

Town of Vinton | Safe Streets and Roads for All

Comprehensive Safety Action Plan

Prepared by Timmons Group
February 2025



THE TOWN OF
VINTON
VIRGINIA



TIMMONS GROUP

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Acknowledgments

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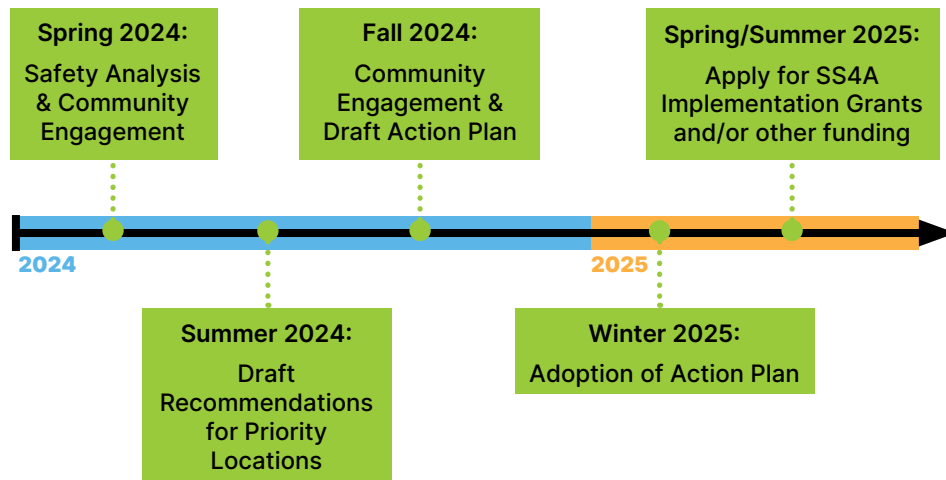
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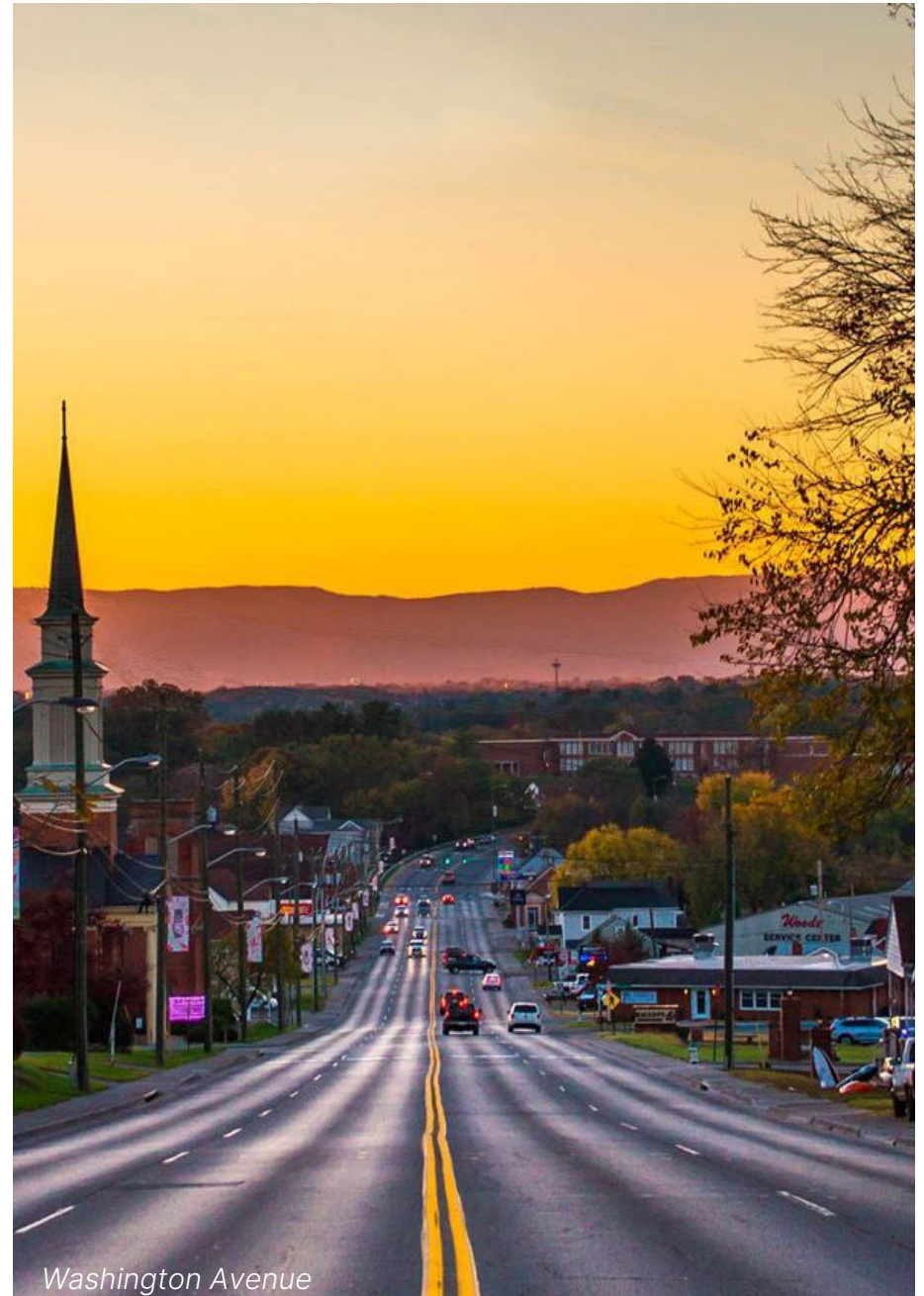
Introduction

Between 2015 and 2023, three people were killed in non-interstate traffic crashes in the Town of Vinton. In the same 9-year time-frame, 56 people were seriously injured in a non-interstate crash on our transportation network. That represents an average of 0.3 deaths and 6 serious injuries each year. These crashes are preventable tragedies that can be reduced or eliminated through innovative design, strategic policies, and committed local leadership.

This Comprehensive Safety Action Plan is part of the Town of Vinton's commitment to enhancing roadway safety under the Federal Safe Streets and Roads for All (SS4A) program. The plan outlines targeted strategies to improve road safety, reduce crashes, and promote a culture of responsible driving. Fatal and serious injury (FSI) crashes are analyzed due to their severity. Fatal crashes result in one or more deaths and serious injury crashes involve incapacitating injuries, beyond visible injuries such as bruising, abrasions, swelling, or limping; serious injury crashes may be life-altering. By implementing engineering solutions, enhancing enforcement measures, and fostering community education, the Town of Vinton can create a safer, more reliable roadway system for all.



Plan Development Timeline



Program Overview

Safe Streets and Roads for All Program (SS4A)

In 2022, the US Department of Transportation (USDOT) awarded \$280,000 to Roanoke County, Botetourt County, and the Town of Vinton. With a \$70,000 match from the localities, these funds were used to develop a comprehensive safety action plan as part of the Safe Streets and Roads for All (SS4A) Grants. The SS4A program funds regional, local, and Tribal initiatives throughout the country through grants to prevent roadway deaths and serious injuries. The program focuses on the development of a comprehensive safety action plan and its implementation for all users of a municipality's highways, streets, and roadways, including motorists, bicyclists, pedestrians, and more.

According to USDOT, an Action Plan is required to have the following aspects:

- Leadership and goal setting: A high-ranking official and/or governing body in the jurisdiction publicly committed to an eventual goal of zero roadway fatalities and serious injuries
- Planning structure: committee, task force or implementation group
- Safety analysis
- Engagement and collaboration
- Equity considerations
- Policy and process changes
- Strategy and project selections
- Progress and transparency



1

Commitment to Safety

"As a town, we are committed to reducing fatal and serious injury (FSI) crashes by 50% by 2050. This ambitious goal reflects our dedication to creating safer streets for all residents, whether they are driving, walking, or cycling. By prioritizing safety improvements, investing in infrastructure, and fostering a culture of shared responsibility, we are confident that we can achieve this goal and ensure that our community remains a safe, vibrant place for everyone."

Mayor Bradley G. Grose, Town of Vinton



Vinton Town Council

2

Planning Structure

The Town of Vinton Planning and Zoning Department led the effort of this SS4A Action Plan process and development, in close partnership with Roanoke County and Botetourt County. Town stakeholders, such as local governance, Town Police and Public Works Departments, and Roanoke County Fire/EMS, provided additional guidance and collaboration throughout the Action Plan creation.



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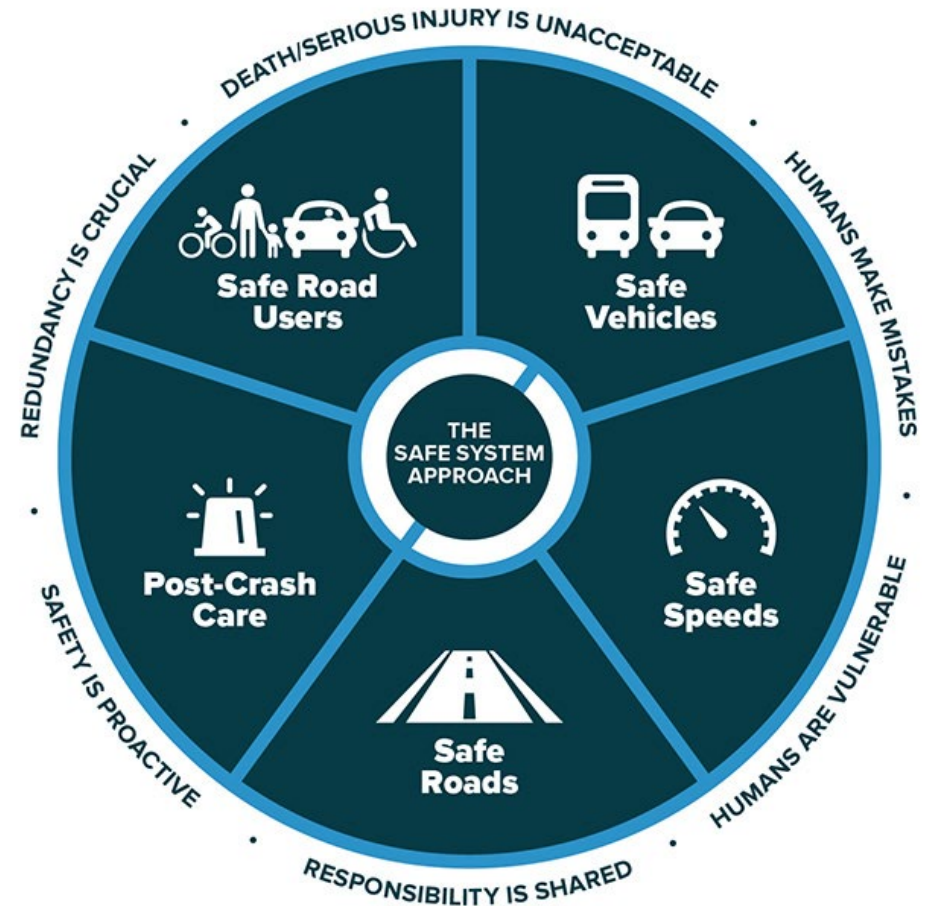
Safety Review

The Safe System Approach

The Safe System approach, developed and adopted by the USDOT, is a framework that guides safety efforts. It works by building and reinforcing multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur. It is a holistic and comprehensive approach that provides a guiding framework to make places safer for people.

This is a shift from a conventional safety approach because it focuses on both human mistakes AND human vulnerability and designs a system with many redundancies in place to protect everyone.

The Safe System Approach is arranged around five complementary objectives: safe road users, safe roads, safe vehicles, safe speeds, and post-crash care. Together, these objectives help steer safety programs to a future with reduced roadway fatalities and serious injuries in Roanoke County, Botetourt County, and the Town of Vinton.



Safe System Approach. Source: FHWA

Historical Crash Analysis

The safety analysis is informed by a historical crash analysis within the Town of Vinton. Historical crash data, from January 1, 2015 to December 31, 2023, was reviewed to evaluate patterns and trends within the crash data such as crash types, crash locations, and contributing circumstances. While Town residents likely travel on interstates outside of Vinton, crashes on interstates I-81 and I-581 were excluded from the analysis in order to focus improvements on roads directly in Vinton, where the Town is able to implement their own projects. The scope of this Safety Action Plan are crashes occurring within Vinton's limits.

This analysis focused primarily on the 47 crashes in the nine-year time period that resulted in fatal and serious injuries. Within the Town of Vinton there were **2 fatal crashes** and **45 serious injury** crashes reported during the study period; the 2 fatal crashes resulted in three fatalities and the 45 serious injury crashes impacted 56 individuals. Figure 1 illustrates the non-interstate fatal and serious crashes reported by year within the Town. Though some variation occurred year-to-year, the number of fatal and serious crashes in the Town remained relatively steady.

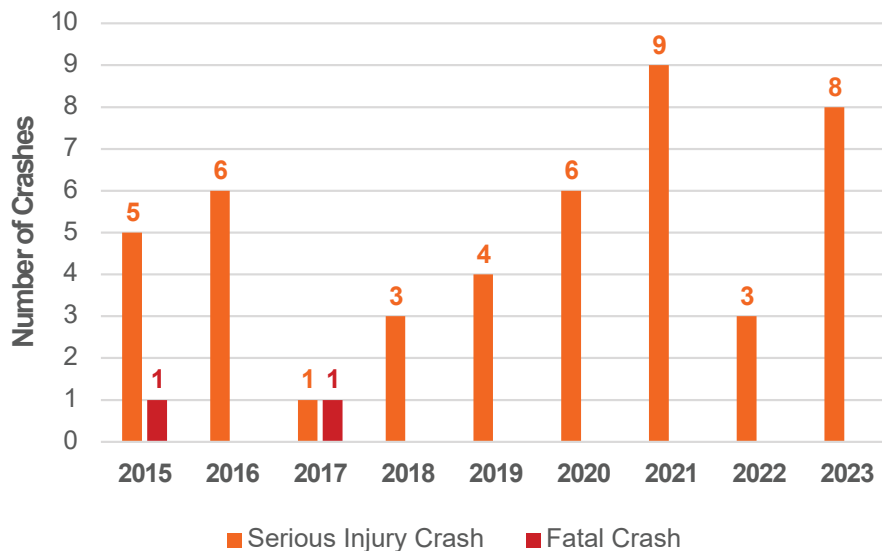


Figure 1. Severe Crashes by Year, Town of Vinton (2015-2023)

Town of Vinton



Crash Types

The most common crash type among the fatal and serious injury crashes reported in the nine-year analysis period was angle crashes, which accounted for approximately 36 percent (36%) of all fatal and serious injury (FSI) crashes in the Town of Vinton. Fixed object off-road crashes (26%), rear-end crashes (10%), and sideswipe (same direction) crashes (10%) were the next most common crash types reported. Figure 2 summarizes the fatal and serious injury crashes reported during the nine-year analysis period by crash type.

The vast majority of severe angle crashes occurred during clear weather conditions (87%), and most commonly occurred during the day.

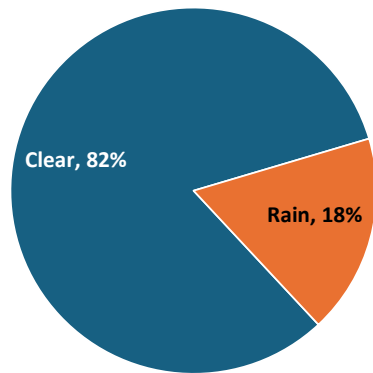


Figure 3. Severe Angle Crashes by Weather Conditions

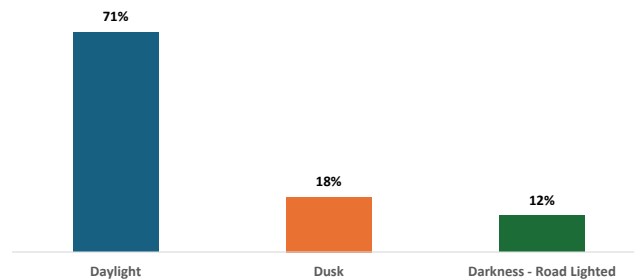
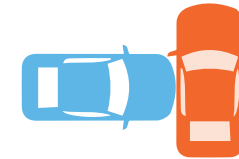


Figure 4. Severe Angle Crashes by Light Conditions

MOST COMMON CRASH TYPES

*Fatal and Serious Injury Crashes Only
Town of Vinton (2015-2023)*

Angle



36%

Fixed Object Off-Road



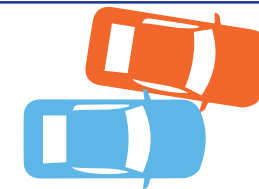
26%

Rear End



10%

Sideswipe Same Direction



10%

Head On



6%

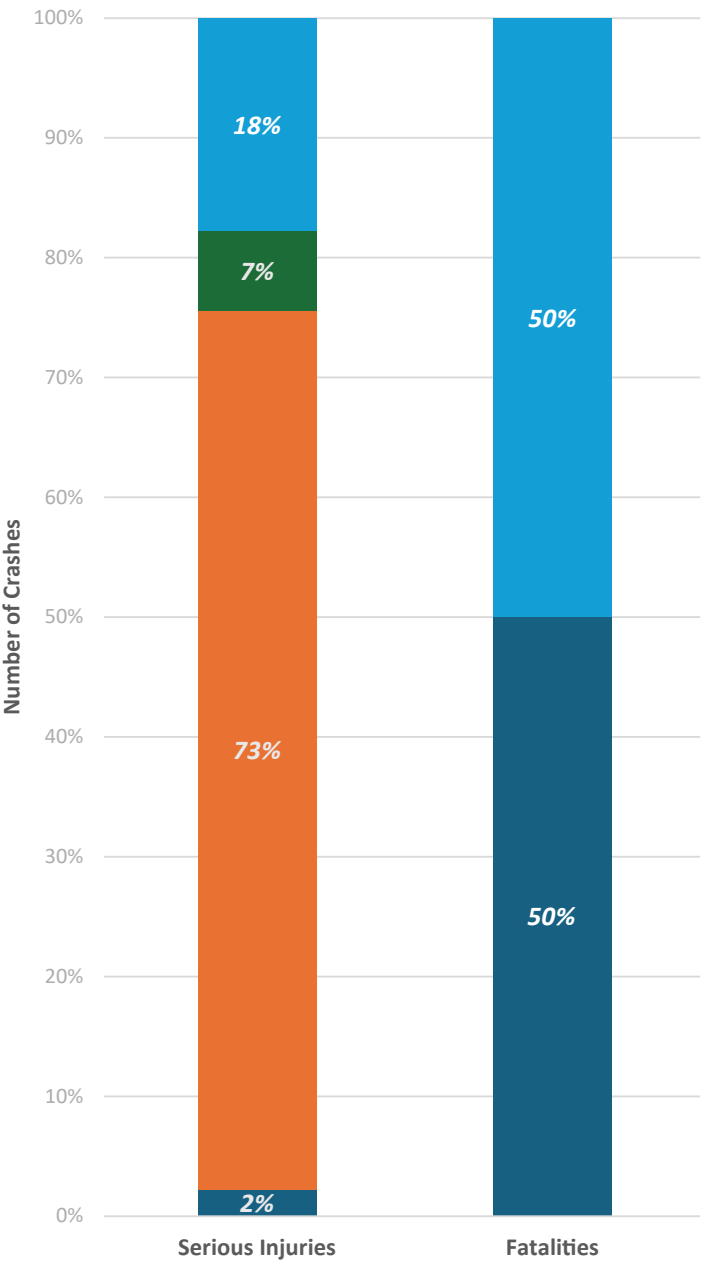
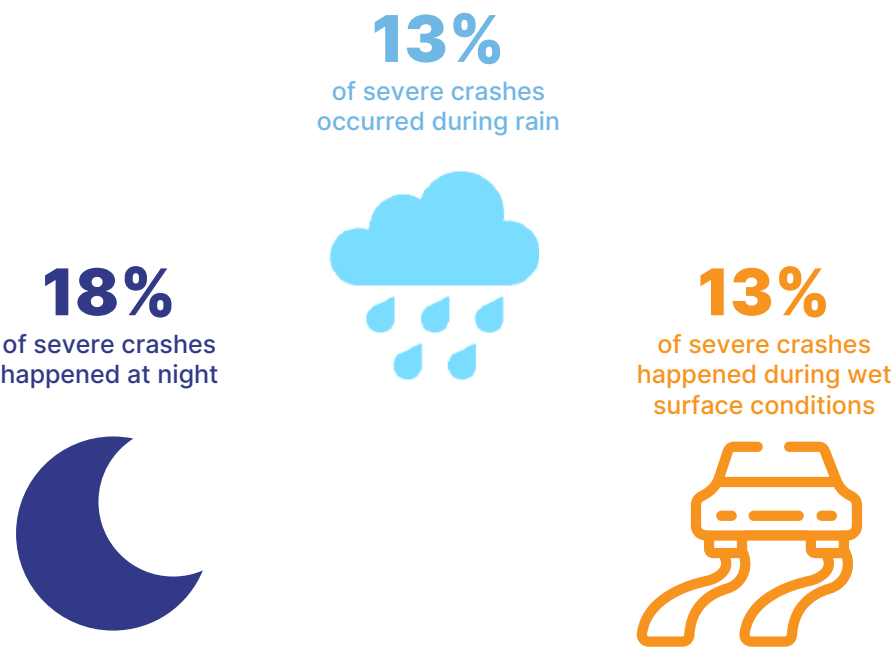
Figure 2. Severe Crashes by Crash Type, Town of Vinton (2015-2023)

Environmental Conditions

The environmental factors contributing to crashes can highlight potential areas for improvement in the roadway network to better serve the traveling public. Factors such as lighting and weather were analyzed for the 47 FSI crashes reported in the Town of Vinton.

Figure 5 illustrates the impact of changing lighting conditions on roadway safety. Notably, fatal crashes in the analyzed time period have only occurred at night.

Overall, the environmental factors contributing to crashes were consistent with statewide trends. 18% of the Town of Vinton’s severe crashes occurred at night, compared to 13% of severe crashes occurred during rain, compared to 10% in all of Virginia, and 13% occurred during wet roadway surface conditions, compared to 14% statewide.



■ Dawn ■ Daylight ■ Dusk ■ Dark - Road Lighted ■ Dark- Road Not Lighted

Figure 5. Crash Types by Lighting Conditions, Town of Vinton (2015-2023)

Driver Behavior

Speed

Higher driving speeds lead to higher collision speeds. Higher driving speeds also make crashes more difficult to avoid because high speeds provide less time to process information and to act on it, and require longer break distance. High speeds are especially dangerous for road users outside of a vehicle. According to the FHWA, pedestrians have a 90% chance of surviving a crash involving a vehicle traveling 20 mph or below, and less than a 50% chance of surviving a crash with a vehicle traveling 30 mph or above.

Exceeding the posted speed limit further heightens the risk of a severe crash. In the Town of Vinton, 10% of vehicles involved in severe crashes were speeding and, notably, 100% of vehicles involved in fatal crashes were speeding. Statewide, 32% of FSI crashes involved speeding.

10% of cars in severe crashes were speeding

100% of cars in fatal crashes were speeding



Drugs or Alcohol

According to the National Highway Traffic Safety Administration (NHTSA), every day, about 37 people in the United States die in drunk-driving crashes. In 2022, 13,524 people died in alcohol-impaired driving traffic collisions.

Drivers with a Blood Alcohol Concentration (BAC) .08 (the legal limit) are approximately 4 times more likely to crash than drivers with a BAC of zero. At a BAC of .15, drivers are at least 12 times more likely to crash than drivers with a BAC of zero.

In the Town of Vinton, 15% of FSI crashes involved drugs or alcohol, compared to 17% statewide.

15% of severe crashes involved drugs or alcohol



Distraction

Distracted driving is defined as any activity that diverts attention from driving. According to the NHTSA, in 2022, 3,308 people died in traffic collisions that involved distracted drivers. Such distractions may include talking or texting on the phone, eating or drinking, or adjusting the audio navigation system. Sending or reading a text takes a driver's eyes off the road for 5 seconds. At 55 mph, that is equivalent to driving the length of an entire football field.

In the Town of Vinton, 26% of FSI crashes involved distracted driving, compared to 19% statewide. Note that distracted driving is often underreported and the actual number may be higher.

26% of severe crashes involved distracted driving



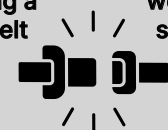
Seatbelts

One of the safest and simplest choices drivers and passengers can make is to buckle up. Research on passenger cars has shown that seatbelts reduce the risk of fatal injury to front-seat occupants by 45 percent and the risk of injury by 50 percent. However, according to the NHTSA 2022 report on seat belt use, Virginia has lowest lowest use rate of any state in the U.S. at 75.6%.

In the Town of Vinton, 20% of serious injury crashes involved unbelted occupants, but in 100% of fatal crashes the occupants were not wearing seatbelts.

20% of severe crashes involved not wearing a seatbelt

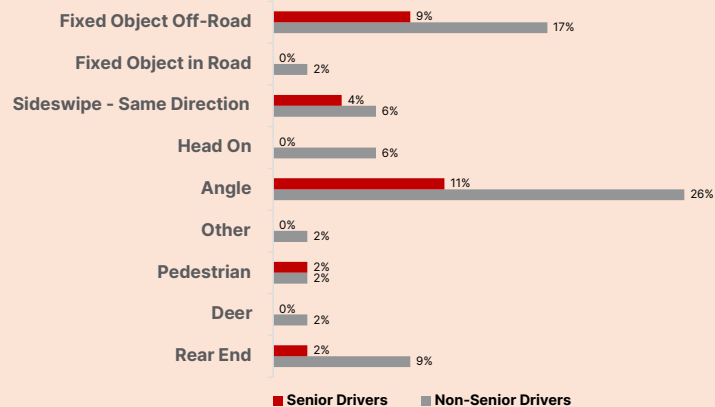
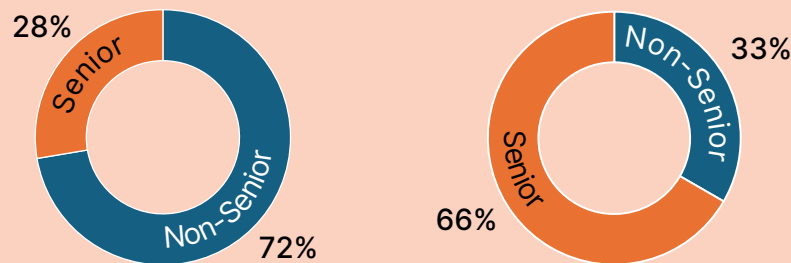
100% of fatal crashes involved not wearing a seatbelt



Crash Age Profiles

Crashes in the Town of Vinton involving seniors (age 65+) and young drivers (ages 15-20) were analyzed due to the unique challenges and risk factors associated with each group.

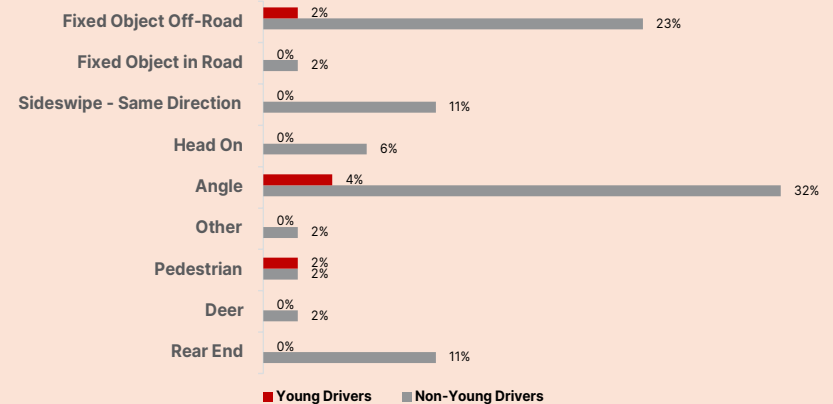
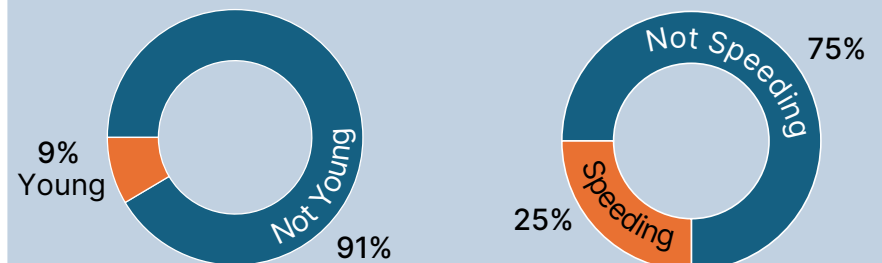
Drivers aged 65 and older were involved in 28% of all severe crashes in the Town of Vinton. Residents that are 65 years or older consist of 19% of the Town population (2022 American Survey 5-year Estimates). Seniors were twice as likely to be involved in a severe crash with a pedestrian than non-senior drivers¹. The most common collision type for senior drivers was angle crashes (11%).



Severe Crashes for Senior Drivers by Crash Type

1. One of the three FSI collisions involving a pedestrian is primarily coded as a fixed object, off-road crash, rather than a pedestrian crash.

Drivers aged 15 to 20 were involved in 9% of all severe crashes. Residents that are 15 to 20 years of age consist of 7% of the Town population (2022 American Community Survey 5-year Estimates). 25% of severe crashes involving young drivers also involved speeding as a factor. Angle crashes were the most common collision type for young drivers (4%).



Severe Crashes for Young Drivers by Crash Type

Crash Severity by Mode

Although motorcyclists, bicyclists and pedestrians represent a small minority of overall road users, they are overrepresented in fatal and serious crashes. The figure below illustrates the relative risk of a crash resulting in a serious or fatal injury for different roadway users. Because speed is a significant factor in crash severity, the Town of Vinton has generally lower rates of serious injuries and fatalities due to overall lower speed limits. Nevertheless, motorcyclists, cyclists, and pedestrians experience greater rates of injury when involved in a crash. Less than 4% of car crashes cause severe harm, but 31% of motorcycle crashes and 50% of bicycle or pedestrian crashes result in a serious injury. Motorcyclists are 12 times more likely to be killed in a crash compared to motorists, and pedestrians and bicyclists are 18 times more likely to be killed in a crash compared to motorists.

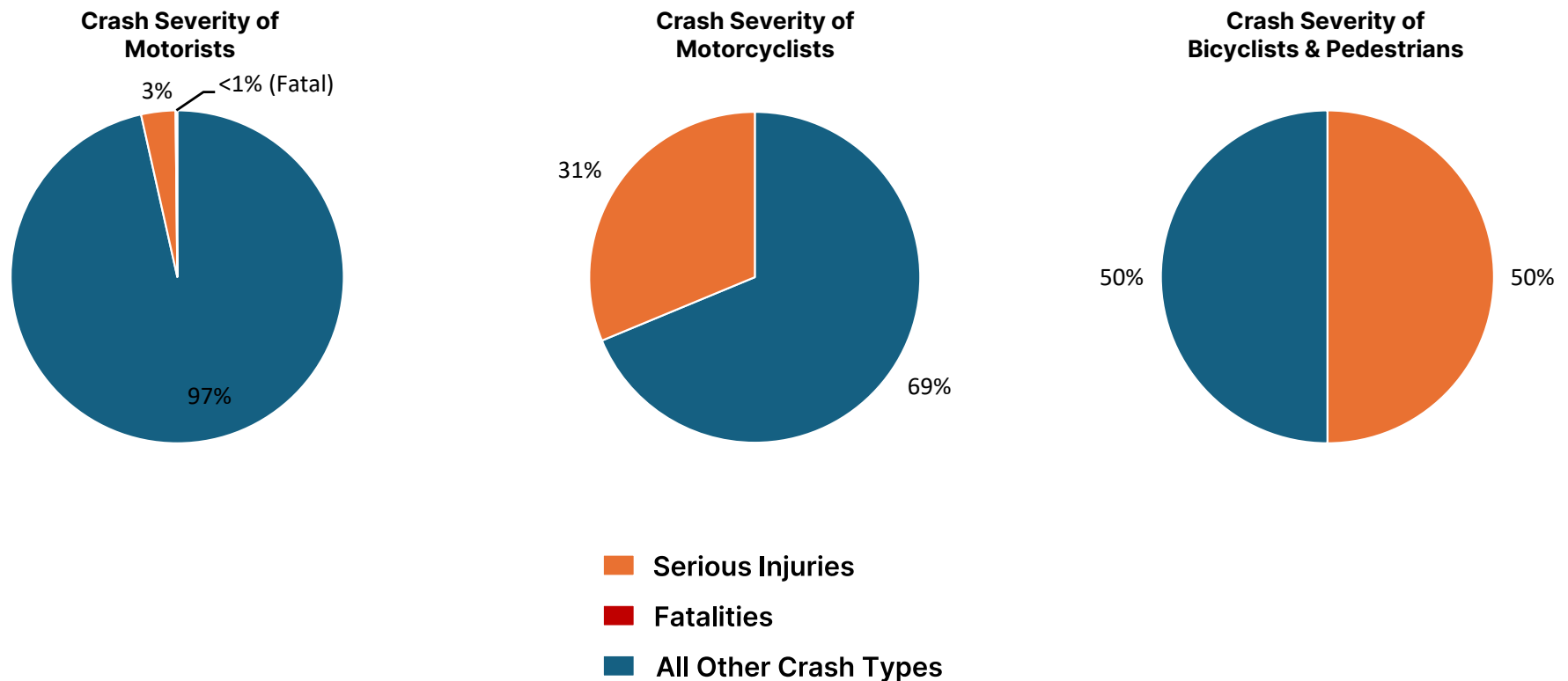


Figure 6. Town of Vinton Crash Severity by Mode of Travel

Pedestrian and Bicycle Crashes

Among the 47 fatal and serious injury crashes, there were 3 pedestrian crashes and 3 bicycle crashes recorded within the Town of Vinton during the nine-year analysis period. Among these incidents, no fatalities occurred; the lower speed limits throughout the Town of Vinton likely decrease crash severity overall.

Two of the three (66%) pedestrian crashes involved a senior driver. Two of the three (66%) bicycle crashes were angle crashes; one bicycle crash was a head on collision.

Two of the three (66%) FSI bicycle crashes took place on Washington Avenue and one bicycle crash occurred at the intersection of Virginia Avenue & 3rd Street.

All bicycle and pedestrian collisions occurred during the daytime and where bicycle or pedestrian facilities are not present.

Figure 6 shows these crashes throughout the Town. Notably, Washington Avenue and Virginia Avenue have experienced four incidents total.

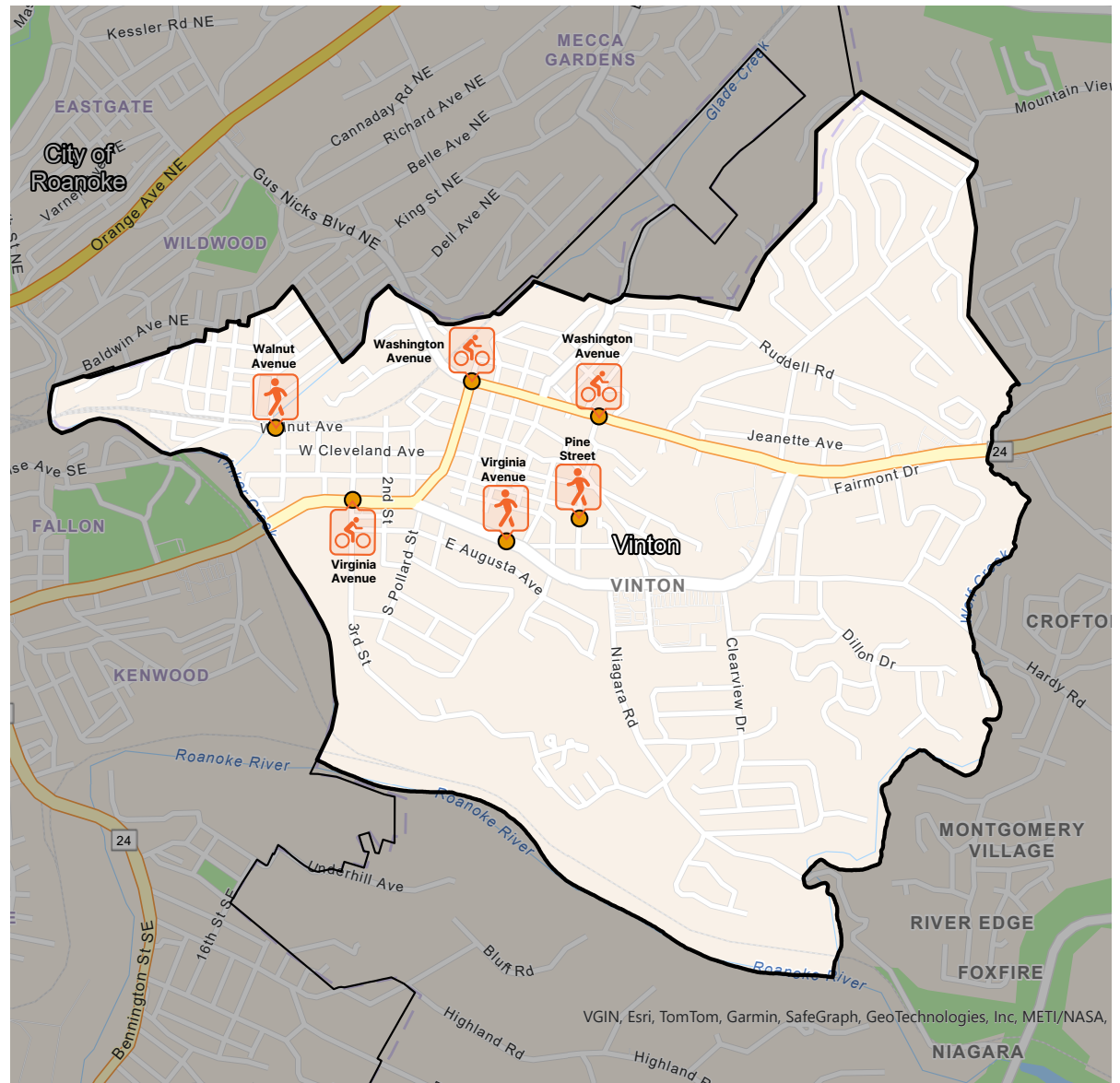
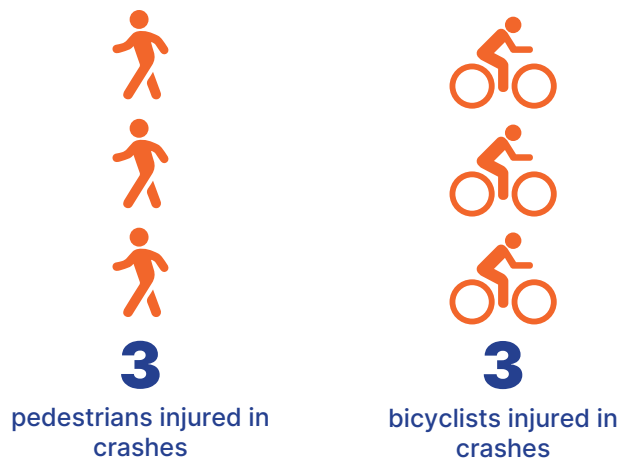


Figure 7. Town of Vinton Bicycle & Pedestrian Crashes Map

4

Network Analysis

In addition to understanding historical trends, it is important to locate the places where people are most likely to be injured in a crash. This effort utilized the ESRI Traffic Crash Analysis Solution to better understand and map out the areas with the highest incidence of serious injury and fatal crashes – along with crashes of other severity types.

The Traffic Crash Analysis solution provides a range of capabilities designed to analyze crash data using methodologies outlined by the United States Road Assessment Program (usRAP) and the Federal Highway Administration (FHWA). usRAP uses a risk-mapping protocol to create maps that show variations in the level of crash risk across a road network. These maps can guide the prioritization of highway infrastructure improvements and targeted enforcement strategies. The tool creates roadway segments, assigns crashes to the segments, and creates risk maps.



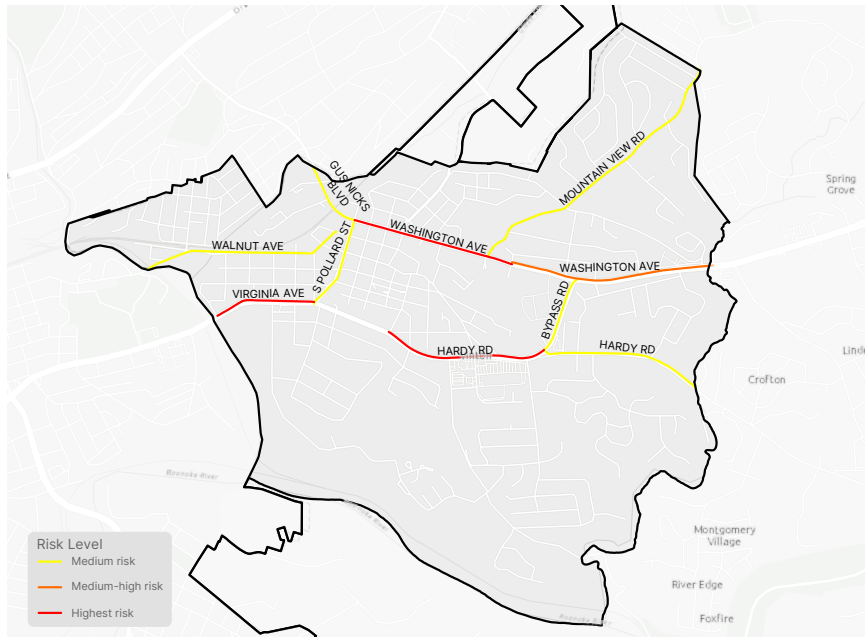
For the Town of Vinton, the usRAP Analysis was used to generate the following maps:

1. **Crash Density:** Crashes per mile of road. Emphasizes road segments that are associated with the highest rate of severe crashes. These segments represent areas where there may be the greatest opportunity to reduce crashes.
2. **Crash Rate:** Crashes per 100 million vehicle miles of travel. Illustrates the risk to an individual motorist while traveling through a given road segment.
3. **Crash Rate Ratio:** Risk expressed as the ratio of the crash rate for a particular analysis segment to the average crash rate for all segments of the same roadway type. Emphasizes segments that have above average crash rates for their roadway type.
4. **Potential Crash Savings:** Estimate of the number of crashes per mile that would be reduced if the crash rate for the road segment could be reduced to the average crash rate for similar road segments.

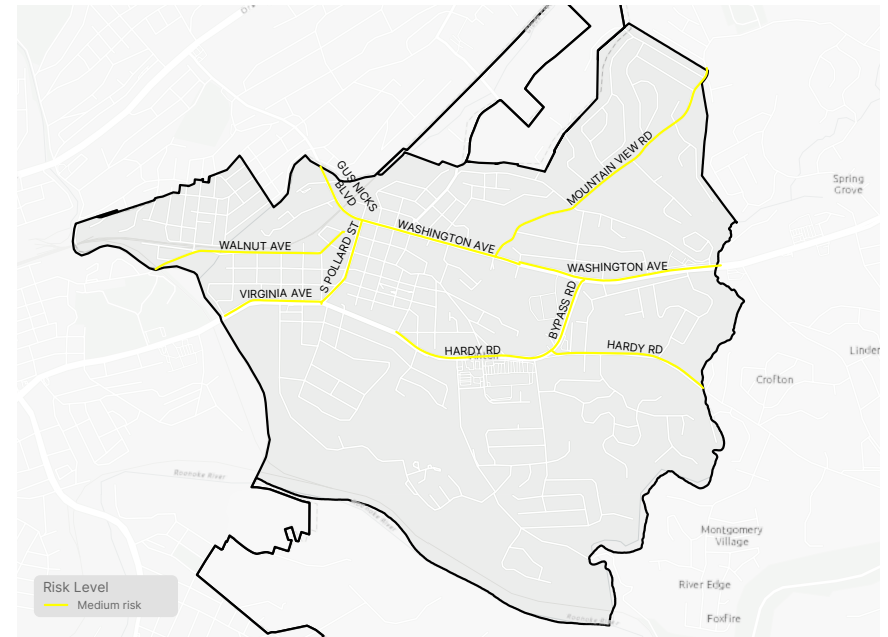
Each map includes up to three color coded risk levels. The risk categories include Highest Risk (top 5 percent of system), Medium-High Risk (10 percent of system), and Medium Risk (20 percent of system).

Note that only corridors with 3 crashes or more in the 9-year study period were placed in the two highest risk categories.

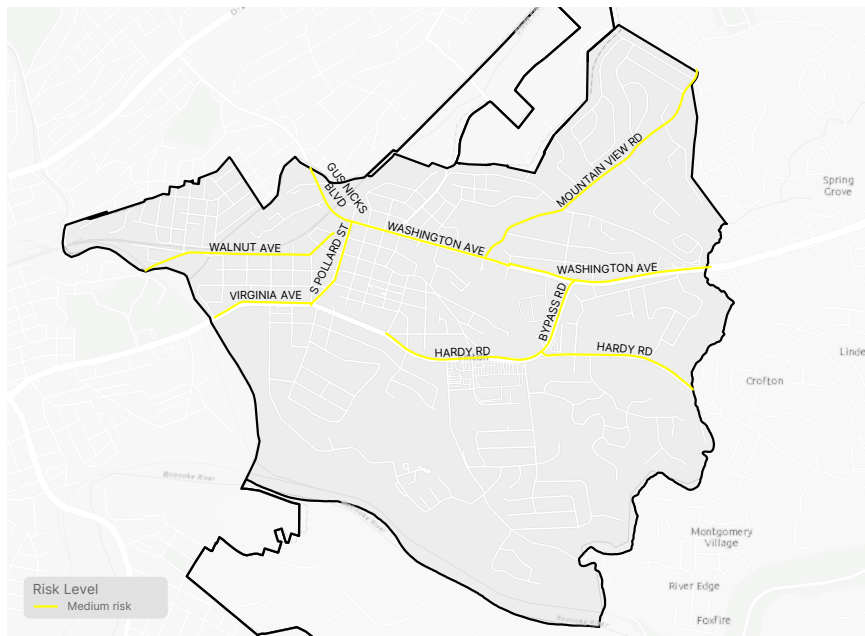
Crash Density



Crash Rate



Crash Rate Ratio



Potential Crash Savings

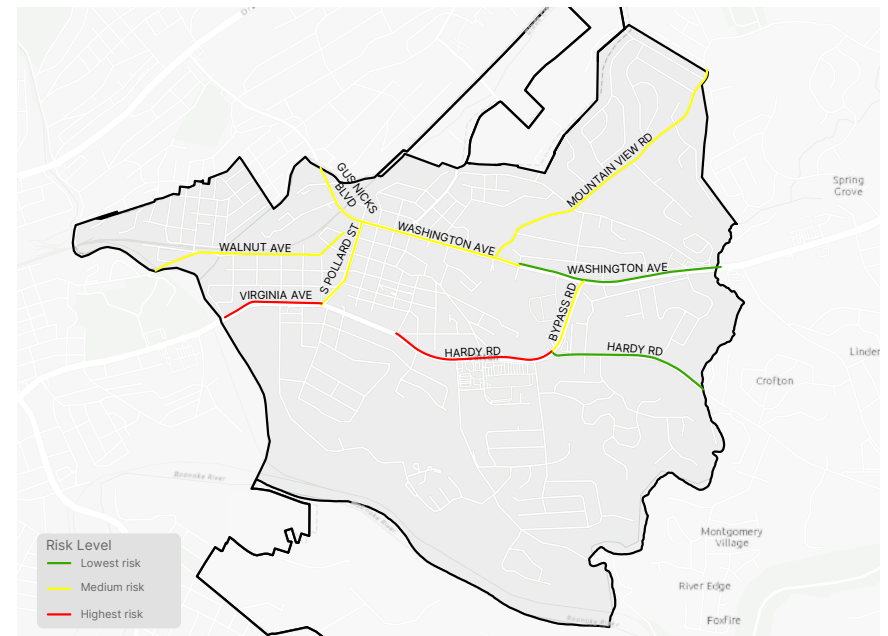


Figure 8. Town of Vinton Severe Crashes Risk Maps

High-Injury Network

The crash risk data from the four maps generated by the usRAP analysis was combined to assign each roadway a single risk score. The result is a High-Injury Network ranking every roadway in the Town of Vinton.

The High-Injury Network (HIN) is a collection of streets and roadways where a disproportionate number of severe car crashes, resulting in fatalities or serious injuries, occur. While increasing safety is important on every street, identifying a HIN assists local leaders in focusing their efforts on improvements on areas that will have the greatest impact and save the most lives.

The HIN in Figure 9 shows areas where the risk score is the highest and most in-need of transportation investment are in red, lower scoring areas are shown in orange, and places with lowest risk score are shown in yellow.

Priority Corridors

Because of the scale of the Town, nearly all routes identified in the overall HIN were considered as a Priority Corridor.

These ten corridors established a preliminary list that was reviewed by elected officials, locality staff, and the public to ensure the selection aligned with broader safety and mobility goals. This approach not only enhances road safety but also improves the quality of life for all road users. By using data-driven strategies, community input, and proven safety measures, the Town of Vinton can make measurable progress toward the goal of zero fatalities.

Figure 10 shows the locations of the 10 highest crash corridors. Table 1 lists each corridor's road name(s) and number of crashes.



87%

of severe crashes
happened on the Top
10 Priority Corridors
between 2015-2023

Priority Intersections

In addition to the systemic corridor analysis performed for all the Town of Vinton roadways, individual intersections were analyzed to find hot spots. All intersections with fatal and serious injury crashes within 250 feet of the intersection were compiled and ranked by the number of crashes. The 10 intersections with the most crashes were selected for further review.

Figure 11 shows the location of the 5 highest crash intersections. Table 2 lists each intersection's road names and number of crashes.



32%

of severe crashes
happened on the
Top 10 Priority
Intersections between
2015-2023

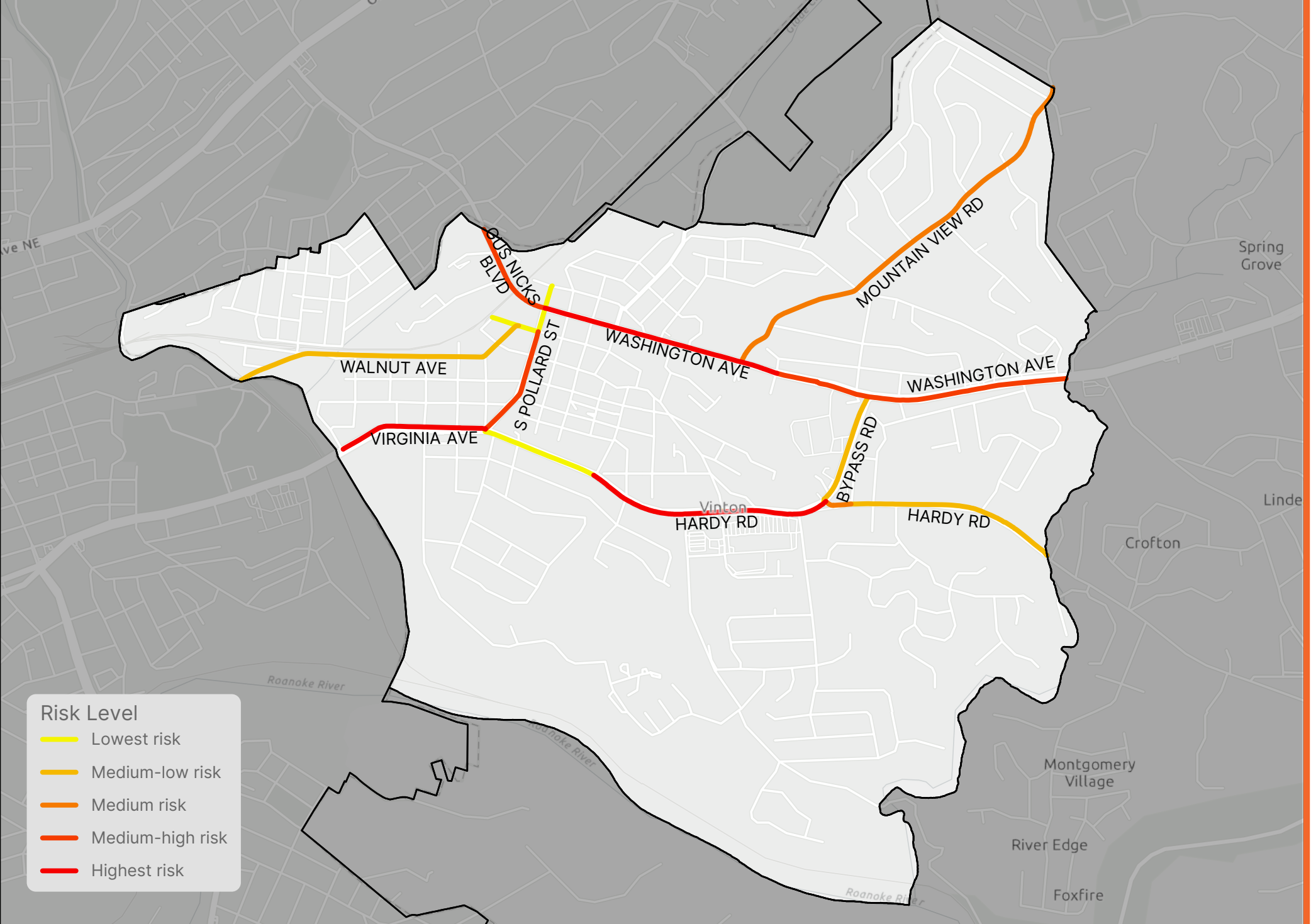
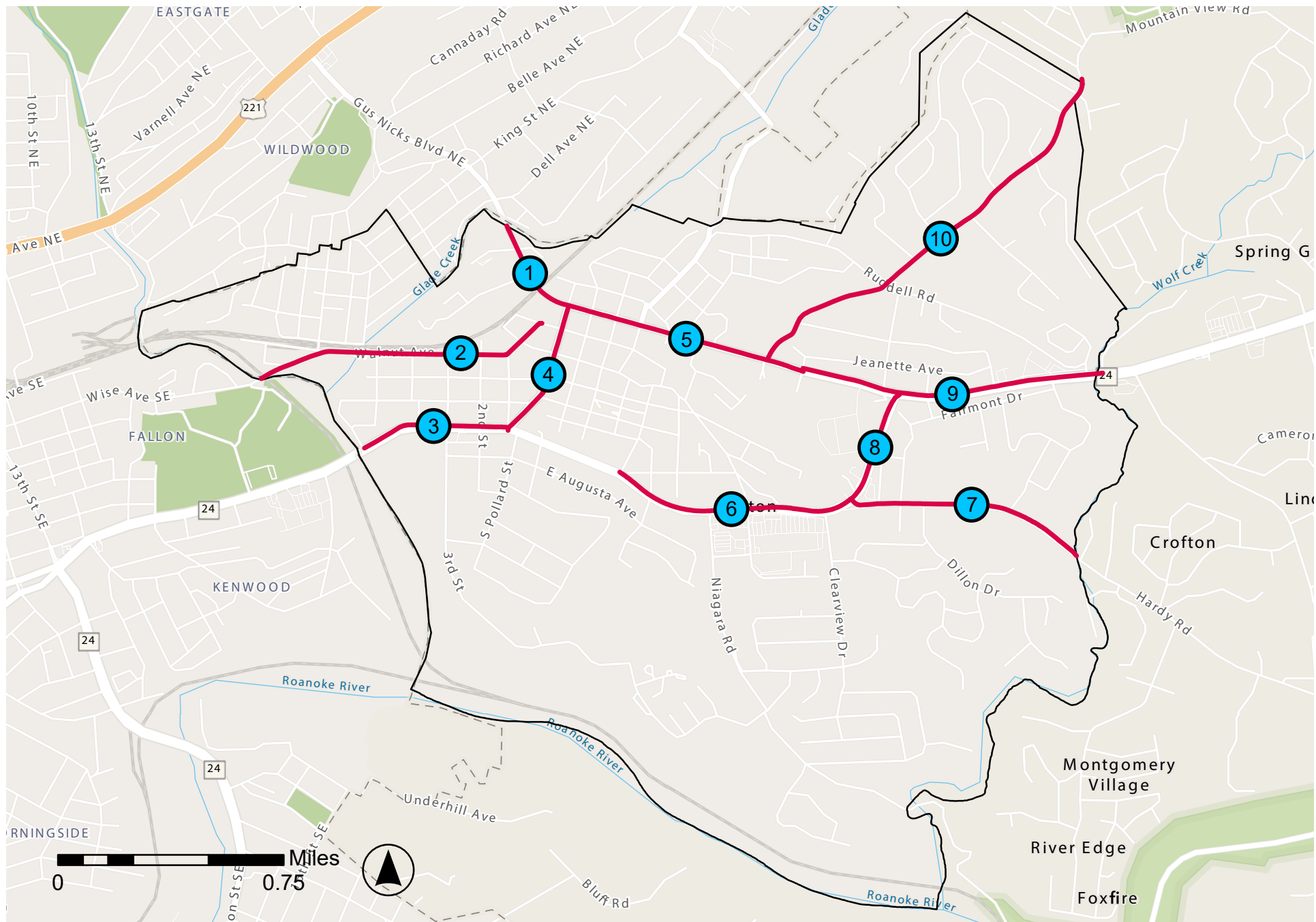


Figure 9. Town of Vinton High Injury Network



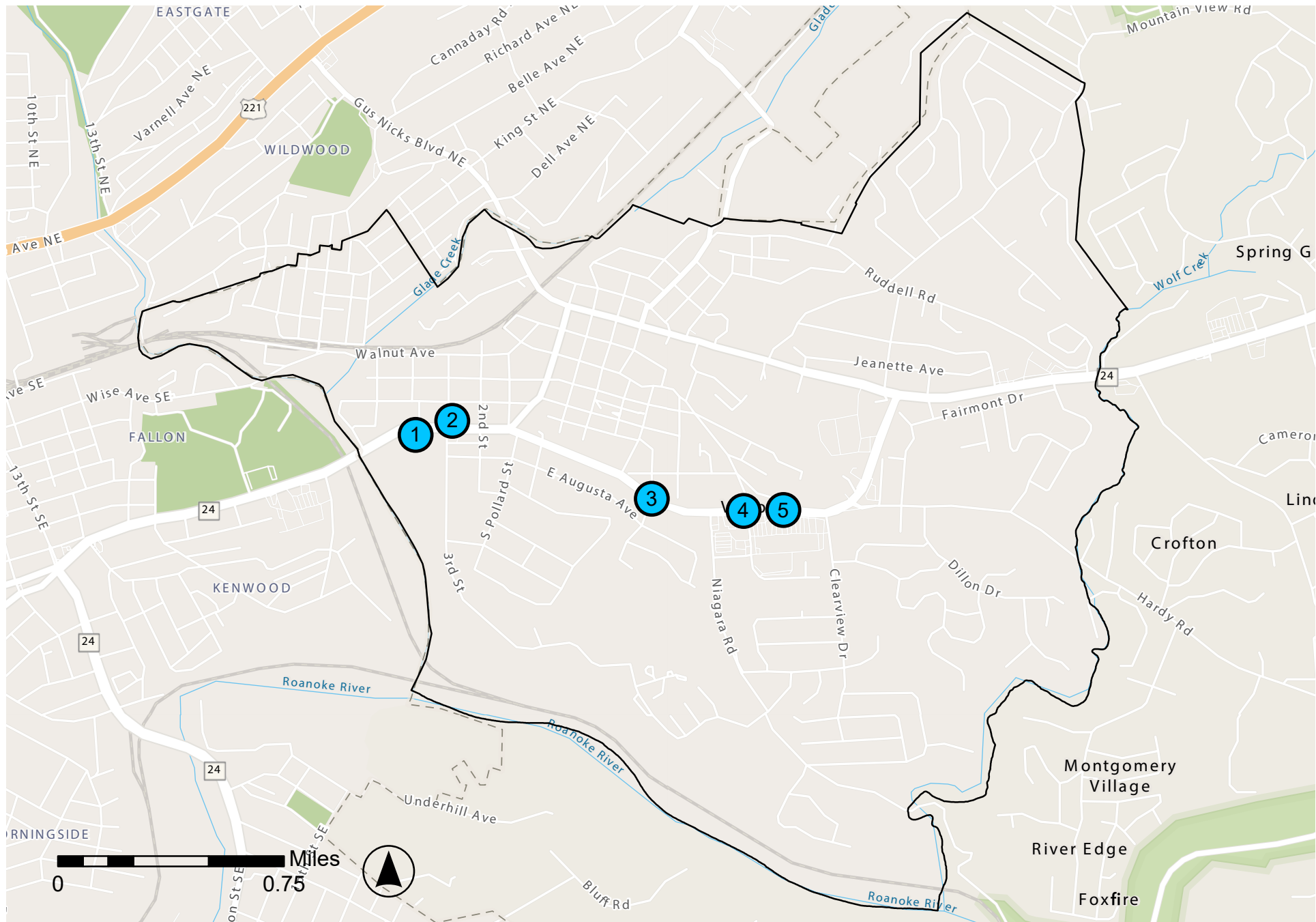
— Priority Corridors

Ⓐ Map Labels

Figure 10. Town of Vinton Priority Corridors

Table 1. *Town of Vinton Priority Corridors*

| Map Label | Corridor Location | Number of Severe Crashes | Number of Fatal Crashes |
|-----------|---|--------------------------|-------------------------|
| 1 | Gus Nicks Boulevard (From Roanoke City Line to South Pollard Street) | 2 | 0 |
| 2 | Walnut Avenue (From Roanoke City Line to Lee Avenue) | 1 | 0 |
| 3 | Virginia Avenue (From Roanoke City Line to South Pollard Street) | 6 | 0 |
| 4 | South Pollard Street (From Washington Avenue to Virginia Avenue) | 1 | 1 |
| 5 | Washington Avenue (From South Pollard Street to Mitchell Road) | 6 | 0 |
| 6 | Hardy Road (From Chestnut Street to Bypass Road) | 11 | 0 |
| 7 | Hardy Road (From Bypass Road to Roanoke County Line) | 2 | 0 |
| 8 | Bypass Road (From Washington Avenue to Hardy Road) | 2 | 0 |
| 9 | Washington Avenue (From Mitchell Road to Roanoke County Line) | 4 | 1 |
| 10 | Mountain View Road (From Washington Avenue to Roanoke County Line) | 2 | 0 |



 Map Labels

Figure 11. Town of Vinton Priority Intersections

Table 2. *Town of Vinton Priority Intersections*

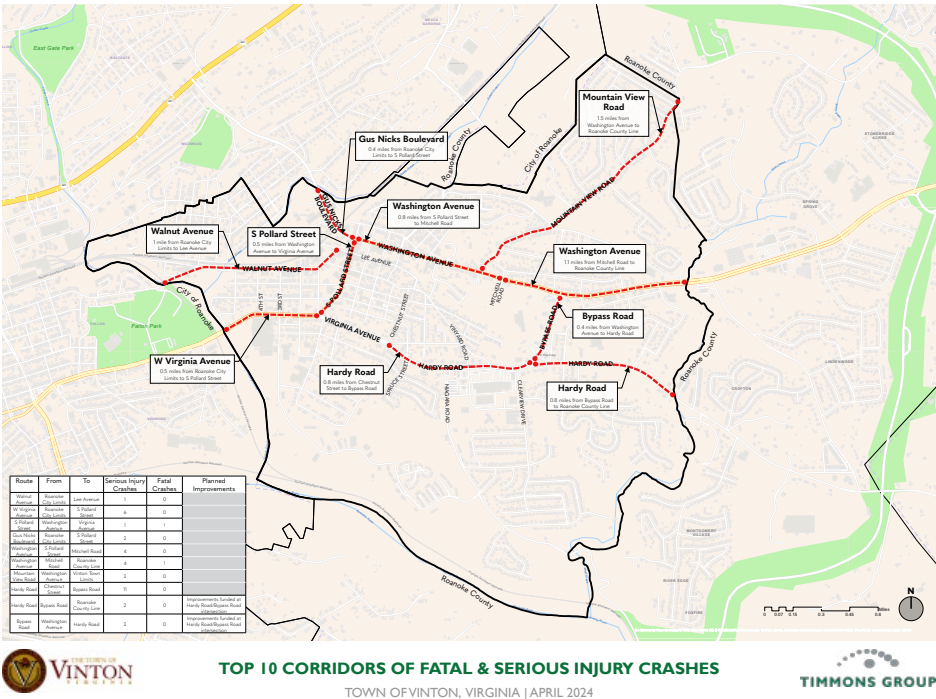
| Map Label | Intersection | Number of Severe Crashes |
|-----------|------------------------------|--------------------------|
| 1 | Virginia Avenue & 4th Street | 4 |
| 2 | Virginia Avenue & 3rd Street | 2 |
| 3 | Hardy Road & Spruce Street | 3 |
| 4 | Hardy Road & Vinyard Road | 2 |
| 5 | Hardy Road & Bedford Road | 3 |

Community Engagement

Community engagement and feedback played a critical role in ensuring the development of this Action Plan was done using an inclusive and representative process. Community engagement for the initiative included holding community meetings, gathering survey responses, and distributing project information through local news campaigns, social media marketing, and on-line resources (such as StoryMaps and interactive dashboards). The project team also routinely collaborated with an identified stakeholder group, that consisted of representatives from the Virginia Department of Transportation (VDOT), local police, fire, and emergency response, Roanoke County Public Schools, and other Town of Vinton departments.

The first community meeting took place in the Spring 2024. The April community meeting was an opportunity to introduce the project and its goals to Town residents, as well as gather feedback on the identified fatal and serious injury crash locations. With feedback from the community, the project team moved forward in developing both location-specific and systemic recommendations. The community meeting in the fall presented these findings to the community and collected their thoughts and comments (see page 62 for Fall 2024 community responses).

Following each of the meetings, community members could share their on-road observations and experiences, as well as their comments on the recommendations by attending the in-person meetings or completing a paper or online survey.





TOP 10 CORRIDORS OF FATAL & SERIOUS INJURY CRASHES
TOWN OF VINTON, VIRGINIA | APRIL 2024



Over
52
survey
responses
recorded

30
total attendees
at in-person
meetings

300
total community
members
reached*

Spring 2024 Meeting

Tuesday, April 30th from 5-7pm at the Vinton War Memorial

Fall 2024 Meeting

Tuesday, September 10th from 5-7pm at the Vinton War Memorial

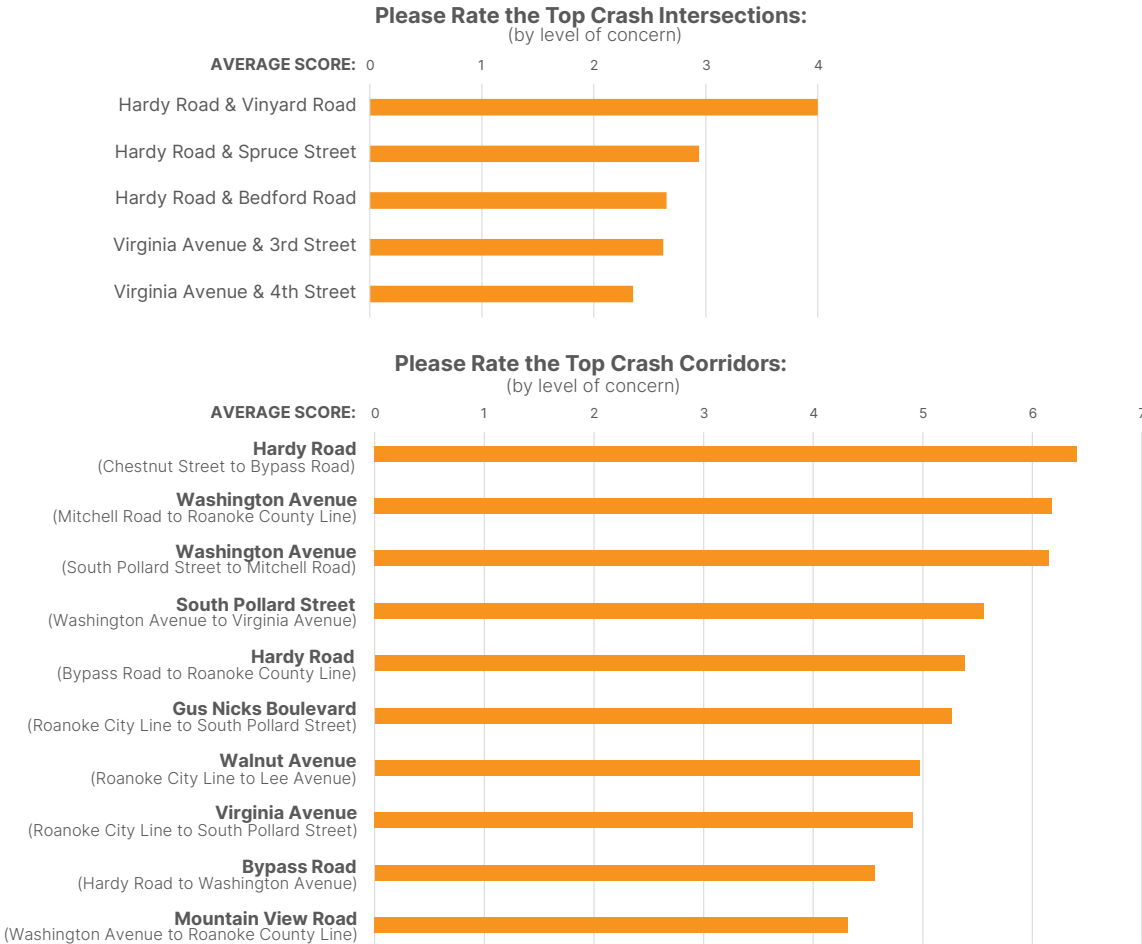
* Includes Spring and Fall survey respondents and meeting attendees, observation app respondents, AGOL Dashboard views, and AGOL StoryMap views

Spring 2024 Engagement Summary

Public outreach and participation have added a much-needed component to the evaluation and decision-making process for this project. Residents provide invaluable first-hand experiences with transportation safety issues.

To ensure that the Town of Vinton staff and the project team had the benefit of the public knowledge and support, a website and survey were presented to local residents to understand where they believe targeted transportation investment is needed most. The website was available for public access and comment from April 25 to May 25, 2024. The Town of Vinton staff worked to initiate outreach efforts on social media and other resources to share the website and survey links.

There were a total of 34 responses to the online survey as part of the public outreach. The survey asked respondents to rate the priority locations in order of their level of concern, and provided an opportunity to comment on the location.



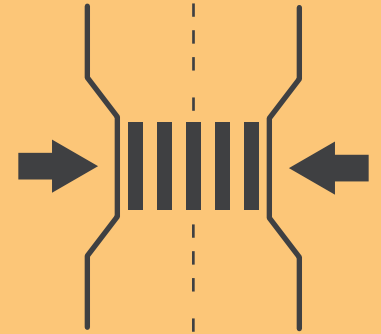
Spring 2024 Engagement Summary

The responses from the community survey can be grouped into several categories based on the concerns and suggestions provided by the respondents. Below is a detailed summary of each category:

Traffic Safety and Calming

Many respondents expressed concerns about traffic safety, particularly on major roads like Washington Avenue, Hardy Road, and Gus Nicks Boulevard. Suggestions such as reducing lane widths, adding roundabouts at select intersections, and increasing police enforcement of speed limits were discussed. Other key issues include:

- Speeding traffic that exceeds posted limits
- Dangerous intersections prone to accidents (e.g., 3rd Street and Cedar Avenue)
- Challenges for pedestrians trying to cross wide, busy streets
- Need for traffic calming measures to slow vehicles organically



Pedestrian and Bicycle Safety

Numerous responses highlighted the need for better pedestrian and bicycle accommodations throughout Vinton. Specific areas for improvement include:

- Completing sidewalk networks and adding sidewalks where missing
- Creating dedicated bike lanes, especially on major corridors such as Washington Avenue
- Enhancing crosswalks and pedestrian crossings, especially across multi-lane roads such as Washington Avenue and Virginia Avenue
- Improving walkability and bikeability to develop a greater sense of safety and place

Corridors called out for needing a focus on bicycle-pedestrian safety include Virginia Avenue, Washington Avenue, Walnut Avenue, South Pollard Street, Lee Avenue, and Cleveland Avenue.



Public Transportation Access

A few comments touched on public transportation, with one person noting that Valley Metro requires riders to catch the bus at Macado's to go downtown. While not a major theme, ensuring safe and convenient access to bus stops is important for those who rely on transit.



Driver Behavior and Enforcement

Some responses expressed frustration with dangerous or illegal motorist behavior, including:

- Running red lights, especially during peak morning and evening hours
- Distracted driving, such as using cell phones behind the wheel
- Driving with expired tags or inspection stickers

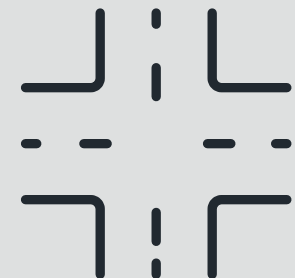


Potential Solutions

Respondents offered several ideas for improving transportation safety and operations in the Town:

- Constructing roundabouts at high-crash, congested intersections
- Implementing "road diets" to narrow travel lanes and slow traffic speeds
- Adjusting traffic signal timing to improve flow
- Enhancing police enforcement of speed limits, red light running, and other violations
- Conducting public education campaigns on proper roundabout use and safe driving habits

While opinions differed on some specifics (such as speed limits), there seems to be general consensus that a multifaceted approach is needed to create a safer, more welcoming transportation environment for all users in Vinton.



Observation Reporting App

In addition to the public survey questions, participants were also provided with the opportunity to share their experiences by marking locations on a map where they had encountered specific transportation safety concerns. The observations can be grouped into categories based on the nature and location of the concerns. Below is a summary of each category.

1. Pedestrian Facilities on Residential Streets

Respondents commented on the need for a complete sidewalk network outside of Vinton's main thoroughfares. Commenters expressed a desire for more sidewalks and crosswalks throughout neighborhood streets. Specific streets selected on the map include Maple Street, S. Poplar Street, Jefferson Avenue, and Niagara Road.

2. Traffic Calming on Major Routes

Many observations focused on the need for increased safety on Vinton's major east-west routes: Washinton Avenue and Virginia Avenue. Respondents reported instances of speeding, near-misses, disregarding traffic signals, and an unsafe pedestrian environment.

A common recommended solution was to improve access management by limiting direct commercial access to these roads, closing crossover or installing RCUTs, and closing particular streets such as Spruce Street and S. Maple Street. Additional solutions offered included reducing the number of lanes and building a tree-lined median.

3. Intersection Safety

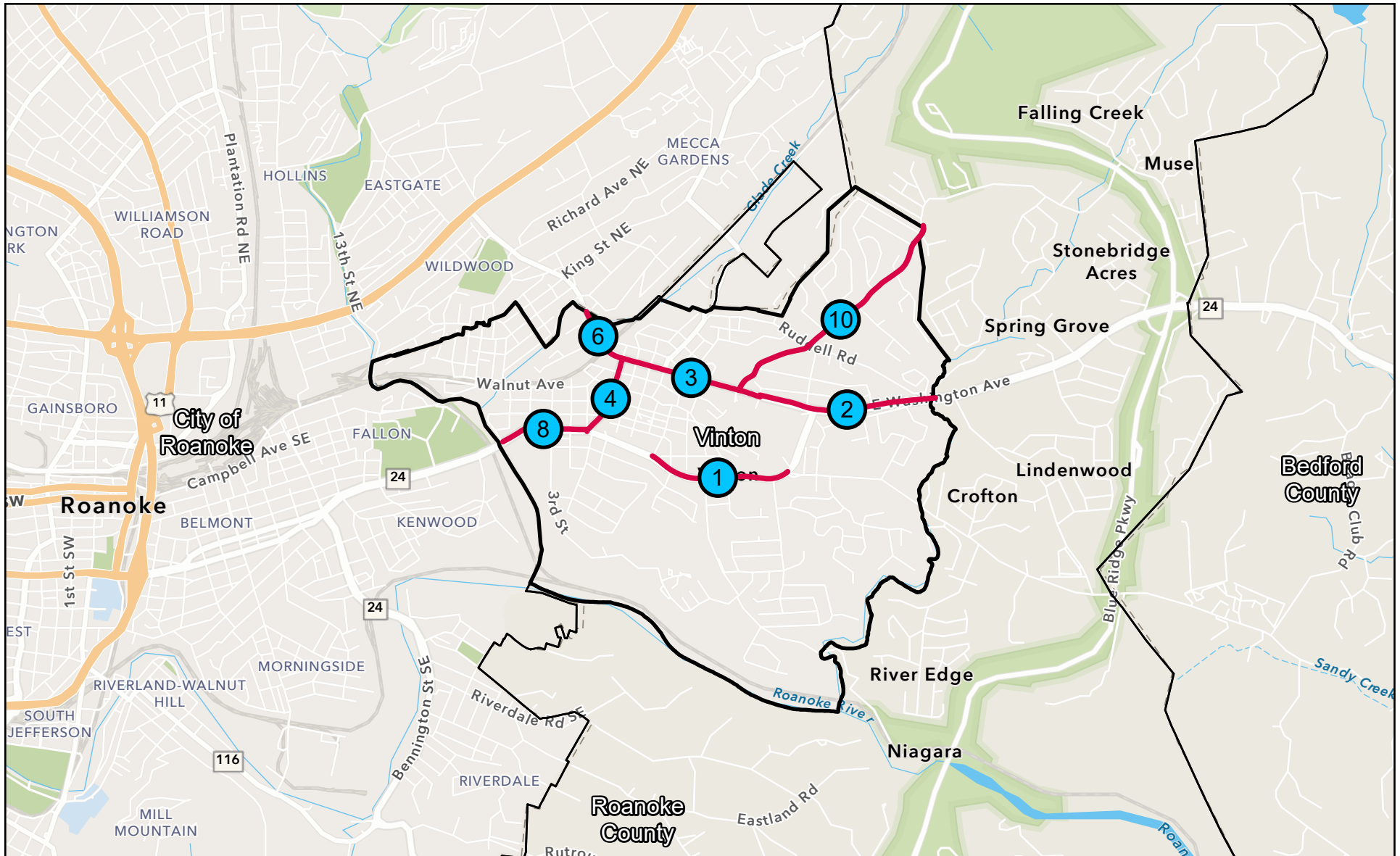
Some respondents focused on particular intersections in need of safety improvements. These included South Pollard Street and Washington Avenue, South Pollard Street and East Jackson Avenue, East Jackson Avenue and Pine Street, and Walnut Avenue and 8th Street. Observations of poor sight distance and many near-misses were reported.


























Figure 12. Town of Vinton Observation Reporting App

Crash Patterns of Top Fatal and Serious Injury Corridors

Following the first round of community meetings, the locations of the highest fatal and serious injury crashes were finalized to study further. Locations that currently have an existing process to pursue funding or design were removed from analysis. Project exhibits for the areas already being addressed by the Town are viewable in the appendix at the end of this document. The remaining locations were examined to determine if there were crash patterns that attributed to the crash or concentration of incidents in a particular area.

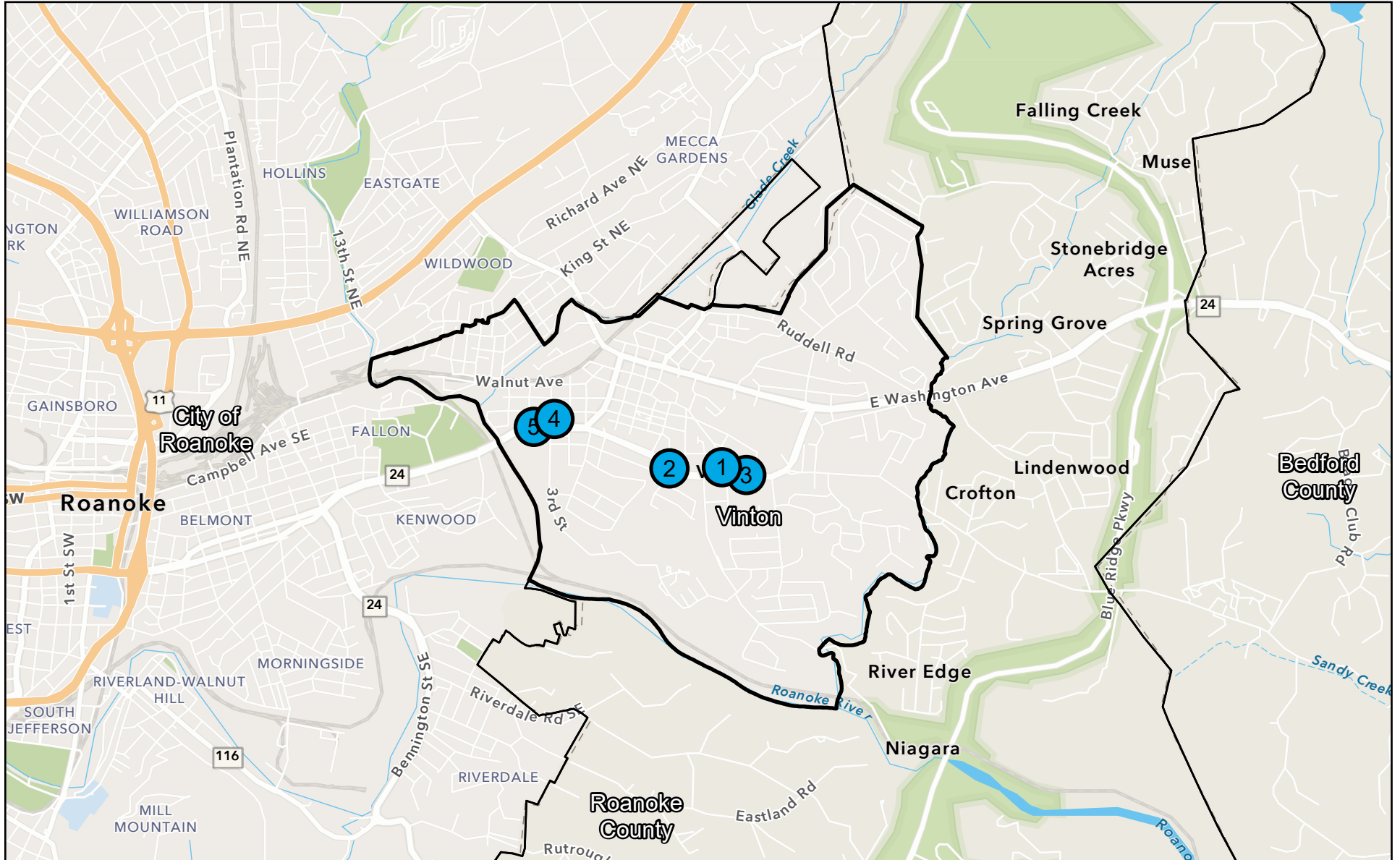





















| Map Label | Corridor Location | Number of Crashes | | Prevalent Crash Characteristics | | | | | |
|-----------|---|-------------------|-------|--|---|---|---|---|---|
| | | Severe | Fatal | | | | | | |
| 1 | Hardy Road (From Chestnut Street to Bypass Road) | 11 | 0 |  Angle |  Rear End |  Sideswipe - Same Direction |  FOOR ¹ | | |
| 2 | Washington Avenue (From Mitchell Road to Roanoke County Line) | 4 | 1 |  Rear End |  Angle |  Sideswipe - Same Direction | | | |
| 3 | Washington Avenue (From South Pollard Street to Mitchell Street) | 6 | 0 |  Rear End |  Angle |  Sideswipe - Same Direction |  Head On |  Motorcycle |  Bicyclist ² |
| 4 | South Pollard Street (From Washington Avenue to Virginia Avenue) | 1 | 1 |  FOOR ⁵ |  Angle | | | | |
| 5 | Hardy Road (From Bypass Road to Roanoke County Line) | 2 | 0 | Roundabout improvements funded by 2024 SMART SCALE at Hardy Road/ Bypass Road intersection | | | | | |
| 6 | Gus Nicks Boulevard (From Roanoke City Line to South Pollard Street) | 2 | 0 |  Head On | |  Angle | | | |
| 7 | Walnut Avenue (From Roanoke City Line to Lee Avenue) | 1 | 0 | Pedestrian improvements funded by 2022 SMART SCALE now completed | | | | | |
| 8 | Virginia Avenue (From Roanoke City Line to South Pollard Street) | 6 | 0 |  Rear End |  Angle |  Motorcycle |  Bicyclist ³ |  Distracted | |
| 9 | Bypass Road (From Washington Avenue to Hardy Road) | 2 | 0 | Roundabout amprovements funded by 2024 SMART SCALE at Hardy Road/ Bypass Road intersection | | | | | |
| 10 | Mountain View Road (From Washington Avenue to Roanoke County Line) | 2 | 0 |  Angle | | | | | |

1. Fixed Object - Off Road 2. (1) bicyclist crash at Washington Avenue & Pollard Street intersection and (1) bicyclist crash at Washington Avenue & Pine Street intersection 3. (2) bicyclist crash incidents at Virginia Avenue & 3rd Street intersection

Crash Patterns of Top Fatal and Serious Injury Corridors

Following the first round of community meetings, the locations of the highest fatal and serious injury crashes were finalized to study further. Locations that currently have an existing process to pursue funding or design were removed from analysis. Project exhibits for the areas already being addressed by the Town are viewable in the appendix at the end of this document. The remaining locations were examined to determine if there were crash patterns that attributed to the crash or concentration of incidents in a particular area.



| Map Label | Intersection | Number of Severe Crashes | Prevalent Crash Characteristics | | | |
|-----------|------------------------------|--------------------------|---|--|---|---|
| 1 | Hardy Road & Vinyard Road | 2 |  Angle |  Senior Driver |  Speeding | |
| 2 | Hardy Road & Spruce Street | 3 |  Sideswipe - Same Direction |  FOOR ¹ |  Motorcycle | |
| 3 | Hardy Road & Bedford Road | 4 |  Angle |  FOOR ¹ |  Rain |  Night ² |
| 4 | Virginia Avenue & 3rd Street | 2 |  Angle |  Bicyclist |  Red-Light Running |  Distracted |
| 5 | Virginia Avenue & 4th Street | 4 |  Angle |  Rear End |  Sideswipe - Same Direction |  FOOR ¹ |
| | | | | | |  Distracted |

1. Fixed Object - Off Road 2. Night FSI crashes occurred on lit roadways

5

Countermeasures, Strategies & Location Profiles

A key outcome of the Road Safety Action Plan is a set of projects and strategies to address specific safety needs that can be implemented to reduce the frequency of fatalities and serious injuries. This section of the Plan highlights proven safety countermeasures and develops potential priority projects from the High Injury Network (HIN) that can positively impact roadway safety. The Safe System Approach encourages designing transportation systems with a multi-layered safety net. If one countermeasure fails, another will help prevent a crash or, in the event of a crash, reduce the likelihood of serious injury or death. The safety net utilizes proven countermeasures designed to protect all road users.

Safety Countermeasures Toolkit

Addressing safety in the Town of Vinton will require the deployment of proven safety countermeasures across the transportation network, starting with the HIN. To assist communities in taking action, the Federal Highway Administration (FHWA) designed the Proven Safety Countermeasures initiative (PCSi). The PCSi is a toolbox of 28 treatments and strategies that have been proven to reduce roadway fatalities and serious injuries nationwide. Each countermeasure addresses at least one safety focus area – speed management, intersections, roadway departures, or pedestrians/

bicyclists – while others are crosscutting strategies that address multiple safety focus areas. Implementing these proven safety countermeasures within Vinton's top locations for fatal and serious injury crashes can work towards reducing crash incidents as well as crash severity.

The FHWA's Proven Safety Countermeasures are listed below along with hyperlinks to provide a more detailed description of the effectiveness of the full safety countermeasure.

Speed Management



[Appropriate Speed Limits for All Road Users](#)



[Speed Safety Cameras](#)



[Variable Speed Limits](#)

Bicycle and Pedestrian



Bicycle Lanes



Crosswalk Visibility Enhancements



Leading Pedestrian Interval



Medians and Pedestrian Refuge Islands



Pedestrian Hybrid Beacons



Rectangular Rapid Flashing Beacons



Road Diets (Roadway Reconfiguration)



Walkways

Roadway Departure



Enhanced Delineation for Horizontal Curves



Longitudinal Rumble Strips and Stripes on Two-Lane Roads



Median Barriers



Roadside Design Improvements at Curves



SafetyEdgeSM



Wider Edge Lines

Intersections



Backplates with
Retroreflective Borders



Corridor Access
Management



Dedicated Left- and
Right-Turn Lanes



Reduced Left-
Turn Conflict
Intersections



Roundabouts



Systemic Application
of Multiple Low-Cost
Countermeasures
at Stop-Controlled
Intersections



Yellow Change
Intervals

Crosscutting



Lighting



Local Road Safety
Plans



Pavement Friction
Management



Road Safety Audit

Corridor Profiles



HARDY ROAD

*Chestnut Street to
Bypass Road*



HARDY ROAD

*Chestnut Street to
Bypass Road*

Context

Hardy Road is one of two primary east/west corridors in the Town of Vinton. West of Chestnut Street, Hardy Road becomes Virginia Avenue, leading into the City of Roanoke. Hardy Road to the east leads into Roanoke County and Bedford County.

Hardy Road is a primary thoroughfare for the Town of Vinton. The corridor experienced 234 crashes since 2015, including 11 serious injury crashes. The serious injury crashes are a mix of angle crashes, collisions with fixed objects off the road, and same direction sideswipes.

A SMART SCALE project is currently in progress for the Hardy Road and Bypass Road intersection. The existing signalized intersection is to be improved as a roundabout.



Average Daily Traffic: 21,000 vehicles/day



Speed Limit: 35 mph



**Number of Lanes:
4 lanes**



2015-2023

Severe Injury Crashes: 11



**Community
Survey Rank: #1**

Prevalent Crash Characteristics



Angle



Rear End



**Sideswipe -
Same Direction**

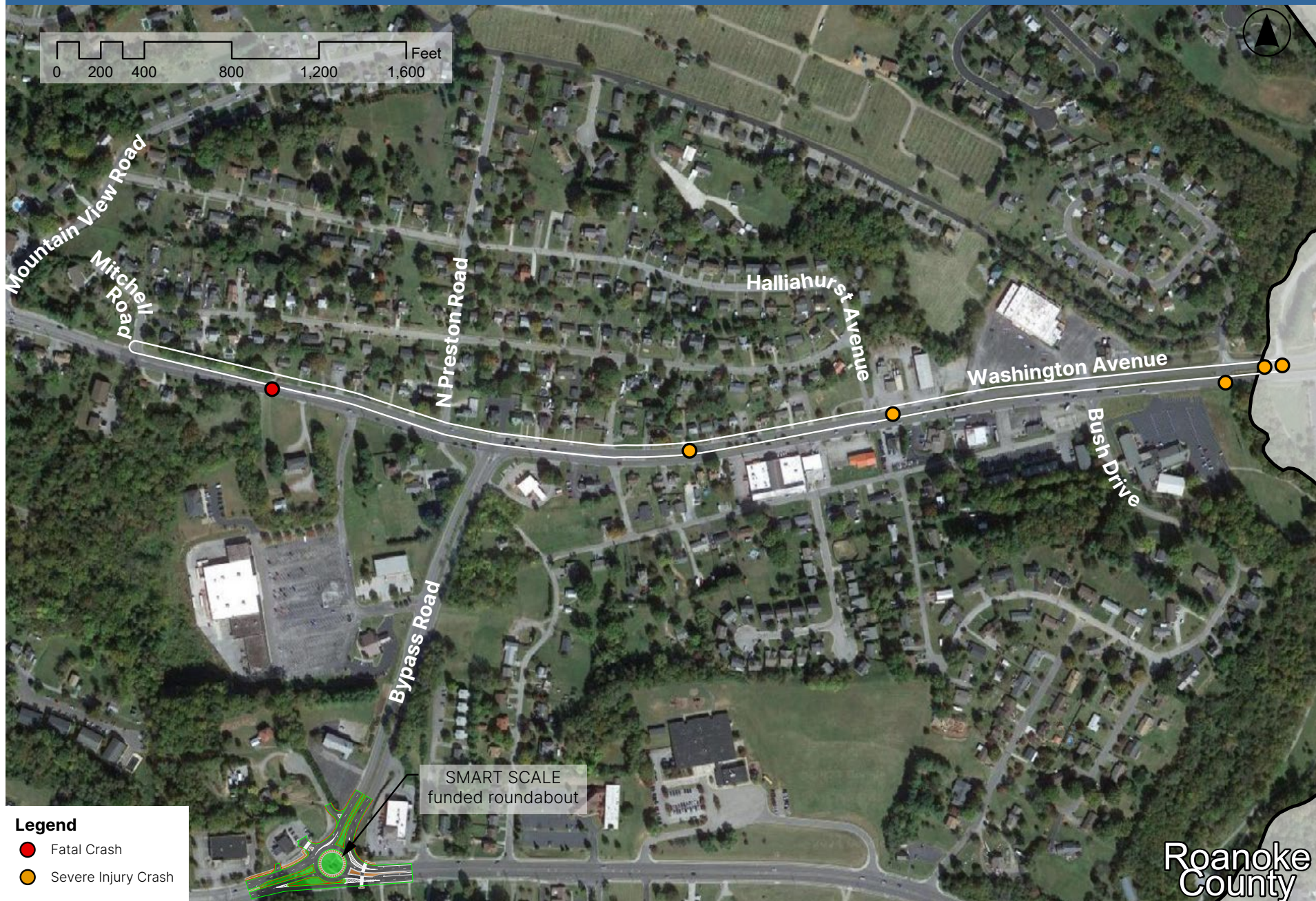


**Fixed Object
Off Road**

| Safety Analysis | Potential Strategies |
|--|---|
| The severe crashes are predominately angle crashes, rear ends, side swipes (same direction), and fixed objects, off-road on a corridor with frequent commercial entrances. Crashes also tend to occur at specific intersections. | Consider access management improvements at the Spruce Street intersection (See Hardy Road & Spruce Street intersection profile) |
| | Consider the installation of a roundabout at the Hardy Road and Vinyard Road intersection (See Hardy Road & Vinyard Road intersection profile) |
| | Evaluate closing the Hardy Road and Bedford Road intersection (See Hardy Road & Bedford Road intersection profile) |
| | Consider opportunities for improving access management along the corridor <ul style="list-style-type: none"> Hardy Road is a significant commercial corridor within the Town with frequent entrances along the roadway. Consolidating entrances where possible could improve severe crashes while also reducing the conflict points for pedestrians, bicyclists and other motorists. |

WASHINGTON AVENUE

Mitchell Road to
Roanoke County Line



WASHINGTON AVENUE

Mitchell Road to
Roanoke County Line

Context

Washington Avenue is one of the Town of Vinton's primary east-west corridors, and this section serves as a major entrance to the Town from Roanoke County. The corridor has experienced 107 crashes since 2015, including 5 serious injury crashes and one fatality in 2015. The varied nature of the crash pattern suggests a comprehensive solution is needed.

Based on the community survey, there is a strong desire for traffic calming and improved bicycle and pedestrian facilities on Washington Avenue. Respondents cited problems with speeding and difficulty crossing the street.

One fatality has occurred on this segment of Washington Avenue. The fatality involved a single vehicle colliding with a fixed object. The severity of the crash could be contributed to the driver being distracted and under the influence, not wearing a seatbelt, and speeding.



Average Daily Traffic: 18,000-24,000 vehicles/day



Speed Limit: 35 mph



**Number of Lanes:
4 lanes**



2015-2023

Severe Injury Crashes: 5

Fatal Crashes: 1



**Community
Survey Rank: #2**

Prevalent Crash Characteristics



Rear End



Angle

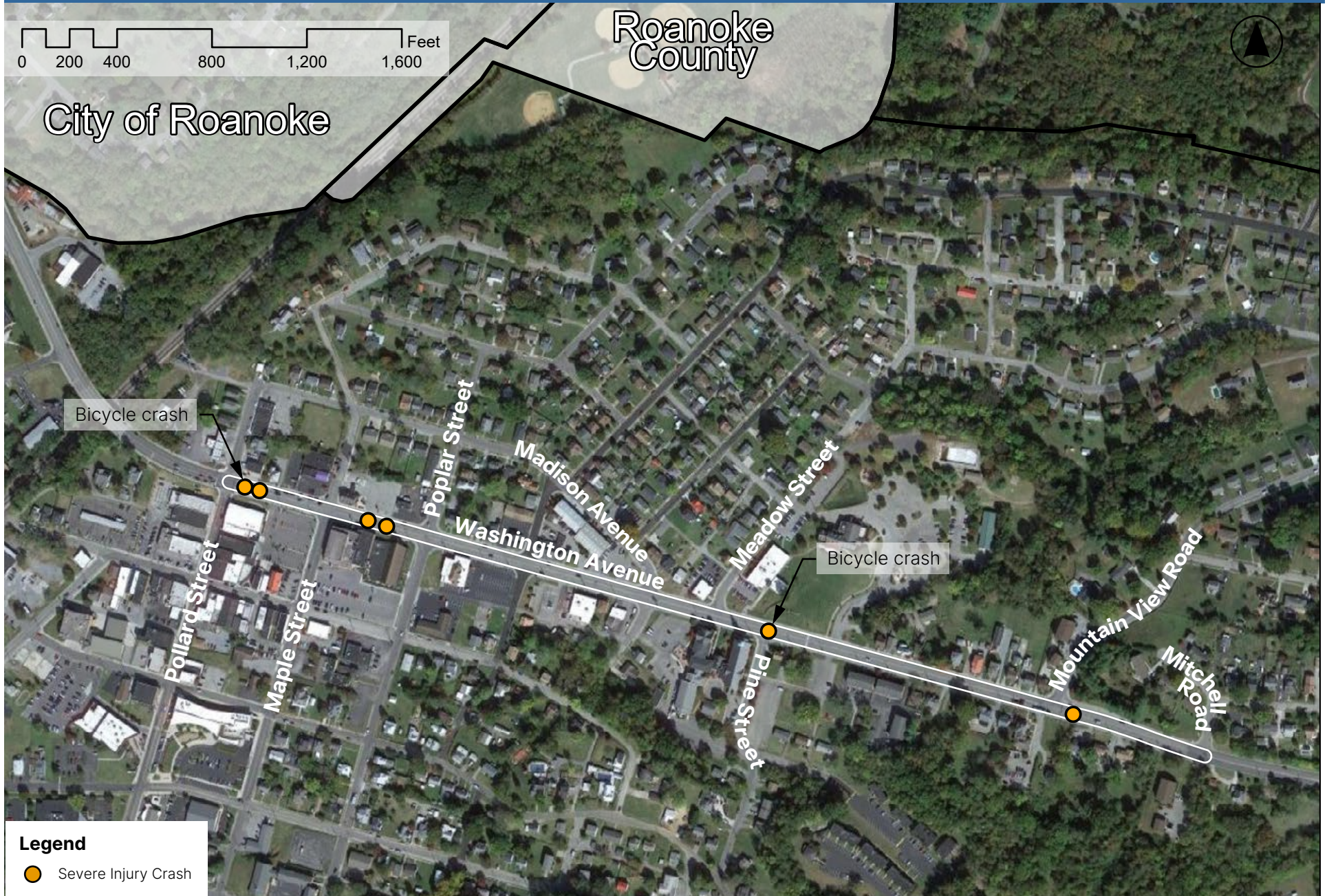


**Sideswipe -
Same Direction**

| Safety Analysis | Potential Strategies |
|--|--|
| The FSI crashes along this corridor have varied characteristics and occur in different locations | <p>Evaluate the installation of a road diet (convert 4-lane undivided road to 2-lanes plus turning lane)</p> <ul style="list-style-type: none"> A road diet, which typically involves reducing the number of travel lanes and reallocating space for other uses, offers several benefits such as improved safety by reducing vehicle speeds and the number of collision points, and better traffic flow by streamlining traffic with dedicated turn lanes, reducing congestion and improving travel times. Road reconfigurations also provide the opportunity to enhance pedestrian safety by adding bike lanes and wider sidewalks, providing safer spaces for non-motorized users. |

WASHINGTON AVENUE

South Pollard Street to Mitchell Street



WASHINGTON AVENUE

South Pollard Street to
Mitchell Road

Context

Washington Avenue is one of the Town of Vinton's primary east-west corridors. According to 2022 VDOT traffic data, the current average daily traffic (ADT) volume on the highlighted section of Washington Avenue is 20,000. The corridor has experienced 168 crashes since 2015, including 6 serious injury crashes. The varied nature of the crash pattern suggests a multifaceted solution is needed.

Based on the community survey, there is a strong desire for traffic calming and improved bicycle and pedestrian facilities on Washington Avenue. Respondents cited problems with speeding and difficulty crossing the street.



Average Daily Traffic: 20,000 vehicles/day



Speed Limit: 35 mph



**Number of Lanes:
4 lanes**



**2015-2023
Severe Injury Crashes: 6**



**Community
Survey Rank: #3**

Prevalent Crash Characteristics



Rear End



Angle



**Sideswipe -
Same Direction**



Head On



Motorcycle

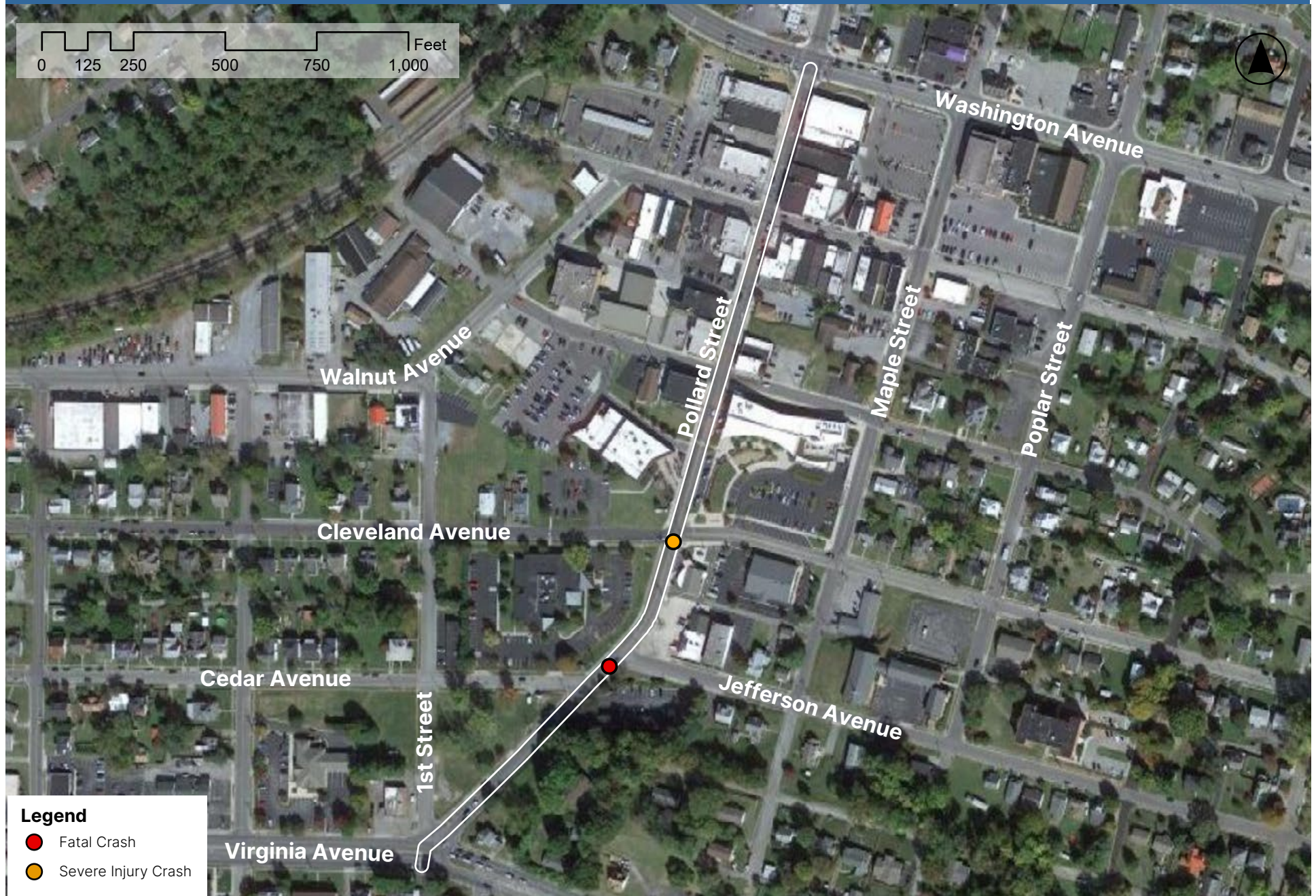


Bicyclist

| Safety Analysis | Potential Strategies |
|--|--|
| <p>The severe crashes along this corridor have varied characteristics and occur in different locations. Furthermore, a severe bicycle collision occurred on this corridor, indicating a need for infrastructure.</p> | <p>Evaluate the installation of a road diet (convert 4-lane undivided road to 2-lanes plus turning lane)</p> <ul style="list-style-type: none"> A road diet, which typically involves reducing the number of travel lanes and reallocating space for other uses, offers several benefits such as improved safety by reducing vehicle speeds and the number of collision points, and better traffic flow by streamlining traffic with dedicated turn lanes, reducing congestion and improving travel times. Road reconfigurations also provide the opportunity to enhance pedestrian safety by adding bike lanes and wider sidewalks, providing safer spaces for non-motorized users. |

SOUTH POLLARD STREET

Washington Avenue to
Virginia Avenue



SOUTH POLLARD STREET

Washington Avenue to
Virginia Avenue

Context

South Pollard Street is a major collector that connects the Town of Vinton's two primary east-west thoroughfares, Washington Avenue and Virginia Avenue. According to 2022 VDOT traffic data, the current average daily traffic (ADT) volume is 6,200 vehicles. The corridor has experienced 51 crashes since 2015, including 1 fatal and 1 serious injury crash, both of which were single vehicle run off road crashes.

South Pollard Street provides access to Vinton's downtown area. This downtown area includes retail, specialty services, restaurants, and other businesses as well as Town departments and public facilities, such as the Vinton Library. Both community members and visitors frequent this central business area and improvements towards traffic calming and pedestrian circulation would highly benefit this denser area of the Town. The most severe crashes were a result of driver behavior (distracted, unbelted, and/or speeding). Installation of traffic calming measures, such as new high-visibility crosswalks or curb bump-outs, could better indicate to drivers on South Pollard Street that they are entering a low-speed zone.



Average Daily Traffic: 6,200 vehicles/day



Speed Limit: 25 mph



**Number of Lanes:
2 lanes**



2015-2023

**Severe Injury Crashes: 1
Fatal Crashes: 1**



**Community
Survey Rank: #4**

Prevalent Crash Characteristics



**Fixed Object
Off Road**



Angle

| Safety Analysis | Potential Strategies |
|---|--|
| <p>The (2) FSI crashes that occurred on South Pollard Street were a result of colliding with a fixed object, off-road; speeding, as well as being an unbelted, senior driver, were key factors of the fatal crash.</p> <p>Less severe crashes tended to be angle collisions. Overall, the corridor could benefit from traffic calming measures.</p> | <p>Evaluate the installation of a roundabout at the Virginia Avenue and Pollard Street intersection</p> <ul style="list-style-type: none"> Roundabouts decrease the likelihood of severe collisions (such as T-bone or head-on crashes) by promoting low-speed, one-way traffic flow. By allowing continuous movement of vehicles, roundabouts reduce congestion and the stop-and-go conditions typical of signalized intersections. The circular design naturally slows vehicles down, reducing the potential for high-speed crashes, improving overall safety and improving overall traffic calming. In addition, slower vehicle speeds with well-designed crosswalks make it safer for pedestrians and cyclists to navigate roundabouts. |
| | <p>Evaluate traffic calming measures along the corridor to slow traffic and encourage pedestrian circulation</p> <ul style="list-style-type: none"> As a corridor through Vinton's downtown district, traffic calming installations, such as high-visibility crosswalks or curb bump-outs, could encourage drivers to slow down. Traffic calming may be piloted as temporary measures, such as initially using flexpost to narrow pedestrian crossing distance. |

GUS NICKS BOULEVARD

Roanoke City Line to
South Pollard Street



GUS NICKS BOULEVARD

Roanoke City Line to
South Pollard Street

Context

Gus Nicks Boulevard is the western edge of the Washington Avenue corridor, one of the Town's two primary east/west corridors, and serves as an entrance to the Town from the City of Roanoke. Gus Nicks Boulevard provides direct access to Route 460, a major commuter route for the region. The corridor has experienced 34 crashes since 2015, including 2 serious injury crashes.



Average Daily Traffic: 22,000 vehicles/day



Speed Limit: 35 mph



**Number of Lanes:
4 lanes**

Prevalent Crash Characteristics



Head On



Angle



2015-2023

Severe Injury Crashes: 2

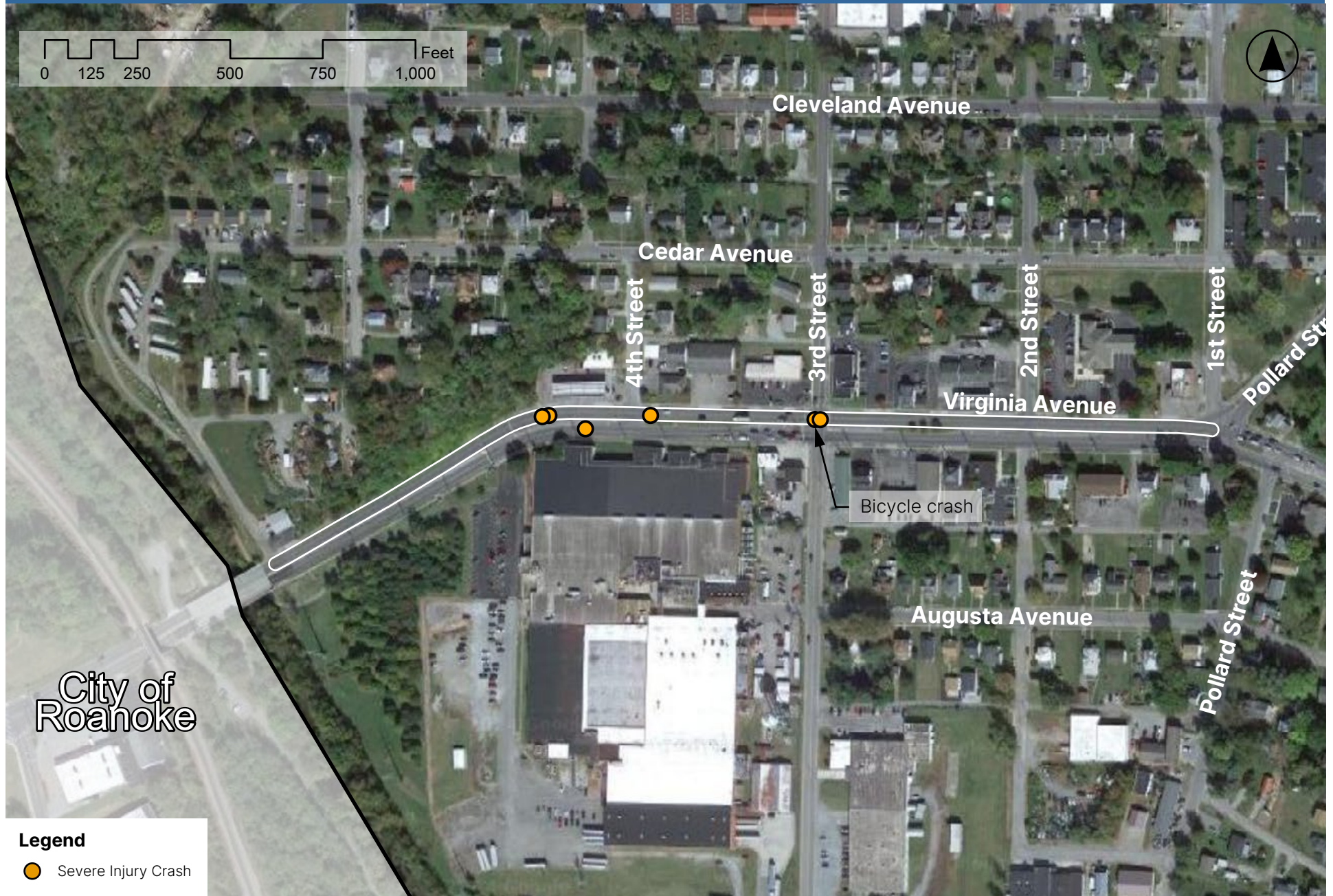


**Community
Survey Rank: #6**

| Safety Analysis | Potential Strategies |
|---|--|
| The two severe crashes were a head on crash and an angle crash. Less severe crashes have varied characteristics, including a collision with a pedestrian. | <p>Evaluate the installation of a road diet (convert 4-lane undivided road to 2-lanes plus turning lane)</p> <ul style="list-style-type: none"> A road diet, which typically involves reducing the number of travel lanes and reallocating space for other uses, offers several benefits such as improved safety by reducing vehicle speeds and the number of collision points, and better traffic flow by streamlining traffic with dedicated turn lanes, reducing congestion and improving travel times. Road reconfigurations also provide the opportunity to enhance pedestrian safety by adding bike lanes and wider sidewalks, providing safer spaces for non-motorized users. |

VIRGINIA AVENUE

Roanoke City Line to
South Pollard Street



VIRGINIA AVENUE

Roanoke City Line to
South Pollard Street

Context

West Virginia Avenue is a major east/west corridor that serves as a primary entrance and thoroughfare for the Town of Vinton. It is a high volume thoroughfare that also has a large number of driveways and intersections. This creates conflict when high-speed motorists traveling through the corridor come in contact with low-speed traffic turning onto and off of the corridor. The corridor has experienced 113 crashes since 2015, including 6 serious injury crashes.



Average Daily Traffic: 27,000 vehicles/day



Speed Limit: 35 mph



**Number of Lanes:
4 lanes**

Prevalent Crash Characteristics



Rear End



Angle



Distracted



Bicyclist



Motorcycle



2015-2023

Severe Injury Crashes: 6



**Community
Survey Rank: #8**

Potential Strategies

Half of the severe crashes were angle collisions. For less severe crashes, the highest occurrence of incidents were rear end crashes.

Consider the installation of a roundabout at the Virginia Avenue & South Pollard Street intersection

- Based on the survey, community members would like traffic calming to slow drivers down, as well as facilitating pedestrian and bicycle movements. There is a funded pedestrian improvement project around the 4th Street intersection that is anticipated to be constructed in 2028. The installation of a roundabout at the Virginia Avenue and South Pollard Street intersection may provide additional traffic calming and pedestrian safety benefits, especially in conjunction with the planned roundabout at Hardy Road and Bypass Road. Roundabouts lower the likelihood of high-speed collisions and T-bone crashes, common at traditional intersections, by promoting a continuous, circular flow of traffic at lower speeds. The design naturally slows down vehicles, which reduces the severity of any collisions that do occur and enhances overall safety for all road users. Pedestrians have fewer lanes to cross at a time and benefit from slower vehicle speeds, making crossing easier and safer.

Consider closing the 4th Street median crossover

- A funded project to address pedestrian safety is currently in the design phase, around the 4th Street intersection. These facilities will directly improve pedestrian circulation, however, other measures may be considered to address vehicle crashes (see Virginia Avenue & 4th Street intersection profile).

Evaluate the installation of pedestrian facilities at 3rd Street intersection
(See Virginia Avenue & 3rd Street intersection profile)

MOUNTAIN VIEW ROAD

Washington Avenue to
Roanoke County Line



MOUNTAIN VIEW ROAD

Washington Avenue to
Roanoke County Line

Context

Mountain View Road is north-south corridor that connects to many residential communities and Washington Avenue. The surrounding land use is predominantly low-density residential, as well as an elementary school. The corridor has experienced 31 crashes since 2016, including 2 serious injury crashes, both of which were angle crashes; crashes clustered around the intersection with Ruddel Road (20/31).



Average Daily Traffic: 4,000 vehicles/day



Speed Limit: 25 mph



**Number of Lanes:
2 lanes**

Prevalent Crash Characteristics



Angle



2015-2023

Severe Injury Crashes: 1



**Community
Survey Rank: #10**

| Safety Analysis | Potential Strategies |
|--|---|
| The severe injury crash occurred at the Ruddel Road intersection. The majority of the less-severe collisions occurred at this same location. | Consider a corridor study of Mountain View Road (with a focus on the Ruddel Road intersection) <ul style="list-style-type: none"> This corridor serves the surrounding residential area, as well as traffic to and from Roanoke County. A corridor study would provide the opportunity to gather feedback from the residents, as well as collect focused data on the Ruddel Road intersection. |
| | Consider the installation of bike lanes from Washington Avenue to Herman L. Horn Elementary School, and from Herman L. Horn Elementary School to the existing bike lane at the Roanoke County Line <ul style="list-style-type: none"> Considering the residential surroundings, presence of Herman L. Horn Elementary School, the existing bike lane to the north in Roanoke County, and lack of bicycle/pedestrian facilities along Mountain View Road, there could be an opportunity to promote active transportation in the corridor. |

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Intersection Profiles



Hardy Road & Vinyard Road



Hardy Road & Vinyard Road

Context

Hardy Road is one of two primary east/west corridors in the Town of Vinton. West of Chestnut Street, Hardy Road becomes Virginia Avenue, leading into the City of Roanoke. Hardy Road to the east leads into Roanoke County and Bedford County. Hardy Road is a primary thoroughfare for the Town of Vinton. Since 2015, 53 crashes have occurred at this intersection. Two of the 53 crashes were characterized as severe injury.



Average Daily Traffic: 21,000 vehicles/day



Speed Limit: 35 mph



**Number of Lanes:
4 lanes**



**2015-2023
Severe Injury Crashes: 2**



**Community
Survey Rank: #1**

Prevalent Crash Characteristics



Angle



Senior Driver



Speeding

| Safety Analysis | Potential Strategies |
|---|---|
| <p>The two severe crashes were angle collisions, involving senior drivers. Speeding was a factor in one of the crashes. This is a busy intersection with several businesses and entrances along this corridor. Based on these characteristics and community feedback, this intersection would benefit from traffic calming and bicycle-pedestrian facilities.</p> | <p>Evaluate the installation of bicycle and pedestrian improvements to encourage traffic calming (bike boxes, curb bump-outs, crosswalks on all approaches as well as repainting of existing crosswalks, etc.)</p> |
| | <p>Consider the installation of a roundabout</p> <ul style="list-style-type: none"> The installation of a roundabout may provide serious traffic calming and pedestrian safety benefits, especially in conjunction with the planned roundabout at Hardy Road and Bypass Road. Roundabouts lower the likelihood of high-speed collisions and T-bone crashes, common at traditional intersections, by promoting a continuous, circular flow of traffic at lower speeds. The design naturally slows down vehicles, which reduces the severity of any collisions that do occur and enhances overall safety for all road users. Pedestrians have fewer lanes to cross at a time and benefit from slower vehicle speeds, making crossing easier and safer. |

Hardy Road & Spruce Street



Hardy Road & Spruce Street

Context

Hardy Road is one of two primary east/west corridors in the Town of Vinton. West of Chestnut Street, Hardy Road becomes Virginia Avenue, leading into the City of Roanoke. Hardy Road to the east leads into Roanoke County and Bedford County. Hardy Road is a primary thoroughfare for the Town of Vinton. Spruce Street is a short, local road that connects to residential communities to the north and south. Hardy Road and Spruce Street is an unsignalized intersection and since 2015, 18 crashes, including 2 serious injury crashes, have occurred at this location.

Two of the serious injury crashes was a sideswipe in the same direction and both crashes collided with motorcyclists. The other collision involved a single vehicle running off the road; the driver of the single vehicle crash was under the influence and was not wearing their seatbelt while speeding, which contributed to the crash severity. The southbound approach has limited sight distance due to a house on the northeast corner.



Average Daily Traffic: 21,000 vehicles/day



Speed Limit: 35 mph



**Number of Lanes:
4 lanes / 2 lanes**



2015-2023

Severe Injury Crashes: 3



**Community
Survey Rank: #2**

Prevalent Crash Characteristics



**Sideswipe
Same Direction**



**Fixed Object
Off Road**



Motorcycle

| Safety Analysis | Potential Strategies |
|---|--|
| This intersection is located on a sweeping curve, with a steep grade, resulting in limited sight distance | Consider restricting Spruce Street north of Hardy Road to a one-way northbound road |
| | Consider limiting northbound through movements with a thru-cut on Spruce Street south of the intersection |
| | The high traffic volume and high number of intersections and driveways on Hardy Road creates many opportunities for collisions to occur. Limiting the northern leg of Spruce to one-way at this intersection will reduce these conflicts, address the challenges with sight distance, and improve safety. Eliminating through movements from the northbound approach may also reduce the chances for a collision to occur. |

Hardy Road & Bedford Road



Legend

- Severe Injury Crash

Hardy Road & Bedford Road

Context

Hardy Road is one of two primary east/west corridors in the Town of Vinton. West of Chestnut Street, Hardy Road becomes Virginia Avenue, leading into the City of Roanoke. Hardy Road to the east leads into Roanoke County and Bedford County. Hardy Road is a primary thoroughfare for the Town of Vinton. Bedford Road is a short, local road that serves as an additional connection between Hardy Road and Vinyard Road.

This unsignalized intersection has experienced 46 crashes since 2015, including 3 serious injury crashes. More than half of the overall crashes were angle collisions; the angle crashes occur from vehicles traveling southbound on Bedford Road onto Hardy Road as well as vehicles traveling northbound, exiting the parking lot area.



Average Daily Traffic: 21,000 vehicles/day



Speed Limit: 35 mph



**Number of Lanes:
4 lanes / 2 lanes**



2015-2023

Severe Injury Crashes: 4



**Community
Survey Rank: #3**

Prevalent Crash Characteristics



Angle



**Fixed Object
Off Road**



Rain



Night

| Safety Analysis | Potential Strategies |
|---|--|
| There is a pattern of angle crashes around this intersection that occur when visibility is impacted | <p>Evaluate closing the Hardy Road and Bedford Road intersection, with the completion of the nearby Hardy Road/Bypass Road roundabout</p> <ul style="list-style-type: none"> Bedford Road provides access to few residences and one commercial use; the commercial use has additional access directly on Hardy Road as well. With the funded roundabout at Hardy Road/Bypass Road just east of this intersection, the ability to access Bedford Road from westbound Hardy Road and Vinyard Road, the number of overall crashes, including 3 high-severity crashes, and the overall low traffic volumes on Bedford Road, closing the Hardy Road and Bedford Road intersection should be explored. The completion of the roundabout would maintain access to Bedford Road for eastbound traffic if this intersection were closed. |

Virginia Avenue & 3rd Street



Virginia Avenue & 3rd Street

Context

West Virginia Avenue is a major east/west corridor that serves as a primary entrance and thoroughfare for the Town of Vinton. It is a high volume thoroughfare that also has a large number of driveways and intersections.

There have been 44 crashes at this signalized intersection since 2015, including 2 serious injury crashes. Both serious injury crashes were angle crashes in which an eastbound motorist on West Virginia Ave disregarded the traffic signal and collided with a vehicle traveling south from 3rd Street.



Average Daily Traffic: 27,000 vehicles/day



Speed Limit: 35 mph



**Number of Lanes:
4 lanes / 2 lanes**



2015-2023

Severe Injury Crashes: 2



**Community
Survey Rank: #4**

Prevalent Crash Characteristics



Angle



Bicyclist*



**Red-Light
Running**



Distracted

*(1) severe injury bicycle crash (shown left) and (1) property damage only bicycle crash occurred at this intersection

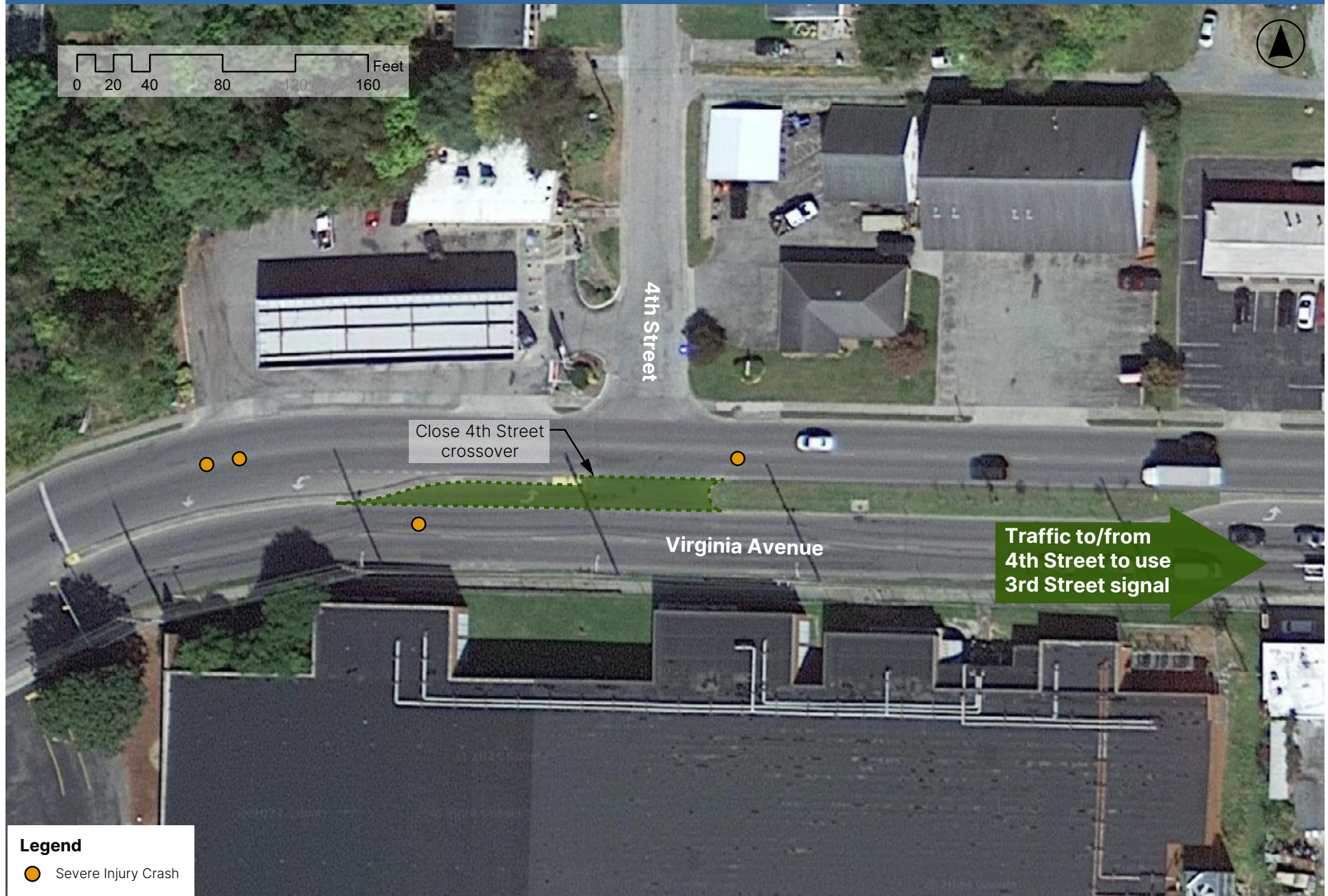
Potential Strategies

There is a prevalence of angle crashes at this signalized intersection, including two bicycle crashes. With reported incidents of red-light running and distracted driving, this intersection would benefit from traffic calming implementations.

Evaluate the installation of bicycle and pedestrian improvements to encourage traffic calming (bike boxes, curb bump-outs, crosswalks on all approaches as well as repainting of existing crosswalks, etc.)

- There are currently no marked crosswalks at this intersection. Responses to the community survey indicated crossing West Virginia Avenue as a pedestrian is very difficult. Improving this intersection with pedestrian facilities is an opportunity to alleviate that concern. Pedestrian safety improvements, including marked crosswalks at 3rd St and across West Virginia Avenue with pedestrian signals and push buttons, are planned and have been approved under a HSIP grant. This plan does not currently include bicycle safety measures.

Virginia Avenue & 4th Street



Virginia Avenue & 4th Street

Context

West Virginia Avenue is a major east/west corridor that serves as a primary entrance and thoroughfare for the Town of Vinton. It is a high volume thoroughfare that also has a large number of driveways and intersections. This creates conflict when high-speed motorists traveling through the corridor come in contact with low-speed traffic turning onto and off of the corridor. The unsignalized intersection has seen 24 crashes since 2015, including 4 serious injury crashes. One of the serious injury crashes was a single-vehicle collision with a fixed object off the road. The other serious crashes were a rear end caused by following too closely, a same direction sideswipe, and an angle crash when a driver crossed the median into the westbound travel lanes. The majority of crashes were rear end collisions. Pedestrian improvements along Virginia Avenue, including a marked crosswalk at 4th St, have been approved under a HSIP grant. Details of these improvements may be found in the appendix of this report.



Average Daily Traffic: 27,000 vehicles/day



Speed Limit: 35 mph



**Number of Lanes:
4 lanes / 2 lanes**



2015-2023

Severe Injury Crashes: 4



**Community
Survey Rank: #5**

Prevalent Crash Characteristics



Angle



Rear End



**Sideswipe
Same Direction**



**Fixed Object
Off Road**



Distracted

| Safety Analysis | Potential Strategies |
|---|---|
| For vehicles southbound on 4th Street, the curvature of Virginia Avenue (towards the City of Roanoke) may create challenges for drivers attempting to make a left-turn. | <p>Evaluate closing the median crossover</p> <ul style="list-style-type: none"> Median crossovers present multiple conflict points where vehicles traveling in opposite directions can collide, especially during left turns. By closing these crossovers and redirecting traffic to the signalized 3rd Street intersection, the number of conflict points is reduced, thus decreasing the potential for collisions. Signalized intersections manage traffic more efficiently by controlling the flow and reducing the likelihood of abrupt stops or merges. This control helps to smooth traffic flow and minimize sudden braking or acceleration, which can lead to accidents. In addition, the signalized 3rd Street intersection can be improved to include designated pedestrian crossing signals and marked crosswalks, providing safer crossing opportunities for pedestrians. |

Fall 2024 Engagement Summary

In September 2024, public outreach was directed towards collecting comments on the location-specific and systemic recommendations for the intersections and corridors with the highest number of fatal and serious injury crashes.

An online survey was available from September 3 to September 30, 2024. There were a total of 18 responses as part of the public outreach. Respondents were asked how much they would be willing to spend to improve each of the priority locations, and were then asked to rank and comment on a set of potential improvements for each priority location.

The table below shows the spending prioritization for each corridor in order of their average score. The mapped ranking is shown in Figure 13.

A detailed summary of the responses to each corridor is provided on the following pages.

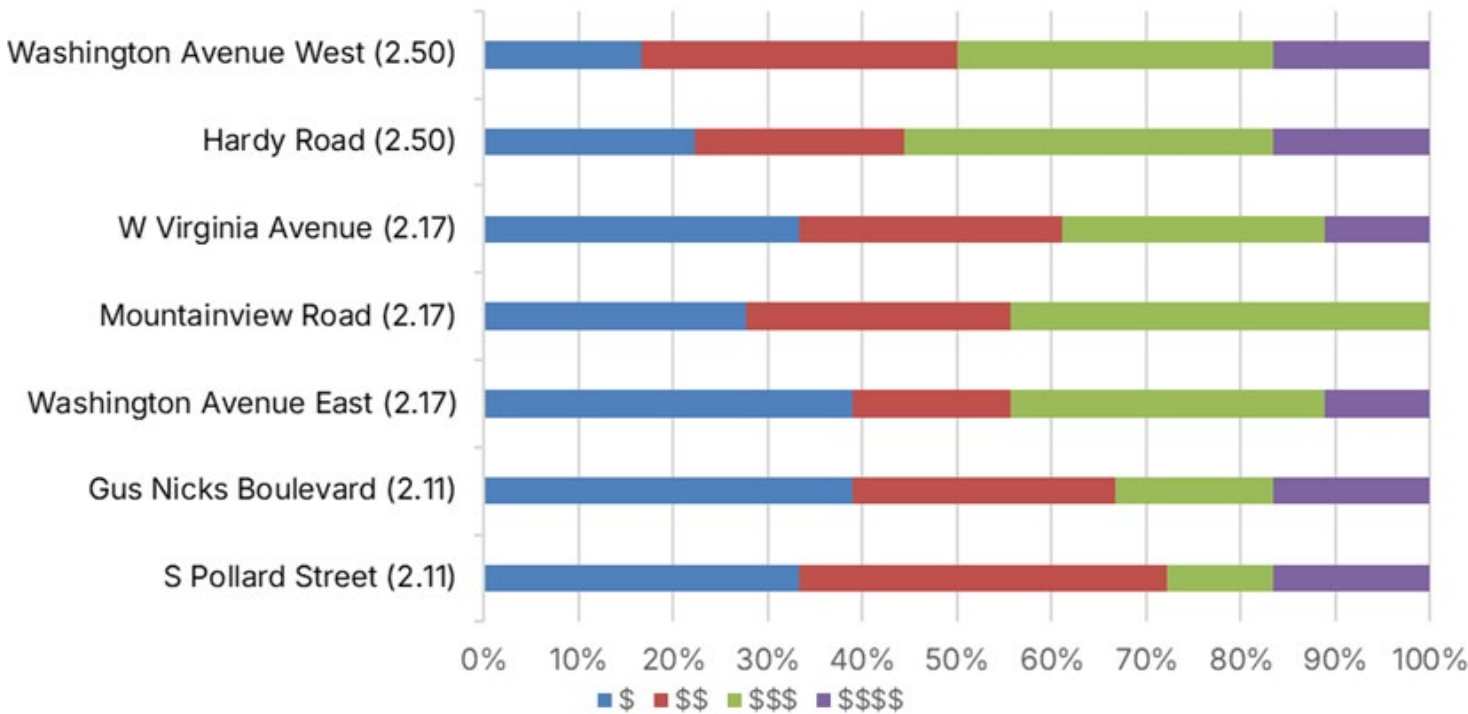


Table 3. *Fall Community Engagement Corridor Spending*

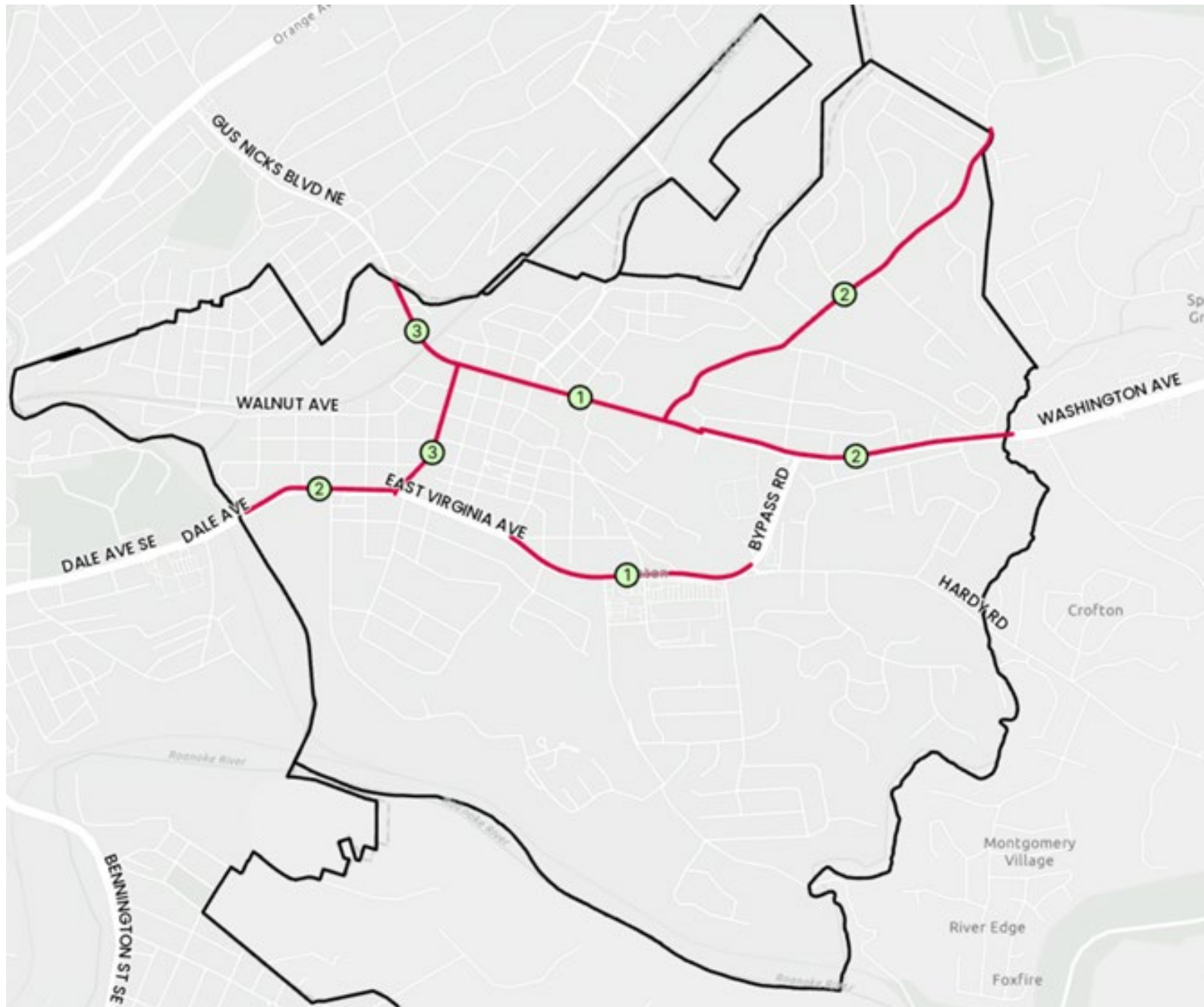
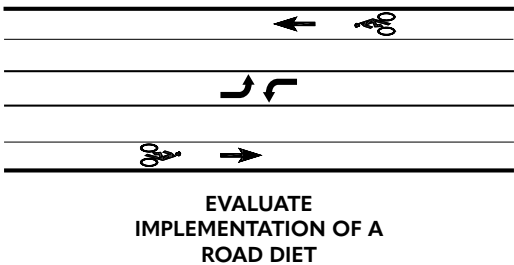


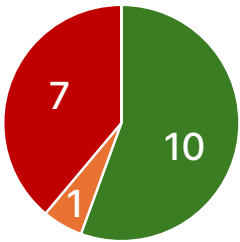
Figure 13. Fall Community Engagement: Corridor Spending Map

Corridor Recommendations & Community Input

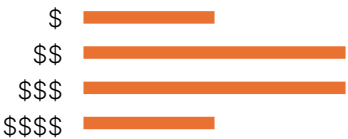
Washington Avenue West



DO YOU AGREE WITH THE POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW MUCH MONEY WOULD YOU BE WILLING TO SPEND TO IMPROVE THIS INTERSECTION?



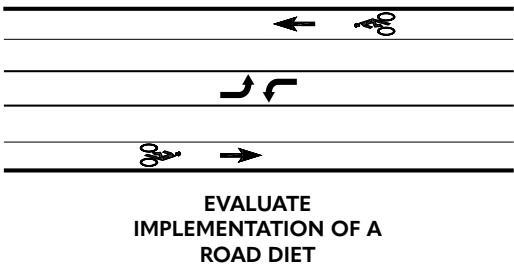
WHY DO YOU DISAGREE WITH THE POTENTIAL IMPROVEMENT(S)?

Free responses were very concerned that a road diet would exacerbate traffic congestion along this corridor. One response discussed that especially with the presence of heavy vehicles that utilize Washington Avenue, reducing a lane would impact existing traffic operations. Others discussed that bicycle lanes are not necessary.

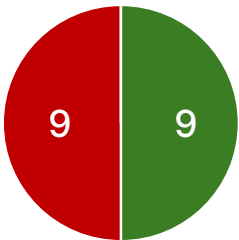
OTHER COMMENTS?

Free responses strongly supported a road diet, as it would provide a left-turn lane. Respondents discussed how rear end crashes occur from drivers waiting to make a left-turn and getting struck. Others requested more police presence along this corridor to enforce speed limits and reduce distracted driving. Other suggestions included widening the sidewalk and installing midblock crossings.

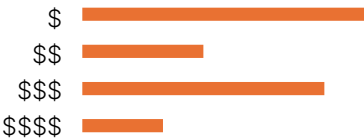
Washington Avenue East



DO YOU AGREE WITH THE POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW MUCH MONEY WOULD YOU BE WILLING TO SPEND TO IMPROVE THIS INTERSECTION?



WHY DO YOU DISAGREE WITH THE POTENTIAL IMPROVEMENT(S)?

Free responses similarly noted that they were very concerned that a road diet would exacerbate traffic congestion along this corridor. One response discussed that especially with the presence of heavy vehicles that utilize Washington Avenue, reducing a lane would impact existing traffic operations. Others discussed that bicycle lanes are not necessary.

OTHER COMMENTS?

Similar to Washington Avenue West, free responses supported the installation of left-turn lanes, but disagreed with removing a lane for bicyclists. Responses also suggested reducing the speed limit, increasing enforcement, widening the sidewalk, and installing midblock crossings.

I agree with this recommendation

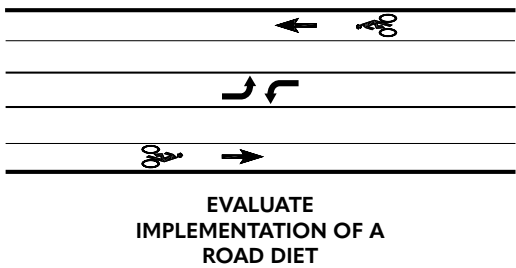
I'm not sure how I feel about this recommendation

I disagree with this recommendation

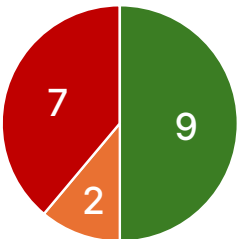
No response

Corridor Recommendations & Community Input

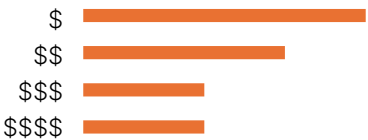
Gus Nicks Boulevard



DO YOU AGREE WITH THE POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW MUCH MONEY WOULD YOU BE WILLING TO SPEND TO IMPROVE THIS INTERSECTION?



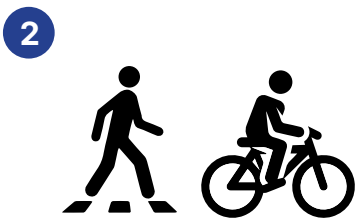
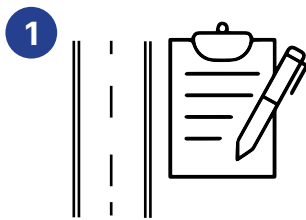
WHY DO YOU DISAGREE WITH THE POTENTIAL IMPROVEMENT(S)?

Free responses similarly noted that they were very concerned that a road diet would exacerbate traffic congestion along this corridor. One response discussed that especially with the presence of heavy vehicles that utilize Washington Avenue, reducing a lane would impact existing traffic operations. Others discussed that bicycle lanes are not necessary.

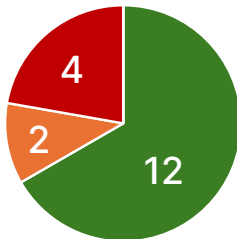
OTHER COMMENTS?

Similar to Washington Avenue West/East, free responses supported the installation of left-turn lanes, but disagreed with removing a lane for bicyclists. Responses also suggested increasing enforcement of the existing speed limit and widening the sidewalk.

Mountain View Road



DO YOU AGREE WITH THE POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW MUCH MONEY WOULD YOU BE WILLING TO SPEND TO IMPROVE THIS INTERSECTION?

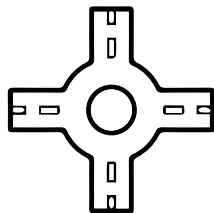


WHY DO YOU DISAGREE WITH THE POTENTIAL IMPROVEMENT(S)?

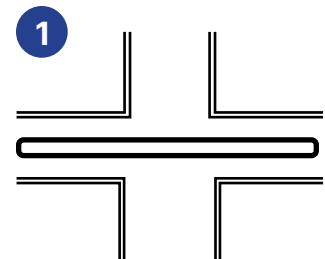
Some free responses supported bike lanes or at a minimum, sharrows with shared lane signage. A suggestion was also made for a right-turn lane into the elementary school. One response disagreed with the installation of bike lanes, and another response noted that they would like better enforcement of the current speed limit. Additionally, a comment described that the Rudell Road intersection has difficult sight distance, which contributes to this location being a hotspot for crashes.

Corridor Recommendations & Community Input

South Pollard Street

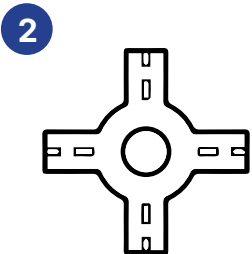


EVALUATE A
ROUNDBOUT AT THE
VIRGINIA AVENUE
INTERSECTION

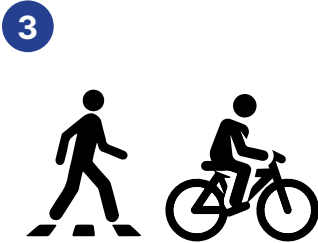


EVALUATE CLOSING
MEDIAN CROSSOVER
AT THE 4TH STREET
INTERSECTION

Virginia Avenue

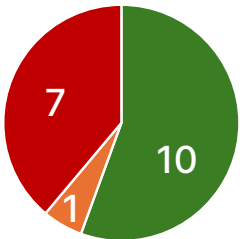


EVALUATE A
ROUNDBOUT AT THE
SOUTH POLLARD STREET
INTERSECTION

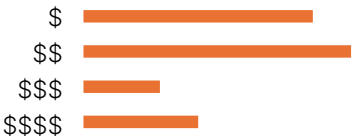


CONSIDER POTENTIAL
BIKE & PEDESTRIAN
IMPROVEMENTS AT THE
3RD STREET INTERSECTION

DO YOU AGREE WITH THE
POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW
MUCH MONEY WOULD YOU BE
WILLING TO SPEND TO IMPROVE THIS
INTERSECTION?



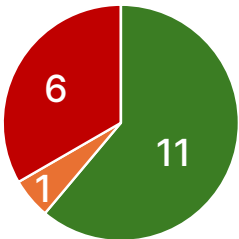
WHY DO YOU DISAGREE WITH THE
POTENTIAL IMPROVEMENT(S)?

Free responses were concerned that a roundabout would impact traffic operations due to the existing volume. Another respondent noted that the intersection had been recently improved, following the installation of a flashing-yellow light, so further improvements would not be needed.

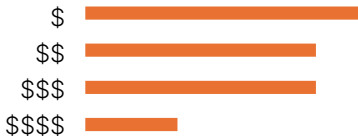
OTHER COMMENTS?

Free responses ranged from requesting additional traffic calming, sidewalks, crosswalks, and midblock crossings.

DO YOU AGREE WITH THE
POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW
MUCH MONEY WOULD YOU BE
WILLING TO SPEND TO IMPROVE THIS
INTERSECTION?



WHY DO YOU DISAGREE WITH THE
POTENTIAL IMPROVEMENT(S)?

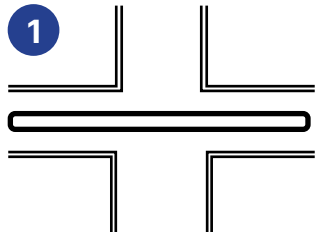
Free responses disagreed with a roundabout or bike lanes, either because it may impact traffic operations or because return on investment would be low.

OTHER COMMENTS?

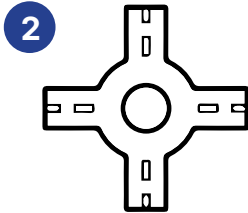
The free response supported expanding sidewalks, but not the installation of bike lanes nor roundabouts. This respondent was very concerned about the curvature and grade of the road as dangerous for cyclists.

Corridor Recommendations & Community Input

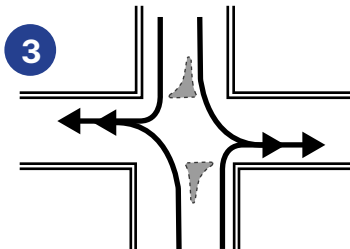
Hardy Road



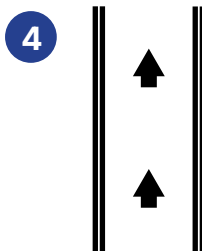
EVALUATE CLOSING
MEDIAN CROSSOVER
AT THE BEDFORD ROAD
INTERSECTION



EVALUATE A
ROUNDABOUT AT
THE VINYARD ROAD
INTERSECTION

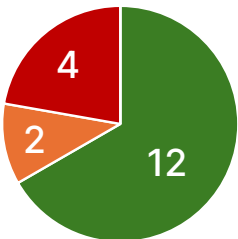


IMPLEMENT THRU-CUT
INTERSECTION STUDY

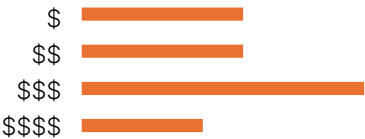


CONSIDER ONE-WAY STREET
CONVERSION (NORTHBOUND) ON
SPRUCE STREET

DO YOU AGREE WITH THE
POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW
MUCH MONEY WOULD YOU BE
WILLING TO SPEND TO IMPROVE THIS
INTERSECTION?



WHY DO YOU DISAGREE WITH THE
POTENTIAL IMPROVEMENT(S)?

Free responses described that the existing traffic volume would conflict with a roundabout, however, supported closing the median crossover at Bedford Road. Additionally, one response suggested reviewing signal timings for signal coordination along Hardy Road.

OTHER COMMENTS?

Free responses disagreed with evaluating a roundabout because of the existing traffic volume. Another commenter requested increasing enforcement of the speed limit along this corridor.

Intersection Recommendations & Community Input

The September 2024 survey additionally sought information about the priority intersections. Respondents were asked how much they would be willing to spend to improve each intersection, and then were asked to rank and comment on a set of potential improvements.

Understanding the public's willingness to spend on improving specific intersections is important in highlighting the community's priorities and the perceived value of these improvements. This information can guide decision-makers in prioritizing projects, allocating budgets effectively, and focusing resources on the intersections that matter most to the public. It also helps identify areas with the greatest perceived safety risks, allowing for targeted interventions that align with community needs.

The table below shows the summary of the responses for each intersection, provided on the following pages.

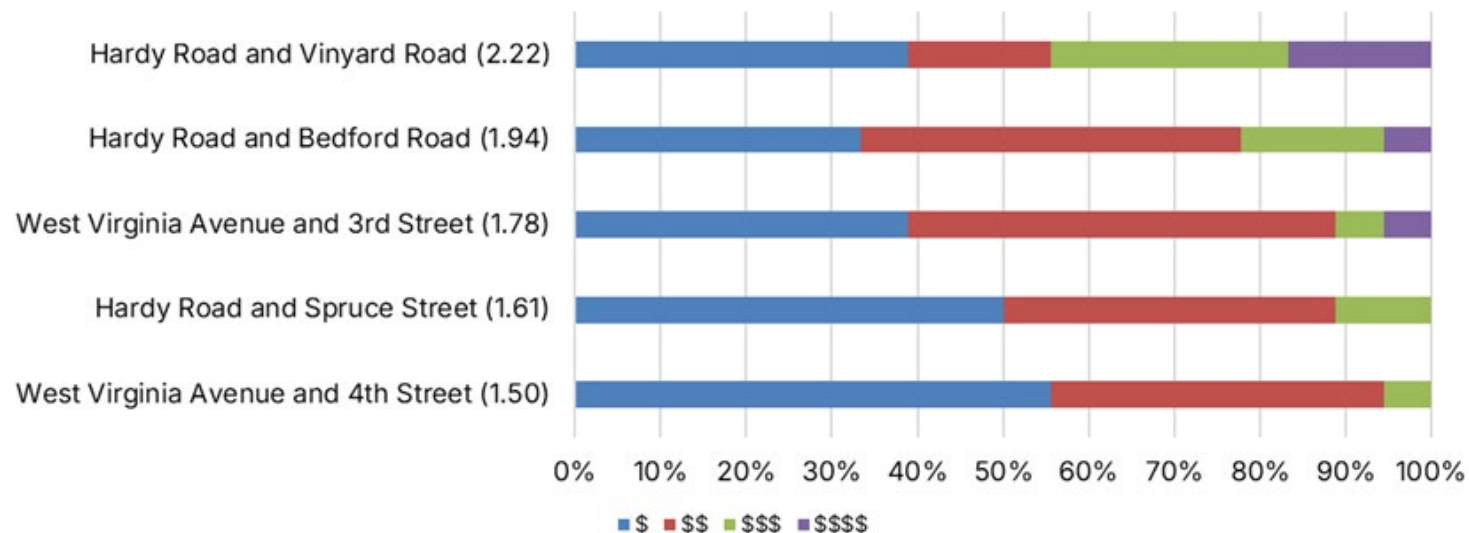


Table 4. Fall Community Engagement Intersection Spending

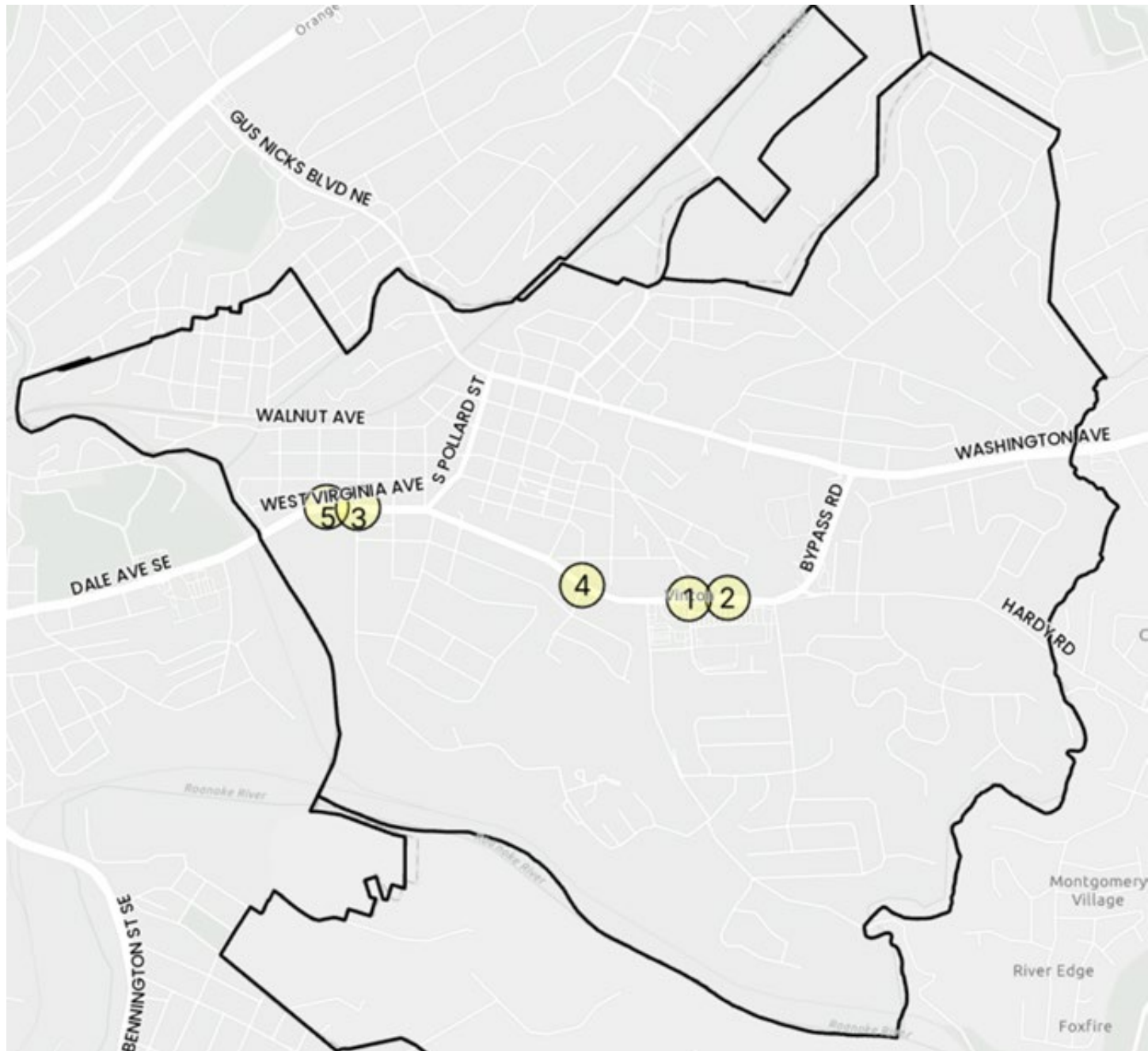
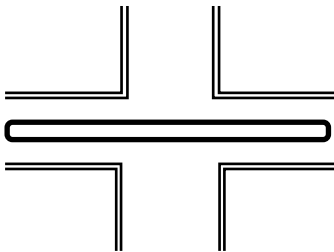


Figure 14. Fall Community Engagement: Intersection Spending Map

Intersection Recommendations & Community Input

Virginia Avenue & 4th Street



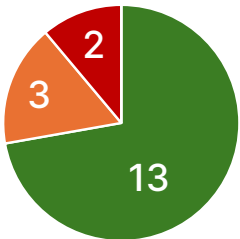
EVALUATE CLOSING
MEDIAN CROSSOVER

Virginia Avenue & 3rd Street



CONSIDER POTENTIAL BIKE &
PEDESTRIAN IMPROVEMENTS AT
SIGNALIZED INTERSECTION

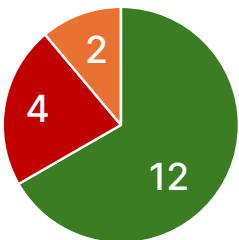
DO YOU AGREE WITH THE
POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW
MUCH MONEY WOULD YOU BE
WILLING TO SPEND TO IMPROVE THIS
INTERSECTION?



DO YOU AGREE WITH THE
POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW
MUCH MONEY WOULD YOU BE
WILLING TO SPEND TO IMPROVE THIS
INTERSECTION?

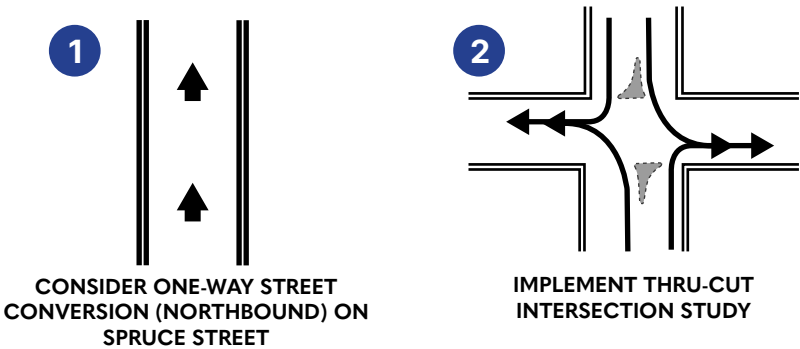


WHY DO YOU DISAGREE WITH THE
POTENTIAL IMPROVEMENT(S)?

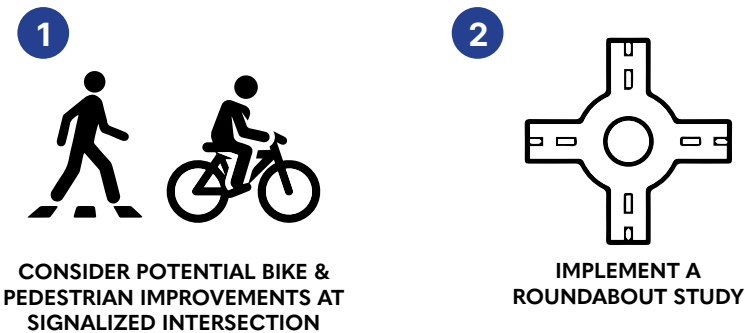
The free responses felt that bicycle lanes are not needed in the Town. One comment disagreed with the installation of bike lanes, however, supported installation of more sidewalks.

Intersection Recommendations & Community Input

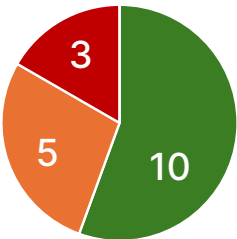
Hardy Road & Spruce Street



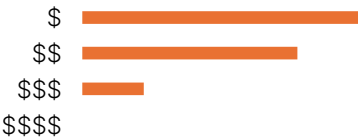
Hardy Road & Vinyard Road



DO YOU AGREE WITH THE
POTENTIAL IMPROVEMENT(S)?



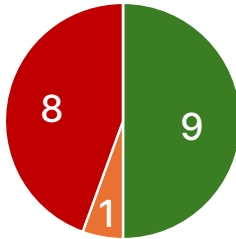
IF YOU WERE IN CHARGE, HOW
MUCH MONEY WOULD YOU BE
WILLING TO SPEND TO IMPROVE THIS
INTERSECTION?



WHY DO YOU DISAGREE WITH THE
POTENTIAL IMPROVEMENT(S)?

Free responses discussed that the possible recommendations would provide low cost of return.

DO YOU AGREE WITH THE
POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW
MUCH MONEY WOULD YOU BE
WILLING TO SPEND TO IMPROVE THIS
INTERSECTION?



WHY DO YOU DISAGREE WITH THE
POTENTIAL IMPROVEMENT(S)?

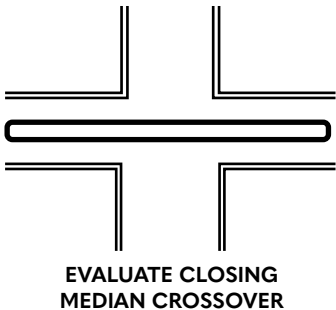
Commentors noted that volume was high at this intersection with limited public right-of-way. Additionally, others commented that they felt there would be low return on investment, or that roundabouts and bike lanes are not needed.

OTHER COMMENTS?

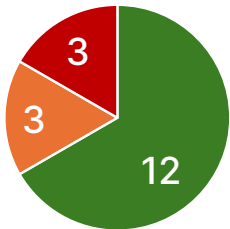
An additional comment noted that the presence of fast-food restaurants around this intersection cause congestion issues, due to drive-thru queueing.

Intersection Recommendations & Community Input

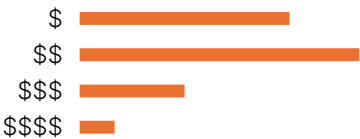
Hardy Road & Bedford Road



DO YOU AGREE WITH THE
POTENTIAL IMPROVEMENT(S)?



IF YOU WERE IN CHARGE, HOW
MUCH MONEY WOULD YOU BE
WILLING TO SPEND TO IMPROVE THIS
INTERSECTION?



WHY DO YOU DISAGREE WITH THE
POTENTIAL IMPROVEMENT(S)?

The free response felt the improvement was not needed, as there would be no return on the investment.

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6

Equity Considerations

The Safe Streets and Roads for All Notice of Funding Opportunity defines equity as:

Equity is the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, Indigenous and Native Americans, Asian Americans and Pacific Islanders, and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.

For the Town of Vinton, data from the American Community Survey was analyzed to better understand existing equity challenges in the Town.

The Town of Vinton has an estimated population of 8,000 residents. According to the American Community Survey, approximately 10% of the population is determined to be impoverished. The Census Bureau defines poverty as “if a family’s total income is less than the family’s threshold, then that family and every individual in it is considered in poverty.” When a household is experiencing poverty, it creates challenges in many facets, including transportation. Per the Transportation Security Index by the University of Michigan, “more than half of the adults in the U.S. who are experiencing poverty are also experiencing transportation insecurity.” Transportation insecurity occurs when “people are unable to get to where they need to go to meet the needs of their day life regularly, reliably, and safely” (USDOT).

Figure 12 highlights the census tracts in the Town of Vinton in red. According to the American Community Survey data, each of the two census tracts has 9-10% of households that are living below the poverty line. Some households may have access to a personal vehicle, however, improving bicycle-pedestrian movement through the Town may provide the most overarching benefits. The Town of Vinton is also served by the Valley Metro bus line; the Town could pursue collaboration with the City of Roanoke for transit-related improvements.

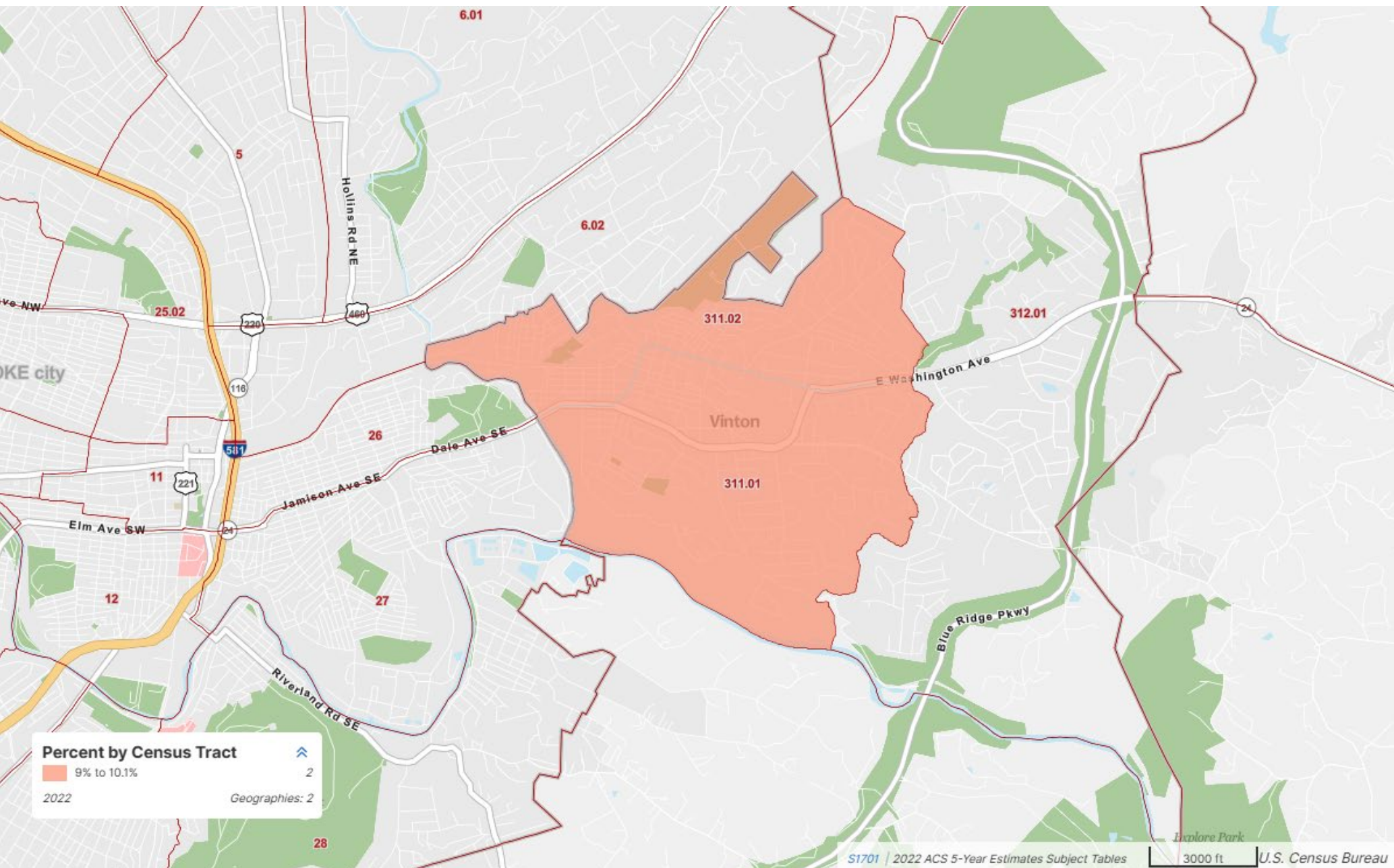


Figure 15. American Community Survey
Poverty Status in the Past 12 Months

7

Policy and Process Changes

As part of the Safe Streets and Roads For All (SS4A) process, it is important for the Town of Vinton to review its current plans and policies to identify opportunities for improvements. There are several plans that also contribute to the development of the Town of Vinton's transportation system.

Vinton Area Corridors Plan (2010)

Prepared by the Town of Vinton, Roanoke County, and the Roanoke Valley-Alleghany Regional Commission, the Vinton Area Corridors Plan was created to be adopted as part of each locality's comprehensive plan. The Corridors Plan intended to guide regional decision-making for future development in the Town of Vinton, reflecting goals and objectives had been collaboratively developed together between the County and Town. Specific to the Town's transportation, the plan focused on six primary corridors: Bypass Road, Hardy Road, South Pollard Street, Virginia Avenue, Walnut Avenue, and Washington Avenue. This study involved taking inventory of existing roadway characteristics, establish existing traffic volume and operations, evaluate bicycle-pedestrian infrastructure, and key Town destinations. Recommendations related to transportation include incorporating bicycle infrastructure within future Walnut Avenue and Hardy Road VDOT Six-Year Road Improvement projects, improving signage and pavement markings, and improving pedestrian conditions at specific intersections (Hardy Road/Vinyard Road, Hardy Road/Niagara Road, Hardy Road/Clearview Drive).

Gus Nicks Boulevard & Washington Avenue Corridor Improvement Study (2019)

The Gus Nicks Boulevard and Washington Avenue Study was prepared by the Roanoke Valley Transportation Planning Organization (RVTPPO). Crash analysis found that poor lighting and driving behavior contributed to crash occurrence and severity along

these corridors; furthermore, drivers involved in these collisions tended to be young male drivers. The study recommends the installation of bike lanes, lane narrowing, and additional study and data collection for possible implementation, including collecting speed data, traffic volume on side streets, peak hour volumes and analysis, access management, and considering a pilot study for a road diet conversion. Several pedestrian-specific interventions were discussed as well, such as replacing or installing high-visibility crosswalk markings, installing leading pedestrian interval crossings, raised crossings, curb extensions, pedestrian hybrid beacons (PHBs), and pedestrian safety islands. These recommendations are still applicable in improving road safety in the Town, however, the included cost estimates are taken from a 2019 context.

Town of Vinton GAP Summary Route 24 Bike/Ped Plan (2022)

The Route 24 Bike/Ped Plan is the most recent plan focusing specifically on major routes in the Town of Vinton. This plan gathered existing roadway conditions and feedback from the community, producing a toolkit for possible bicycle-pedestrian improvements through the Town. The toolkit provides possible projects for different contexts, such as signalized intersections, uncontrolled crossings, within residential neighborhoods, and the downtown area. Similar to the 2019 study, the specific recommendations presented in this plan are still applicable in improving road safety in the Town. Additionally, this plan provides an ordered list and mapping of prioritized improvements that should be accounted for, as many locations directly correlate with this Safety Action Plan.

Enforcement and Policies

Goal: Discourage undesirable or illegal behaviors that are not necessarily addressed through engineering countermeasures.

1.A: Increase Law Enforcement Patrol

Increasing law enforcement patrol would discourage or address dangerous or illegal driver behavior. However, local law enforcement is constrained (with staffing shortages, budget, etc.) and additional collaboration is needed to identify feasibility and limitations.

1.B: Implement Speed Cameras

Based on survey responses and discussions with community meeting attendees, there is a high concern for speeding on Town roadways. At the time of this report, Virginia legislation only permits speed cameras in school zones and work zones. The installation of speed cameras in these locations would provide enforcement without the physical presence of law enforcement and could encourage drivers to be more aware of their speeds elsewhere. Additional budget will need to be allocated to review and process violations. This recommendation would also necessitate Code changes and needs to be discussed with Town of Vinton Police before adoption.

1.C: Implement Red Light Cameras

As described with reviewing signal timings, the Town of Vinton residents are very concerned with red-light running behavior at intersections. Red light cameras are permitted in Virginia localities, however, the quantity of cameras is restricted by population. Additional budget will need to be allocated to review and process violations. This recommendation would also necessitate Code changes and needs to be discussed with Town of Vinton Police before adoption.

Intersection and Corridor Studies

Goal: Dedicate time and budget for a focused and nuanced study of a specific intersection or corridor.

2.A: Conduct an Intersection or Corridor Study

Where an intersection or corridor experienced a high number of fatal and serious injury crashes without a clear crash pattern, further study is needed for developing recommendations. A specific intersection or corridor study would gather additional information about roadway conditions and learn about resident experiences, priorities, and future goals for that particular location.

2.B: Conduct a Speed Study

Speeding is a top concern for the Town of Vinton residents and high vehicle speeds lead to more severe crashes. A speed study in select locations could identify areas where drivers tend to excessively exceed the posted speed limit and could serve as an element of project prioritization for design solutions.

Land Use

Goal: Coordinate with property owners to create safer conditions around high-priority intersections

3.A: Improve Access Management

Where several entrances are present near an intersection, there is an opportunity to consolidate these access driveways to reduce the number of conflict points. Ease of access would improve traffic flow nearby intersections. Better access management would benefit, not only drivers but adjacent property owners and businesses. Implementation would require ongoing coordination and negotiation with private property owners.

8

Strategy and Project Selections

The built environment plays a major role in roadway safety. This chapter highlights potential improvements to road and intersection design in the Town of Vinton, and provides a list of potential projects to address safety concerns at locations identified in this study.

Road and Intersection Design

Goal: Improve roads and intersections to increase driver visibility, encourage drivers to slow down and be aware of their surroundings, and facilitate safe bicycle and pedestrian movement.

1.A: Add New Signage or Improve Existing Signage

Installation of new signage or improving existing signage may alert drivers of upcoming road conditions or to increase awareness of bicyclists and pedestrians. Signage improvements could include increasing the size of existing signs, adding flashing lights, or adding reflectivity to improve visibility to drivers.

1.B: Improve Sight Distance

Adequate sight distance is vitally important in creating safe intersections and entrances. Improving sight distance through grading or other design interventions would require further study and additional coordination with involved parties.

1.C: Intersection Redesign

Intersections are often hotspots for collisions, as an area of changing traffic conditions. Safety can be improved at intersections through smaller projects (such as adding sidewalk, curb bumpouts, etc.) or larger projects (such as reducing the size of the intersection, installing a roundabout/Restricted Crossing U-Turn (RCUT)/Thru-Cut, etc.). Redesigning an intersection may vary in scope but should ultimately slow down drivers, improve visibility, and accommodate different modes of transportation, as applicable.

1.D: Add a Turn Lane or Improve Existing Turn Lane

Adding a turn lane or improving an existing turn lane could improve traffic flow and reduce collisions. Where there is not currently a turn lane, adding a turn lane would allow a vehicle to wait in a designated location before turning when there is adequate time to clear an intersection. An existing turn lane could be improved with the installation of a left-turn offset, which could improve visibility at intersections where the turning vehicle must yield to oncoming through traffic.

1.E: Review Signal Timings

Reviewing and revising signal timings could improve traffic flow and alleviate pressure at certain intersections. Based on community input, uncoordinated signals may be contributing to driver frustration and potentially increasing risky and dangerous behavior. Along corridors with coordinated signals such as Hardy Road, the existing timing plan should be reviewed. Additionally, many survey respondents and community meeting attendees observed frequent red-light running behavior; longer all red timings could improve crashes due to red-light running. Enforcement and policy should additionally be considered to discourage dangerous driver behavior.

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Potential Project Improvements Summary | Corridors

| Location | Crashes | | Community Ranking (Per Fall 2024 Survey) | Potential Project | Cost Estimate | Time Frame |
|--|----------------|-------|---|--|-----------------|--|
| | Serious Injury | Fatal | | | | |
| Hardy Road <i>(Chestnut Street to Bypass Road)</i> | 11 | 0 | 1 | Consider access management at the Spruce Street intersection | \$-\$\$\$ | Short Term / Long Term |
| | | | | Consider the installation of a roundabout at the Hardy Road and Vinyard Road intersection | \$\$\$-\$\$\$\$ | Long Term |
| | | | | Evaluate closing the Hardy Road and Bedford Road intersection | \$\$-\$\$\$ | Long Term |
| | | | | Consider opportunities for improving access management along the Hardy Road corridor | \$\$-\$\$\$ | Long Term Requires coordination and agreements with private property owners |
| Washington Avenue <i>(Mitchell Road to Roanoke County Line)</i> | 5 | 1 | 2 | Evaluate the installation of a road reconfiguration | \$\$-\$\$\$ | Long Term |
| Washington Avenue <i>(South Pollard Street to Mitchell Road)</i> | 6 | 0 | 3 | Evaluate the installation of a road reconfiguration | \$\$-\$\$\$ | Long Term |
| South Pollard Street <i>(Washington Avenue to Virginia Avenue)</i> | 1 | 1 | 4 | Evaluate the installation of a roundabout at the Virginia Avenue and South Pollard Street intersection | \$\$\$-\$\$\$\$ | Long Term |
| | | | | Evaluate traffic calming measures along the corridor to slow down traffic and encourage pedestrian circulation | \$-\$\$\$ | Short Term / Long Term |
| | | | | Traffic calming measures may be piloted through temporary or quick-build projects | | |

Potential Project Improvements Summary | Corridors

| Location | Crashes | | Community Ranking (Per Fall 2024 Survey) | Potential Project | Cost Estimate | Time Frame |
|--|----------------|-------|---|---|---------------|------------------------|
| | Serious Injury | Fatal | | | | |
| Gus Nicks Boulevard <i>(Roanoke City Limits to South Pollard Street)</i> | 2 | 0 | 6 | Evaluate the installation of a road reconfiguration | \$\$-\$\$\$ | Long Term |
| Virginia Avenue <i>(Roanoke City Line to South Pollard Street)</i> | 6 | 0 | 8 | Evaluate the installation of a roundabout at the Virginia Avenue and South Pollard Street intersection | \$\$\$-\$\$\$ | Long Term |
| | | | | Consider closing the 4th Street median crossover | \$\$-\$\$\$ | Short Term |
| | | | | Evaluate the installation of pedestrian facilities at 3rd Street intersection | \$-\$\$\$ | Short Term / Long Term |
| | | | | Pedestrian facilities may be piloted through temporary or quick-build projects | | |
| Mountain View Road <i>(Washington Avenue to Roanoke County Line)</i> | 1 | 0 | 10 | Consider a corridor study of Mountain View Road (with a focus on the Ruddel Road intersection) | \$ | Short Term |
| | | | | Consider the installation of bike lanes from Washington Avenue to Herman L. Horn Elementary School to the existing bike lane at the Roanoke County Line | \$\$-\$\$\$ | Long Term |

Potential Project Improvements Summary | Intersections

| Location | Crashes | | Community Ranking (Per Fall 2024 Survey) | Potential Project | Cost Estimate | Time Frame |
|------------------------------|----------------|-------|---|---|---|------------------------|
| | Serious Injury | Fatal | | | | |
| Hardy Road & Vinyard Road | 2 | 0 | 1 | Evaluate the installation of bicycle and pedestrian improvements to encourage traffic calming | \$-\$\$\$ | Short Term / Long Term |
| | | | | | Traffic calming measures may be piloted through temporary or quick-build projects | |
| | | | | Consider the installation of a roundabout | \$\$\$-\$\$\$\$ | Long Term |
| Hardy Road & Spruce Street | 3 | 0 | 2 | Consider restricting Spruce Street north of Hardy Road to a one-way northbound road | \$ | Short Term |
| | | | | Consider limiting northbound through movements with a thru-cut on Spruce Street south of the intersection | \$\$-\$\$\$ | Long Term |
| Hardy Road & Bedford Road | 4 | 0 | 3 | Evaluate closing the Hardy Road and Bedford Road intersection | \$-\$\$ | Long Term |
| Virginia Avenue & 3rd Street | 2 | 0 | 4 | Evaluate the installation of bicycle and pedestrian improvements to encourage traffic calming | \$-\$\$\$ | Long Term |
| | | | | | Traffic calming measures may be piloted through temporary or quick-build projects | |
| Virginia Avenue & 4th Street | 4 | 0 | 5 | Evaluate closing the median crossover | \$-\$\$ | Long Term |

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Supplemental Planning & Demonstration Activities

Under the Safe Streets and Roads for All (SS4A) grant program, localities may apply for funding to explore supplemental planning and demonstration activities. Planning activities aim to gather more information through studies, plans, or audits and demonstration activities include implementations related to infrastructure, behavior, or technology. Infrastructure activities could include conducting temporary 'quick-build' projects, temporary street or lane closures (road diets), or MUTCD engineering studies. Localities that would like to address driver behavior and education may pilot educational campaigns, provide training (such as focusing on bus drivers and bike-pedestrian awareness), or develop projects around Safe Routes to School, encouraging best practices in student pick-up and drop-off. A variety of technological implementations could be pursued, such as signal timings and upgrades for bike-pedestrian prioritization or signal reemption for emergency vehicles, installation of red-light and speed cameras, and data collection.

| Type | Activity | Location | Cost | Notes |
|-------------------------------------|--|---|-------------|---|
| Supplemental Planning | Corridor/intersection study or road safety audit | Mountain View Road (From Roanoke County Line to Washington Avenue) | \$\$ | High incidences of crashes at the Mountain View Road & Ruddell Road intersection; study could focus on potential intersection improvements and possible corridor-wide implementations |
| Demonstration Infrastructure | Quick-Build Projects | Virginia Avenue & 4th Street | \$ | Use flex-post to pilot closing the 4th Street crossover; evaluate if crashes improve |
| | | Hardy Road & Bedford Road | \$ | Use flex-post to pilot closing the Bedford Road crossover; evaluate if crashes improve |
| | | Washington Avenue | \$\$ | Consider temporary pedestrian refuge islands (midblock crossings) |
| | Temporary Road Diet | Washington Avenue & Gus Nicks Boulevard | \$\$-\$\$\$ | While some residents support the road diet, other residents are unsure or oppose a road diet along these corridors. Piloting a temporary road diet would familiarize drivers with a possible intervention and allow Town staff to evaluate road diet conditions. Data and observations to be collected throughout the process and feedback to be gathered at the end of the trial period. |

| Type | Activity | Location | Cost | Notes |
|--|-----------------------------------|---|------|--|
| Demonstration Infrastructure | MUTCD Engineering Studies | Washington Avenue & Gus Nicks Boulevard | \$\$ | Evaluate warrants for safety impact strategies for pedestrian infrastructure (such as rectangular rapid-flashing beacons (RRFBs)/high intensity activated crosswalk (HAWK) beacon signals) |
| Demonstration Behavioral | Educational or Training Campaigns | - | \$ | Pattern of senior drivers involved in the FSI crashes, particularly with pedestrians and bicyclists Educational/training could be paired with studying rideshare interest or other transportation alternatives for individuals for those aging out of driving |
| | | - | \$ | Pattern of motorcyclists involved in the FSI crashes; education campaigns to raise awareness about looking for motorcyclists |
| Demonstration Technology | Data Collection & Signal Timings | Virginia Avenue & 3rd Street | \$\$ | Collect bicycle-pedestrian volume data and review signal timings; consider if intersections would benefit from leading pedestrian intervals |
| | | Hardy Road & Vinyard Road | \$\$ | |
| | Data Collection | Hardy Road & Spruce Street | \$ | Collect conditions and number of near-misses that occur at this intersection |

Funding Options

| Administering Agency | Program Name | Description | Eligible Projects | Source of Funds | Local Match Required | Level of Funding Available |
|----------------------|---|--|--|-------------------|----------------------|--|
| VDOT | SMART SCALE | SMART SCALE evaluates proposed transportation projects based on certain criteria (improving safety, reducing congestion, increasing accessibility, contributing to economic development, promoting efficient land use, and affecting the environment). The scored criteria determines prioritization of funds. | <ul style="list-style-type: none"> Highway improvements Transit- and rail-capacity expansion Bicycle and pedestrian improvements Transportation Demand Management (Park & Ride facilities) | Federal and State | No | N/A |
| | Highway Safety Improvement Program (HSIP) | The Highway Safety Improvement Program (HSIP) is intended to facilitate the goals of the Strategic Highway Safety Plan. The purpose of this plan is to implement safety improvements in Virginia. | <ul style="list-style-type: none"> Projects consistent with Virginia's Strategic Highway Safety Plan Correcting or improving a hazardous road location or feature, or address a highway safety problem Projects based on crash experience, crash potential, crash rate, or other relevant safety data | Federal | No | No maximum, but award amount likely under \$1M |

| Administering Agency | Program Name | Description | Eligible Projects | Source of Funds | Local Match Required | Level of Funding Available |
|----------------------|---|--|--|-----------------|----------------------|--|
| VDOT | HSIP (cont.) | | <ul style="list-style-type: none"> • Be listed under 23 U.S.C. 148(a)(4)(B) or (a)(11); and • Comply with other Title 23 requirements | | | |
| | Transportation Alternatives Program (TAP) | Expanded under the Bipartisan Infrastructure Law (BIL), the Transportation Alternatives Program (TAP) is intended to provide funding for non-motorized transportation. | <ul style="list-style-type: none"> • Projects pertaining to non-motorized transportation • Expand travel choice for daily needs, strengthens local economy, improves quality of life, and protects the environment | Federal | Yes, 20% | Funding awards between \$200,000 and \$600,000 |

| Administering Agency | Program Name | Description | Eligible Projects | Source of Funds | Local Match Required | Level of Funding Available |
|----------------------|--|---|--|-----------------|--|--|
| VDOT | Safe Routes to School (Part of TAP) | The Safe Routes to School (SRTS) initiative is part of the VDOT TAP program. SRTS program's purpose is to encourage students, including those with disabilities, to walk or bike to school, by establishing safer bike-ped connections and reducing traffic | <ul style="list-style-type: none"> • Walkabout mini-grants to assess existing walking and biking conditions • Program grants • Infrastructure grants | Federal | The Virginia SRTS program is a locally-administered reimbursement program. For new applicants, provides 100% of total funding with no match required. However, applicants are still encouraged to leverage funding from other sources. | Varies |
| | Revenue Sharing | VDOT'S Revenue Sharing program enables localities to match investment with the state, in order to fund construction and/or improvement of highway systems | <ul style="list-style-type: none"> • Bicycle and pedestrian improvements • Corridor widening and stormwater management improvements • Traffic calming • Green infrastructure | State | Yes, 50% | <p>A locality may apply for a maximum of \$10M per biennial cycle (or \$5M per fiscal year) and the maximum lifetime matching per project is \$10M. This limitation includes any allocations transferred to the project.</p> <p>Up to \$2.5M per fiscal year of these requested funds may be specified for maintenance projects.</p> |

| Administering Agency | Program Name | Description | Eligible Projects | Source of Funds | Local Match Required | Level of Funding Available |
|----------------------|---|---|--|-----------------|----------------------|--|
| DMV | Virginia Highway Safety Office (VAHSO) | The intent of the VAHSO grant program is to reduce the number of fatalities, injuries, and related economic losses from traffic collisions in Virginia. | Initiatives to: <ul style="list-style-type: none"> • Reduce alcohol/impaired driving • Promote occupant protection • Reduce aggressive driving and speeding • Collect and analyze traffic records/data • Promote bicycle-pedestrian safety • Promote motorcycle safety • Promote roadway safety | State | Yes, 25% | Minimum award: \$5,000 No maximum award |
| USDOT & Local MPO | Surface Transportation Block Grant (STBG) Program | As part of the Bipartisan Infrastructure Law (BIL), the Surface Transportation Block Grant (STBG) program provides flexible funding for transportation improvement needs. | <ul style="list-style-type: none"> • Installation/deployment of current and emerging intelligent transportation technologies • Protective features, including natural infrastructure, to improve the experience of an eligible facility • Projects to enhance travel and tourism | Federal | No | Funding is based on population ratio |
| | Carbon Reduction Program (CRP) | As part of the Bipartisan Infrastructure Law (BIL), the CRP provides funding to develop carbon reduction strategies and for projects to reduce transportation carbon dioxide emissions. Strategies must be developed in consultation with MPOs. | <ul style="list-style-type: none"> • Bike lanes • Traffic management • Public transportation • Pedestrian facilities • Alternative fueling/charging infrastructure | Federal | No | Virginia is expected to receive nearly \$166 million in CRP funding from fiscal year (FY) 2022 to FY 2026. Funds are awarded in proportion to population. |

| Administering Agency | Program Name | Description | Eligible Projects | Source of Funds | Local Match Required | Level of Funding Available |
|----------------------|--|--|---|-----------------|----------------------|--|
| USDOT | Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant | As part of the Bipartisan Infrastructure Law (BIL), the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program provides investment towards transportation initiatives that create a significant local or regional impact. | <ul style="list-style-type: none"> Highway, bridge, or other road projects Public transportation projects Any other surface transportation infrastructure project that the Secretary considers to be necessary to advance the goals of the program | Federal | Yes, 20% | Minimum award: Capital projects (urban) - \$5M Capital projects (rural) - \$1M Planning projects - no minimum Maximum award: \$25M |
| | Safe Streets and Roads for All (SS4A) Supplemental Planning and Demonstration Activities Grant | See Sheet 84 for expanded description and possible activities directly applicable to this Safety Action Plan | | Federal | Yes, 20% | Varies significantly |
| | Safe Streets and Roads for All (SS4A) Implementation Grant | The SS4A Implementation Grant provides funding towards project and strategy implementation as outlined in this Action Plan. | | Federal | Yes, 20% | Varies significantly |

The Town of Vinton Comprehensive Safety Action Plan is a commitment along with strategies and actions to reduce fatal and serious injury crashes on roadways across the Town. This Plan can serve people across agencies, departments, organizations, and interest groups to unite around the importance of roadway safety and a positive traffic safety culture.

Action items identified by this plan should be used by the Town and partners on projects, policies, and programs. Additionally, the Town should consistently measure how actions are making roadways safer and saving lives.

Performance Measures and Dashboard

The Town of Vinton should monitor the progress and impact of individual actions related to each strategy. Evaluation is essential for the data-driven approach of the Comprehensive Safety Action Plan. There must be accountability to the commitment of eliminating traffic deaths and severe injuries. If certain actions are not successful, not moving fast enough, or not working for another reason, the Town and partnering agencies should assess and modify actions as needed. Measuring progress and success can be accomplished using a data dashboard. Routine updates can be made to the dashboard when new projects are funded, designed, and implemented will highlight changes and mark milestone efforts related to increasing roadway safety. This tool can provide insight into a number of metrics, including but not limited to:

- Number of fatal and serious injury crashes
- Total Crashes
- Crashes along the HIN and changes in crash rates over time
- Crashes involving bicycles and pedestrians
- Crashes resulting from high posted speeds
- Crashes occurring during particular weather conditions

The dashboard is available for public viewing [here](#), or by using the following link:

<https://www.arcgis.com/apps/dashboards/9e034966a97646dea732aaa5fa589ff9>

Annual Reporting

Along with tracking several performance measures and the use of a data dashboard, annual reporting will provide the Town an opportunity to reflect on accomplishments and communicate steps toward eliminating fatal and severe injury crashes.

The Town of Vinton will publish an annual report on the progress of the SS4A Comprehensive Safety Action Plan. The report will be published in January or February of each year and may include the following:

- Updated crash statistics with a focus on fatal and serious injury crashes
- Projects completed or beginning construction
- Proven Safety Countermeasures deployed
- Funding associated with safety projects

Transparency

The Town of Vinton has developed the Comprehensive Safety Action Plan with the goal of full transparency. The Action Plan will be publicly available on the Town of Vinton's [website](#). Interim documents like the annual report will also be posted on the Town's website.



The Roanoke Times

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Appendix: Town Project Exhibits

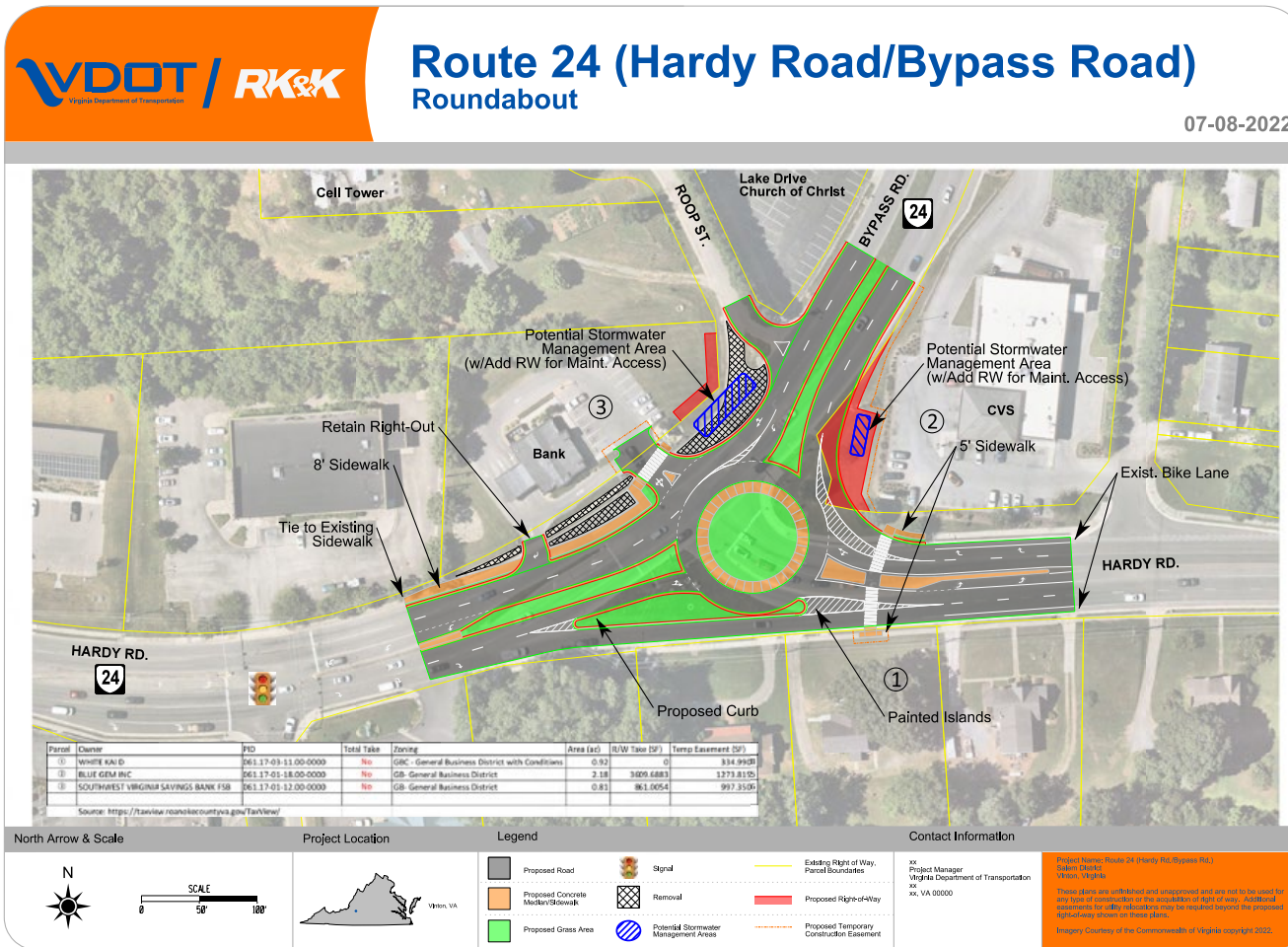
Priority Corridor #5 & #9

Hardy Road | Bypass Road to Roanoke County Line

Bypass Road | Washington Avenue to Hardy Road

There is a funded SMART SCALE project at the intersection of Hardy Road and Bypass Road. The project will convert a signalized intersection to a one-lane roundabout with slip lanes.

Construction for all projects is anticipated to be completed in 2030.

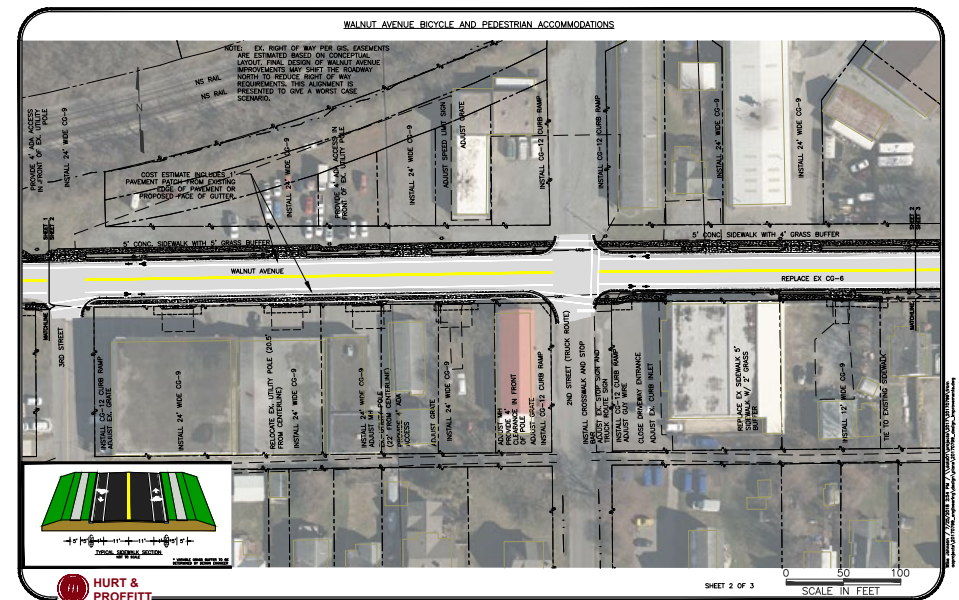


Walnut Avenue | Roanoke City Limits to Lee Avenue

Phase 1: Roanoke City Limits to 5th Street - Completed

Phase 2: Lee Avenue to 1st Street - Completed

Phase 3: 1st Street to 5th Street - Funded, in progress



Priority Corridor #8 & Intersection #5

Virginia Avenue | Roanoke City Limits to South Pollard Street

Virginia Avenue & 4th Street

With VDOT Highway Safety Improvement Program (HSIP) funding, pedestrian facilities are to be constructed near the Virginia Avenue and 4th Street intersection. This project proposes a signalized pedestrian crossing at the Precision Fabric Group entrance, crosswalk improvements, and ADA ramp construction.

