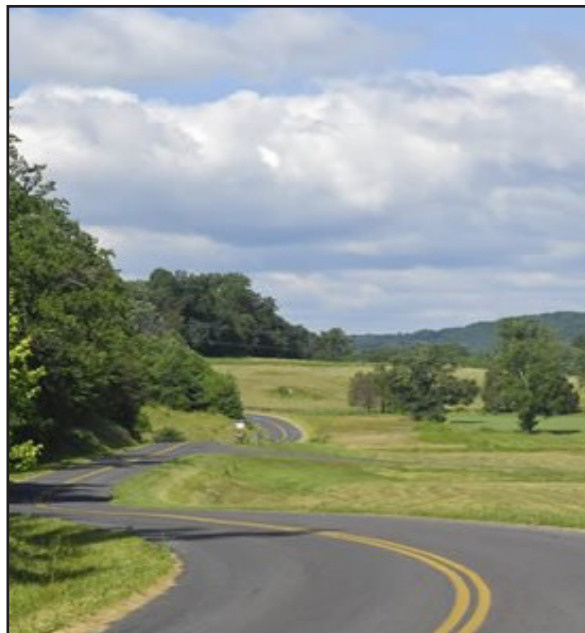


# CHAPTER 3: TRANSPORTATION



Source: Culpeper County Home Page

# INTRODUCTION

An efficient transportation system is central to any functioning community. The highways, roads, and rails that cross Culpeper County shape the flow of how people and goods move throughout the jurisdiction. The diversity and quality of this system also influence what types of developments can be accommodated, where these developments can be located within the county, the speed of emergency services and daily commuting, and what types of travel are feasible. Whether by car, truck, train, or plane, every method of mobility plays a vital role in keeping the local economy alive, and connecting the County to the increasingly globalized world.

The County's Planning & Zoning Department plays a crucial role in facilitating investment into existing and new transportation networks. By working with other relevant entities, such as the Town of Culpeper, the Rappahannock-Rapidan Regional Commission (RRRC), the Virginia Department of Transportation (VDOT), the Commonwealth Transportation Board (CTB), the Department of Rail & Public Transportation (DRPT), and the Office of Intermodal Planning and Investment (OIPI), the County is able to initiate construction projects, conduct traffic studies, and administer various transportation programs and initiatives. Specifically, these partnerships allow the County to access State and Federal funding opportunities like the STARS Program, utilize input from specialized transportation experts, and coordinate projects within a more cohesive and regional framework. The RRRC's 2045 Regional Long Range Transportation Plan, and its Active Transportation Plan are examples of a regional framework.

This chapter aims to provide an overview of the County's existing transportation system, an analysis of current and future transportation problems, and a list of the goals, objectives, and action items that will address these identified concerns. These statements will outline the County's transportation-related aspirations for the next several years, influencing how it will start new projects and manage existing ones. Each of these generalized goals will include detailed objectives and accompanying action items that will provide the framework for how the County can work towards achieving them.

# EXISTING CONDITIONS

## ROADS

Culpeper County's roadways are the main component of the County's transportation system. According to 2016 VDOT statistics, Culpeper County had 75.10 miles of primary roadways, all paved, and 493.51 miles of secondary roadways. As this road network has developed, it now provides access to virtually any property within the County.

The road network in Culpeper County develops primarily based upon the actions of three entities: Culpeper County, the Town of Culpeper, and VDOT. The Culpeper County Board of Supervisors, working with VDOT, makes decisions about where new roads will be located and what improvements will be made to existing roads in the County. Culpeper County relies on VDOT to ensure that roads scheduled for perpetual maintenance meet State design guidelines, and that construction practices on these roads meet State requirements. VDOT is responsible for the maintenance of all public roads in Culpeper County.

The Town of Culpeper is an integral component of the overall road network in the County. Due to its central location, the Town is the focal point for the primary roads in the County. While the County is affected to a certain extent by transportation decisions made by the Town, any changes and improvements made to the County roadway network can have significant impacts on the Town. Therefore, transportation decisions should be coordinated between the two entities.

### ROAD CLASSIFICATION

As illustrated in Map 3-1, public roads are divided into 7 distinct categories based on design and intended use. A road's classification is one of many factors considered when planning and forecasting for future growth. The following definitions were taken from the *2014 VDOT Functional Classification Comprehensive Guide*.

#### Interstate

"Interstates are the highest classification and designed with mobility and long-distance travel in mind. This classification is for highways designated as part of the Eisenhower Interstate System. Roadways classified as interstates are limited access, divided highways with the highest level of mobility."

There are no Interstates that go through Culpeper County.

### Other Freeways and Expressways

“This classification is for highways that are generally divided with partial or full control-of-access. They primarily serve through traffic and major circulation movements within or around Urban Areas. These routes provide connecting links between interstates, principal arterials and minor arterials.”

The portion of James Madison Highway (Rt. 15/29) from the Fauquier County border to the Madison Road (Rt. 15/29 Business) interchange is classified as an Other Freeway and Expressway.

### Other Principal Arterials

“In rural areas, Other Principal Arterials serve corridor movements of substantial statewide or interstate travel and provides an integrated network without stub connections (dead ends). This network connects all or nearly all Urbanized Areas and a large majority of Urban Clusters with populations of 25,000 and over.”

The portion of James Monroe Highway (Rt. 29) from the Madison Road (Rt. 15/29 Business) interchange to the Madison County border is categorized as an Other Principal Arterial. Others include Germanna Highway (Rt. 3), Lee Highway (Rt. 211), and Brandy Road (Rt. 15/29 Business) from the Town of Culpeper limits to the interchange with James Madison Highway (Rt. 15/29).

### Minor Arterials

“Minor Arterials provide service for trips of moderate length, serve geographic areas that are smaller than their higher Arterial counterparts and offer connectivity to the higher Arterial system.”

“In rural areas, Minor Arterials link cities and large towns, along with other major traffic generators, and form an integrated network providing interstate and inter-county service. The design in rural areas typically provides for relatively high overall speeds, with minimum interference to the through movement. Minor Arterials are spaced at intervals, consistent with population density, so that all developed areas within the state are within a reasonable distance of an arterial roadway. They also provide service to corridors with trip lengths and travel density greater than those served by rural collectors or local systems.”

For example, Rixeyville Road (Rt. 229) and Sperryville Pike (Rt. 522) are classified as Minor Arterials.



### Major Collector

“Major Collector routes are longer in length; have lower connecting driveway densities; have higher speed limits; are spaced at greater intervals; have higher annual average traffic volumes; and may have more travel lanes than minor collectors may. In rural areas, Major Collectors provide service to any county seat not on an arterial system, to larger towns not directly served by higher systems. Major Collectors also link these places to nearby larger towns and cities or with arterial routes and serve the most important intra-county travel corridor.”

For example, Griffinsburg Road (Rt. 634) and Stevensburg Road (Rt. 663) are classified as Major Collectors.

### Minor Collector

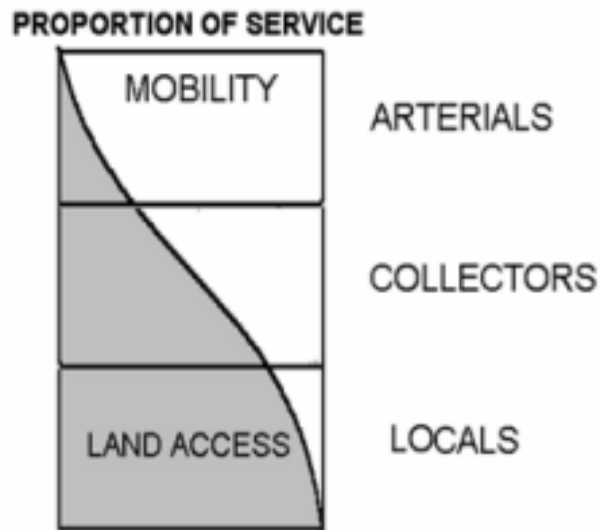
“In rural areas, Minor Collectors are spaced at intervals, consistent with population density. Minor Collectors collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road. Minor Collector facilities provide service to the remaining smaller communities and link local traffic generators with their rural hinterland.”

For example, White Shop Road (Rt. 603) and Auburn Road (Rt. 685) are classified as Minor Collectors.

### Local

“Locally classified roads account for the largest percentage of all roadways in terms of mileage. They are not intended for use in long distance travel, except at the origin or destination end of the trip, due to their provision of direct access to abutting land.”

“Local Roads provide service to travel over relatively short distance as compared to collectors or other higher systems.”



# 3-1: FUNCTIONAL ROADWAY CLASSIFICATION CULPEPER COUNTY, VIRGINIA



RAPPAHANNOCK  
COUNTY

FAUQUIER  
COUNTY

MADISON  
COUNTY

STAFFORD  
COUNTY

ORANGE  
COUNTY

SPOTSYLVANIA  
COUNTY

**Legend**

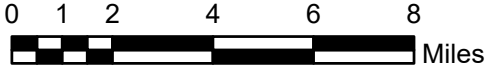
- Other Freeways and Expressways
- Other Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Townlimits2022

Source: Virginia Dept. of Transportation  
July 2022



Prepared By  
Culpeper County Planning Department

DATE: 12-2022



ANNUAL AVERAGE DAILY TRAFFIC

Annual Average Daily Traffic (AADT) estimations, which represents a road’s daily average traffic volume for the year, are central to planning future development and for transportation improvements. Specifically, analysis of traffic volume helps the County identify the most traveled roadways and which roadways are experiencing increasing traffic volume compared to previous years. The AADT data referenced in this chapter was generated by VDOT This data was incorporated into the creation of the County’s Transportation Plan, which is discussed on page 3-29.

CURRENT LEVEL OF SERVICE

As visualized in Figure 3-1, a level of service (LOS) rating indicates the performance of a road based on the average traffic flow, speed, and maneuverability. Road segments that have a rating of C or higher are deemed acceptable, while ranks D, E, and F, indicate issues such as high traffic volume relative to a road segment’s capacity, frequent and more sudden slowdowns and stops, and generally unpleasant and/or unsafe driving conditions. These ratings play a key role in the County’s short- and long-term planning, helping it identify key traffic areas that need improvements, and also providing justification for large scale infrastructure projects. This data was created by VDOT and was incorporated into the creation of the County’s Transportation Plan, which is discussed on page 3-29.







LEVELS OF SERVICE for Two-Lane Highways			
Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		55+	Highest quality of service. Free traffic flow with few restrictions on maneuverability or speed. <b>No delays</b>
B		50	Stable traffic flow. Speed becoming slightly restricted. Low restriction on maneuverability. <b>No delays</b>
C		45	Stable traffic flow, but less freedom to select speed, change lanes or pass. <b>Minimal delays</b>
D		40	Traffic flow becoming unstable. Speeds subject to sudden change. Passing is difficult. <b>Minimal delays</b>
E		35	Unstable traffic flow. Speeds change quickly and maneuverability is low. <b>Significant delays</b>
F			Heavily congested traffic. Demand exceeds capacity and speeds vary greatly. <b>Considerable delays</b>

Figure 3-1

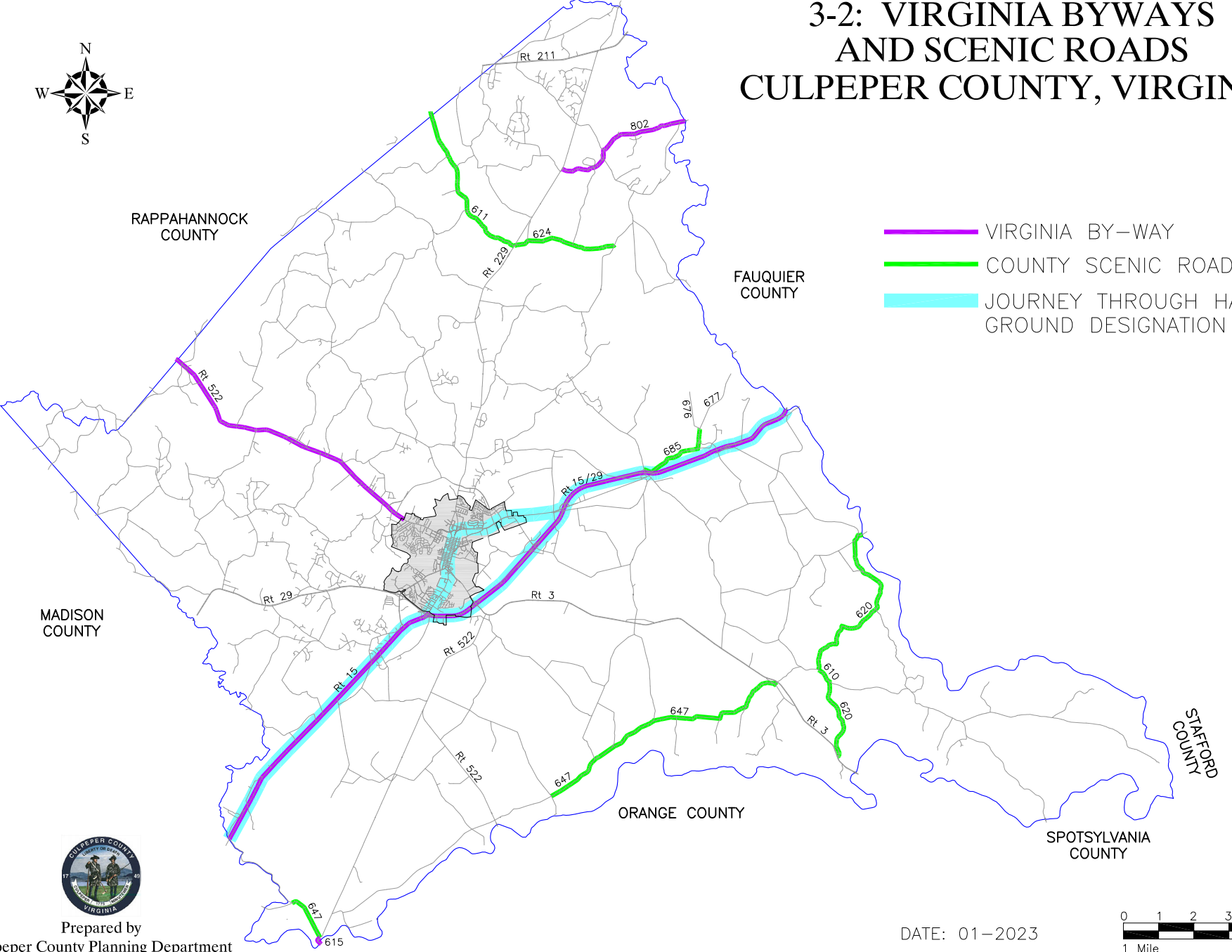
Source: 2000 HCM, Exhibit 20-2, LOS Criteria for Two-Lane Highways in Class 1

## VIRGINIA BYWAYS & SCENIC ROADS

A scenic road designation is intended to highlight certain roads or road segments that should receive additional attention during the design of road improvements to preserve their scenic qualities. It also is intended to highlight certain roads that may merit special improvements to increase the quality of the road or provide travelers with the opportunity to view the County's scenic resources. Such improvements may include roadside stops and/or historic markers.

The Journey Through Hallowed Ground follows US Route 15 and Virginia Routes 20, 231, 22 and 53 from Gettysburg, PA to Monticello in Charlottesville, VA. The Journey is the primary touring route through an area which is rich in American history, featuring many presidential homes, Civil War battlefields, and unparalleled scenic landscapes. As the Journey has been developed, the route through Culpeper County has been designated as not only a State Scenic Byway, but also a National Heritage Area. The route was named a National Scenic Highway. The route in Culpeper County runs from the Fauquier County line following Route 15/29, takes Route 15/29 Business through the Town of Culpeper, and then follows Route 15 South to the Madison County line. These routes are illustrated on Map 3-2.

# 3-2: VIRGINIA BYWAYS AND SCENIC ROADS CULPEPER COUNTY, VIRGINIA

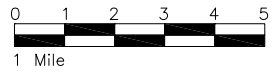


- VIRGINIA BY-WAY
- COUNTY SCENIC ROAD
- JOURNEY THROUGH HALLOWED GROUND DESIGNATION



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Culpeper County Planning Department

DATE: 01-2023



## RAIL & AIR

### RAIL

Culpeper's sole rail line is a two-track right-of-way which traverses the County from Rapidan in the southwest, through Mitchells and Winston to the Town of Culpeper, and then east along James Madison Highway (Rt. 15/29) through Brandy Station and Elkwood to the eastern County border. Owned by the Norfolk-Southern Railway, the line connects with Charlottesville to the south and with Manassas, Alexandria, and Washington, D.C. to the north, providing freight and passenger service. The right-of-way also provides utility easements for communication lines and other services taking advantage of this continuous line to access different communities.

There are multiple sidings located along the rail line that serve multiple businesses within both the Town and the County. This direct access to the railway provides significant logistical and financial benefits to these businesses, as well as reducing the amount of freight traffic on the roadways. It is expected that rail will continue to play an important role in the economic development of the County.

Amtrak, the National Railroad Passenger Corporation, operates three routes that stop in Culpeper. These are the Northeast Regional, which has a branch that goes from Roanoke, VA to Springfield or Boston, MA; the Crescent, which connects New Orleans, LA to New York City, NY; and the Cardinal, which connects Chicago, IL to New York City, NY. The multistate length of these routes is more suitable for long duration travel and not for daily commuting. Currently, there are no commuter rail lines that stop in Culpeper. The closest are the Virginia Railway Express lines that start in Prince William County and Spotsylvania County.

### AIR

Culpeper County hosts a regional airport located in the east that processes around 23,000 passengers per year. The Culpeper Regional Airport (T.I. Martin Field) is located on Beverly Ford Road (Rt. 677) in Elkwood. Built in 1966 on a 274-acre parcel, the airport was dedicated as a general aviation facility to serve not only recreation, but also corporate aircraft activity. The airport is listed in the Virginia Air Transportation System Plan and is designated as a "Regional Airport Facility," hence recognizing the airport's potential to serve both regional and local general aviation needs and to provide a role in regional aviation services. The airport offers a complete range of aviation services including aircraft fueling, maintenance, and flight school.

The regional airport serves three important roles for Culpeper County. First, it is an engine for economic development, with its nearby industrial air park, and access to the James Madison/James Monroe Highway (Rt. 15/29) corridor and the nearby railroad. Secondly, it serves as a corporate aviation destination due to its location outside of the Special Flight Rules Area (SFRA) that surrounds the Washington D.C. airspace, making landing in Culpeper County cheaper and less burdensome. Finally, the airport allows for recreational aviation activity, which generates revenue through storage, refueling, and other services & fees.



## BICYCLE & PEDESTRIAN INFRASTRUCTURE

Bicycle and pedestrian infrastructure facilitates alternative and shorter-range transportation, as well as recreational opportunities. Due to the more rural nature of Culpeper County, pedestrian infrastructure, such as crosswalks and sidewalks, are primarily located in more populated areas. This is also true regarding bicycle infrastructure, which includes bike lanes, shared use paths, and painted buffers. The County's rural setting, however, does allow for the possibility of expanding the networks of bicycle and pedestrian trails that could serve as rural connections and as natural recreation opportunities.

Although the County does have bicycle and pedestrian facilities, many are self-contained within the parks in the form of trails, and are primarily for recreational purposes. County bicycle and pedestrian facilities outside of parks are primarily located around the Town borders. These facilities are located on small portions of Rixeyville Road (Rt. 229), Ira Hoffman Lane (Rt. 694), Madison Road (Rt. 299/29 Business), and Braggs Corner Road (Rt. 666). The facilities along Braggs Corner Road are shown in Figure 3-2.

There are two recreational bike routes in the eastern portion of Culpeper County, centered around the historic battlefields around Brandy Station, Elkwood, and Kellys Ford. Both routes start in the Town of Remington, in Fauquier County, and then traverse multiple County Roads, as shown on Figure 3-3.



Figure 3-2  
Source: Google Maps



Figure 3-3  
Source: Google Maps



## COMMUTING & PUBLIC TRANSPORTATION

### WHERE & HOW

According to 2019 data from the U.S. Census ON THE MAP application, 6,699 working residents (30%) stay in the County for work, while the remaining 15,688 of working residents (70%), commute outside of the County to work. As of 2019, the top 3 destinations for Culpeper commuters were Fairfax County at 2,433 workers (10.9%), Fauquier County at 2,345 workers (10.5%), and Prince William County at 1,957 workers (8.7%). Other locations in the top ten include Loudoun County, Washington D.C., Orange County, Spotsylvania County, Manassas City, and Stafford County. This is shown on Map 3-3.

The 6,699 working residents that do work within the County only represent 41.6% of the total Culpeper workforce. The top origins outside of the County are Orange County with 1,155 workers (7.2%), Madison County at 803 workers (5%), and Fauquier County at 762 (4.7%). Other locations in the top ten include Spotsylvania County, Prince William County, Loudoun County, Fairfax County, Stafford County, and Albemarle County. This is shown on Map 3-4.

Based on 2020 American Community Survey 5-Year Estimates Data Profiles from the U.S. Census, 19,225 of Culpeper workers (78.4%) drive a car, truck, or van alone to work. Another 13.3% carpool to work, while 4.8% worked from home. The mean travel time to work was about 37.2 minutes.

The increased acceptance of work-from-home, whether it is fully remote work or a hybrid schedule, has the potential to significantly alter previous commuting patterns. These changes can include shifts in daily traffic volume, shifts in peak travel time, and changes in travel destinations.

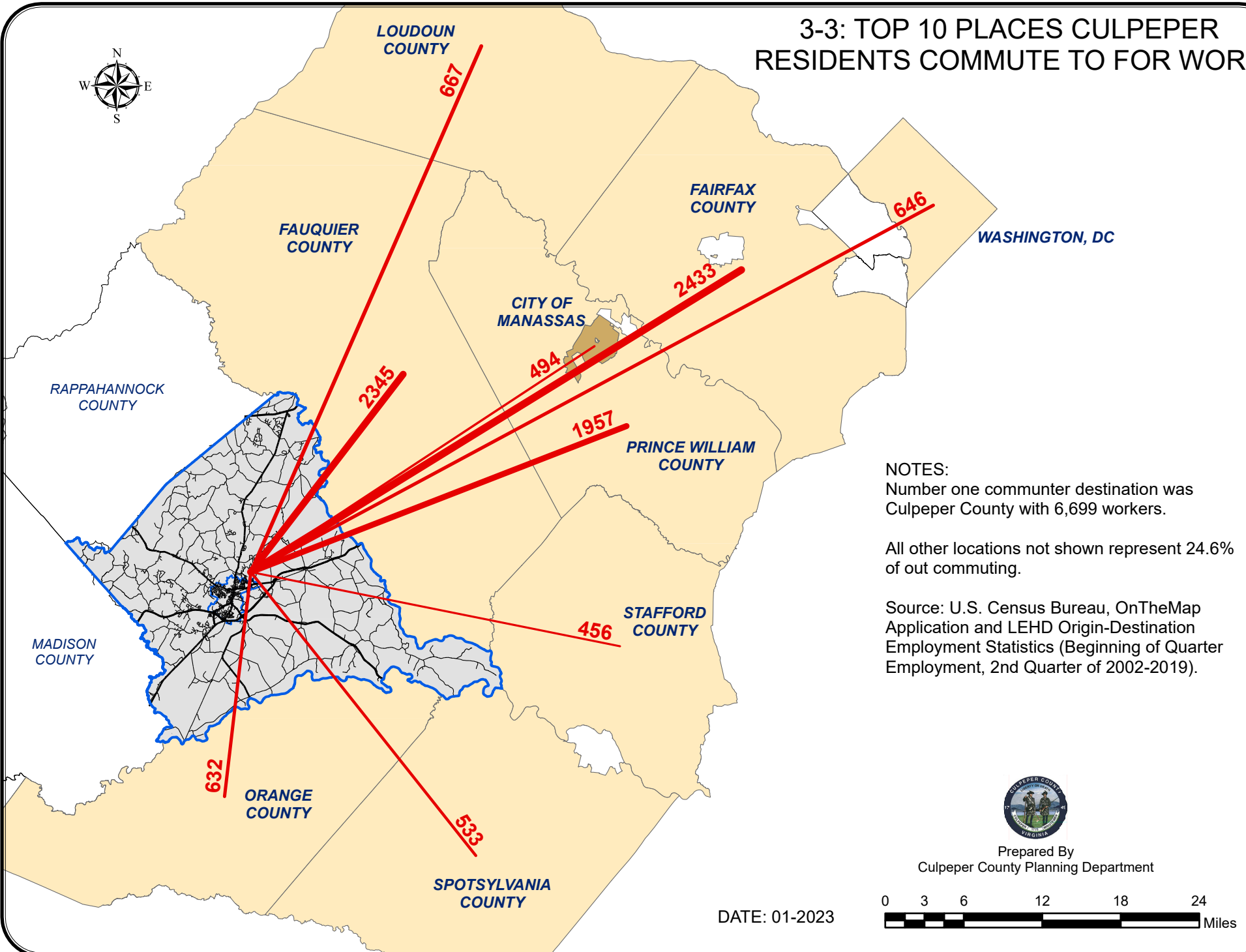


Source: Virginia Regional Transit (Culpeper)



Source: Virginia Regional Transit (On-Demand)

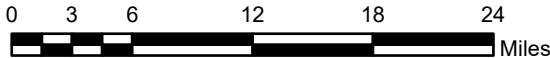
### 3-3: TOP 10 PLACES CULPEPER RESIDENTS COMMUTE TO FOR WORK



NOTES:  
 Number one commuter destination was Culpeper County with 6,699 workers.  
 All other locations not shown represent 24.6% of out commuting.  
 Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2019).

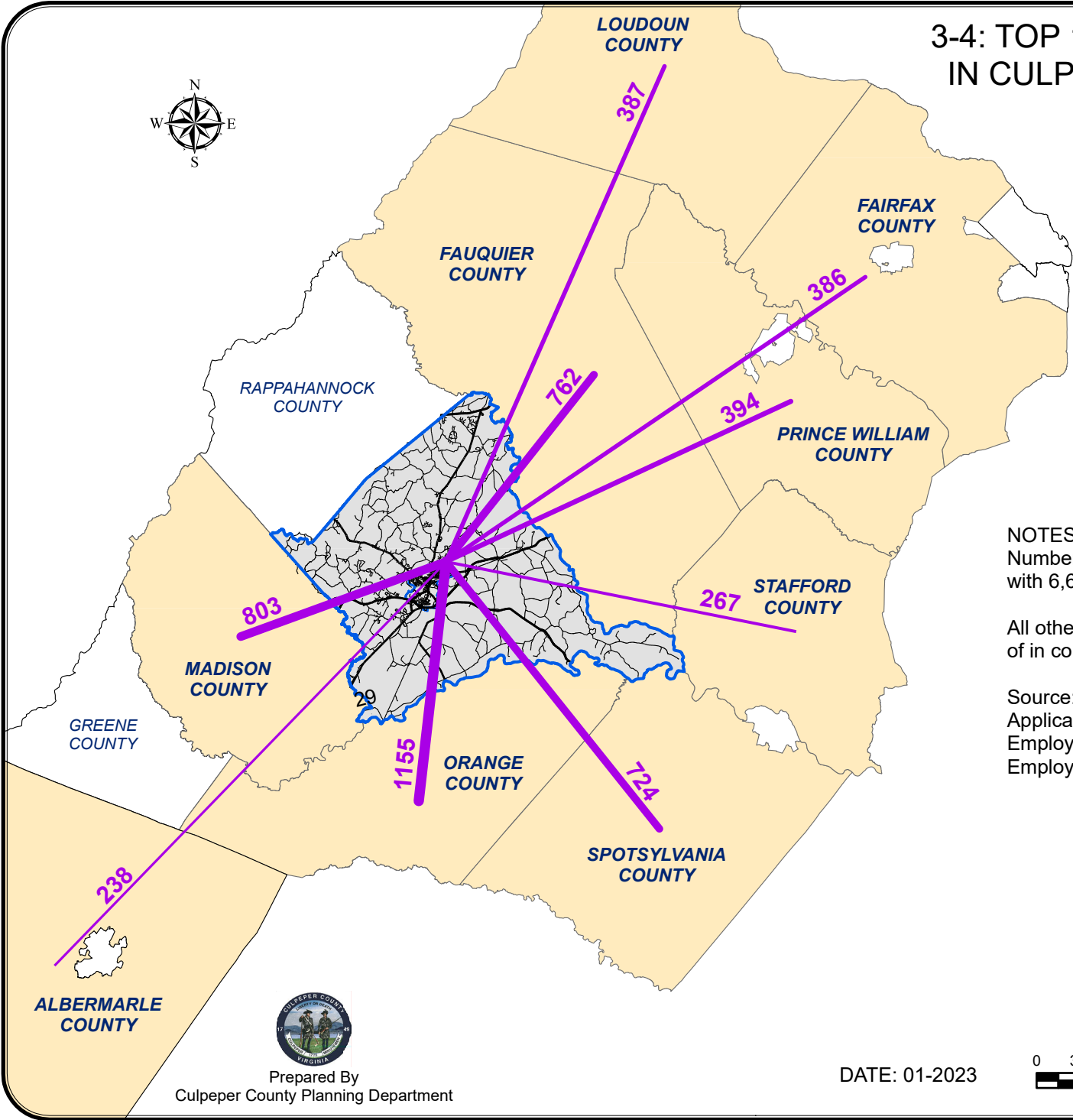


Prepared By  
 Culpeper County Planning Department



DATE: 01-2023

### 3-4: TOP 10 ORIGINS OF WORKERS IN CULPEPER COUNTY, VIRGINIA



NOTES:  
 Number one worker origin was Culpeper County with 6,699 workers.

All other locations not shown represent 26.6% of in commuting.

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2019).



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## SERVICES

Although traveling by car is the dominant transportation choice, there are multiple alternatives available that are either facilitated, assisted, or coordinated by The Rappahannock-Rapidan Regional Commission and other organizations.

Geared towards the majority of workers and travelers who drive, there are opportunities to participate in carpooling and vanpooling. The Rappahannock-Rapidan Regional Commission helps commuters join the Commuter Connections program and hosts a list of existing vanpools. The Commuter Connections program has services such as ride matching, subsidy information, and guaranteed ride home.

There are three Park and Ride lots located in Culpeper County. They are located at the intersection of Rixeyville Road (Rt. 229) and Lee Highway (Rt. 211), the intersection of Alanthus Road (Rt. 663) and James Madison/James Monroe Highway (Rt. 15/29), and one at the intersection of Rabbit Run (F720) and Germanna Highway (Rt. 3).

There are multiple local and regional bus routes operated by Virginia Regional Transit. Two of the routes are the North and South Culpeper Trolley routes, which provide service within the Town and to a few areas right outside of the Town border into the County. A third route connects the Town of Culpeper with the Town of Orange in Orange County. Finally, there is a bus that connects Culpeper and Madison Counties to Charlottesville; however, it is primarily for curb-to-curb service for medical visits. Virginia Regional Transit also provides some on-demand transportation options, in the form of the Culpeper Express.

There are public transportation options for long-range travel. The first two options are long-range bus routes. One bus route is operated by Virginia Breeze, which connects Danville to Washington D.C. Another is a commuter-oriented bus line by Academy Bus, which connects Culpeper and Warrenton to Washington D.C.; however, it was shutdown during the pandemic. Additionally, as mentioned previously, there are also three nationwide Amtrak routes that stop in Culpeper, but are not suitable for commuter travel.

The Rappahannock-Rapidan Regional Commission coordinates the Regional Transportation Collaborative (RTC), a complex partnership of local programs and stakeholders working together to improve mobility for vulnerable individuals in Culpeper and the region. The RTC coordinates multiple pilot programs, volunteer transportation services under the Trusted Community Partnership (TCP) umbrella, gas card supports, and the Foothills Area Mobility System (FAMS) One Call/ One Click Center. The FAMS One Call Center provides a single phone number for all transportation related information, coordinates ride and gas requests, and collects comprehensive data on evolving transportation needs and program impacts.

# VISION ZERO

Vision Zero is an alternative way of viewing traffic safety, with the main concept being that traffic deaths are preventable. As outlined in Figure 3-4, adopting a Vision Zero policy outlook requires analyzing traffic issues and solutions through multiple lenses, such as incorporating different methods of transportation into safety analysis and infrastructure design, and considering alternative solutions such as road diets and speed reductions instead of adding more travel lanes.

Culpeper County recognizes the importance of this framework and is incorporating Vision Zero throughout this chapter. In the Constraints & Concerns section, this Comprehensive Plan identifies crash hotspots based on an aggregation of year's worth of crash data, and identified deficiencies in existing public transportation, bicycle, and pedestrian infrastructure. Additionally, in this Chapter's Goals, Pathways, & Action Items section, the County is committing to a multimodal approach for transportation concerns, valuing the needs of every type of user. That section also has a Goal focusing specifically on the safety of the County's transportation system.

One aspect of Vision Zero is stakeholder and community engagement throughout a transportation safety project. Culpeper County aims to uphold this commitment in transportation projects to ensure various community voices are represented throughout the process. This Comprehensive Plan embodies this aspiration through its own engagement process, described in Chapter 1.

Some measures that Culpeper County have taken to work towards a vision zero future include recommending the reduction of speed limits on multiple roads, the installation of restricted crossing u-turns (RCUTs) and other intersection interventions, and the construction of the Braggs Corner Road (Rt. 666) interchange over James Madison Highway (Rt.15/29) with a separated shared use path.

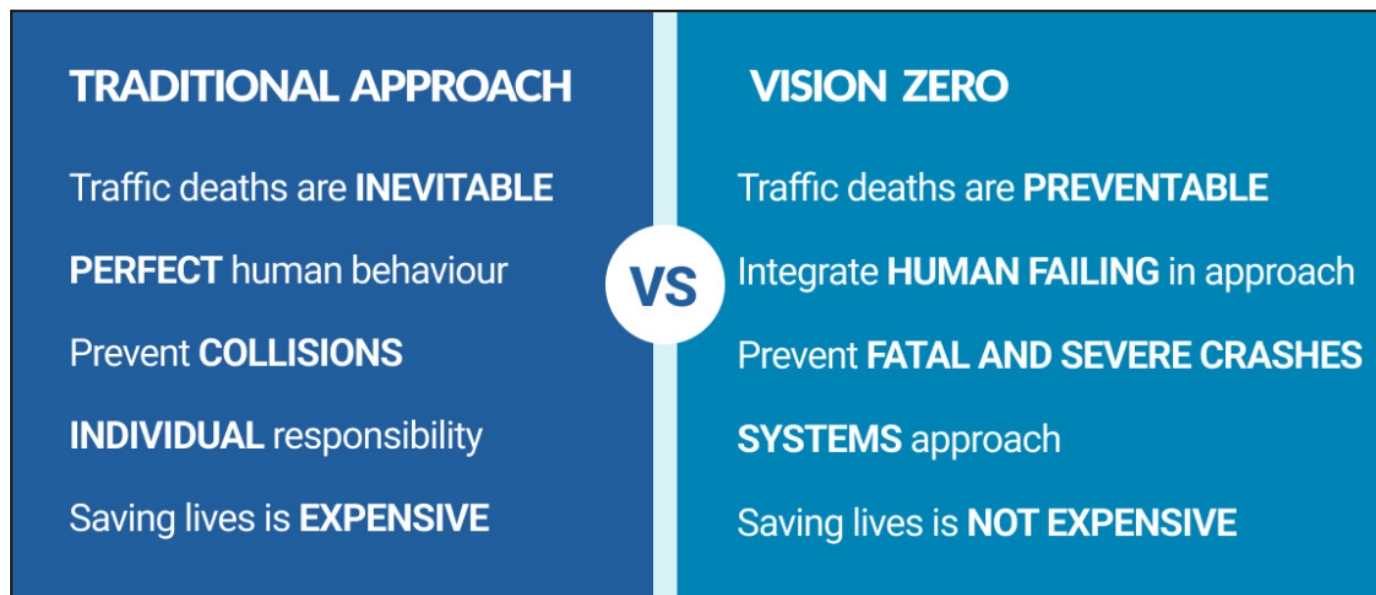


Figure 3-4  
Source: Vision Zero Network



# CONSTRAINTS & CONCERNS

## TRAFFIC

### PROJECTED INCREASE IN TRAFFIC VOLUME

It is projected that the AADT on many of the County's roads will increase by 2050. Roads that are projected to have noticeable increases of traffic volume include James Madison/James Monroe Highway (Rt. 15/29), Rixeyville Road (Rt. 229), Germanna Highway (Rt. 3), Brandy Road (Rt. 15.29 Business), and Braggs Corner Road (Rt. 666).

Since both the D.C. Metropolitan Area and the City of Charlottesville are connected by James Madison/James Monroe Highway (Rt. 15/29), this corridor will most likely experience the largest increase in traffic volume. Rixeyville Road (Rt. 229) and Lee Highway (Rt. 211) are also projected to experience higher increases in traffic volume, with the new Stone Haven development contributing to the projected volume increase.

### Level of Service

Based on the aforementioned traffic projections and on the assumption that the existing road network does not substantially change, it is estimated that many of the County's roadways will experience a decrease in their level of service. This decrease would be attributed to the higher traffic volume exceeding a road's existing capacity, especially on those that are only two lanes, go through varied terrain such as hills, and/or have many intersections or driveways. This overloading of the County's roadways would decrease the average speed of drivers, while contributing to increased safety risks due to traffic volume and could lead to higher potential for disruptions to traffic flow.

The two roads with the most severely projected level of service decreases are Ira Hoffman Lane (Rt. 694) and Braggs Corner Road (Rt. 666). Both of these routes serve as connections to the Town and have segments that are only two lanes. Their projected decrease from an LOS rating of C to an LOS rating of E indicates that these routes will experience severe traffic congestion with frequently irregular traffic flow. Other routes that will see LOS decreases to an unsatisfactory level include Brandy Road (Rt. 15/29 Business), Rixeyville Road (Rt. 229), James Madison Highway (Rt. 15), and parts of Zachary Taylor Highway (Rt. 522), and Germanna Highway (Rt. 3).

## SAFETY

### CRASHES & IDENTIFIED POTENTIAL SAFETY IMPROVEMENTS

VDOT maintains a database that records and categorizes vehicular crashes throughout Virginia. As shown in Map 3-5, this database can help identify crash hot spots along the County's major roadways. The data shown only includes severe injury and fatal crashes to help identify the most serious problem areas. The map includes crashes that occurred between 2015 through August 2022.

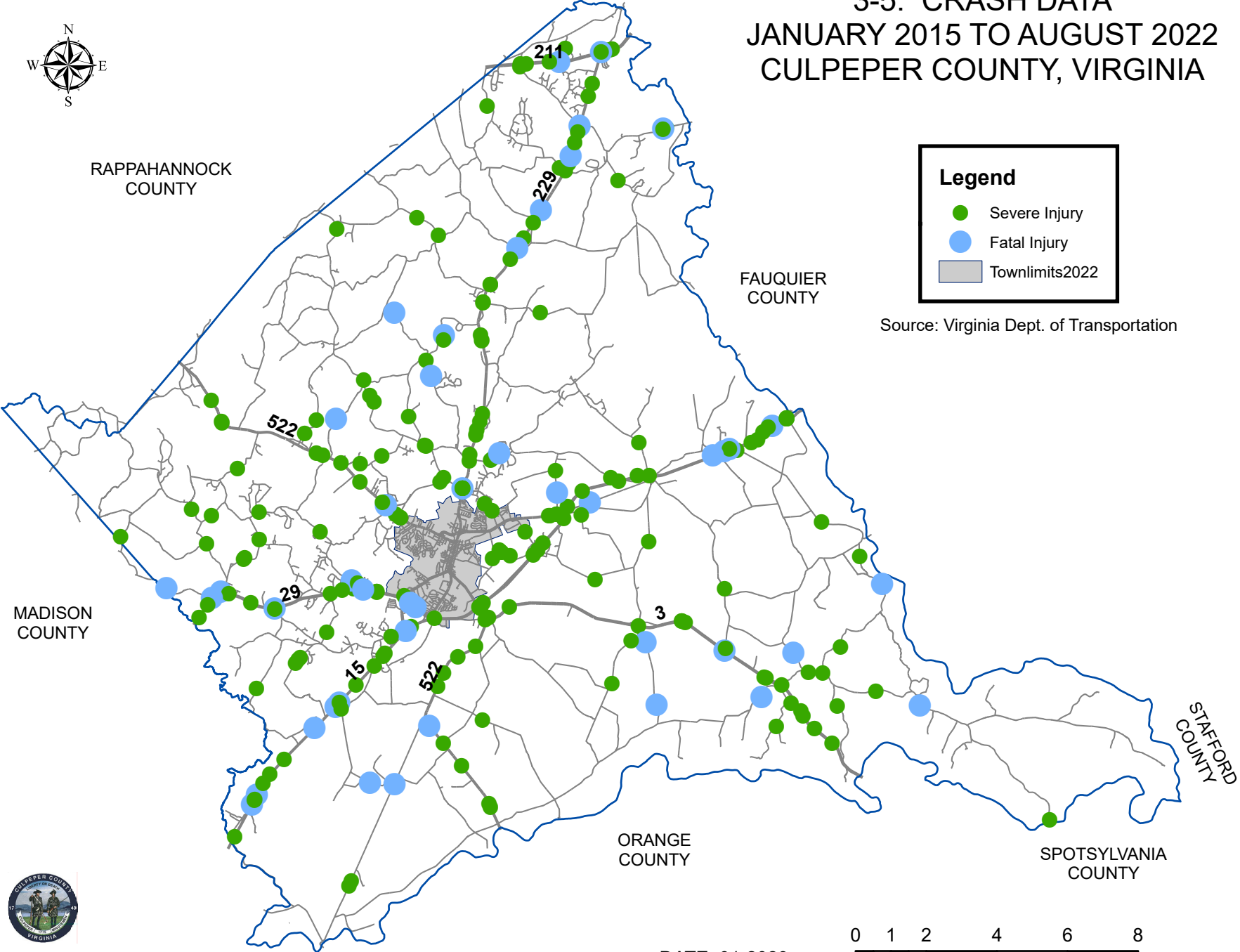
VDOT utilizes this and other data to create a list of intersections and road segments that are in need of a safety improvement. Map 3-6 shows where these locations are in Culpeper County and how they rank compared to other identified Potential For Safety Improvement (PSI) projects in the Rank District ALL category. There is a separate category that ranks these PSI projects based on the VDOT District. The Culpeper VDOT District includes the Counties of Fauquier, Culpeper, Rappahannock, Madison, Orange, Greene Louisa, Albemarle, Charlottesville, and Fluvanna.

The top 3 rated areas in Culpeper County include the intersection of Rixeyville Road (Rt. 229) and Lee Highway (Rt. 211), which has a rank of 15, the intersection of Alanthus Road (Rt. 663) and James Madison Highway (Rt. 15/29), which has a rank of 42, and the intersection of Rixeyville Road (Rt. 229) and Ira Hoffman Lane (Rt. 694), which has a rank of 11. All three of these locations are intersections on routes that experience high levels of traffic volume which are projected to have even more traffic in the future. Additionally, there have been multiple severe injury and/or fatal crashes at these locations. Potential improvements at these locations can include road redesigns, traffic calming measures, and intersection improvements.

Efforts should be made to decrease the possibility of fatal and severe injury crashes as much as possible.



# 3-5: CRASH DATA JANUARY 2015 TO AUGUST 2022 CULPEPER COUNTY, VIRGINIA



**Legend**

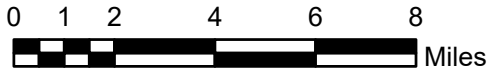
- Severe Injury
- Fatal Injury
- Townlimits2022

Source: Virginia Dept. of Transportation



Prepared By  
Culpeper County Planning Department

DATE: 01-2023



# 3-6: VDOT TOP POTENTIAL SAFETY IMPROVEMENTS SEGMENTS & INTERSECTIONS CULPEPER COUNTY, VIRGINIA



RAPPAHANNOCK COUNTY

MADISON COUNTY

FAUQUIER COUNTY

ORANGE COUNTY

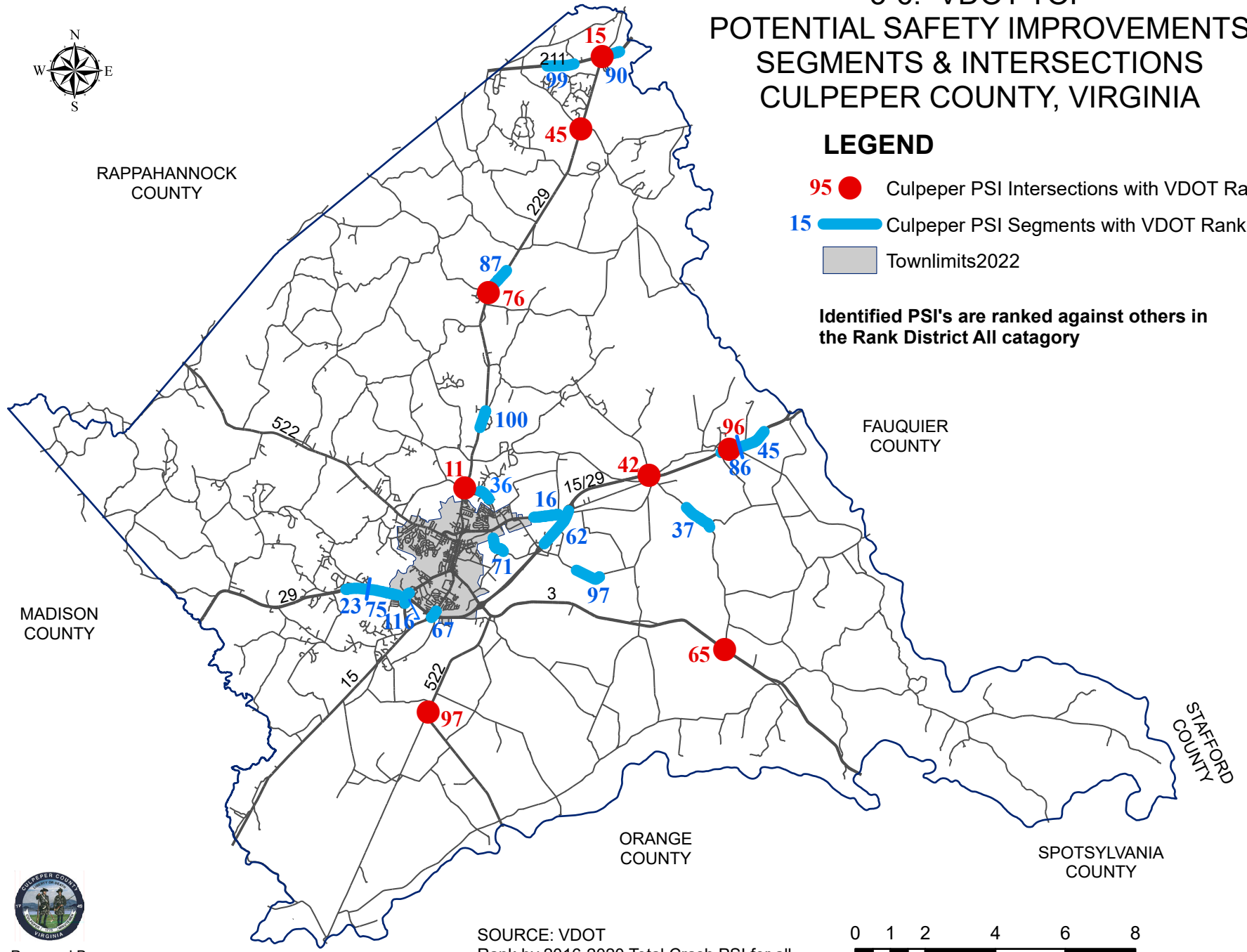
SPOTSYLVANIA COUNTY

STAFFORD COUNTY

## LEGEND

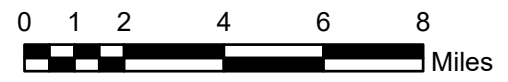
- 95 Culpeper PSI Intersections with VDOT Rank
- ▬ 15 Culpeper PSI Segments with VDOT Rank
- Townlimits2022

Identified PSI's are ranked against others in the Rank District All category



Prepared By  
Culpeper County Planning Department

SOURCE: VDOT  
Rank by 2016-2020 Total Crash PSI for all intersections and road segments



### EXISTING ROAD QUALITY & TRANSPORTATION PROJECT REALITIES

In addition to the traffic volume and safety concerns mentioned earlier, the overall quality and maintenance of Culpeper County's existing road network are also priorities to be addressed in the upcoming years. Specifically, the County is in the process of identifying existing roadways that would be suitable candidates for projects such as shoulder widening, repaving, and conversion from gravel to pavement.

Although the County can identify, rank, and initiate design and feasibility studies for potential transportation projects and repairs, VDOT is generally the entity with the authority to initiate projects. Additionally, since VDOT maintains the public roads in the County, projects must conform to VDOT standards. These realities make broader communication and coordination between the County, VDOT, and other relevant entities central to improving existing road quality.

## **LACK OF BICYCLE & PEDESTRIAN INFRASTRUCTURE**

There are limited bicycle and pedestrian facilities located throughout Culpeper County. Most are in self-contained settings within the County's parks, while the remaining facilities are distributed throughout the County. A few of the bicycle facilities are painted bike lanes or shared bicycle/pedestrian paths, but most are categorized as shared lanes with vehicular traffic. These shared lanes are identified by signage, but do not provide any separation and protection for bicyclists.

Some existing shared lanes, such as the ones around Brandy Station, Elkwood, and Kellys Ford, only have limited signage indicating the potential presence of bicyclists. Signage is needed so that drivers have a heightened awareness for bicyclists on these designated roadways.

Many of these facilities are currently isolated and do not connect to other networks, such as the bike lanes and shared use path located along the Braggs Corner (Rt. 666) interchange. Unconnected bicycle and pedestrian facilities provide limited to no support for those who wish to bike or walk safely. A connected network that links the Town with the County will provide a safe network for those who want to walk or bike to their destinations instead of using a car.

While usually considered a vehicle safety concern, the lack of paved road shoulders is also an issue for bicyclists and pedestrians. Although they are not suitable infrastructure compared to bike lanes, sidewalks, and shared use paths, paved road shoulders provide a relatively safe area where no such infrastructure exists.

## **ADAPTING TO EMERGING TRENDS**

In addition to identifying these concerns and priorities, the County should be aware of potential future shifts that could significantly alter how society functions regarding transportation. These shifts could vary from minor changes to existing networks, such as the electrification of vehicles, to changes in what kinds of transportation will be frequently used. To avoid falling behind in the evolving world of transportation, the County needs to be proactive in ordinance and in policy to readily adapt to change.

Two identified trends that have this potential to alter how transportation functions is the rising popularity of hybrid and electric vehicles, and the use of telecommuting. Regarding electric cars, the biggest concern is adapting the current transportation infrastructure to accommodate charging facilities. For telecommuting, this shift towards being able to work from anywhere, provided there is sufficient Internet, has the potential to significantly alter commuting patterns and other transportation demands.

# GOALS, PATHWAYS, & ACTION ITEMS

## TRANSPORTATION VISION

Create a multimodal transportation plan that fosters the movement of people and goods in a safe and efficient manner which promotes economic development, while not unnecessarily disrupting rural areas.

**GOAL 1:** Address key transportation infrastructure needs that directly relate to the safe and continuous flow of people and goods within and throughout the County of Culpeper.

**PATHWAY 1:** Implement a Transportation Plan that addresses the most critically needed roadway improvements.

*ACTION ITEM:* Identify projects and area plans in need of further study & designing, and begin the process of preparing official plans for them, such as through contracting third-party engineering & planning consulting firms.

*ACTION ITEM:* Identify projects and area plans listed in the transportation plan that are “shovel ready” and begin the VDOT application process for the relevant funding program(s).

**PATHWAY 2:** Continue the identification of areas in need of extensive alteration that would require working with VDOT & other relevant authorities.

*ACTION ITEM:* Monitor relevant traffic data and input from VDOT, the public, and other reputable sources, to identify relevant changes to traveling patterns, traffic intensity, and crash location & severity, and for project identification.

**PATHWAY 3:** Plan and prepare for the transportation impacts that will arise from development in the identified Future Growth Areas, which are discussed in Chapter 2.

*ACTION ITEM:* Conduct small area plans that address current and future transportation concerns for the identified Future Growth Areas.

**GOAL 2:** Improve the overall safety of the County’s transportation system, so as to work towards Vision Zero, as described on page 3-16.

**PATHWAY 1:** Proactively coordinate with VDOT, the CTB, and other relevant entities to implement safety improvements on existing networks to decrease the potential for fatal and severe crashes as much as possible.

*ACTION ITEM:* Place, enhance, and/or replace signage and other safety indicators that raise awareness of upcoming road conditions, such as intersections, crosswalks, and bike trails.

*ACTION ITEM:* Place, enhance, and/or replace safety infrastructure that lessens the severity of crashes or serves as a warning device, such as guard rails and rumble strips.

*ACTION ITEM:* Implement intersection and roadway redesigns, such as road diets, roundabout conversions, signalization, and other traffic calming measures, to create safer conditions for all types of users.

*ACTION ITEM:* Reexamine, and potentially lower, existing speed limits and utilize traffic calming measures to ensure compliance, especially on rural roads and at intersections with bicyclists and pedestrians.

*ACTION ITEM:* Identify road shoulders that are in need of widening to provide safe places for vehicles to pull over, and for bicyclists.

*ACTION ITEM:* Address concerns of truck traffic on rural roads, including implementing truck restrictions.

**PATHWAY 2:** Proactively coordinate with VDOT and other relevant entities to prioritize and expedite the maintenance and repair of existing systems.

*ACTION ITEM:* Create a ranked list of road segments requiring resurfacing or repaving to plan for improvements.

*ACTION ITEM:* Create a ranked list of roads requiring a transition from being gravel to paved, to plan for improvements.

*ACTION ITEM:* Conduct an inventory of existing transportation safety infrastructure, such as guardrails and signs, to repair and replace those that are damaged.

*ACTION ITEM:* Repaint faded traffic markers and lines.

**PATHWAY 3:** Ensure future changes or additions to the transportation system maintain or improve upon existing safety conditions.

*ACTION ITEM:* Work with future developments on creating best practice safety connections to the existing transportation networks.

*ACTION ITEM:* Elevate the safety and accessibility of alternative modes of transportation, such as bicycling and walking, in future development.

*ACTION ITEM:* Encourage interconnection between developments to limit the number of entrances, and traffic, on main roadways.



**GOAL 3:** Elevate public transportation so that it plays a larger part in the County's overall transportation system.

***PATHWAY 1:*** Preserve and expand the existing public transportation networks that serve Culpeper County and increase awareness and usage of these services.

*ACTION ITEM:* Coordinate with relevant organizations on facilitating outreach initiatives to increase public awareness of existing transit options.

*ACTION ITEM:* Conduct research on the demand for public transportation options and service needs.

*ACTION ITEM:* Expand the existing Culpeper Trolley service to include additional stops, and potentially routes, within Culpeper County at key areas, such as the new field house.

*ACTION ITEM:* Expand the existing on-demand transit options provided by Virginia Regional Transit.

*ACTION ITEM:* Continue support for the continued operation and potential expansion of the Culpeper Regional Airport.

*ACTION ITEM:* Continue support for the existing railway and the passenger and freight services it provides.

***PATHWAY 2:*** Encourage and facilitate the creation of new public transportation networks that function within the County and serve destinations outside of its borders.

*ACTION ITEM:* Initiate a study of the feasibility of a bus/shuttle route between the Town of Culpeper and the Town of Warrenton.

*ACTION ITEM:* Initiate a study of the feasibility of a bus/shuttle route between the Town of Culpeper and Clevengers Corner.

*ACTION ITEM:* Initiate a study of different public transit connections to other localities and/or transportation hubs, including but not limited to, the Omni system in Gainesville or Fairfax, the Virginia Rail Express Broad Run Station, locations in neighboring localities, and nearby major employment centers.

**PATHWAY 3:** Ensure future changes or additions to the transportation system maintain or improve upon existing public transportation infrastructure.

*ACTION ITEM:* Work with future developments on creating infrastructure that would accommodate existing and/or future public transportation options, such as park & ride lots and shuttle/bus stops.

*ACTION ITEM:* Ensure improvements are data-driven, especially regarding route timing/dependability, as to enable commuters to utilize transit as an adequate travel option.

**GOAL 4:** Facilitate the expansion of safe and effective bicycle and pedestrian facilities, where appropriate, through the implementation of the modified 2008 Bike Plan, discussed on 3-49 through 3-51.

**PATHWAY 1:** Place, enhance, and/or replace signage on shared road/sharrow bike routes.

*ACTION ITEM:* Identify key locations for bicycle route signs and begin placing signs along existing and planned shared road/sharrow routes.

**PATHWAY 2:** Elevate bicyclist and pedestrian safety and access when building and expanding transportation facilities, where appropriate.

*ACTION ITEM:* Utilize identified best practices in bicycle and pedestrian facility design.

*ACTION ITEM:* Engage with pedestrian and bicyclist stakeholders on what kinds of facilities are required and desired.

*ACTION ITEM:* Work with future developments on creating infrastructure that would accommodate existing and/or future bicycle and pedestrian facilities.

*ACTION ITEM:* Where best practices cannot be installed on identified routes, paved shoulders should be preferred, with shared roads as a last resort.

**PATHWAY 3:** Draft a targeted bicycle-pedestrian infrastructure plan that focuses on connections to the Town and other networks.

*ACTION ITEM:* Catalogue existing facilities and initiate studies on future bike lanes and shared use paths between the Town and the County.

**GOAL 5:** Prepare the County for upcoming and other future trends that will impact how people and goods move.

**PATHWAY 1:** Expand the available infrastructure for electric vehicle recharging.

*ACTION ITEM:* Identify County-owned properties that would be suitable for hosting public electric vehicle charging facilities and explore the feasibility and potential benefit of their installation.

*ACTION ITEM:* Explore the possibility of reaching out to private stakeholders, such as businesses and other organizations, to build electrical charging stations.

*ACTION ITEM:* Explore if County vehicle electrification is a viable opportunity to reduce operating costs and to reduce emissions.

**PATHWAY 2:** Adapt to the current trend of workers partaking in telecommuting for either some or all aspects of their job.

*ACTION ITEM:* Continue with the expansion of broadband throughout the County (More detail in the Utilities Chapter).

*ACTION ITEM:* Identify other needs and barriers towards the adaption and use of telecommuting by residents and businesses that are within the scope of the powers of the Planning & Zoning Department.

# TRANSPORTATION PLAN

A key component in the Transportation Chapter of the Comprehensive Plan is the Transportation Plan. This plan serves as an outline of the County's top infrastructure studies and projects for which it plans to pursue funding and support in the upcoming future. These projects include intersection alterations and conversions, road creation and expansion, and other intensive proposals. The facilities were identified through a mix of multiple criteria including projected AADT and LOS changes, existing crash data, VDOT identified Potential For Safety Improvements, identified mid-term needs in Virginia's Transportation Plan (VTrans), future development projections, and input from the public. It is important to note that the plan details illustrated in Map 3-7 and provided on the following pages are not exact in location and by type of improvement. These are not final plans or proposals. These are guidelines that outline the County's project goals and provide the basis for proposals.

The following list of identified study areas incorporates the data and concerns discussed earlier, as well as citizen input and expected future development. This list identifies where the County should focus regarding transportation to address issues such as existing safety concerns or prepare for development in the growth areas identified in Chapter 2. This list does not rank by importance.



Identified County Study Area	Project	From	To	2019 AADT	2050 AADT	2019 LOS	2050 LOS
Route 15/29 North Corridor	James Madison Highway (Rt. 15/29) & Journey Through Hallowed Ground Byway (Rt. 15 /29 Business)/ Hubbards Road (Rt. F-715) Intersection Restriction	Study Intersection	Study Intersection	29473	48179	B	C
Route 15/29 North Corridor	James Madison Highway (Rt. 15/29) & Berry Hill Road/Beverly Ford Road (Rt. 676) Intersection Conversion	Study Intersection	Kellys Ford Road (Rt. 674) & Richlands Road (Rt. F717) Intersection	32262	50117	B	C
Route 15/29 North Corridor	James Madison Highway (Rt. 15/29) & Alanthus Road (Rt. 663) Intersection Conversion	Study Intersection	Study Intersection	28064	44944	B	B
Route 29 South Corridor	James Monroe Highway (Rt. 29) & Merrimac Road (Rt. 643) Intersection	Study Intersection	Study Intersection	20424	25201	A	B
Route 29 South Corridor	South Merrimac Road (Rt. 643) Realignment	South Merrimac Road (Rt. 643) & Hudson Road intersection	James Monroe Highway (Rt. 29) & John Coates Boulevard (Rt. 1250)	961	1150	B	B
Route 29 South Corridor	New Minor Collector Along Hungry Run	James Monroe Highway (Rt. 29) & John Coates Boulevard (Rt. 1250)	Field Stone Boulevard (Rt. 1350) & Scenic Creek Lane Intersection	N/A	N/A	N/A	N/A

Identified County Study Area	Project	From	To	2019 AADT	2050 AADT	2019 LOS	2050 LOS
Route 29 South Corridor	James Monroe Highway (Rt. 29) & White Shop Road (Rt. 603) Intersection	Study Intersection	Study Intersection	20424	25201	A	B
Route 29 South Corridor	White Shop Road Corridor Improvements	White Shop Road (Rt. 603) & James Monroe Highway (Rt. 29) Intersection	White Shop Road (Rt. 603) & Old Orange Road (Rt. 692) Intersection	1623	1875	B	B
Route 29 South Corridor	James Monroe Highway (Rt. 29) & Reva Road (Rt. 633) Intersection Realignment	Study Intersection	Study Intersection	20424	25201	A	B
Route 29 South Corridor	Western Collector Road Corridor Improvements & Realignment	Reva Road (Rt. 633) & James Monroe Highway (Rt. 29) Intersection	Griffinsburg Road (Rt. 634) & Sperryville Pike (Rt. 522) Intersection	2467	3860	C	C
Route 29 South Corridor	Western Loop Intersection Realignment	Sperryville Pike (Rt. 522) & Gibson Mill Road (Rt. 641) Intersection Realignment AND/OR a new collector road	John Coates Boulevard (Rt.1250) & Ira Hoffman Lane (Rt. 784) Intersection Improvement	6344	7178	C	D
Rixeyville Road Corridor	Rixeyville Road (Rt. 229) & Ira Hoffman Lane (Rt. 694) Intersection	Study Intersection	Study Intersection	9745	16412	C	D
Rixeyville Road Corridor	Rixeyville Road (Rt. 229) & Monumental Mills Road (Rt. 640) Intersection	Study Intersection	Study Intersection	7432	10998	C	D



Identified County Study Area	Project	From	To	2019 AADT	2050 AADT	2019 LOS	2050 LOS
Rixeyville Road Corridor	Rixeyville Road (Rt. 229) Corridor Improvements	Rixeyville Road (Rt. 229) & Ira Hoffman (Rt. 694) Intersection	Rixeyville Road (Rt. 229) & Lee Highway (Rt. 211) Intersection	7659	12392	D	D
Eastern Business Area	Brandy Road (Rt. 15/29 Business) Corridor Improvements	Brandy Road (Rt. 15/29 Business) & Inlet Road/Normans Lane (Rt. 665) Intersection	Brandy Road (Rt. 15/29 Business) & Braggs Corner Road/Bradford Road (Rt. 666) Intersection	11558	16049	D	D
Eastern Business Area	Braggs Corner Road (Rt. 666) Segment Improvements	Creativity Drive & Braggs Corner Road (Rt. 666) Intersection	Greens Corner Road (Rt. 666) & Stevensburg Road (Rt. 663) Intersection	7618	18472	C	E
Eastern Business Area	Nalles Mill Road (Rt. 667) Realignment/Widening	James Madison Highway (Rt. 15/29 Business) & Nalles Mill Road (Rt. 667) Intersection (Requires cooperation with Town of Culpeper)	Nalles Mill Road (Rt. 667) and Braggs Corner Road (Rt. 666) Intersecton	N/A	N/A	N/A	N/A
Eastern Business Area	Ira Hoffman Lane (Rt. 694) Extension	Ira Hoffman Lane (Rt. 694) or Montanus Drive (Rt. 1023) & James Madison Highway (Rt. 15/29 Business) Intersection (Requires cooperation with Town of Culpeper)	Nalles Mill Road (Rt. 667) and Keyser Road (Rt. 799) Intersection or Enterprise Way	N/A	N/A	N/A	N/A

Identified County Study Area	Project	From	To	2019 AADT	2050 AADT	2019 LOS	2050 LOS
N/A	Germanna Highway (Rt. 3) & Stevensburg Road/Batna Road (Rt. 663) Intersection	Study Intersection	Study Intersection	9861	12337	C	D
N/A	Stevensburg Road Corridor Improvements	Germanna Highway (Rt. 3) & Stevensburg Road/Batna Road (Rt. 663) Intersection	Mt. Dumpling Road (Rt. 663) & Carrico Mills Road Intersection	1846	2925	B	C
N/A	Germanna Highway (3) & Carrico Mills Road/SherwoodFarm Road (Rt. 669) Intersection	Study Intersection	Study Intersection	9861	12337	C	D
N/A	Ira Hoffman Lane (Rt. 694) Corridor Improvements	Rixeyville Road (Rt. 229) & Ira Hoffman Lane (Rt. 694) Intersection	North Ridge Boulevard	9933	22833	C	E
N/A	James Madison Highway Corridor Improvements	James Madison Highway (Rt. 15) & Madison Road (Rt. 299) Intersection	James Madison Highway (Rt. 15) & The George Washington Carver Center Entrances	7197	9374	D	D
N/A	AG Richardson Elementary School and Peal Sample Elementary School Second Entrance	Madison Road (Rt. 299) & Friendship Way (Rt 930) Intersection	James Madison Highway (Rt. 15) & Simms Drive (Rt. 9566) Intersection	7197	9374	D	D
N/A	Rapidan Traffic Calming	The border of Orange County	Rapidan Road (Rt. 615) & Locust Dale Road (Rt. 614) intersection	1310	1896	B	B

## **NEAR-TERM TRANSPORTATION PROJECTS**

In consideration of the previously discussed factors, the County has chosen the following 4 areas to apply for VDOT Smart Scale. As of publishing, there has been no determination on whether if any of the projects have been accepted.

### ROUTE 229 & ROUTE 621 INTERSECTION

This project would alter the intersection of Rixeyville Road and Jeffersonton Road/Colvin Road from the “existing four-way intersection, with stop conditions on the east and west legs, to a single lane roundabout.” The total 2022 uninflated estimate is \$8,047,900, with a proposed completion date of November 2029.

### ROUTE 229 & ROUTE 694 INTERSECTION

This project would alter the intersection of Rixeyville Road and Ira Hoffman Lane from the existing four-way, signaled intersection, to a double lane roundabout. The total 2022 uninflated estimate is \$11,850,000, with a proposed completion date of February 2030.

### ROUTE 3 & ROUTE 669 INTERSECTION

This project would alter the intersection of Germanna Highway and Carrico Mills Road from the existing three-way intersection, to a partial RCUT. The total 2022 uninflated estimate is \$3,775,000, with a proposed completion date of November 2029.

### ROUTE 29 & ROUTE 633 INTERSECTION

This project would alter the intersection of James Monroe Highway and Reva Road from the existing three-way intersection, to a partial MCUT. The total 2022 uninflated estimate is \$6,737,900, with a proposed completion date of November 2029.

## TRANSPORTATION AREA PLANS

### ROUTE 15/29 NORTH CORRIDOR

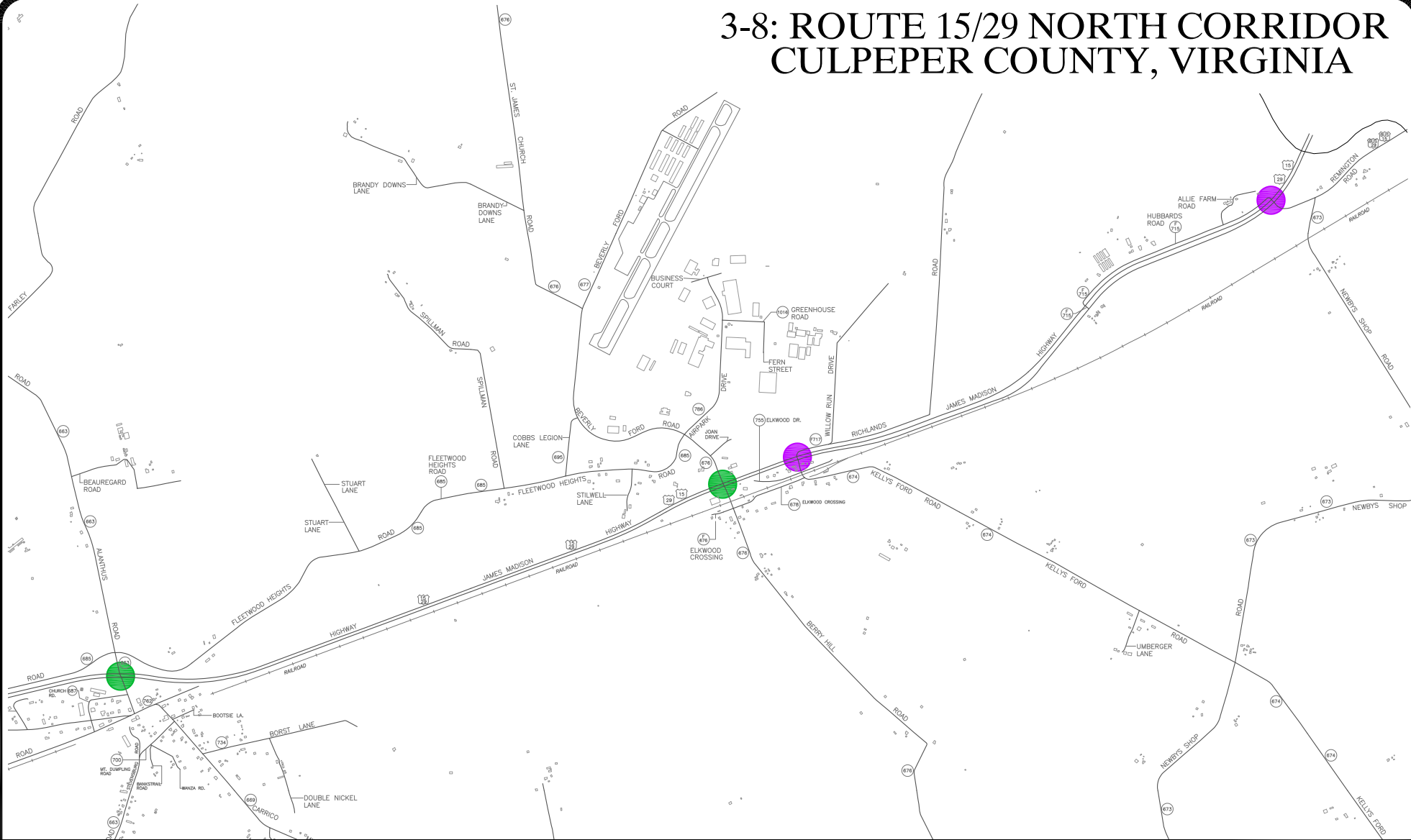
James Madison Highway (Rt. 15/29) serves as the primary connection point to Northern Virginia for Culpeper County. The County's 15/29 Northern Corridor is identified as an area in heightened need of intervention due to the following identified issues.

- As shown in Map 3-1, this portion of corridor is categorized as an Other Freeway/Expressway, indicating the corridor's importance to regional travel.
- It is projected that the corridor will experience a significant increase in annual average daily traffic.
- As shown in Map 3-5, there have been multiple severe injury and fatal crashes along this corridor, especially at the intersection with Berry Hill Road/Beverly Ford Road (Rt. 676), the key entryway for Elkwood and the Culpeper Regional Airport.
- The volume of semi-trucks making turns at the intersection with Berry Hill Road/Beverly Ford Road (Rt. 676) due to the nearby Culpeper Regional Airport and the associated industrial park creates additional traffic and safety concerns.
- Multiple road segments and intersections are identified as 2021 Mid-term Needs in Virginia's Transportation Plan for Corridors of Statewide Significance. These are the needs for Roadway Safety, Capacity Preservation, Reliability Improvement for Intercity/Commuter Rail, and Transportation Demand Management.
- Multiple road segments and intersections are identified as 2021 Mid-term Needs in Virginia's Transportation Plan for Regional Networks for Transit Access to Activity Centers.
- Multiple segments and intersections are identified as 2021 Mid-term Needs in Virginia's Transportation Plan Statewide Safety Need, as illustrated in Map 3-6.

There are multiple potential interventions that can address the above issues. These are illustrated on Map 3-8.

- Eliminating the crossings at the intersection with Kellys Ford Road (Rt. 674) & Richlands Road (Rt. F717), and at the intersection with Journey Through Hallowed Ground Byway (Rt. 15 /29 Business)/ Hubbards Road (Rt. F-715).
- Installation of additional safety infrastructure at the intersection with Berry Hill Road/Beverly Ford Road (Rt. 676), and with Alanthus Road (Rt. 663).
- The potential conversion of the intersection with Alanthus Road (Rt. 663) into an interchange.

# 3-8: ROUTE 15/29 NORTH CORRIDOR CULPEPER COUNTY, VIRGINIA



Prepared by  
Culpeper County Planning Department

## LEGEND

- INTERSECTION IMPROVEMENTS
- RESTRICT ACCESS



DATE: 01-2023

### ROUTE 29 SOUTH CORRIDOR

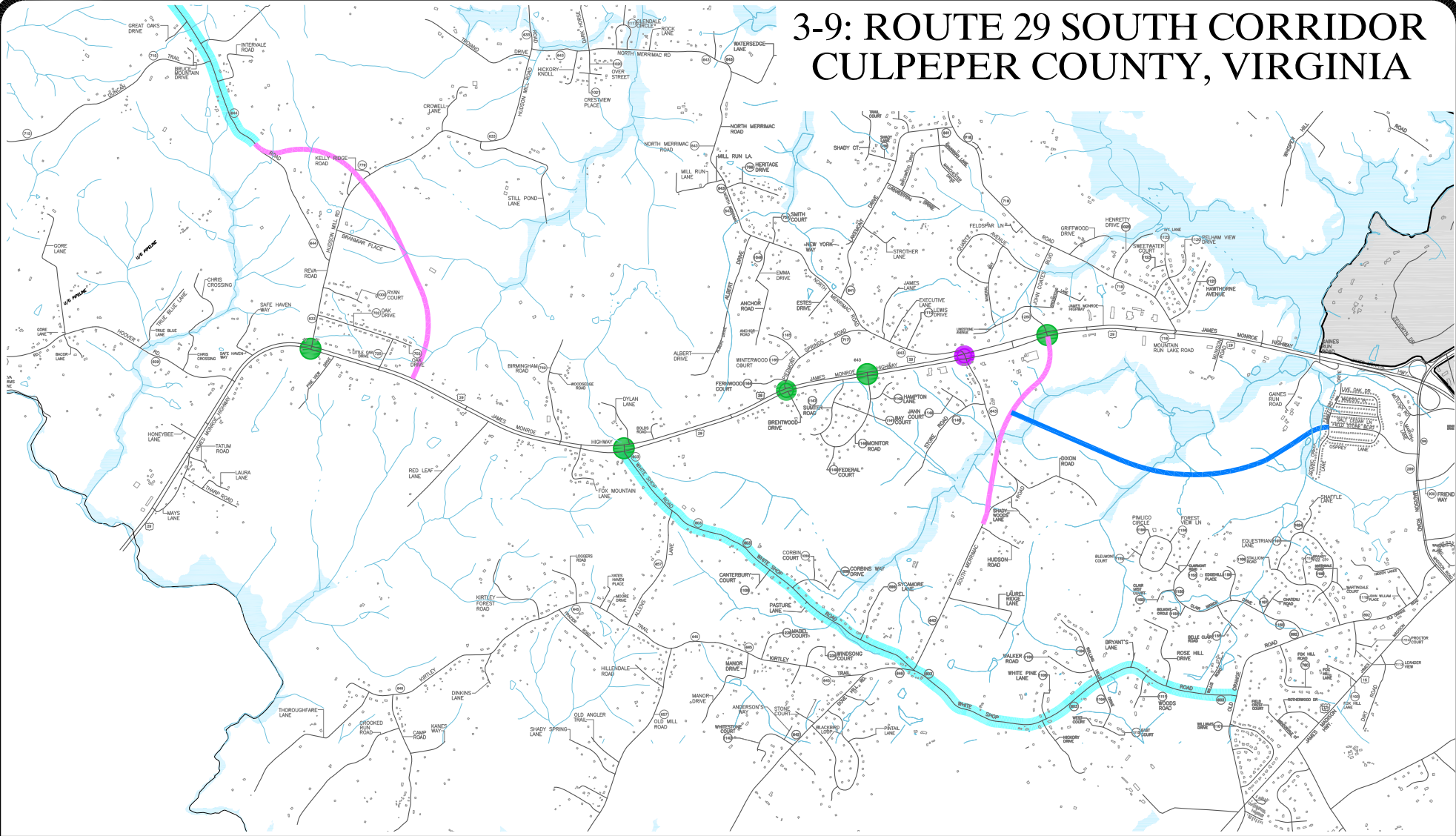
James Monroe Highway (Rt. 29) serves as the primary connection point to Southern Virginia for Culpeper County. The County's 29 South Corridor is identified as an area in heightened need of intervention due to the following identified issues.

- As shown in Map 3-1, this portion of the corridor is categorized as an Other Principal Arterial, indicating the corridor's importance to regional travel.
- It is projected that the corridor will experience a significant increase in annual average daily traffic.
- As shown in Map 3-5, there have been multiple severe injury and fatal crashes along this corridor, especially on the segment between the County Store Drive intersection & the John Coates Boulevard (Rt.1250) intersection, and at the intersections with collector roads of Merrimac Road (Rt. 643), White Shop Road (Rt. 603), Reva Road (Rt. 633), and Hoover Road (Rt. 609).
- Although the Northern Corridor is categorized as limited access, the Southern Corridor is not due to the number of intersections, driveways, and other access points located throughout. This creates numerous points of potential conflict.
- Multiple road segments are identified as 2021 Mid-term Needs in Virginia's Transportation Plan for Corridors of Statewide Significance. These are the needs for Roadway Safety, Capacity Preservation, Reliability Improvement for Intercity/Commuter Rail, and Transportation Demand Management.
- Multiple segments and intersections are identified as 2021 Mid-term Needs in Virginia's Transportation Plan Statewide Safety Need, as illustrated in Map 3-6.





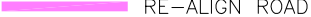

There are multiple potential interventions that can address the above issues. These are illustrated on Map 3-9 and on Map 3-10.

- The elimination of the crossing at Merrimac Road (Rt. 643).
- The installation of additional safety infrastructure at the segment between the County Store Drive intersection & the John Coates Boulevard (Rt.1250) intersection and at other key intersections and road segments.
- The installation of restricted crossing u-turns (RCUTs), or other interventions, at suitable intersections to limit the potential for sideswipe and angle crashes.
- Realigning Merrimac Road (Rt. 643) and Reva Road (Rt. 633) to new access points along James Monroe Highway (Rt. 29) to create safer intersections and/or interchanges.
- Reviewing and upgrading the road geometrics of White Shop Road (Rt. 603) and Reva Road (Rt. 644) to address safety and capacity concerns.
- The potential signalization or interchange conversion of the intersection of John Coates Boulevard (Rt.1250) and James Monroe Highway (Rt. 29).
- Lowering the speed limit on James Monroe Highway (Rt. 29) between Merrimac Road (Rt. 643) intersection and the Madison Road (Rt. 299) interchange.
- Reviewing and upgrading the road geometrics of Gibson Mill Road (Rt 641) and/or constructing a new collector road for the western portion of the Town/County Loop Road.

# 3-9: ROUTE 29 SOUTH CORRIDOR CULPEPER COUNTY, VIRGINIA



## LEGEND

-  INTERSECTION IMPROVEMENTS
-  RESTRICT ACCESS
-  REVIEW AND UPGRADE ROAD GEOMETRICS
-  MINOR COLLECTOR
-  RE-ALIGN ROAD
-  FEMA 1% ANNUAL CHANCE FLOODPLAIN

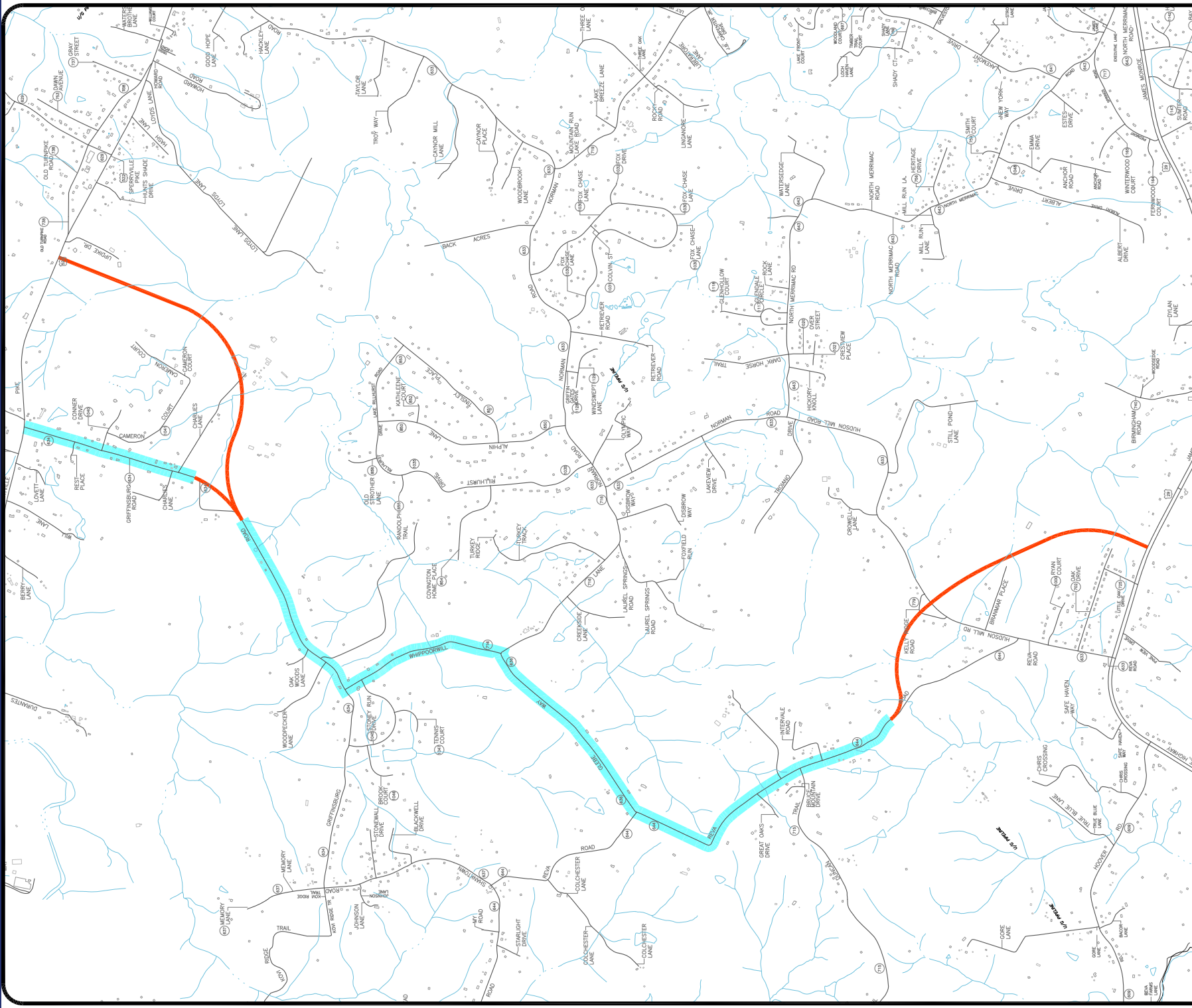


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DATE: 01-2023





DATE: 01-2023

# 3-10: WESTERN COLLECTOR ROAD CULPEPER COUNTY, VIRGINIA

## LEGEND

- NEW ALIGNMENT COLLECTOR ROAD
- REVIEW AND UPGRADE ROAD
- GEOMETRICS



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### RIXEYVILLE ROAD CORRIDOR

Rixeyville Road (Rt. 229) serves as the primary connection corridor between the Town of Culpeper and the northern areas of the County. This route is identified as an area in heightened need of intervention due to the following identified issues.

- As shown in Map 3-1, this corridor is categorized as a Minor Arterial, indicating the route's importance to County travel.
- It is projected that the route will experience a significant increase in annual average daily traffic.
- It is projected that the route will experience a decrease in its level of service along the entire route.
- The Stonehaven development is expected to generate additional traffic volume and additional intersections, necessitating additional preparations for the future.
- As shown in Map 3-5, there have been multiple severe injury and fatal crashes along this corridor, especially at multiple intersections such as at Ira Hoffman Lane (Rt. 694), Temple Lane (Rt. 1062), Monumental Mills Road (Rt. 640), Little Fork Church Road (Rt. 726), and Colvin Road/Jeffersonton Road (Rt. 621).
- Multiple road segments are identified as 2021 Mid-term Needs in Virginia's Transportation Plan for Regional Networks, specifically for transit access to activity centers.
- Multiple segments and intersections are identified as 2021 Mid-term Needs in Virginia's Transportation Plan Statewide Safety Need, as illustrated in Map 3-6.

There are multiple potential interventions that can address the above issues. These are illustrated on Map 3-11.

- The conversion of intersections into roundabouts, specifically at Ira Hoffman Lane (Rt. 694) and Colvin Road/Jeffersonton Road (Rt. 621).
- Installation of additional safety infrastructure at key intersections such as at Ira Hoffman Lane (Rt. 694), Temple Lane (Rt. 1062), Monumental Mills Road (Rt. 640), Little Fork Church Road (Rt. 726), and Colvin Road/Jeffersonton Road (Rt. 621).
- Shoulder widening and lane expansion along the route to improve traffic flow and allow for additional safety features.
- Installation of bicycle or pedestrian facilities along the route to provide a safe and viable path for those traveling by foot or bike.



### EASTERN BUSINESS CORRIDOR

The Eastern Business Area, which includes Brandy Road (Rt. 15/29 Business), Braggs Corner Road (Rt. 666), Nalles Mill Road (Rt. 667), Keyser Road (Rt. 799), and other local roads, serves as the major entryway to the Town of Culpeper and as an area of future growth. This area is identified as an area in heightened need of intervention due to the following identified issues.

- As shown in Map 3-1, Brandy Road (Rt. 15/29 Business) is classified as an Other Principal Arterial, indicating the route's importance to regional travel.
- It is projected that the area will experience a significant increase in annual average daily traffic.
- It is projected that many routes will experience a decrease in its level of service along multiple routes.
- As shown in Map 3-5, there have been multiple severe injury crashes here.
- The area's proximity to James Madison Highway (Rt. 15/29) and the Town of Culpeper makes it suitable for a Future Growth Area.
- Multiple road segments are identified as 2021 Mid-term Needs in Virginia's Transportation Plan for Corridors of Statewide Significance. These are the needs for Congestion, Roadway Safety, Capacity Preservation, Reliability Improvement for Intercity/Commuter Rail, and Transportation Demand Management.
- Multiple road segments are identified as 2021 Mid-term Needs in Virginia's Transportation Plan for Urban Development Areas regarding Access to Industrial and Economic Development Areas (IDEAs).
- Multiple segments and intersections are identified as 2021 Mid-term Needs in Virginia's Transportation Plan Statewide Safety Need, as illustrated in Map 3-6.

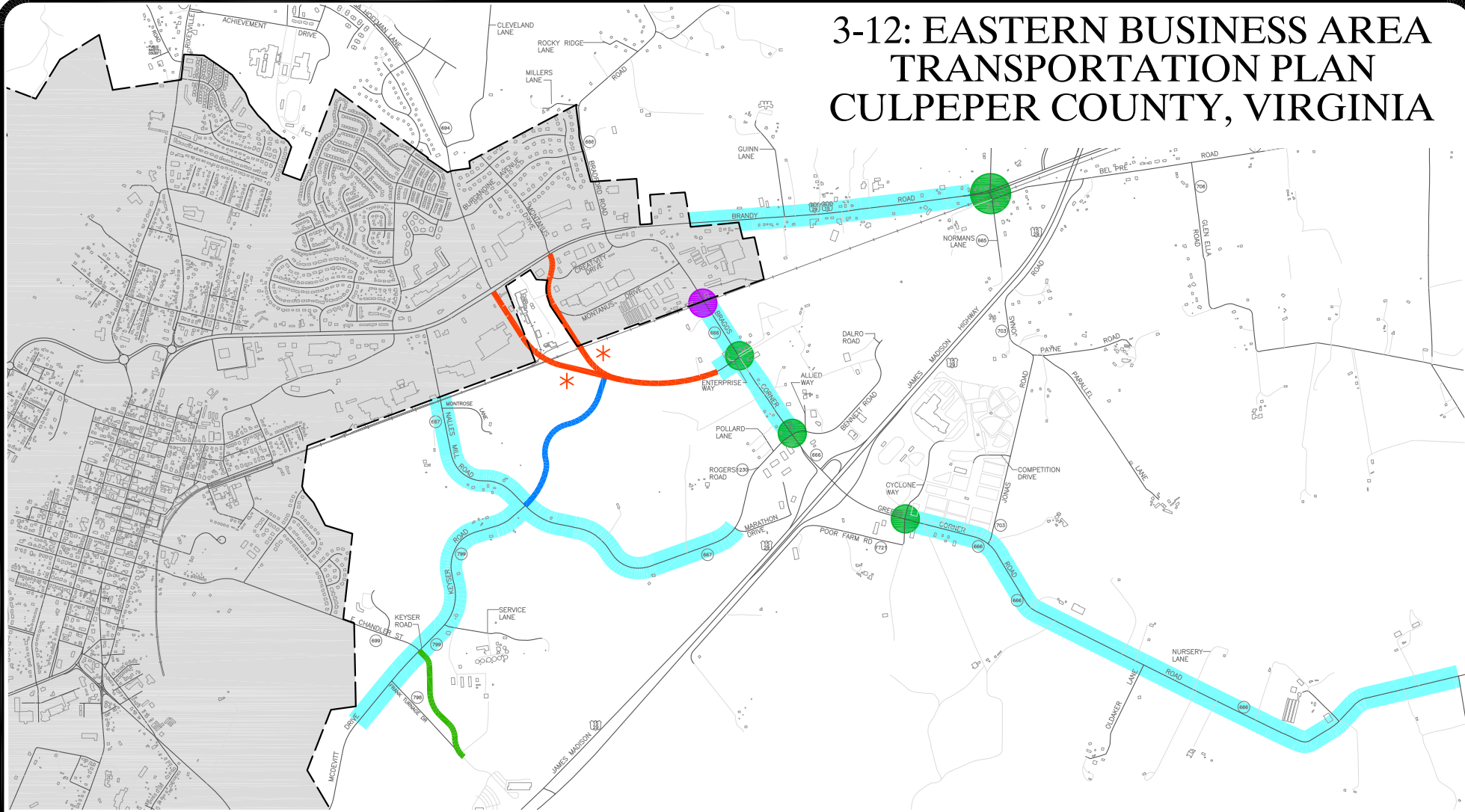
There are multiple potential interventions that can address the above issues. These are illustrated on Map 3-12.

- The realignment, signalization, and/or roundabout conversion of existing intersections such as Nalles Mill Road (Rt. 667) and Keyser Road (Rt. 799), and Rogers Road (Rt. 667) and Braggs Corner Road (Rt. 666).
- The realignment and alteration of existing roadways such as Nalles Mill Road (Rt. 667), Keyser Road (Rt. 799), Braggs Corner Road (Rt. 666), and Brandy Road (Rt. 15/29 Business).
- The potential creation of new roadways to further access to future growth areas and to build upon the Town/County Loop Road concept.
- Installation of additional safety infrastructure at multiple intersections and along road segments.
- Installation of bicycle and pedestrian infrastructure throughout the subject area.
- Realigning Frank Turnage Drive.
- The transformation of the railroad crossing on Braggs Corner Road (Rt. 666) into a bridge over the railroad, or the construction of a new roadway over the railroad at a different location.







Additionally, there is a GAP funded small area plan that addresses these concerns and potential solutions. It is available on the Department website.





# 3-12: EASTERN BUSINESS AREA TRANSPORTATION PLAN CULPEPER COUNTY, VIRGINIA



## LEGEND

-  MAJOR COLLECTOR
-  MINOR COLLECTOR
-  PROPOSED ROAD ALIGNMENT (FRANK TURNAGE DR.—RT. 798)
-  REVIEW AND UPGRADE ROAD GEOMETRICS
-  INTERSECTION IMPROVEMENTS
-  REMOVAL OR IMPROVEMENT OF EXISTING RAILROAD CROSSING

## NOTES

-  A new major collector road would either connect to Ira Hoffman Lane (Rt. 694) or Montanus Drive. There is no scenario where a new major collector road connects to both of these roads.
-  The suggested new major and minor collector roads would only be pursued if it is determined that upgrades to the existing road network would not be sufficient to accommodate future traffic conditions.



Prepared by  
Culpeper County Planning Department



DATE: 01-2023

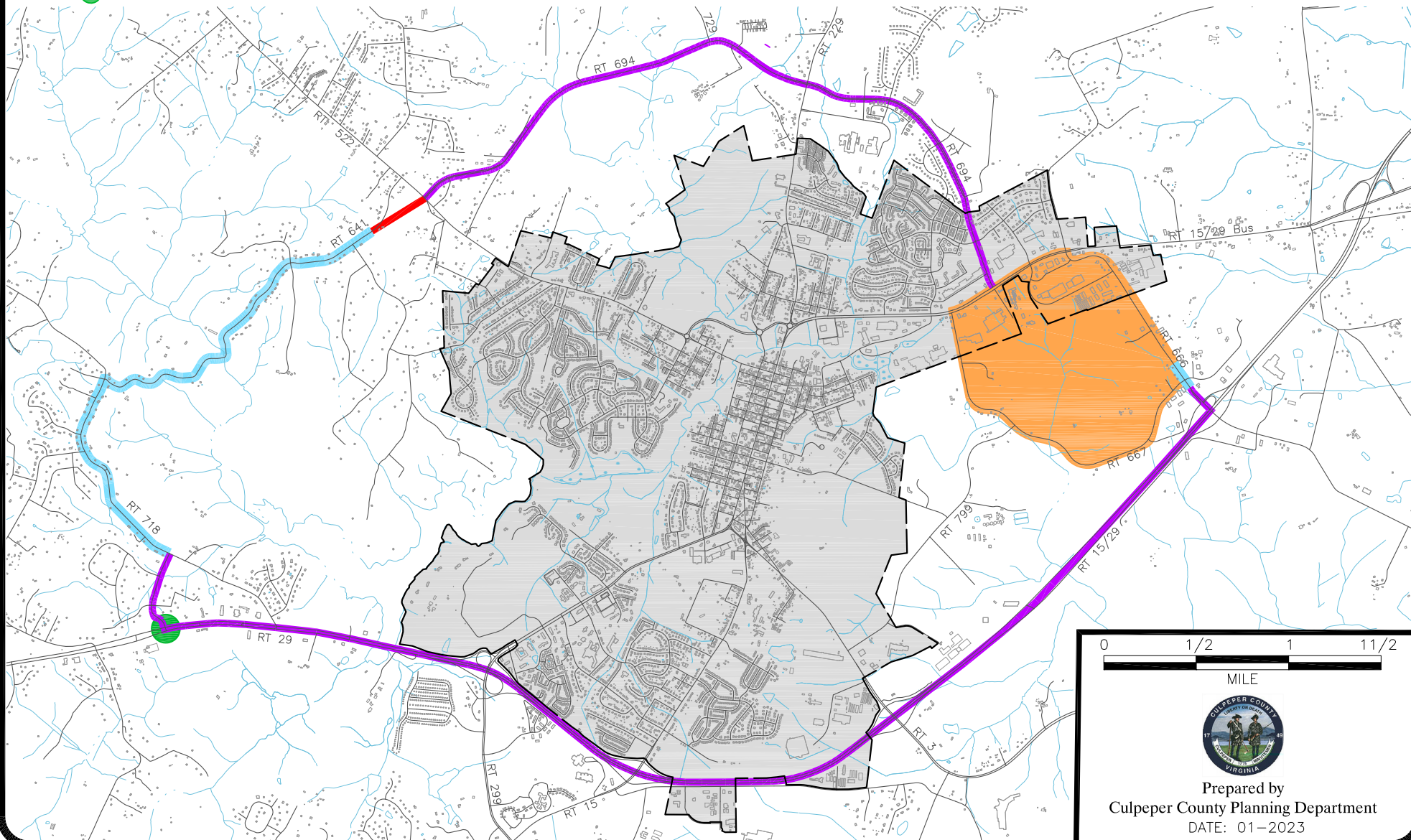
### TOWN/COUNTY LOOP ROAD

The concept behind the Town/County loop road is to create a road network to facilitate local traffic throughout the County while relieving traffic congestion in the Town of Culpeper. As illustrated in Map 3-13, most of this loop already exists, primarily as Ira Hoffman Lane (Rt. 694) and James Madison Highway (Rt. 15/29). However, there is still a need for a link in the Braggs Corner area, for realignment/geometric review for the western portion of the loop, and a potential interchange at the intersection of John Coates Boulevard and Route 29.

# LEGEND

- LOOP ROAD (NEW CONSTRUCTION OR UPGRADE)
- LOOP ROAD (EXISTING SEGMENTS)
- REVIEW AND UPGRADE ROAD GEOMETRICS
- POTENTIAL CONNECTION AREA
- INTERSECTION IMPROVEMENTS

# 3-13: TOWN VICINITY IMPROVEMENTS TOWN/COUNTY LOOP ROAD CULPEPER COUNTY, VIRGINIA



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Prepared by  
Culpeper County Planning Department  
DATE: 01-2023



# 2008 BIKE STUDY & MODIFIED PLAN

In 2008, HNTB was contracted to create a bicycle study for Culpeper County. The study was comprehensive in scope, detailing existing and common bicycle routes, reaching out to community stakeholders, describing types of bicycle facilities, and drafting an implementation plan. This is available on the department website.

Upon revisiting this plan, it was determined that the implementation plan should be revised based on changing data, priorities, and public input. Specifically, the Modified Plan narrows the scope of the planned bike routes to key recreational routes and routes that would complement the bike infrastructure within the Town of Culpeper.

## MODIFIED 2008 BIKE PLAN

### TYPES OF BIKE FACILITIES

Shared Use Paths are what the 2008 Study defines as “dedicated facilities on exclusive right-of-way and have minimal, if any, interference from motor vehicles. Shared use paths are considered Class I bicycle facilities and may also be used for other non-motorized modes such as walking, running, and skating.”

Bike Lanes are what the 2008 Study defines as “designated space for bicyclists in the roadway. They are one-way facilities in which bicycle traffic travels in the same direction and adjacent to vehicle traffic.”

Road Shoulders, which are a new category in this Modified Plan, are shoulders that are wide enough for recreational cycling, thus providing slight separation from vehicular traffic. While not ideal, they provide some degree of safety. These would only be created in conjunction with general shoulder widening projects on routes identified in the Transportation Plan where appropriate.

Shared Roads/Sharrows are what the 2008 Study defines as “shared roadways designated by bike route signs,” which “indicate to bicyclists that the routes have advantages over alternative routes,” and warns “vehicle drivers to the potential presence of bicyclists.” In this modified plan, these facilities are along routes utilized by recreational cyclists but cannot accommodate any other type of bicycle facility.

These facilities, both existing and proposed, are shown in Map 3-14.

## IMPLEMENTATION

One priority is to add additional signage along existing routes. Although there are some existing bike route signs, there is a lack of safety signs alerting drivers to the possibility of bicyclists on the road. Warning signs are needed so that drivers are aware and can look out for bicyclists.

Routes identified as having the potential to have suitable road shoulders are to be included in general transportation corridor improvement programs since many of these routes are on corridors identified in the Transportation Plan. Expanding shoulders provides benefits to both drivers and bicyclists, improving overall safety.

A joint study between the Town of Culpeper and the County should be conducted to identify the routes and types of facilities that can connect the Town and the County. Some areas of potential collaboration include Braggs Corner Road (Rt. 666), Nalles Mill Road (Rt. 667), East Chandler Street (Rt.699), McDevitt Drive (Rt.799), Ira Hoffman Lane (Rt. 694), Sperryville Pike (Rt. 522), Lovers Lane (Rt. 686), and the intersection of Orange Road (Rt.15 Business) and James Madison Highway (Rt.15).

Finally, the RRRC's Active Transportation Plan analyzes the existing and proposed bicycle infrastructure throughout its entire coverage area. This plan provides a supportive framework on implementing this modified bike plan and how to connect to other localities.



# Chapter Source Appendix & Resources

- 2020: American Community Survey 5 Year Estimates Data Profiles Selected Economic Characteristics <https://data.census.gov/cedsci/table?t=Commuting&g=0500000US51047&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2020.DP03&moe=false>
- Culpeper Airport <https://culpeperairport.com/>
- County of Culpeper Capital Improvements Program Fiscal Years 2023-2027 <https://web.culpepercounty.gov/planning/page/fy-2023-2027-capital-improvements-program>
- Culpeper Economic Development (Air) <https://www.culpeperva.org/locate/culpeper-regional-airport/>
- Culpeper Economic Development (Rail) <https://www.culpeperva.org/news/culpepers-railroad-and-train-history/>
- Culpeper County Home Page <https://web.culpepercounty.gov/>
- Culpeper County Road Map [https://www.virginiadot.org/travel/resources/county\\_maps/23\\_Culpeper.pdf](https://www.virginiadot.org/travel/resources/county_maps/23_Culpeper.pdf)
- Foothills Area Mobility System Transportation Resource Guide [https://8006166a-de6a-4b7f-b30e-624ecb01b87e.filesusr.com/ugd/42e2c8\\_0739551e0ccf44b98f18e245123a81ae.pdf](https://8006166a-de6a-4b7f-b30e-624ecb01b87e.filesusr.com/ugd/42e2c8_0739551e0ccf44b98f18e245123a81ae.pdf)
- Google Maps
- The Journey Through Hallowed Ground <https://www.hallowedground.org/>
- Norfolk Southern <http://www.nscorp.com/content/nscorp/en.html>
- Rappahannock-Rapidan Regional Commission <https://www.rrregion.org/>
- Rappahannock-Rapidan Regional Commission Publications [https://www.rrregion.org/data\\_\\_\\_resources/publications.php](https://www.rrregion.org/data___resources/publications.php)
- Rappahannock-Rapidan Regional Commission Transportation [https://www.rrregion.org/program\\_areas/transportation/index.php](https://www.rrregion.org/program_areas/transportation/index.php)
- Remington <https://www.remingtonva.com/tours>
- Virginia Department of Transportation <https://www.virginiadot.org/>
- VDOT 2014-2018 Top Potential Safety Improvement Intersections & Segments by District <https://vdot.maps.arcgis.com/home/item.html?id=61f6e122367248fa946d9ad9da5a506c>

# Chapter Source Appendix & Resources

- VDOT Functional Classification Comprehensive Guide [https://www.virginiadot.org/Functional\\_Classification\\_Comprehensive\\_Guide.pdf](https://www.virginiadot.org/Functional_Classification_Comprehensive_Guide.pdf)
- VDOT Potential For Safety Improvement Information <https://vdot.maps.arcgis.com/apps/webappviewer/index.html?id=c2d8972619954f6d9e1613f257c9ad23>
- Virginia Breeze Bus Lines <https://virginiabreeze.org/>
- Virginia Regional Transit (Culpeper) <https://vatransit.org/culpeper/>
- Virginia Regional Transit (On-Demand) <https://vatransit.org/on-demand/>
- Virginia Regional Transit (Services) <https://vatransit.org/services/>
- Virginia's Transportation Plan Mid-term Needs and Priorities <https://www.vtrans.org/mid-term-planning/mid-term-needs-and-priorities>
- Vision Zero Network [https://visionzeronetwork.org/wp-content/uploads/2018/11/VZN\\_CoreElements\\_FINAL.pdf](https://visionzeronetwork.org/wp-content/uploads/2018/11/VZN_CoreElements_FINAL.pdf)
- Vist Culpeper (The Train Depot) <https://visitculpeperva.com/listing/the-train-depot.aspx>