoe Road	<ul style="list-style-type: none"> • Provides an asset that doesn't exist • Connects Heron's Ridge with Elementary School and potentially the Community Center • May Improve Vehicular Safety 	<ul style="list-style-type: none"> • Very High Costs • Right-of-Way Acquisition Required for the entire corridor
6a	Further consideration needed		a. 10' Shared Use Path on north side of Viscoe Road with 4' buffers	<ul style="list-style-type: none"> • Provides an adequate facility for bicycles and pedestrians 	
6b	Dropped from consideration		b. 6' wide shoulder for bicycle use in both directions of Viscoe Road	<ul style="list-style-type: none"> • Provides refuge for vehicle breakdowns 	<ul style="list-style-type: none"> • Shoulder width may cause increased speeds
6c	Mid-Term Recommendation		c. 4' wide shoulder for bicycle use in both directions of Viscoe Road	<ul style="list-style-type: none"> • Provides additional room for passing other vehicles, particularly trucks 	<ul style="list-style-type: none"> • Shoulder width may cause increased speeds
6d	Dropped from consideration		d. 5' Sidewalk with 4' buffer on north side of Viscoe road		<ul style="list-style-type: none"> • Potentially mixes bicycle and pedestrian traffic on a narrow facility
7	Dropped from consideration	\$\$\$\$\$	Install Bicycle/Pedestrian Facilities on Brooklyn Road	<ul style="list-style-type: none"> • Provides an asset that doesn't exist • Provides Connection to Smith Farm Trail and Community Center 	<ul style="list-style-type: none"> • Very High Costs • Right-of-Way Acquisition Required for the entire corridor • Encroaches close to many residences
7a	Dropped from consideration		a. 5' Sidewalk with no buffer		
8	Dropped from consideration	\$	Modify Traffic Control at Heron's Landing Drive and Viscoe Road to make the path to/from Heron's Landing Drive free-flow and the northbound Viscoe Road approach stop controlled.	<ul style="list-style-type: none"> • Creates direct flow for higher volume movements 	<ul style="list-style-type: none"> • Trucks exiting Camrett Logistics will have to stop when exiting
9	Dropped from consideration	\$\$\$	Sidewalk along Viscoe Road Between Heron's Landing Drive and River Course Drive (0.25 mi)	<ul style="list-style-type: none"> • Improves pedestrian safety • Provides logical residential connection and creates a walking loop 	
10	Dropped from consideration	\$\$\$\$\$	Acquire property from Camrett Logistics and Continue Viscoe Road into the New Highbridge development (0.5 mi)	<ul style="list-style-type: none"> • Decreases traffic through Heron's Landing • Creates direct route to Highbridge development 	<ul style="list-style-type: none"> • Requires acquisition of ROW
11	Further consideration needed	\$	Install speed display signs along Viscoe Road	<ul style="list-style-type: none"> • May decrease average speed • Low Cost 	
12	Further consideration needed	\$	Increase police enforcement along Viscoe Road	<ul style="list-style-type: none"> • May decrease average speed 	<ul style="list-style-type: none"> • Temporary effectiveness
13	Dropped from consideration	\$	Limit speed to 25 MPH along the entirety of Viscoe Road	<ul style="list-style-type: none"> • May decrease average speed • Low Cost 	<ul style="list-style-type: none"> • Speed study may recommend keeping the existing speed limit
14	Dropped from consideration	\$\$\$	Install pull-off areas along Viscoe Road	<ul style="list-style-type: none"> • Modest Improvement in vehicular safety 	<ul style="list-style-type: none"> • May not be necessary for a short corridor
\$ 0-25,000 \$\$ 25,001-100,000 \$\$\$ 100,001-500,000 \$\$\$\$ 500,000-2,000,000 \$\$\$\$\$ 2,000,001-5,000,000+					

The conversations between attendees and the consultant team consisted mostly of discussions regarding corridor safety, focusing heavily on reducing speeding, consistent and proactive roadside vegetation maintenance, and implementation of a school zone for Riverlawn Elementary School. According to County representatives an application for a signed school zone along Viscoe Road has already been submitted by the administrators at Riverlawn Elementary.

Residents expressed ongoing concerns that there is significant speeding throughout the corridor, however the data collected during in the study did not bear out these assertions based on VDOT guidance for setting or modifying speed limits along roadways in the Commonwealth. The conversation evolved to what can be done to reduce the amount of speeding along Viscoe Road. Lower cost speed reduction items such as increased speed enforcement and speed radar signs were generally supported.

When discussing short term options for improving safety along the corridor, the conversation was centered around proactive and consistent vegetation management to maintain sight distance on horizontal curves. It was noted that untrimmed vegetation is particularly a problem during certain times of the year. The residents requested vegetation trimming to be conducted on a more consistent basis and were encouraged to make these wishes know to the local VDOT Residency office.

VII. Alternative Refinement

Following the second CIM, the design team, with feedback from the meeting attendees, further explored the preferred typical section of the addition of a 4' wide paved shoulder along the entire corridor. A high-level cost estimate was prepared considering construction and material costs of adding paved shoulders and extending the right turn onto Viscoe Road, resurfacing and restriping the existing roadway, and installing approximately 360 ft of guardrail in a single location along the corridor. Additional items such as stormwater management, maintenance of traffic, erosion and sediment control, preliminary engineering, construction engineering and inspection, as well as VDOT oversight were calculated via allowances, resulting in a project range of \$5.1-8.5 million in 2023 dollars.

VIII. Next Steps

Following the conclusion of this study the MPO, VDOT, County, and other stakeholders will prioritize the recommended alternatives and develop a plan for pursuing funding for those improvements. Some of the proposed improvements may qualify for funding through VDOT's various funding programs, such as SMART SCALE, Revenue Sharing (RS), Transportation Alternatives (TA), and Highway Safety (HSIP) Programs. Qualification for these potential funding sources is dependent on the type of project and the programs are generally competitive in nature. Larger initiatives such as the potential of extending Viscoe Road, which would require a significant purchase Right-of-Way from a private company would need to be pursued through the County's development process for the proposed Highbridge development or their Capital Improvement Plan.