CHAPTER 5: SAFE AND CONNECTED SPACES



INTRODUCTION

PLANNING FOR HENRICO'S FUTURE TRANSPORTATION NEEDS

This chapter outlines the goal, policies, and actions that support continued development of a safe, efficient, and effective transportation network. The goal is to contribute to the well-being of residents and businesses and enhance the quality of life for people who live, work, and play in Henrico County. This network includes all modes of transportation: roads, transit, pedestrian and bicycle infrastructure, railroads and interregional services.

To achieve its vision, Henrico County will prioritize safety and efficiency by addressing high-crash areas and enhancing infrastructure to reduce traffic-related injuries and fatalities. Expanding pedestrian, bicycle, and transit options will also promote mobility choices and reduce car dependency, improving access for all residents. Coordinated land use and transportation planning will align development with infrastructure to support sustainable growth. Promoting more complete transportation networks will enhance interactions between residential, commercial, and recreational areas.



Local transit center

Roles of County, Regional, State, and Federal Transportation Agencies

Transportation planning responsibilities are shared across multiple local, regional, state, and federal agencies.

HENRICO COUNTY DEPARTMENT OF PUBLIC WORKS

The Henrico County Department of Public Works (DPW) oversees and manages the County's multimodal transportation system, playing a central role in planning, maintaining, and improving infrastructure that supports all modes of travel. Specifically, DPW is responsible for the County-owned roadway network, which often includes local streets and many collector roads, along with associated operations such as pavement preservation, drainage coordination, and traffic signals and signage on County-maintained roads. Transportation projects led by DPW are funded through a combination of local, state, regional, and federal sources, including County capital funds and revenues, state transportation programs administered by VDOT, and federal funds programmed through the regional transportation planning process. DPW also conducts ongoing coordination with GRTC to support transit system planning, including data-driven forecasting of future service demand and the joint development and delivery of transit infrastructure improvements.

PLANRVA & THE RICHMOND REGIONAL TRANSPORTATION PLANNING AGENCY (RRTPO)

PlanRVA is the regional planning organization serving the Richmond region and provides coordination among local governments on transportation, land use, housing, and environmental planning. The Richmond Regional Transportation Planning Agency (RRTPO) operates within PlanRVA and serves as the federally designated Metropolitan Planning Organization (MPO) for the region, including Henrico County. In this role, RRTPO is responsible for coordinating regional transportation planning across jurisdictions and modes to ensure a connected and efficient transportation system. Key responsibilities include development and maintenance of the region's Long-Range Transportation Plan and Transportation Improvement Program (TIP), which identify and prioritize transportation projects eligible for federal funding. RRTPO works closely with Henrico County, VDOT, transit providers, and neighboring localities to align local transportation priorities with regional goals, federal requirements, and available funding sources.

VIRGINIA PASSENGER RAIL AUTHORITY

VPRA is responsible for sponsoring and advancing passenger rail improvements in Virginia, including service expansion, capital investments, and station-related coordination. In Henrico, VPRA is an important partner in planning for the future of Staples Mill Station and broader intercity rail improvements.

VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION

DRPT supports transit, rail, and transportation demand management programs across the Commonwealth. The agency provides technical assistance and funding for capital and operating needs, rail initiatives, and multimodal planning that affect Henrico County and the wider region.

CENTRAL VIRGINIA TRANSPORTATION AUTHORITY

CVTA is the regional transportation funding authority for Central Virginia. It helps fund major transportation improvements through regional revenues and allocates resources to projects that improve mobility, safety, and connectivity across local jurisdictions, including Henrico County.

GREATER RICHMOND TRANSIT COMPANY

GRTC is the region's primary public transit operator and provides fixed-route bus, bus rapid transit, microtransit, and paratransit services that connect Henrico residents to jobs, schools, services, and activity centers across the greater Richmond area. Henrico County coordinates with GRTC on service planning, stop and station improvements, transit access, and long-range system expansion.

VIRGINIA DEPARTMENT OF TRANSPORTATION

The Virginia Department of Transportation (VDOT) maintains the Interstate system as well as several key U.S. and state routes in Henrico that function as major regional corridors, including W. Broad Street (US 250/Route 250), Brook Road (US 1), Chamberlayne Road (US 301), Williamsburg Road (US 60/Route 60), Nine Mile Road (Route 33), Staples Mill Road (Route 33), and Patterson Avenue (Route 6). In some cases, maintenance responsibility can shift along a single corridor. For example, Parham Road is largely County-maintained, but the SR-73 portion is VDOT-maintained. Thus, many improvements require close coordination on scope, design standards, and delivery.

U.S. DEPARTMENT OF TRANSPORTATION

The U.S. Department of Transportation (USDOT) establishes national transportation policy and provides funding and regulatory oversight for transportation systems across all modes. Through its modal administrations—such as the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA)—USDOT distributes federal transportation funds that support planning, capital improvements, operations, and safety programs in Henrico County. Federal funds are typically allocated to states and metropolitan planning organizations, including VDOT and RRTPO, and are programmed into projects through required planning processes. Many transportation projects in Henrico are therefore supported through a combination of federal, state, regional, and local funding, reflecting the collaborative nature of transportation investment and delivery.

COMMUNITY ASPIRATIONS

HenricoNEXT public engagement efforts identified residents' transportation and recreation priorities, emphasizing the community's desire for safer, better-connected infrastructure to support walking, biking, and recreation. Across all engagement activities detailed below, residents expressed concerns about pedestrian and cyclist safety, a lack of continuous bike lanes and sidewalks, and the need for improved connectivity between neighborhoods and key destinations such as parks, schools, and commercial areas. While the surveys show widespread satisfaction with existing recreational amenities like trails, they highlight an unmet demand for enhanced infrastructure to reduce car dependency and promote alternative modes of transportation.

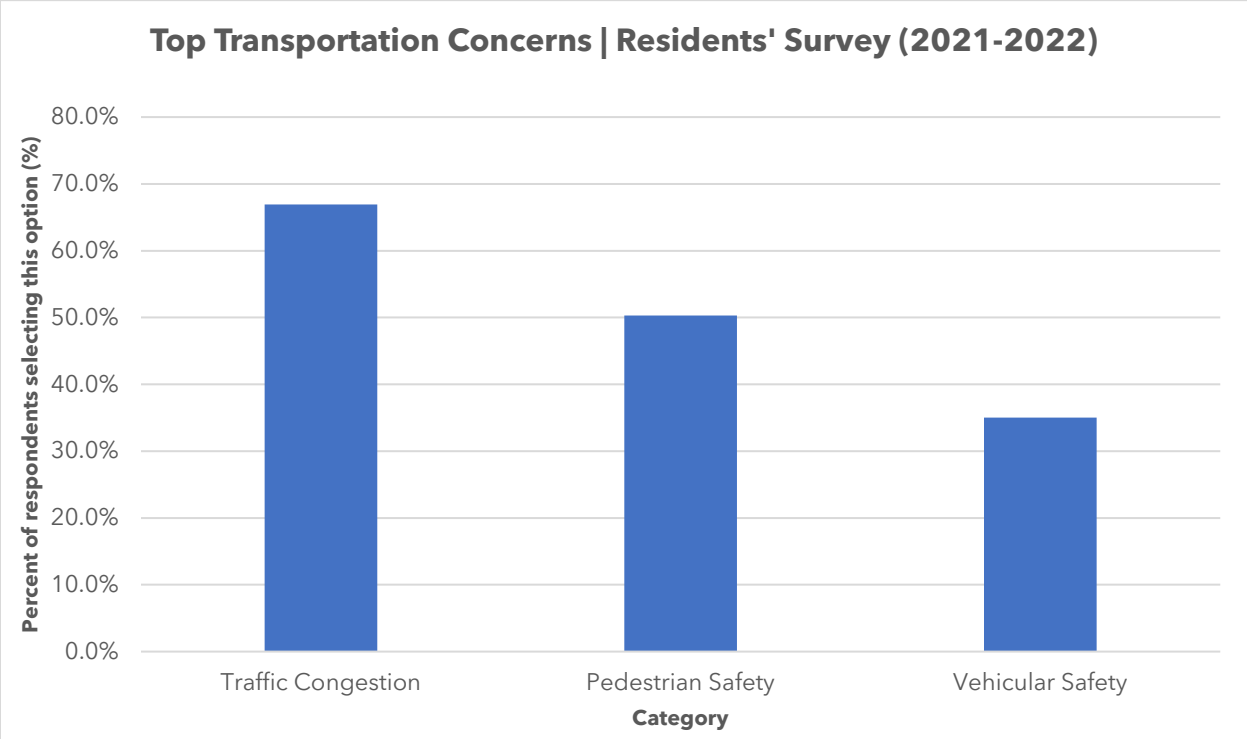
Public Engagement Highlights

The following summarizes key takeaways from engagement efforts related to transportation, mobility, parks, and land use. Full summaries and results of each engagement effort, including the Residents' Survey, Recreation and Parks Survey, Community Visioning Exercise,

Bicycle and Trails Plan Mapping Activity, the 2024 Listening Sessions, and the 2025 Suggestion Sessions, are provided in the appendix.

1. RESIDENTS' SURVEY (2021-2022) HIGHLIGHTS

- Traffic congestion (67%), pedestrian safety (50%), and vehicular safety (35%) were the top transportation concerns across the county.
- Many residents expressed interest in alternative transportation methods, like biking and walking, if infrastructure and safety were improved. However, safety concerns and a lack of existing bike lanes and pedestrian amenities were significant barriers.
- Sidewalks in neighborhoods and commercial corridors were deemed "very important" by 51% of respondents.
- Nearly half of respondents (49%) prioritized connecting non-residential developments with surrounding residential areas through sidewalks and bike paths.

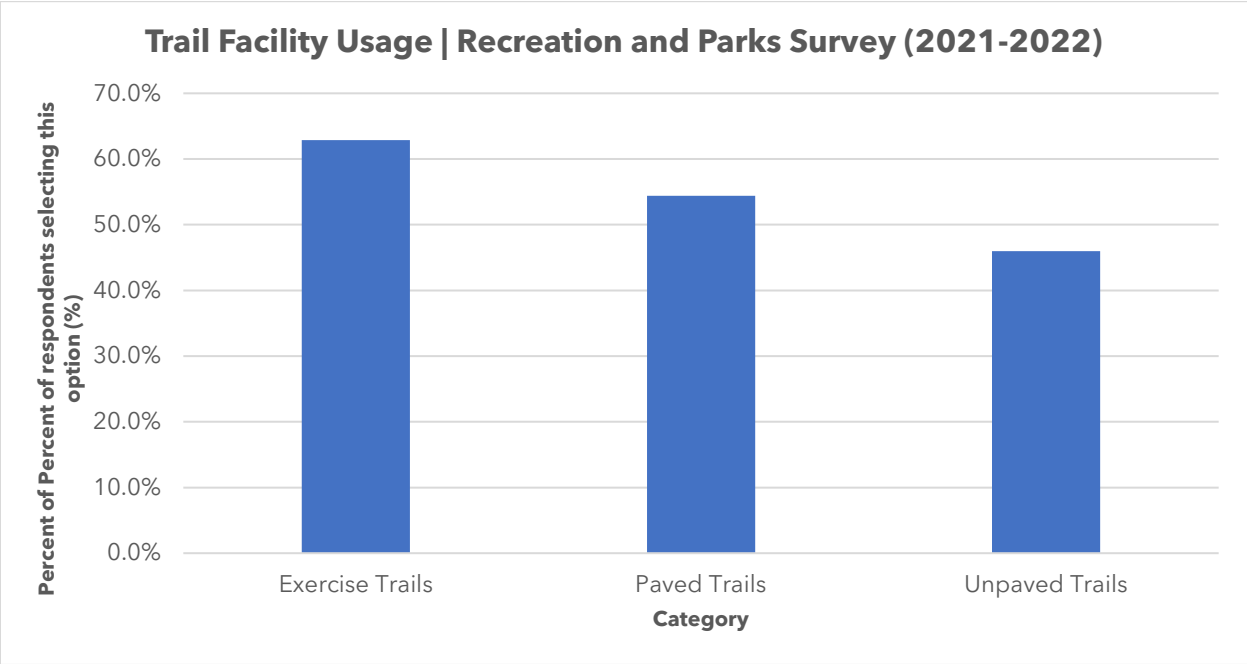


Top Transportation Concerns | Residents' Survey (2021-2022)

2. RECREATION AND PARKS SURVEY (2021-2022) HIGHLIGHTS

- Trails were among the most used facilities, with 63% of households using exercise trails (i.e., trails primarily used for walking, jogging, or running, regardless of surface type), 54% using paved trails, and 46% using unpaved trails. Typical reasons included exercise (82%), experiencing nature (69%), and recreation (58%).

- The highest priority was trails linking neighborhoods with parks (62%). Conversely, trails linking neighborhoods with places of employment were the least preferred (4%).
- Nearly half of respondents (43%) reported riding bicycles in Henrico County, with safety (61%) and lack of existing bicycling infrastructure (57%) cited as primary obstacles to increased biking.
- Facility Preferences: Residents preferred wide, paved shared-use paths (44%) and a mix of trail types (i.e., a variety of trail surfaces to accommodate different users and activities) (41%).

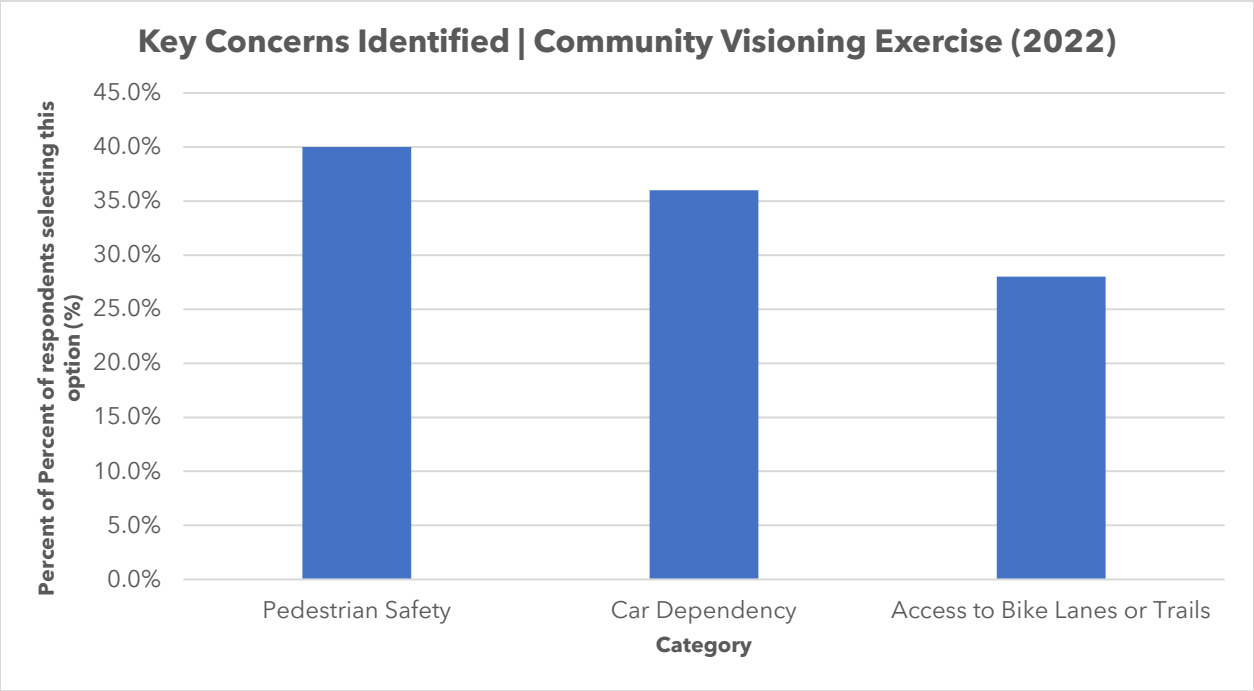


Trail Facility Usage | Recreation and Parks Survey (2021-2022)

3. COMMUNITY VISIONING EXERCISE (2022) HIGHLIGHTS

- The first major public engagement event for the 2045 Comprehensive Plan invited over 670 participants and generated more than 3,000 comments via in-person and online workshops.
- There was broad support for expanded pedestrian and bicycle infrastructure, with "walkable" and "bike" among the most common words used to describe a desired future vision for the county.
- Car dependency (36%), pedestrian safety (40%), and access to bike lanes or trails (28%) were identified as key concerns.
- A significant portion (40%) of respondents prioritized adding sidewalks in older neighborhoods and commercial corridors, identifying it as the most desired physical improvement.

- More than a third (38%) of respondents said they would like to use a bicycle more, and 55% said they would like to walk more, highlighting a clear interest in more accessible, multimodal transportation options.



Key Concerns Identified | Community Visioning Exercise (2022)

4. BICYCLE AND TRAILS PLAN MAPPING ACTIVITY (2022) HIGHLIGHTS

- Participants expressed a desire for:
    - A network of bike and pedestrian facilities separated from vehicular traffic.
    - Connectivity between parks, schools, employment centers, and recreational areas such as Deep Run Park and Dorey Park.
    - Retrofitting older neighborhoods with sidewalks and adding bike/pedestrian amenities such as wayfinding signs, bike maintenance stations, and lighting.
- Specific areas, including major roads such as W. Broad Street, Patterson Avenue, Nine Mile Road, and Laburnum Avenue, were identified as needing crossing improvements and more robust bike lane facilities.

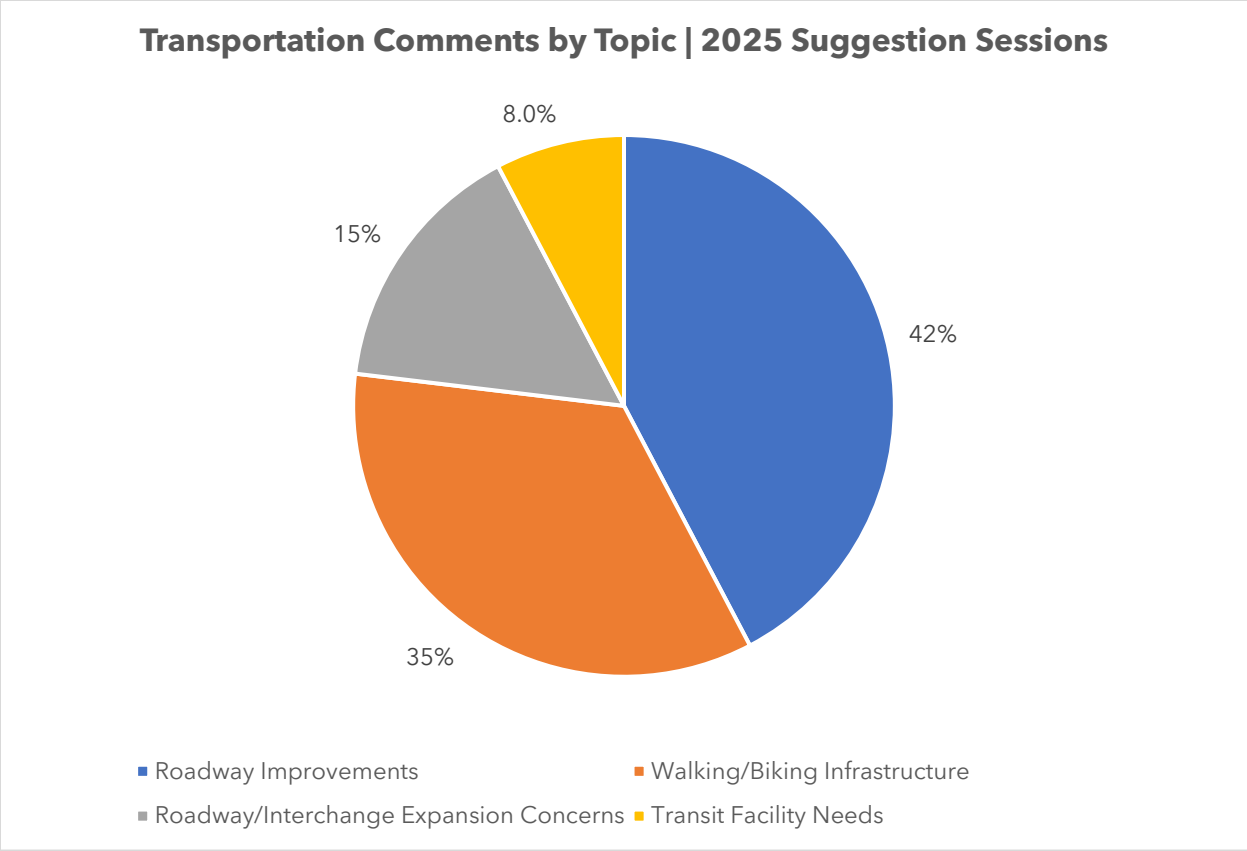
5. HENRICONEXT LISTENING SESSION (2024) HIGHLIGHTS

- Respondents emphasized the need for safer pedestrian and bicycle infrastructure, with car dependency and lack of safe traveling corridors frequently cited as key challenges.

- Many respondents highlighted the importance of eliminating traffic fatalities.
- While 98% of respondents currently rely on cars, 27% would prefer to walk if safe and accessible options were available. Many also expressed interest in alternative modes of transportation, such as bicycling.
- The most significant transportation-related concern was safety, particularly at intersections and areas lacking sidewalks.
- Most respondents (81%) supported the draft Transportation and Mobility Goal for the 2045 Comprehensive Plan, highlighting widespread community interest in improving mobility options and accessibility.
- More than a third of respondents (35%) identified automobile dependency as one of their biggest transportation concerns, underscoring the importance of expanding multimodal options.

6. HENRICONEXT SUGGESTION SESSIONS (2025) HIGHLIGHTS

- Transportation infrastructure made up 13% of all comments (26 of 195 total).
- Of the transportation comments, 35% (9 of 26) focused on walking/biking infrastructure, such as sidewalks, bike lanes/paths, and safer crossings.
- 42% of transportation comments (11 of 26) were about roadway improvements, including intersection changes, added turn lanes, and corridor upgrades.
- 8% of transportation comments (2 of 26) raised transit facility needs.
- 15% of transportation comments (4 of 26) cautioned against road expansion/new major interchanges.



Transportation Comments by Topic | 2025 Suggestion Sessions

TRANSPORTATION AND MOBILITY

TRANSPORTATION AND MOBILITY GOAL

Henrico County will create a safe, efficient, and effective transportation system that contributes to the well-being of residents and businesses and enhances the quality of life for people who live, work, and play in Henrico.

TRAVEL MODES

Pedestrian

EXISTING PEDESTRIAN NETWORKS [11]

The County's pedestrian network reflects the diverse character of its urban, suburban, and rural areas. Sidewalk infrastructure is more prevalent west of I-95, particularly in newer residential developments and along commercial corridors. Sidewalks in older neighborhoods often show signs of wear and exhibit gaps in continuity, primarily due to historical development patterns that predate sidewalk installation requirements and, in some areas, such as Lakeside, challenges posed by mature street trees, which can constrain sidewalk installation and maintenance. Recent policy changes, including updates to the DPW Design Manual, now require sidewalks on major thoroughfares and within new developments, promoting a more cohesive expansion of pedestrian infrastructure.

ACCESSIBILITY STANDARDS AND DESIGN REQUIREMENTS

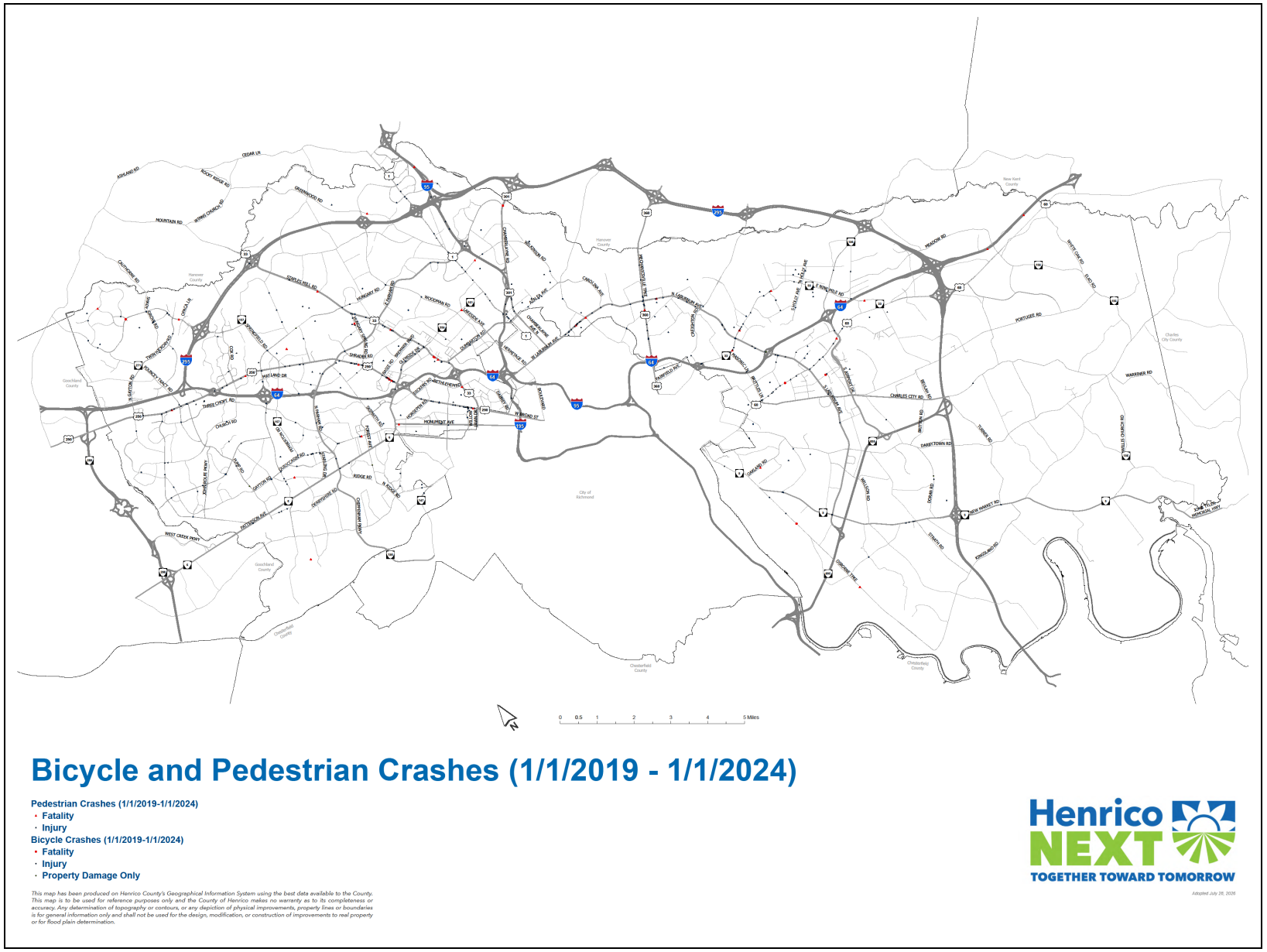
Henrico County is committed to ensuring that pedestrian infrastructure is accessible to people of all ages and abilities. In the public right-of-way, the County follows the Public Rights-of-Way Accessibility Guidelines (PROWAG), which establish standards for accessible design, including appropriate sidewalk widths, cross slopes, curb ramps, and pedestrian signals. This includes installing audible pedestrian signals and accessible pedestrian push buttons to better serve people with vision or mobility impairments. For facilities outside the right-of-way, such as transit stops, public buildings, and libraries, the Americans with Disabilities Act (ADA) standards continue to apply.

SAFETY TRENDS AND HIGH-CRASH AREAS

Between 2019 and 2024, Henrico County recorded 473 pedestrian-related crashes, resulting in 41 fatalities. High-crash areas, such as Nine Mile Road, Kenway Avenue, and W. Broad Street, highlight the need for targeted infrastructure improvements to enhance pedestrian safety. See the following Bicycle and Pedestrian Crashes map for the specific locations.

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[11] This sub-section identifies key pedestrian issues and the existing network and references the Transportation Existing Conditions Report, which contains more detail and is found in the Appendix.


0 0.5 1 2 3 4 5 Miles
Bicycle and Pedestrian Crashes (1/1/2019 - 1/1/2024)
Pedestrian Crashes (1/1/2019-1/1/2024)
Fatality
Injury
Bicycle Crashes (1/1/2019-1/1/2024)
Fatality
Injury
Property Damage Only
This map has been produced on Henrico County's Geographical Information System using the best data available to the County. This map is to be used for reference purposes only and the County of Henrico makes no warranty as to its completeness or accuracy. Any determination of topography or contours, or any depiction of physical improvements, property lines or boundaries is for general information only and shall not be used for the design, modification, or construction of improvements to real property or for flood plain determination.
Henrico NEXT
TOGETHER TOWARD TOMORROW
Adopted July 28, 2026

PEDESTRIAN VISION

Henrico County's vision for its pedestrian network prioritizes safety, connectivity, and access, serving as the cornerstone of its transportation and mobility goals. The County aspires to create a comprehensive and integrated pedestrian network that enhances community well-being, supports alternative transportation modes, and reduces car dependency. This vision is rooted in providing safe, convenient walking routes that connect residents to key destinations, such as parks, schools, commercial centers, and transit hubs.



Pedestrian crosswalk

IMPLEMENTATION

The County's DPW Design Guidelines require pedestrian infrastructure, including sidewalks and bus pads, in all applicable new developments and along major corridors. These measures ensure that future projects align with the County's vision for a connected and accessible pedestrian network. Additionally, Henrico's collaboration with regional transportation agencies, like the Richmond Regional Transportation Planning Organization (RRTPO), strengthens its capacity to implement multimodal and pedestrian-friendly projects.

RECENT PEDESTRIAN CONNECTION SUCCESSES

Henrico has recently implemented several projects to improve walkability and safety across the community, noted in the County's Capital Improvement Program (CIP) for FY 2027-2031 through FY 2032-2036. Notable sidewalk expansions have closed key gaps in the network. For example, Phase I of the Ridge Road Sidewalk project added approximately 1,920 feet of new 5-foot-wide sidewalk (with a grass buffer) along Ridge Road in the Tuckahoe area, completed in June 2024. In the nearby Raintree subdivision, the Raintree Drive Sidewalk project built approximately 1,400 feet of sidewalk with ADA ramps along Raintree Drive, linking residential streets from Falconbridge Road to the Raintree Commons area. These additions provide safe walking routes within neighborhoods and better connections to local parks and shopping areas.

Pedestrian access along major roads has also been enhanced. In 2024, the County completed the Parham Road Pedestrian and Transit Improvements, filling a missing link along a 0.45-mile stretch of Parham Road by constructing 620 feet of new sidewalk, new curb and gutter, drainage upgrades, ADA-accessible ramps, and two GRTC bus stop pads. This project improved walkability and transit access along the busy corridor, connecting nearby residents to bus routes and commercial destinations without needing a car. Likewise, targeted safety improvements have been made near schools. For instance, in late 2024, a new signalized pedestrian crossing was installed at Glen Allen High School (across Staples Mill Road), complete with crosswalk markings, push-button pedestrian signals, and ADA ramps. This provides students and other pedestrians with a much safer connection between the school and the adjacent Meadow Pond neighborhood.

PEDESTRIAN CONNECTIVITY PROJECTS UNDERWAY

Henrico is building on these successes with numerous other pedestrian projects planned over the next several years. Many of these upcoming initiatives, outlined in the County's CIP, will further expand the sidewalk network, improve crossings, and link key destinations.

INTERSECTION AND CROSSWALK ACCESSIBILITY UPGRADES

- Airport Drive and Nine Mile Road Pedestrian Intersection Improvements
- Parham Road and Staples Mill Road Pedestrian Intersection Improvements
- Parham Road and Hungary Springs Road Pedestrian Intersection Improvements
- Sadler Road and Sadler Place Intersection Improvements
- S. Laburnum Avenue/Route 5 Intersection Improvements
- W. Broad Street and Glenside Drive Intersection Improvements
- W. Broad Street Intersection Improvements at Dominion Boulevard and Cox Road
- Kingsridge Parkway Signal and Improvements
- Route 1 Pedestrian Signals

SIDEWALK GAP CLOSURES AND NEW SIDEWALK SEGMENTS

- Airport Drive Sidewalk
- E. Laburnum Avenue Sidewalk (Phase II)
- Eastridge Road Sidewalk
- Lauderdale Drive Sidewalk (Preliminary Design)
- Monument Avenue Sidewalk
- N. Parham Road Sidewalk (#3)
- Patterson Avenue Sidewalk
- Ridge Road Sidewalk (Phase 2)
- Ridgefield Parkway Sidewalk (Phase 3)
- S. Laburnum Avenue Northbound Sidewalk
- S. Laburnum Avenue Southbound Sidewalk
- Shrader Road Sidewalk
- Thalbro Street Sidewalks

MAJOR CORRIDOR WALKABILITY AND MULTIMODAL IMPROVEMENTS

- E. Laburnum Avenue Pedestrian Improvements
- N. Laburnum Avenue Pedestrian and Transit Improvements
- N. Parham Road Sidewalk and Signals
- Nine Mile Road Multimodal and Safety Improvements
- Nine Mile Road Reconfiguration and Pedestrian Safety
- Richmond–Henrico Turnpike Improvements (South)
- Staples Mill Road Improvements
- Staples Mill Road Pedestrian Improvements
- S. Laburnum Avenue Multimodal Improvements (over I-64)
- Mayland Drive Reconfiguration
- Woodman Road Improvements
- Three Chopt Road Improvements

- W. Broad Street Pedestrian and Transit Improvements (Forest Avenue to Willow Lawn Drive)
- W. Broad Street Pedestrian and Transit Improvements (Glenside Drive to Parham Road)
- W. Broad Street Pedestrian and Transit Improvements (Parham Road to Pemberton Road)
- Libbie Avenue Road Diet (bicycle/pedestrian enhancements)

TRAILS AND COMMUNITY CONNECTIONS

- Fall Line Trail – Brook Road to Hilliard Road segment
- Fall Line Trail – Lakeside Community Trail (Phase 1)
- Fall Line Trail – Lakeside Community Trail (Phase 2)
- Fall Line Trail – Lakeside Community Trail (Phase 3)
- Fall Line Trail – Longdale Trail and Intersection Improvements
- Fall Line Trail – Southern Section Amenities
- Fall Line Trail – Spring Park Trailhead
- Fall Line Trail – Villa Park segment
- Garden City Trail (GreenCity Connector Trail)
- Garden City Pedestrian Bridge
- Greenwood Glen–Magnolia Ridge Connector Trail
- Lake Overton Trail
- Maude Trevvett Elementary School Pedestrian Connection
- Messer Road Trail
- New Market Heights Trail
- VCC Connector Trail
- Capital Trail Lighting at Rocketts Landing
- Three Notched Trail (East-West connection from Goochland to Richmond)

DESIGN GUIDANCE AND CORRIDOR PLANNING

- Darbytown Road Improvements
- Hermitage Road Pedestrian and Roadway Improvements

- Lauderdale Drive Sidewalk
- New Market Heights Trail
- VCC Connector Trail

Intersection & Crosswalk Upgrades: A countywide effort is underway to retrofit key intersections with pedestrian accommodations. For example, the Countywide Pedestrian Intersection Accommodations project will add crosswalks, ADA curb ramps, and pedestrian signals at four busy intersections – including Gayton and Gaskins and Monument Avenue and Willow Lawn Drive – with construction expected by 2027. In addition, Henrico is installing new pedestrian signals at various locations (such as along Route 1) to improve safety on high-traffic corridors, with those signal upgrades slated for 2026. These enhancements will make it easier and safer to walk across major roadways and intersections that currently pose barriers to pedestrians.



Pedestrian crosswalk elements

New Sidewalk Extensions: Sidewalk infill projects are planned across multiple neighborhoods to continue closing gaps in the pedestrian network. Design work is already funded for a sidewalk along Airport Drive (near Richmond International Airport) in 2026, which will connect residential areas and businesses along that corridor. Similarly, a new

sidewalk along Monument Avenue in the county's West End is scheduled for 2027, extending pedestrian access on Monument Avenue beyond the city line. In eastern Henrico, Phase II of the Laburnum Avenue pedestrian improvements will add sidewalks and crossings along Laburnum Avenue by 2027. Each of these projects will knit together existing sidewalks into a more continuous network.

Corridor Enhancements for Walkability: Henrico is also pursuing larger-scale corridor improvements that integrate pedestrian and transit access. On W. Broad Street, for example, two major pedestrian/transit improvement projects are in design: one from Parham Road to Pemberton Road (targeted for 2029–2030) and another from Forest Avenue to Willow Lawn Drive (by 2028–2029). These projects will likely add sidewalks or multi-use paths along W. Broad Street, fill in missing crosswalks, and improve bus stop areas – critical in a busy retail corridor where many people walk or ride transit. Likewise, a future project on Williamsburg Road (anticipated around 2029–2030) will bring pedestrian and transit upgrades to that corridor, improving access in the Varina area.

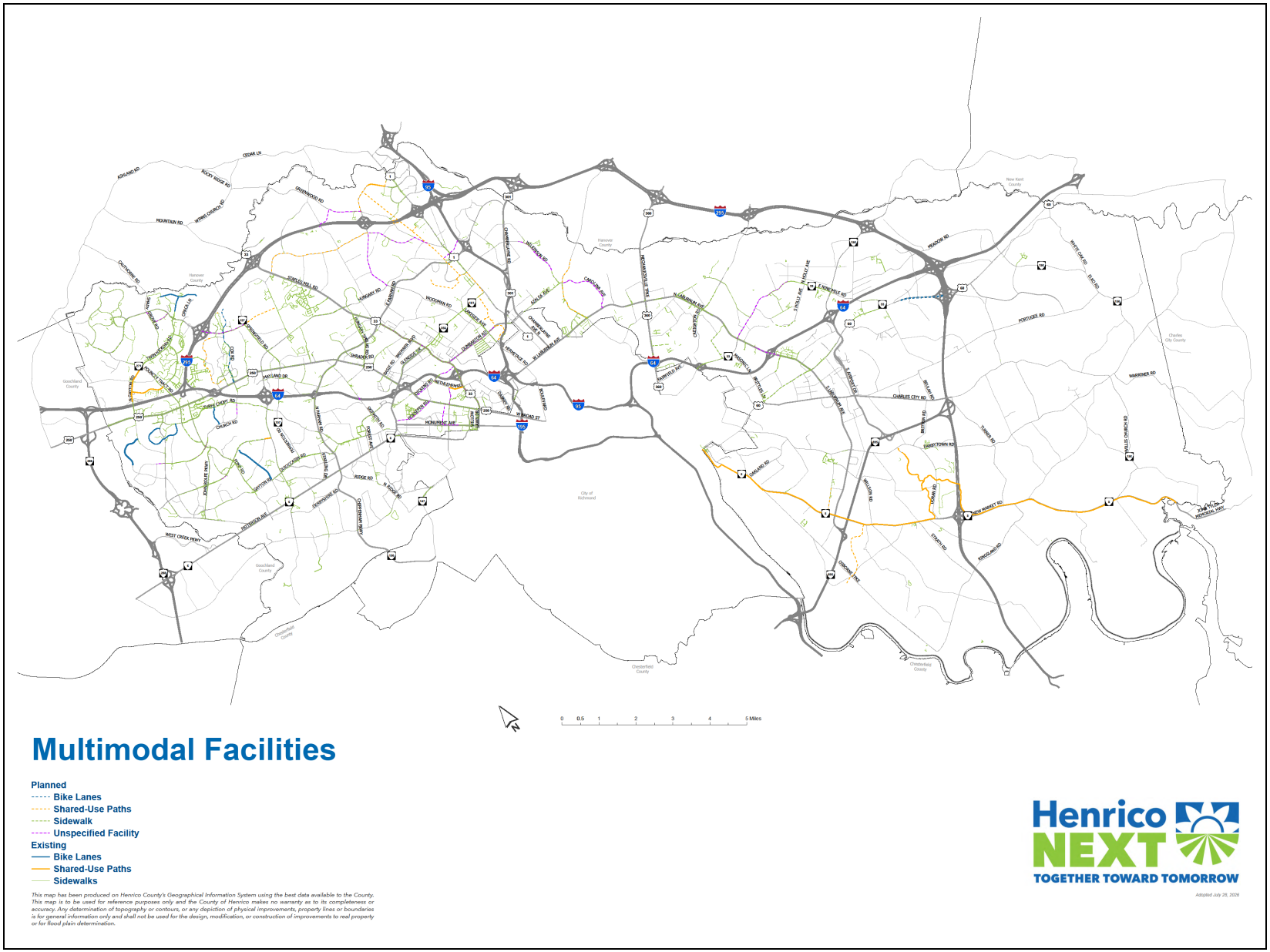
Trails and Community Connections: In support of recreational walking and inter-neighborhood connectivity, Henrico is investing in new trail links. A connector trail between the Greenwood Glen and Magnolia Ridge communities is planned for 2026, which will give those adjacent neighborhoods a safe walking/biking path to each other (and to nearby parks) without needing to use a main road. In the Garden City area of Varina, the County is planning a pedestrian bridge and trail project (preliminary engineering is slated for 2027–2029) to connect neighborhoods across a physical barrier. Supporting safe routes to schools is another priority: for example, a new pedestrian connection to Maude Trevvett Elementary School was recently completed, which will enable students in surrounding neighborhoods to walk or bike to school more safely. Henrico is also actively collaborating on regional trails, notably the forthcoming Fall Line Trail that will span the region. Several sections of the Fall Line Trail in Henrico are underway: the Park Street segment in the Lakeside area was completed in early 2024, and additional phases are in design for completion over the next few years. Once finished, the Fall Line Trail will link into Henrico's local pedestrian/bicycle network, connecting county residents to a 43-mile trail system extending well beyond Henrico's borders.

MULTIMODAL DESIGN GUIDELINES

Henrico County also relies on corridor- and area-specific guidance documents to ensure new development and roadway projects advance consistent, multimodal outcomes. The Westwood Area Multimodal Design Guidelines provide a tailored set of multimodal design standards for streets and connections as the area transitions toward a more urban, mixed-use environment. These guidelines include corridor categories and illustrative cross-sections that clarify how pedestrian, bicycle, transit, and vehicle elements should be accommodated in the right-of-way. To be effective, the guidelines should be formally adopted and then implemented through both Planning and DPW design review, as well as Plans of Development (POD) checklists and standard review procedures, so that projects in Westwood consistently apply the intended street typologies, facility widths, and multimodal elements.

Similarly, the Williamsburg Road study should be referenced as a key implementation tool for improving multimodal safety and connectivity along that corridor. The study provides direction on feasible roadway reconfigurations and targeted pedestrian and bicycle

improvements, helping to identify where right-of-way constraints, access management, and intersection treatments need to be addressed to improve comfort and safety for all users. Incorporating the study into Planning and DPW POD design review will help ensure adjacent development, frontage improvements, and capital projects align with the study's recommended cross-sections and multimodal priorities and will support coordinated implementation over time as funding and project opportunities arise. See the following Multimodal Facilities map for existing and planned locations.


Multimodal Facilities
Planned
Bike Lanes
Shared-Use Paths
Sidewalk
Unspecified Facility
Existing
Bike Lanes
Shared-Use Paths
Sidewalks
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0 0.5 1 2 3 4 5 Miles
Henrico NEXT
TOGETHER TOWARD TOMORROW
Adopted July 28, 2026

Bicycles

EXISTING BICYCLE NETWORKS

This section is guided by Henrico's Bike Plan, the County's first plan specifically tailored to biking and walking needs. The plan charts a course for meeting the varied needs of all users by establishing a long-term framework for expanding and improving bicycle and trail connections. It builds on data analysis, background research, and community input to set a clear vision and goals, identify a connected network of priority corridors, provide design guidance for facility types and supportive amenities, and outline strategic actions (projects, policies, and programs) to help implement the network over time.



Bicycle pathway

The County's existing bike network has expanded substantially and provides a growing foundation for improved connectivity. With approximately 83 miles of total bike facilities countywide, Henrico has grown its network in recent years, adding bicycle lane mileage from 9 miles in 2021 to over 60 miles in 2025. While there is a notable concentration of neighborhood bike lanes west of I-95, where urban and suburban development is more

prevalent, biking infrastructure in the county's more rural east end is typically geared more toward recreational purposes, highlighted by the Virginia Capital Trail.



Bikeway infrastructure

The County is home to nationally significant biking routes. Nearly 16 miles of U.S. Bicycle Route 76 (USBR 76), also known as the TransAmerica Bike Route, pass through Henrico County, forming part of the cross-country trail from Missouri to Yorktown, VA. Additionally, Henrico features a segment of U.S. Bicycle Route 176 (USBR 176), a 17-mile connector spur that links USBR 1 in Richmond to USBR 76 in southwest Henrico, largely aligning with the Virginia Capital Trail. These designations emphasize the County's strategic location within regional and national bicycle networks, supporting long-distance touring and local active transportation.

COMMUNITY FEEDBACK

Biking safety concerns remain prevalent in Henrico County, underscoring the need for new infrastructure such as separated bike lanes, lighting, and safe crossings in high-traffic areas. Between 2019 and 2024, there were 143 bicycle-related crashes, including five fatalities.

These ongoing safety issues underscore the challenges cyclists face on current roadways and trails. Additionally, bike paths should be better integrated with key destinations and other transportation modes, like public transit. The lack of connections between key destinations, such as parks, schools, and employment centers, limits the effectiveness of biking as a primary transportation option, while rural areas remain underserved. Community surveys have revealed strong public interest in biking infrastructure and safety improvements. Residents have emphasized the importance of paved, shared-use paths and retrofitting older neighborhoods with bike-friendly amenities.

BICYCLING VISION

Henrico County envisions a safe, efficient, connected, and sustainable bicycle network that promotes accessibility for people of all ages and abilities. Future strategies outlined in the Bike Plan [12] include enhancing connectivity through a cohesive network of bike paths and shared-use trails that link residential areas with parks, schools, and commercial districts. Safety measures are prioritized, including implementing separated bike lanes, improving crossings, and addressing high-crash areas.

Recent and upcoming improvements to the bicycle network illustrate this vision:

- In 2024, Henrico opened its first section of the Fall Line Trail, connecting the County's Spring Park to Richmond's Bryan Park. Further phases of the Fall Line Trail are underway. Henrico's segment will span from Bryan Park north to Woodman Road, where it will tie into the existing Fall Line Trail from Carter Park in the Town of Ashland to Woodman Road in Henrico County.

- In eastern Henrico, the County recently extended a shared-use path nearly 0.75 miles into Dorey Park, giving Virginia Capital Trail users direct access to park amenities at the Dorey Recreation Center. Another project, now in design, will add a 0.4-mile trail along Messer Road to link Varina High School with the Capital Trail by 2027.

- In western Henrico, a new 10-foot-wide asphalt trail was completed in 2020 to connect Short Pump Park with John Rolfe Parkway, improving bike/pedestrian access to nearby neighborhoods. An upcoming improvement will create a separated bike and pedestrian facility along Cox Road through the Innsbrook area, enhancing connectivity between commercial centers and residential communities.

- Henrico's CIP dedicates significant funding to bicycle infrastructure across the county, including investments in the Western Henrico Connector Trails ($25 million) and the Eastern Henrico Connector Trails ($27.5 million), to ensure continued expansion of the biking network.

- Henrico is advancing the Nuckols Trail as a key northside/shared-use spine that will fill a major gap in walking and bicycling connectivity along the Nuckols Road corridor. The next segment (Phase 2) will construct a new 12-foot-wide multi-use trail of about 1 mile, including a new pedestrian bridge over the Meredith Branch tributary. It is

[12] *See the Transportation Existing Conditions Report and the Bike Plan in the Appendix for more details.*

planned to run from the Phase 1 terminus at Broad Meadows Road to Francistown Road, using a combination of on-road (about 0.4 miles on existing Nuckols Road) and off-road (about 0.6 miles on an adjacent alignment) sections to improve comfort and continuity.

- The Messer Road Trail Connector will strengthen east-end bicycle and pedestrian access by creating a 12-foot-wide asphalt shared-use path of approximately 0.4 miles that links Varina High School directly to the Virginia Capital Trail at New Market Road (Route 5). The alignment is planned to begin at the New Market Road/Messer Road intersection and continue along the southeast side of Messer Road to connect into the existing sidewalk in front of the school, creating a safer, more comfortable connection for students and families, and offering a convenient "last-mile" link between neighborhoods and the regional trail network.

Transit Service

EXISTING TRANSIT SERVICES

Henrico County's transit network reflects its diverse urban, suburban, and rural landscapes, with services provided by the GRTC. The network includes the Pulse bus rapid transit (BRT) line, local and express bus routes, microtransit zones, and paratransit services for elders and riders with disabilities. Regional initiatives, such as the Greater RVA Transit Vision Plan and GRTC's Transit Strategic Plan (TSP), aim to expand transit corridors and enhance connectivity, further integrating Henrico into the regional transportation system.

BUS RAPID TRANSIT

The Pulse is a 7.6-mile BRT line connecting Rocketts Landing to Willow Lawn. It provides frequent, level-boarding service and dedicated bus lanes.



Local Bus Rapid Transit stop

FIXED ROUTE

Local bus routes operate throughout urban and suburban areas, while express routes primarily serve peak-hour commuters.



Local bus stop

MICROTRANSIT

Microtransit services blend elements of traditional transit and ridesharing by using smaller, on-demand vehicles with dynamic routing based on real-time passenger requests, effectively bridging gaps in fixed-route networks. These services are increasingly used to address "last-mile" challenges (getting riders from a transit stop or hub to their final destination, such as a home or workplace) and enhance access in underserved areas, supported by smartphone apps and real-time tracking. Henrico County has embraced microtransit as part of its broader mobility strategy, exemplified by the Azalea Zone (GRTC's first LINK microtransit zone launched in October 2023) and the Sandston–Elko Zone (launched in July 2024), which offer curb-to-curb service. These wheelchair-accessible rides connect residents to fixed-route transit in northern and eastern Henrico. Additional pilot zones, such as Short Pump and Innsbrook, are also identified in the 2023 GRTC Richmond Region Micro-Transit Study for potential implementation, extending microtransit access into western suburban areas.



Local microtransit vehicle

PARATRANSIT

The CARE (Community Assisted Ride Enterprise) and CARE Plus paratransit programs provide essential mobility for elders and riders with disabilities and meet Americans with Disabilities Act (ADA) requirements.



Local paratransit vehicle. Source GRTC

TRANSIT IMPROVEMENTS

Despite these services, significant accessibility gaps remain. Urban areas benefit from more comprehensive transit coverage than rural and low-density areas, which have limited transit options. The County as a whole lacks infrastructure such as sidewalks, safe crossings, and essential transit infrastructure like concrete landing pads, bus shelters, benches, and trash receptacles, creating barriers to seamless multimodal transit use. While recent service enhancements, such as increased frequencies, extended hours, and weekend coverage, have improved accessibility, some areas of the County could use service adjustments and additions; for example, the proposed Parham Road fixed route or a neighborhood transit hub (i.e., transfer facility).

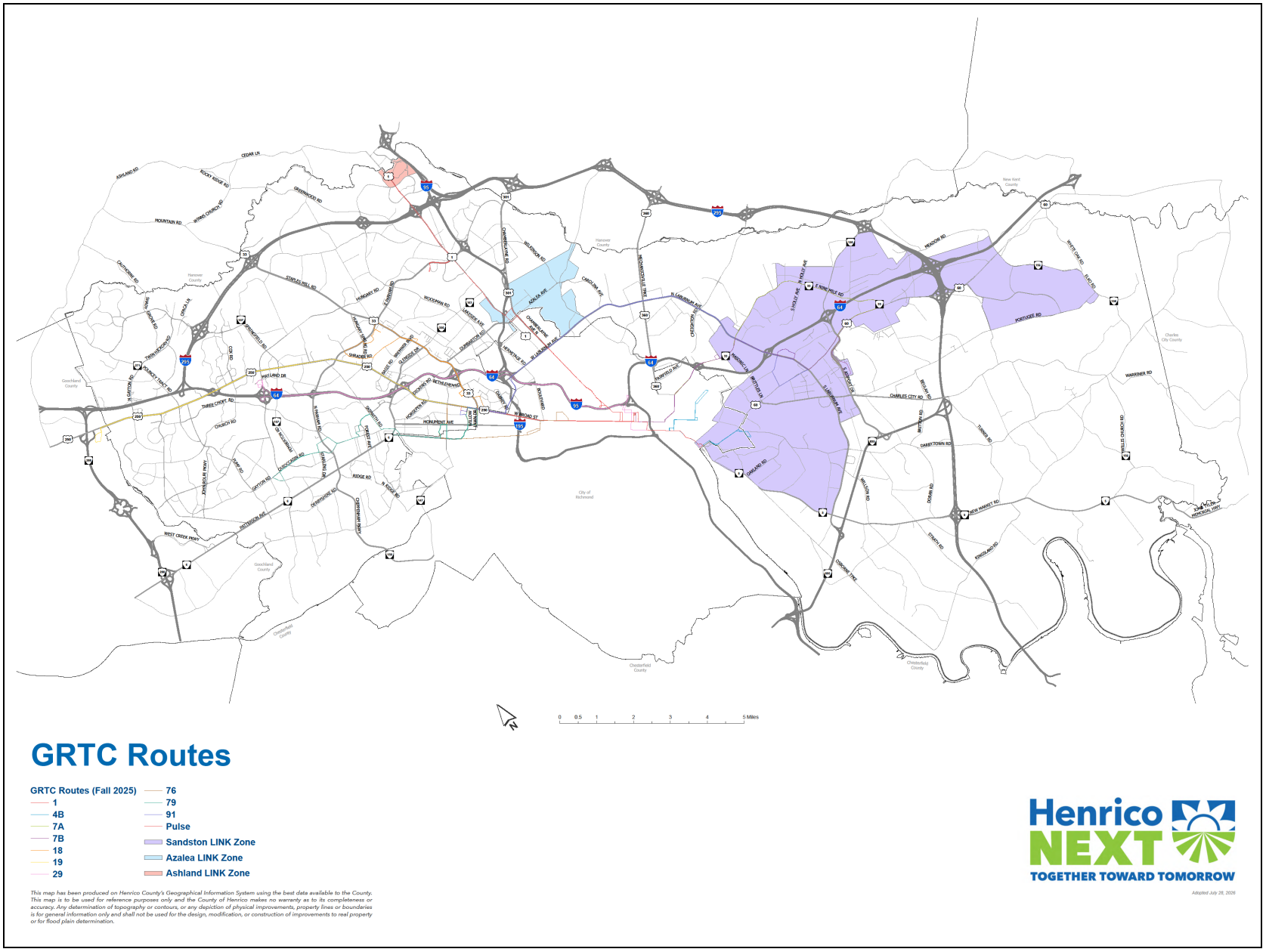
Henrico County is actively involved in regional planning efforts to address these challenges. Partnerships with organizations like the Central Virginia Transportation Authority (CVTA) and the Richmond Region Transportation Planning Organization (RRTPO) support infrastructure improvements and promote regional mobility.

Looking ahead, the County aims to expand its transit offerings to better meet the needs of its growing population. Plans include extending the GRTC BRT service to Virginia Center Commons (VCC) and Short Pump, improving local service coverage, and enhancing frequency on existing routes. It also seeks to invest in infrastructure improvements in underserved areas, ensuring all residents benefit from high-quality transit services. The County and GRTC are seeking options for transfer facilities and parking along W. Broad St.,

near Willow Lawn, and near Parham Rd. Plans for transfer stations are in the early stages, with proposals for a climate-controlled facility offering amenities such as restrooms and a park-and-ride area to facilitate commuter access for the region. For more details, see the GRTC Routes map on the following page.



Local bus


GRTC Routes
GRTC Routes (Fall 2025)
1
4B
7A
7B
18
19
29
76
79
91
Pulse
Sandston LINK Zone
Azalea LINK Zone
Ashland LINK Zone
0 0.5 1 2 3 4 5 Miles
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PARK-N-RIDES

Park-N-Ride facilities are an important part of Henrico's multimodal system, providing convenient locations where travelers can park and continue their trip by other modes of transportation. In a county with many suburban and lower-density areas, Park-N-Rides can help reduce peak-period congestion, expand the practical reach of transit, and make longer-distance commutes more reliable.

EXISTING PARK-N-RIDES

GRTC's current Park-N-Ride network in Henrico supports commuter travel and transit access in key areas of the county with the following facilities:

- Glenside Park-N-Ride
- Gaskins Park-N-Ride
- Parham Park-N-Ride

These sites serve as access points to regional travel options and provide a "meet-up" location for carpools and vanpools, helping reduce single-occupant vehicle trips in higher-congestion corridors.

PROPOSED PARK-N-RIDES

Henrico's Capital Improvement Program includes committed funding for additional Park-N-Ride facilities intended to strengthen access to transit corridors and future service improvements. Planned locations include:

- Willow Lawn – New Park-N-Ride facility supporting continued transit activity at the western end of the Broad Street corridor.
- Broad Street corridor for transit – A Park-N-Ride/transfer function intended to support enhanced service and improve connections.
- Short Pump (future BRT end-of-line) – A longer-term concept to support a future westward BRT extension and provide a high-capacity intercept location for commuters.
- Old Osborne Turnpike (Route 5) – New Park-N-Ride facility to improve multimodal access and expand options for the county's eastern corridor. This should connect to the future BRT eastern expansion.

TRANSIT VISION

Henrico's vision for future transit service intends to create a safe, efficient, and accessible transportation network that meets the needs of its diverse population. The County emphasizes expanding and enhancing transit options to promote mobility for all residents, reducing car dependency, and supporting sustainable growth. This vision is informed by community feedback, transit challenges, and future aspirations for a robust multimodal system.

Key influencing factors for transit service include population growth and the evolving needs of urban, suburban, and rural areas. Equity is also a critical focus, with efforts to address these disparities through targeted expansions and enhancements, particularly in underserved areas. Safety remains a pressing concern, with plans to address high-crash zones near transit hubs and improve pedestrian and cyclist infrastructure around bus stops.

Henrico also recognizes the value of integrating microtransit solutions into the broader transit system. The flexible and demand-responsive nature of microtransit offers a tailored approach to bridging connectivity gaps within the existing network. Expanding these services can serve as a model for addressing the "last-mile" challenge (the gap between a transit stop and a rider's actual origin or destination, often the final short segment of a trip), particularly in suburban and rural areas where fixed-route transit is less practical.

Coordination with existing fixed-route transit services and infrastructure is another essential approach. Connecting microtransit to key transit services, such as the GRTC Pulse, local bus routes, and regional transportation centers like the Staples Mill Amtrak Station, would enhance the overall network's efficiency and promote a seamless multimodal transportation experience. As microtransit solutions evolve, Henrico can further integrate these systems into long-term land-use and transportation planning efforts to align with sustainable growth and community-focused development goals.

TRANSIT PROJECTS TO PRIORITIZE:

- Parham & Broad Transfer Station & Parking
- Willow Lawn Transfer Station & Parking
- BRT Pulse Extension West to East
- New North-South BRT to Virginia Center Commons area
- Parham Rd Route (Proposed Route 92 in GRTC's Transit Strategic Plan)
- Express Route to Innsbrook area
- Airport Express Route
- Countywide Microtransit zones
- Improved bus stop infrastructure (e.g., Landing pads, lighting, shelters, benches, and trash receptacles)
- Countywide increased frequency on existing transit routes
- New transit service to accompany redevelopment and future development in the County

Interregional Services

EXISTING INTERREGIONAL SERVICES

Henrico County's existing passenger rail, air travel, and interregional bus services offer vital connectivity within the region and beyond, supported by key infrastructure and long-term planning initiatives.

PASSENGER RAIL

Passenger rail is anchored by the Staples Mill Road Amtrak Station (RVR), Virginia's busiest hub for regional and long-distance routes. Amtrak's services include routes connecting Henrico to Washington, D.C., and interregional routes along the East Coast. In addition, the station plays a role in proposed high-speed rail initiatives like the Southeast High-Speed Rail Corridor, which intend to enhance travel efficiency and frequency.

AIR TRAVEL

Air travel is facilitated by Richmond International Airport (RIC), located in eastern Henrico. It serves nearly 4.8 million passengers annually, with flights provided by major carriers such as Delta, Southwest, and United Airlines. Its master plan outlines future expansions, including terminal improvements, additional parking facilities, and the development of an Aviation Business Park to accommodate growing passenger and cargo demands.

INTERREGIONAL BUS SERVICE

Henrico County is also served by multiple interregional bus services that connect the area to major cities across the East Coast. In addition to the Virginia Breeze Capital Connector, which links Henrico to Washington, D.C., with stops at Staples Mill Amtrak Station and Richmond International Airport, private carriers such as Greyhound, Megabus, and Apex Bus also operate intercity routes through the county. These services offer residents direct access to destinations including New York City, Philadelphia, Atlanta, and other key metropolitan areas, enhancing Henrico's role as a regional transportation hub and complementing the local and regional transit network.

INTERREGIONAL VISION

Henrico County's vision for interregional services emphasizes integrating diverse transportation modes to foster connectivity, economic growth, and accessibility for residents and businesses. Key assets, ongoing projects, and influential trends shaping the region's evolving travel needs support this vision.

Population and economic growth continue to drive demand for enhanced regional mobility. As development intensifies, the County recognizes the importance of accessible and reliable transportation systems that serve a wide range of users. The rise of high-volume corridors, such as those supported by the Capital Trail and the Fall Line Trail, further reflects a growing interest in multimodal connectivity. These trails serve recreational purposes and act as functional components of the interregional transportation network, accommodating pedestrians and cyclists while linking communities within and beyond Henrico.

At the core of Henrico County's interregional transportation strategy are two major hubs: the Staples Mill Road Amtrak Station and Richmond International Airport (RIC).

STAPLES MILL AMTRAK STATION

The Staples Mill Amtrak Station, located at 7519 Staples Mill Road in Henrico County, is a cornerstone of passenger rail in the Southeast. As the busiest Amtrak station in the region, it served 464,881 passengers and 20 daily trains in Fiscal Year 2024. Despite its critical role in regional mobility, the facility has seen limited upgrades since its original construction in 1975.

The County supports continued investment in the station to ensure it can meet the demands of a growing population and expanding rail service. With the Commonwealth of Virginia's Transforming Rail in Virginia initiative and the anticipated addition of 12 daily trains by 2030, the station is expected to experience significant increases in ridership and operational activity. These changes necessitate improvements that enhance safety, accessibility, and passenger experience.

The County will continue to collaborate with the Virginia Passenger Rail Authority (VPRA) and other stakeholders to advance planning, design, and funding efforts that align with broader state and federal transportation goals. Enhancing Staples Mill Station, including modernization of the main building and boarding platforms, is essential to supporting multimodal connectivity, reducing congestion along the I-95 corridor, and fostering sustainable economic growth throughout Central Virginia.

RICHMOND INTERNATIONAL AIRPORT (RIC)

Planned initiatives to expand RIC, including terminal modernization, airfield improvements, and additional nonstop flight options, are positioning the airport as a growing regional gateway. As air travel demand rises, RIC's strategic location in Henrico places the County at the forefront of regional mobility and economic development. However, unlike many peer cities where travelers can conveniently reach central business districts or surrounding communities via public transit, the Richmond region currently lacks a direct, frequent, and reliable public transit connection between RIC and key destinations in Henrico. Addressing this gap through dedicated express bus service or integration with future microtransit or BRT corridors would significantly enhance accessibility, reduce car dependency, and support broader regional mobility goals.

When combined with the advancement of higher-speed rail at Staples Mill Station, RIC and Henrico's other interregional assets have the potential to function as a cohesive, multimodal system, efficiently connecting people, goods, and services across Virginia and beyond. With strategic investment and enhanced multimodal integration, these hubs can anchor a more connected and competitive regional transportation network.

Freight

EXISTING FREIGHT NETWORKS

Henrico County is a key hub for freight transportation in the Richmond Metropolitan Area, leveraging its strategic location, robust infrastructure, and connections to surrounding regions. Freight movement is supported by a combination of truck, rail, and air transport modes, which are integrated into the broader logistics network of Virginia and the Mid-Atlantic. The County actively collaborates with the Virginia Port Authority and Port of Virginia to support regional freight mobility. This partnership is embedded within broader intergovernmental frameworks such as the Capital Region Airport Commission and the

Richmond Marine Terminal Task Force, which include Henrico, Richmond, Chesterfield, and Hanover, working together to optimize the Richmond Marine Terminal (RMT).

ALIGNMENT WITH VIRGINIA STATE FREIGHT PLAN

Henrico's alignment with the Virginia State Freight Plan, combined with these partnerships, enables a coordinated approach to infrastructure enhancements, such as intermodal access roads, rail spurs, and cargo-handling facilities that improve efficiency and capacity. This coordinated regional strategy ensures that the RMT and RIC remain critical nodes in Virginia's logistics network, leveraging Henrico's strategic location, multimodal investments, and economic development initiatives to enhance freight movement across the Mid-Atlantic region.

TRUCKING AND HIGHWAY ACCESS

Trucking remains the primary mode of freight movement in Henrico County, with its extensive road network accommodating high volumes of goods. The County's proximity to I-95, a critical north-south freight corridor, and I-64, which connects to the Port of Virginia and the Port of Richmond, ensures efficient access to national and international markets. The nearby Port of Richmond, located along the James River, serves as an inland cargo terminal that enhances intermodal freight movement in the region, particularly for container and bulk shipments. Major arterial roads, such as W. Broad Street and Parham Road, also play key roles in facilitating intra- and inter-county freight distribution. However, high traffic volumes and congestion on key corridors, such as Staples Mill Road and Williamsburg Road, highlight the need for ongoing capacity improvements and strategic freight management.

RAIL FREIGHT AND INTERMODAL CONNECTIVITY

Henrico County is well-integrated into Virginia's rail freight system, operated primarily by CSX Transportation and Norfolk Southern Railway. Acca Yard, a major CSX freight rail hub located just inside the city of Richmond near the Henrico County border, plays a critical role in supporting regional commerce. Situated along the Richmond Terminal Subdivision near Westwood Avenue, just north of W. Broad Street and west of I-64/I-95, the yard connects several key rail lines, including the RF&P, Bellwood, and North End subdivisions. Though technically within Richmond, Acca Yard directly influences freight movement and economic activity in Henrico, serving as a vital link for goods traveling through Central Virginia and the broader Mid-Atlantic. Rail infrastructure in Henrico connects to the Port of Virginia and other key intermodal facilities, facilitating the efficient transfer of goods between rail and truck. The County aligns with the Virginia State Freight Plan by prioritizing rail investments that enhance freight capacity and reduce roadway congestion. See the Railroads map on page 206 for the specific locations of rail lines and stations.

AIR CARGO

Richmond International Airport (RIC) is a critical hub for air cargo services in central Virginia. Handling approximately 142 million pounds of cargo in 2021, the airport supports major carriers such as FedEx, UPS, and DHL. Its strategic location along the I-64 corridor and strong airfield infrastructure provide essential access to national and international markets, supporting a wide range of regional industries. The 2022 RIC Master Plan outlines key initiatives to expand air cargo capacity, including new facilities, improved taxiway connections, and enhanced landside access for freight carriers. These planned

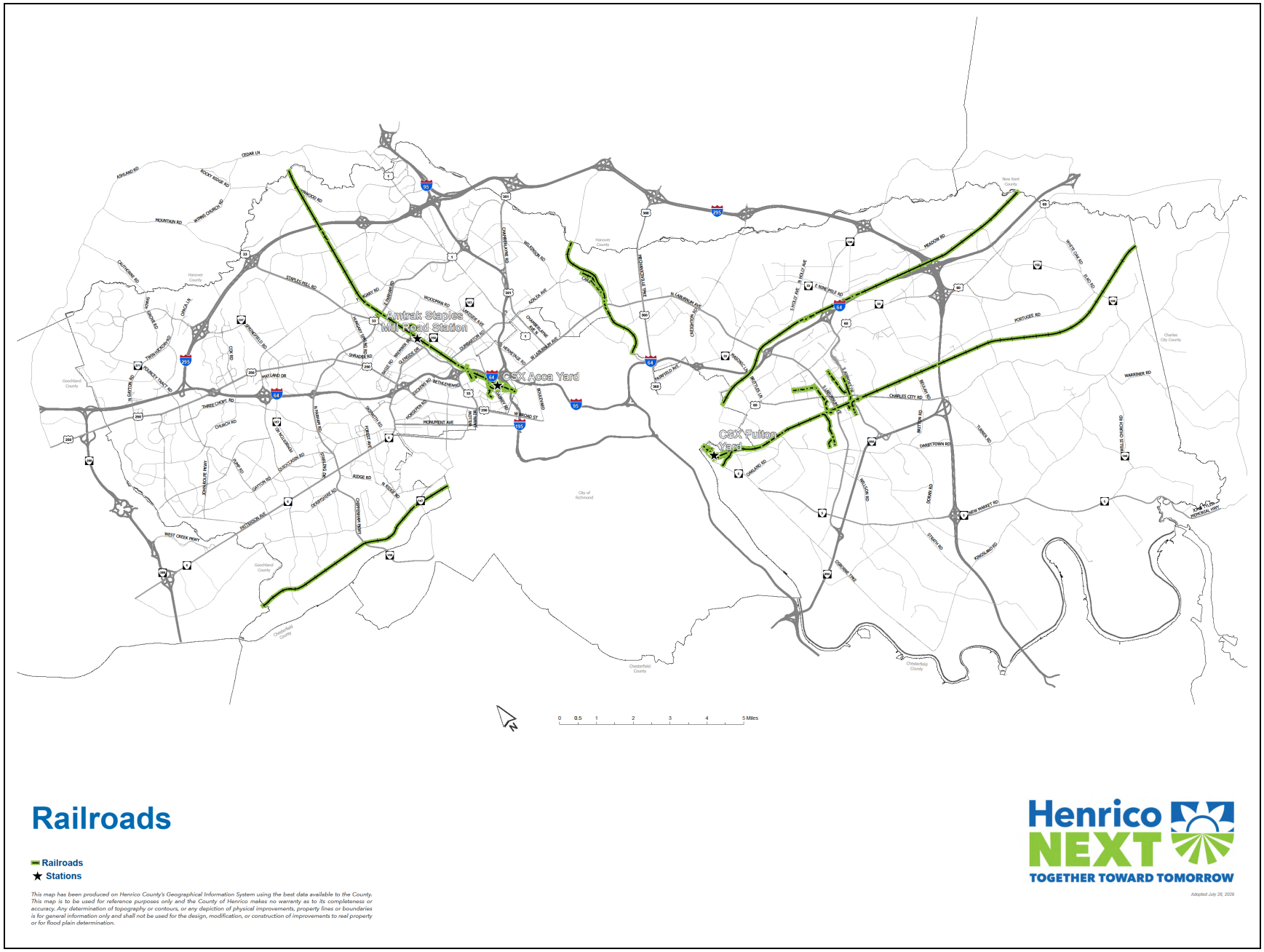
enhancements align with Henrico County's economic development strategy and are designed to meet growing demand in the air freight sector.

PORT CONNECTIVITY AND SUPPLY CHAINS

Henrico County benefits from its proximity to the Port of Virginia, a major deep-water port that handles a significant portion of the East Coast's containerized cargo. Efficient rail and trucking connections to the port allow Henrico to function as a key logistics node, facilitating the distribution of goods to and from the Mid-Atlantic region. The County's freight strategies emphasize strengthening these connections to ensure businesses can leverage the Port of Virginia's global reach.

CONNECTION TO VIRGINIA STATE FREIGHT PLAN

Henrico County's freight transportation planning is guided by the Virginia State Freight Plan, which sets forth strategies for improving the efficiency, safety, and sustainability of the Commonwealth's freight system. The plan emphasizes enhancing multimodal freight corridors, reducing bottlenecks, and supporting economic growth through strategic investments. Henrico County's integration of truck, rail, and air freight aligns with these objectives, positioning the County as a regional leader in logistics and supply chain management.



Railroads

Railroads
Stations

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PROJECT UNDERWAY: FULTON YARD LAYOVER FACILITY

The Fulton Yard Layover Facility project will provide an overnight storage and servicing yard in the Richmond metropolitan area. This facility is necessary to support growth in passenger rail service between Richmond and Washington, D.C., from one daily round trip to five daily round trips, serving Richmond Main Street and Staples Mill Station with connections to the Northeast. It will also improve on-time performance and mitigate train congestion in the Richmond region by reducing existing deadhead movements for Amtrak trains through Acca Yard between Richmond Staples Mill Station and Richmond Main Street Station. The Fulton Yard Layover Facility Project will eliminate the deadhead movements of existing and future planned Amtrak trains through Acca Yard and accommodate Amtrak's new Airo trainsets at the new facility.

The project is located adjacent to CSX's Fulton Yard, located on the Peninsula Subdivision of CSX between milepost (MP) CA 83 and MP CA 84 in Henrico County. The project includes design and construction of three storage tracks, one maintenance platform, a service pit covered by a canopy, upgrades to the existing railroad signal system for entering and exiting the site, roadway improvements for access into the facility, a parking lot for staff, and a site building for equipment storage and staff facilities.

FREIGHT VISION

Henrico County's vision for its freight network and services will foster a well-connected, efficient, and sustainable transportation system that accommodates freight mobility while aligning with broader land use and community objectives. The freight vision is built on key principles outlined in the Virginia State Freight Plan, prioritizing safety, connectivity, economic growth, and environmental sustainability. The County aims to balance freight operations with community development by enhancing infrastructure, reducing conflicts with other transportation modes, and promoting compatibility with local land use policies.

FREIGHT ASSETS

Freight transportation in Henrico County benefits from substantial assets, including major interstate corridors such as I-95, I-64, and I-295, which serve as critical arteries for regional and national goods movement. The Staples Mill Amtrak Station and CSX Acca Yard also provide significant rail freight capacity, while Richmond International Airport (RIC) is a hub for air cargo. The existing road network facilitates efficient freight movement, supported by classifications such as major arterials and collector roads to handle varying freight traffic volumes.

GROWTH CONSIDERATIONS

Economic growth and changing land use patterns, such as increasing demand for industrial and warehousing spaces, spur freight activity. Additionally, population growth and urban development can strain transportation networks, necessitating improvements in freight corridors. Environmental concerns, such as air quality and noise impacts, also influence freight planning, aligning with sustainability and community well-being objectives.

ALIGNMENT WITH LAND USE REGULATIONS

Alignment of freight with land use regulations is critical to Henrico's planning. This Plan emphasizes infill development and redevelopment in existing industrial zones to optimize

freight accessibility without encroaching on residential or environmentally sensitive areas. This approach is informed by public engagement, highlighting concerns about noise, safety, and environmental impacts of freight activities near neighborhoods. Policies prioritize separating freight corridors from pedestrian and cyclist networks and encouraging mixed-use developments that support local economies while mitigating negative freight impacts.

In alignment with the Virginia State Freight Plan, Henrico County works toward a resilient and multimodal freight network. Strategies such as optimizing freight routes, leveraging technological advancements in logistics, and fostering public-private partnerships for infrastructure development help strengthen the County's role in regional and national freight mobility.

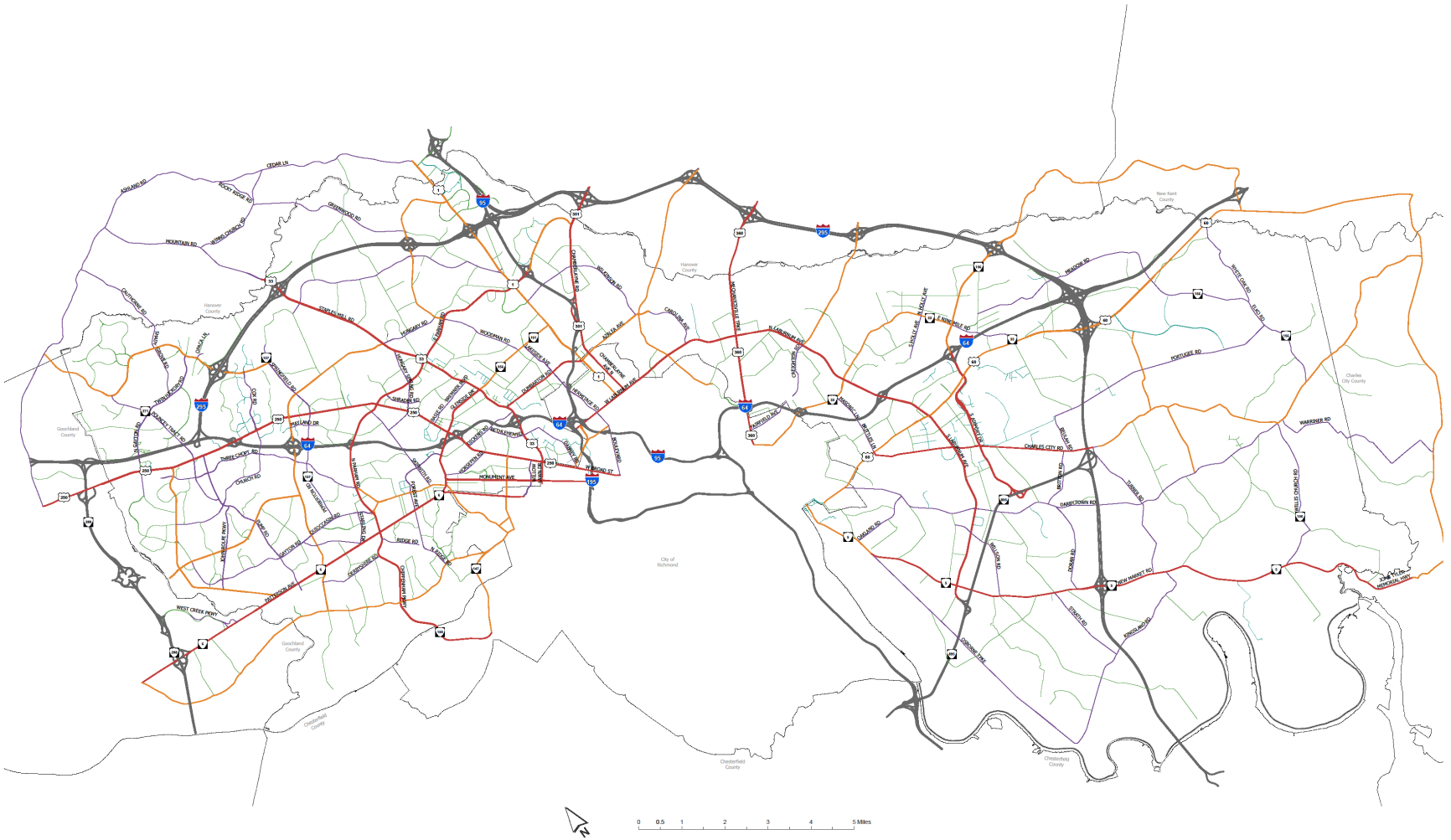
Road Facilities

EXISTING ROADWAY NETWORKS

Controlled-access roads in Henrico County are crucial for intercity and metropolitan travel, facilitating the highest vehicular throughput. Major arterials connect significant activity centers and support long-distance, high-volume traffic within the metropolitan area. Minor arterials complement the major ones, prioritizing access and safety, while major and minor collector roads provide essential linkages within neighborhoods and business districts. Local streets cater primarily to direct access needs in residential areas. The Major Thoroughfare Plan Map illustrates existing and proposed county roadways with designated functional classifications. This chapter's Major Thoroughfare Plan section provides more detailed descriptions of each functional classification. The mapped designation of each roadway's functional classification is provided on page 209.

TRAFFIC VOLUMES

Henrico's road network accommodates high traffic volumes, with interstate routes such as I-64 and I-95 experiencing the highest daily volumes, ranging from 61,000 to 75,000 vehicles per day. Non-interstate roads like W. Broad Street (U.S. 250) also see substantial traffic, with specific segments handling upwards of 67,000 vehicles daily. The County utilizes volume-to-capacity (V/C) ratios to monitor and manage congestion. Several road segments have already surpassed capacity, including parts of W. Broad Street and Gaskins Road, highlighting the need for targeted improvements. Mapped traffic volumes are found on page 210 and volume-to-capacity ratios are found on page 211.



Functional Classification

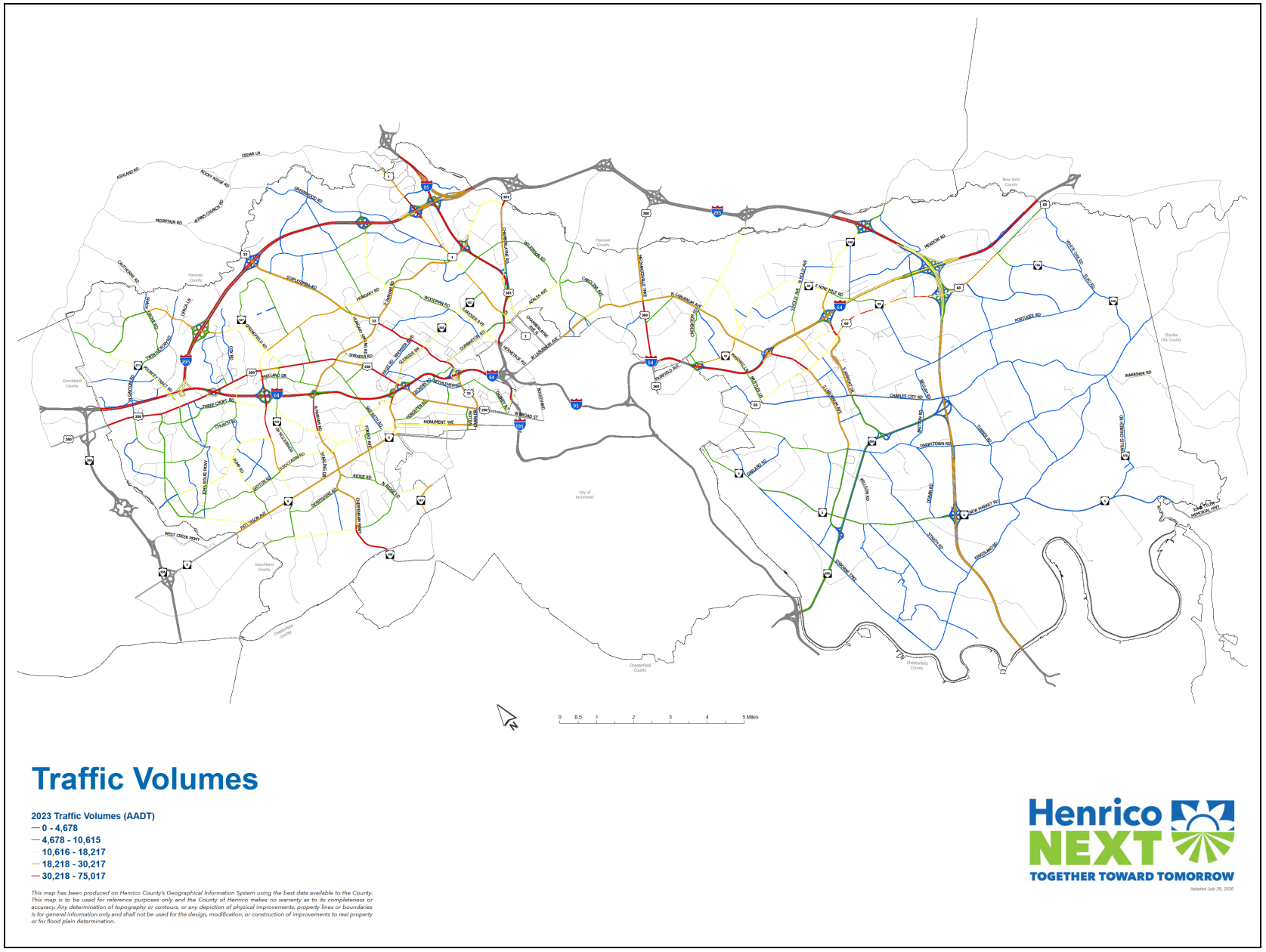
Functional Classification

- CONTROLLED ACCESS
- MAJOR ARTERIAL
- MAJOR COLLECTOR
- MAJOR ACCESS ROAD
- MINOR ARTERIAL
- MINOR COLLECTOR
- LOCAL

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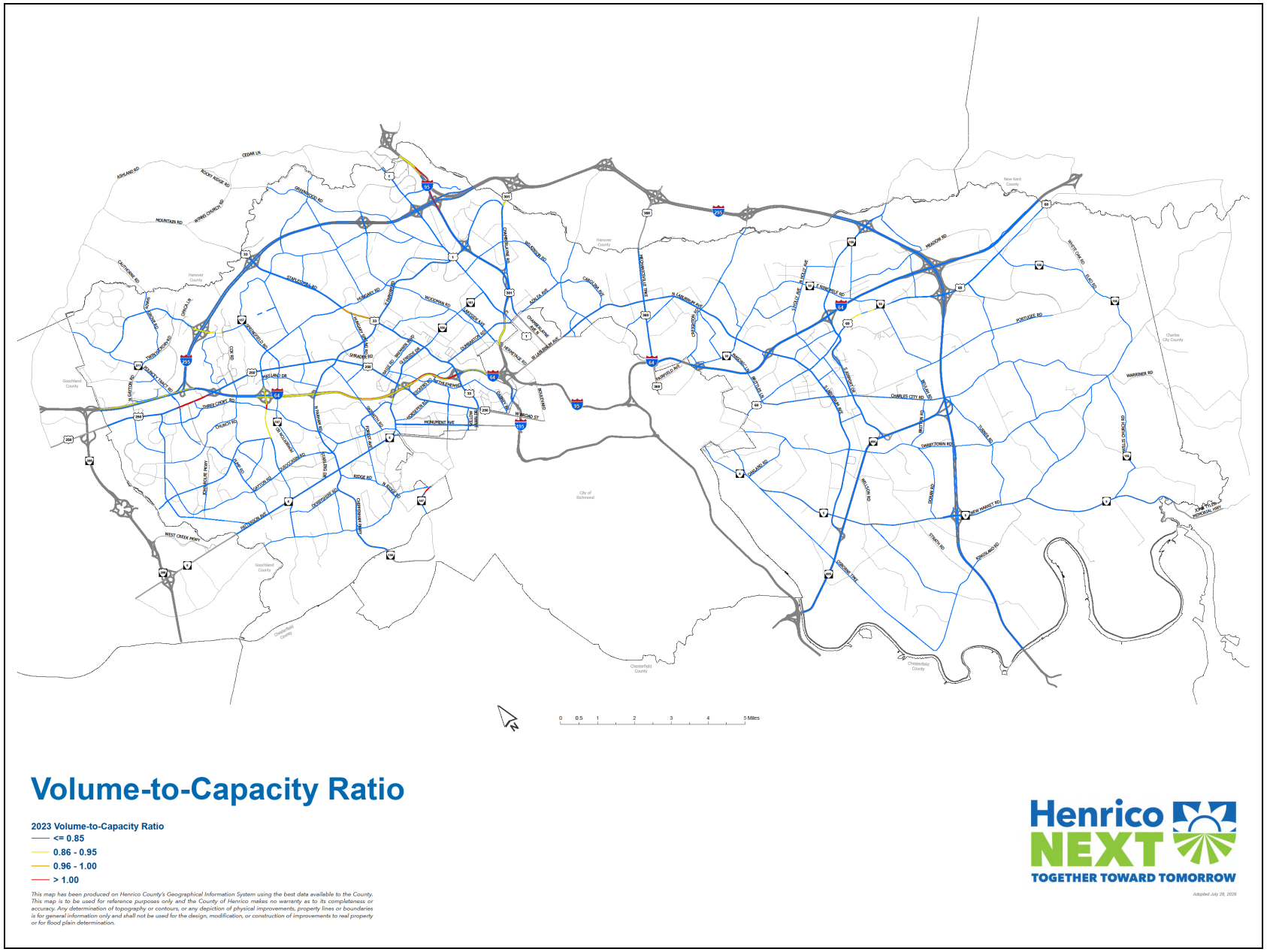
Traffic Volumes

2023 Traffic Volumes (AADT)

- 0 - 4,678
- 4,678 - 10,615
- 10,616 - 18,217
- 18,218 - 30,217
- 30,218 - 75,017

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0 0.5 1 2 3 4 5 Miles
Volume-to-Capacity Ratio
2023 Volume-to-Capacity Ratio
<= 0.85
0.86 - 0.95
0.96 - 1.00
> 1.00
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ROADWAY SAFETY

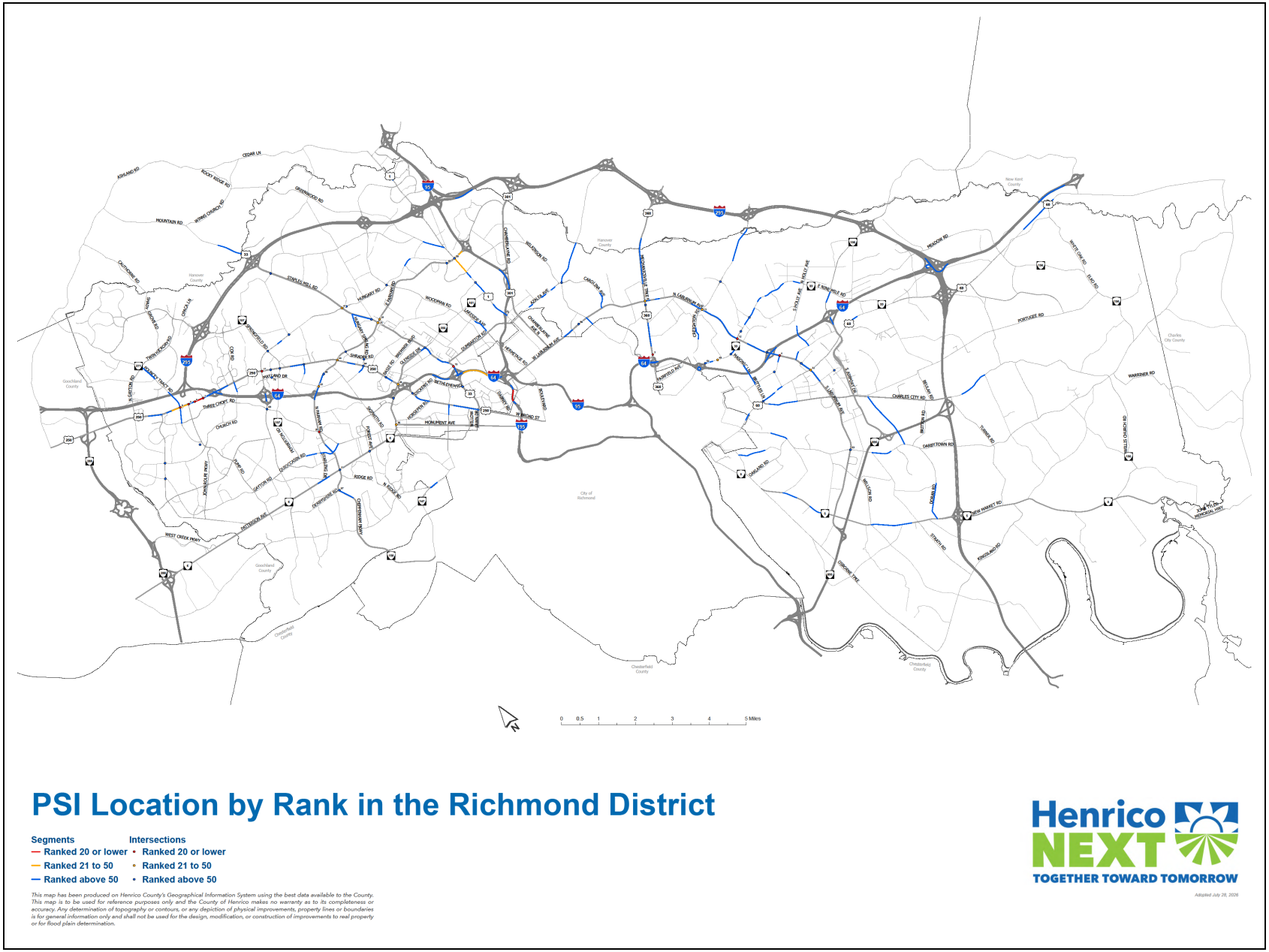
Safety remains a paramount concern. From 2019 to 2024, Henrico recorded over 31,000 crashes, including 188 fatalities and 1,041 severe injuries. High-crash locations, including W. Broad Street near Short Pump and Chamberlayne Avenue (U.S. 301) at Azalea Avenue, are identified as priorities for improvement under VDOT's Potential for Safety Improvements (PSI) program. These PSI locations guide safety-focused planning and bolster the County's eligibility for state and federal funding under programs like SMART SCALE. [13] See the PSI Location by Rank in the Richmond District map on the following page for more details.

ARRIVE ALIVE HENRICO

The County's Arrive Alive Henrico program, funded through the Safe Streets and Roads for All (SS4A) initiative, aims to reduce roadway fatalities and serious injuries through infrastructure improvements, public education, and policy changes. On December 3, 2024, the County's Board of Supervisors unanimously approved an SS4A commitment letter resolution aligned with Virginia's 2022-2026 Strategic Highway Safety Plan (SHSP). The resolution states that the County is committed to reducing roadway fatalities and serious injuries by more than 50 percent by 2035. Recent public engagement efforts have identified key safety concerns, including pedestrian and bicyclist infrastructure needs, unsafe driving behaviors, and the importance of community partnerships in achieving safer streets.



[13] ***SMART SCALE*** *(Smart* - System for the Management and Allocation of Resources for Transportation: Safety, Congestion, Accessibility, Land Use, and Economic Development*) is Virginia's data-driven process for prioritizing and funding transportation projects. It evaluates proposals based on objective criteria such as safety improvements, congestion mitigation, accessibility, environmental impact, economic development potential, and land use coordination to ensure public funds are directed toward the most effective and equitable solutions.*



PSI Location by Rank in the Richmond District

Segments
- Ranked 20 or lower
- Ranked 21 to 50
- Ranked above 50

Intersections
- Ranked 20 or lower
- Ranked 21 to 50
- Ranked above 50

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ROADWAY VISION

Henrico County envisions its roadway network as a foundation for safe, efficient, and sustainable connectivity that supports community needs, enhances quality of life, and fosters economic growth. The County's vision emphasizes the integration of transportation infrastructure into its broader objectives of managed growth, safety, and high-quality, livable spaces. By 2045, the county aspires to maintain a multimodal network that accommodates vehicular, pedestrian, bicycle, and transit travel while promoting equity, accessibility, and environmental responsibility.

FACTORS SHAPING FUTURE ROADWAY TRAVEL DEMAND

Several factors will shape future roadway travel in Henrico County. Population growth and land-use changes are primary considerations as the County transitions from greenfield development [14] to infill and redevelopment strategies. This shift responds to the limited vacant land available and growing demand for revitalized urban corridors and suburban centers.

As employment hubs expand, particularly in healthcare, finance, logistics, advanced manufacturing, and technology industries, Henrico anticipates increased commuter traffic. Major centers of employment include Innsbrook, home to thousands of workers in finance and tech; the White Oak Technology Park in eastern Henrico, which houses major data centers and electronics manufacturing operations, including Meta and Hewlett-Packard; and the Airport Logistics Center near Richmond International Airport, which anchors a growing cluster of freight, distribution, and transportation-related businesses. Additional activity centers include VCU Health and Bon Secours facilities, which drive substantial employment in healthcare and medical services across central and eastern Henrico, and retail-commercial hubs such as Short Pump Town Center, Reynolds Crossing, Willow Lawn, and the Shops at White Oak Village. Together, these destinations draw significant daily commuting volumes from across the region.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

To mitigate congestion and improve mobility, Henrico could promote Transportation Demand Management (TDM) strategies such as expanded public transit along key corridors, increased bikeable and walkable roadways, support for carpooling programs, and greater flexibility for work-from-home (WFH) policies. These strategies can help reduce peak-hour traffic volumes and improve overall transportation system efficiency as the County grows.

COMMUNITY FEEDBACK

The community has voiced strong support for expanding bicycle and pedestrian infrastructure, highlighting the desire for safer, more walkable neighborhoods. This aligns with broader trends toward reducing automobile dependency and addressing connectivity gaps between residential areas, commercial centers, and recreational spaces. The County's ongoing focus on safety, including addressing high-crash areas identified through VDOT's PSI program and Arrive Alive Henrico, further informs future roadway safety priorities. In

[14] *Greenfield development refers to new construction on vacant land as opposed to redevelopment of an existing built upon site.*

addition, Henrico's Traffic Engineering Division leads ongoing traffic calming efforts in residential areas to discourage speeding and cut-through traffic. These neighborhood-focused initiatives reflect a growing commitment to safety at both the community and corridor scale.



Local roadway

COMMITTED ROADWAY PROJECTS

The following list highlights currently committed roadway projects identified through the County's most recent Capital Improvement Program and related partner programs. This list will continue to evolve as projects are added, advanced, reprioritized, or refined over time. Current committed projects include:

- Improving through and turn lanes as well as pedestrian and transit accommodations along W. Broad Street between Staples Mill Road and N Gayton Road.
- A new diverging-diamond interchange at N. Gayton Road and I-64 which is expected to relieve pressure on nearby corridors.
- Partial cloverleaf interchange at W. Broad Street and I-64 in Short Pump to improve safety and accommodate pedestrians on W. Broad Street.
- I-64 and Parham Road Interchange Configuration Improvement.

- I-64 and Gaskins Road Interchange Improvements.
- I-95 and Parham Road Interchange Improvements.
- Staples Mill Road Improvements from Dickens Road to Waller Road.
- Implementing improvements along the Richmond–Henrico Turnpike from Laburnum Avenue to Hummingbird Lane, expanding the corridor to four lanes with a raised median, sidewalk, and lighted shared-use path.
- Realignment and widening of Sadler Road is under construction between Dominion Boulevard and Cedar Forest Road, with new roundabouts and a shared-use path.
- Safety and pedestrian upgrades along Derbyshire Road between Lakewater Drive and Midway Road.
- Brook Road Improvements from Villa Park Drive to Hilliard Road to improve traffic flow and provide pedestrian accommodations.
- Widening and pedestrian accommodations on Three Chopt Road between Barrington Hill Drive and east of Gaskins Road.
- Greenwood Road Improvements from Woodman Road to Branch Road include adding a center turn lane, a shared-use path, and a sidewalk.
- Liesfeld Farm Drive Extension west of N. Gayton Road to include a roundabout.
- Magellan Parkway and St. Charles Road Extensions
- N Laburnum Avenue Pedestrian and Transit Improvements from Harvie Elementary School to the former Fairfield Library to include road widening to match adjacent pavement widths, sidewalk, and transit stop improvements.
- Woodman Road Improvements from Hungary Road to Mountain Road, expanding the corridor to four lanes with a raised median, sidewalks, and a shared-use path.
- S Laburnum Avenue and Route 5 Intersection Improvements to extend a right turn lane.

A complete table of current transportation projects is available in the Appendix and online at henrico.gov/works/projects.

MAJOR THOROUGHFARE PLAN

The Major Thoroughfare Plan (MTP) is Henrico County's long-range roadmap for the roadway network through 2045. It helps the County plan for growth by identifying where new connections, extensions, and corridor improvements may be needed over time. A core purpose of the MTP is to support an interconnected network that spreads traffic across multiple routes, shortens trips, and improves overall reliability.

The MTP map (located on page 226) is conceptual. It shows where additional roadway connectivity could be beneficial, but it does not prescribe exact alignments for future roads.

When identifying potential corridors, the County focused on areas expected to develop and worked to avoid or minimize impacts to environmentally, historically, or culturally sensitive areas. Where practical, the plan emphasizes improvements to existing corridors and highlights opportunities to use the current network more efficiently through strategic extensions and new connections.

ROAD CLASSIFICATIONS

Henrico uses a roadway classification system to describe how roads function within the overall network. The classifications help guide planning, design, and access management by clarifying what each roadway is expected to do, such as moving through traffic, connecting neighborhoods to major corridors, or providing direct access to homes and businesses.

JURISDICTIONAL CLASSIFICATION

Responsibility for road maintenance is shared between Henrico County and the Commonwealth of Virginia. The County maintains about 80 percent of roadway lane-miles, while VDOT maintains about 20 percent. VDOT-maintained roadways are identified in Table 1 and shown on the VDOT Maintained Roadway Map.

FUNCTIONAL CLASSIFICATION

Functional classification describes the balance between mobility and access. At one end of the spectrum are controlled-access highways that prioritize moving high volumes of traffic efficiently through limited access points. At the other end are local streets that prioritize property access and low-speed, neighborhood-serving travel. Arterials and collectors fall between these two, balancing regional movement with access to adjacent land uses.

CONTROLLED ACCESS ROADS

Controlled access roads are designed primarily for long-distance travel and regional movement, with access provided only at interchanges. These facilities carry the highest traffic volumes and are intended to move people and goods across and through the region efficiently. In Henrico, controlled access roads include Interstate Highways 64, 95, 195, 295, and Route 895.

MAJOR ARTERIALS

Major arterials connect major activity centers and carry high traffic volumes over longer distances within the region. Their primary role is mobility and efficient movement, with access to adjacent properties managed to support safety and operations. Major arterials typically:

- Support regional and countywide travel;
- Connect key employment, commercial, and residential areas; and
- Use access management strategies such as shared driveways and consolidated entrances where feasible.

MINOR ARTERIALS

Minor arterials support and connect to the major arterial system, providing important cross-county connections while also serving adjacent land uses. They generally place more

emphasis on access than major arterials, with operational and safety needs addressed through turn lanes, signalization, and intersection design. Minor arterials typically:

- Link neighborhoods and activity centers to major corridors;
- Provide a balance of mobility and access; and
- Avoid routing through the interior of established neighborhoods when possible.

MAJOR COLLECTORS

Major collectors move traffic between local streets and arterials and often serve as primary internal routes within residential, commercial, or industrial areas. They may pass through neighborhoods, gathering local traffic and directing it to higher-order roads. Major collectors typically:

- Provide efficient connections from neighborhoods and commercial areas to arterials;
- Serve key local destinations and major trip generators; and
- Use access management where appropriate to support safety and flow.

MINOR COLLECTORS

Minor collectors provide similar connections as major collectors but generally operate at lower volumes and speeds and provide more direct access to adjacent properties. Minor collectors typically:

- Connect local streets to the broader network;
- Support shorter trips within community areas; and
- Help discourage cut-through traffic on local streets by providing appropriate routing options.

MAJOR ACCESS ROADS

Major access roads serve areas with concentrated commercial and industrial activity, such as business and industrial parks. Their primary function is to support access for customers, employees, and freight, often requiring design features that can accommodate larger vehicles and higher traffic volumes. Major access roads typically:

- Provide circulation and access within commercial and industrial areas;
- Support safe and efficient movement of goods and services; and
- Connect to collector and arterial corridors.

RESIDENTIAL COLLECTORS

Residential collectors are neighborhood-serving streets that connect local streets and cul-de-sacs to the collector and arterial network. They are not shown on the 2045 MTP map, but they

play an important role in supporting circulation within residential areas. Residential collectors typically:

- Provide internal neighborhood connectivity;
- Encourage lower speeds and safer conditions for pedestrians and bicyclists; and
- Help reduce reliance on higher-volume roads for short local trips.

LOCAL STREETS

Local streets provide direct access to homes and businesses and support low-speed, short-distance travel. Like residential collectors, they are not shown on the 2045 MTP map. Local streets prioritize access and neighborhood livability and are designed to discourage speeding and unnecessary through traffic. Local streets typically:

- Emphasize safe access and low-speed operation;
- Support walking and biking within neighborhoods; and
- Connect to collectors that carry traffic to the broader roadway network.

TRANSPORTATION NETWORK DEFICIENCIES AND NEEDS ASSESSMENT

This section identifies specific deficiencies in the current transportation network and describes how those deficiencies may affect Henrico County as future growth, redevelopment, and travel demand occur. It is based on existing conditions, future land use policies, public input, the Arrive Alive Henrico Safety Action Plan, VTrans Mid-term Needs and Priority Locations, the County's PSI Segments/Intersections map, multimodal and transit facility information, and County and regional transportation planning efforts.

The assessment compares the existing transportation system with the County's future land use policies and anticipated growth areas. It is intended to show where the transportation network does not fully support current needs, or where the quantity, type, location, and density of anticipated development do not. The deficiencies identified below connect existing conditions and projected needs to the transportation recommendations and project priorities that follow in this chapter.

Planning and Data Inputs

The following inputs were used to identify transportation deficiencies and support future project prioritization:

- Future land use policies and growth assumptions identify where anticipated development, redevelopment, population growth, and employment growth may increase transportation demand.
- Arrive Alive Henrico and PSI Segments/Intersections identify safety needs, high-crash locations, severe crash patterns, vulnerable road user needs, the County's High-Injury

Network, pedestrian and bicyclist priority corridors, and potential safety countermeasures.

- VTrans Mid-term Needs and Priority Locations identify statewide and regional needs related to safety, bicycle access, pedestrian access, transit access, transit equity, travel demand management, congestion, reliability, capacity preservation, and statewide corridors.
- Bicycle and sidewalk network information identifies gaps in existing and planned pedestrian and bicycle connectivity.
- Transit service and transit planning information identifies areas where fixed-route transit, microtransit, transfer facilities, bus stop improvements, and first/last-mile connections are needed.
- Critical infrastructure information supports coordination between transportation improvements and available water, sewer, stormwater, and other infrastructure. If electric service area information is not available from Dominion or other providers, that limitation should be noted in the chapter.

Current transportation projects and studies maintained by Henrico County DPW provide additional location-specific evidence of network gaps, safety needs, multimodal access needs, and corridor operations issues.

ARRIVE ALIVE HENRICO Safety Findings

Arrive Alive Henrico provides a safety-focused foundation for identifying current deficiencies in the transportation network. The plan was developed through the federal Safe Streets and Roads for All program and uses crash history, emphasis areas, high-risk locations, public and stakeholder input, and potential countermeasures to identify roadway safety needs.

The plan's 2019-2023 crash review identified 26,843 countywide crashes, including 145 fatal crashes and 888 serious injury crashes. These crashes resulted in 153 fatalities and 1,064 serious injuries. Road segments with the highest numbers of fatal and serious injury crashes include Mechanicsville Turnpike, W. Broad Street, I-64, Brook Road, Chamberlayne Road, I-95, and Nine Mile Road.

Arrive Alive Henrico also identifies a High-Injury Network, PSI locations, pedestrian and bicyclist priority corridors, and spot and systemic safety countermeasures. The High-Injury Network includes 140 segment-miles, with 75% of fatal and serious injury crashes occurring on 8% of the roadway network. Tier 1 High-Injury Network roadways include W. Broad Street, Nine Mile Road, Staples Mill Road, E. Laburnum Avenue, I-95, Mechanicsville Turnpike, Williamsburg Road, Chamberlayne Road, and Glenside Drive. The plan also notes long top-priority pedestrian and bicyclist safety corridors on W. Broad Street, Nine Mile Road, Staples Mill Road, and Laburnum Avenue.

Current and Projected Network Deficiencies

The following deficiencies are identified in the current transportation network and should inform future transportation investments:

SAFETY DEFICIENCIES

High-crash corridors and intersections continue to present conflicts among vehicles, pedestrians, and bicyclists, particularly where traffic volumes, vehicle speeds, access points, and crossing demand overlap. Arrive Alive Henrico identifies concentrations of fatal and serious injury crashes on Mechanicsville Turnpike, W. Broad Street, I-64, Brook Road, Chamberlayne Road, I-95, and Nine Mile Road, and identifies additional safety needs through the High-Injury Network, PSI analysis, and intersection safety needs. These findings support continued enhancements to crossing, speed, and access management, lighting, pedestrian refuge areas, signal upgrades, and other proven safety countermeasures.

PEDESTRIAN NETWORK GAPS AND CROSSING BARRIERS

Sidewalk coverage is inconsistent across the County, especially in older neighborhoods, commercial corridors, and areas that developed before current sidewalk requirements. Major roadways also create barriers between neighborhoods, schools, parks, transit stops, employment areas, and commercial destinations. Arrive Alive Henrico and VTrans both identify pedestrian safety and access needs, including risks related to crossing conditions, nighttime visibility, and higher-speed roadways. In light of the countywide scope and safety importance of these needs, DPW is in the process of developing a sidewalk prioritization matrix. This tool will establish systematic identification and ranking methods for more efficient, cost-effective completion of projects which are the most beneficial to the community.

BICYCLE AND TRAIL CONNECTIVITY GAPS

Henrico County has expanded its bicycle network, but gaps remain between neighborhoods, parks, schools, employment centers, commercial areas, and regional trails. VTrans bicycle access needs, public input, and Arrive Alive Henrico pedestrian and bicyclist priority corridor findings support continued investment in separated bicycle facilities, shared-use paths, trail connections, wayfinding, and safer crossings on major corridors.

TRANSIT ACCESS AND PASSENGER ENVIRONMENT DEFICIENCIES

Transit access remains limited in areas where fixed-route service is less frequent or difficult to serve due to land-use patterns, roadway design, or incomplete first- and last-mile connections. Deficiencies also include missing or limited bus stop infrastructure such as landing pads, lighting, shelters, benches, and trash receptacles.

STAPLES MILL STATION AND INTERREGIONAL ACCESS NEEDS

Amtrak's Staples Mill Station is a major interregional passenger rail hub, and access to the station remains an important multimodal need. Station-area deficiencies include passenger rail access, transit connections, pedestrian and bicycle access, parking, passenger circulation, and surrounding roadway operations.

CONGESTION, RELIABILITY, AND CAPACITY PRESERVATION NEEDS

VTrans identifies congestion, capacity preservation, reliability, and travel demand management needs along major regional corridors, interstate connections, and activity centers. These deficiencies should be addressed through roadway operations, intersection improvements, multimodal alternatives, transit improvements, access management, technology, and travel demand management strategies.

FREIGHT, AIRPORT, AND INDUSTRIAL ACCESS NEEDS

Richmond International Airport, industrial areas, logistics activity, and major freight corridors create needs related to truck movement, roadway operations, safety, and access. Improvements should support freight and goods movement while managing conflicts with residential areas, pedestrians, bicyclists, and transit users.

INFRASTRUCTURE COORDINATION AND RESILIENCY NEEDS

Transportation improvements must be coordinated with water, sewer, stormwater, and other critical infrastructure. Future growth areas and transportation corridors should be evaluated for infrastructure readiness, drainage constraints, utility coordination needs, and resiliency considerations.

LAND USE AND ACCESS MANAGEMENT NEEDS

Redevelopment and new development can increase driveway activity, turning movements, pedestrian demand, bicycle demand, and transit demand. These needs are most significant in corridors and activity centers, where land-use intensity is expected to increase.

Identified Deficiencies By Corridor and Area

The following corridors and areas have specific transportation network deficiencies based on VTrans needs, Arrive Alive Henrico safety findings (including the High-Injury Network, intersection safety needs, pedestrian and bicyclist priority corridors, and safety countermeasure locations), PSI locations, County bicycle and sidewalk network information, transit planning information, current County projects and studies, and public input. These locations include overlapping safety, pedestrian and bicycle access, transit access, congestion, reliability, capacity preservation, freight movement, and land use access needs.

Table 8:Identified Deficiencies by Corridor/Area

Corridor / Area	***Identified Transportation Network Deficiencies***
W. Broad Street/US 250	Deficiencies include pedestrian safety, transit access, bicycle connectivity, congestion, reliability, access management, and redevelopment access. Specific areas include Forest Avenue to Willow Lawn Drive, Glenside Drive to Parham Road, Parham Road to Pemberton Road, Cox Road, Gaskins Road, Gayton Road, Nuckols Road, and the Short Pump/Pouncey Tract Road area. Arrive Alive Henrico also identifies multiple W. Broad Street safety need locations, including intersections at Pump Road/Pouncey Tract Road, Brownstone Boulevard, Tom Leonard Drive, John Rolfe Parkway, Gaskins Road, Glenside Drive, Pemberton Road/Springfield Road, and Parham Road. Safety lighting and opportunities for dedicated bike/pedestrian infrastructure on existing bridges should be explored throughout this and all other major corridors.

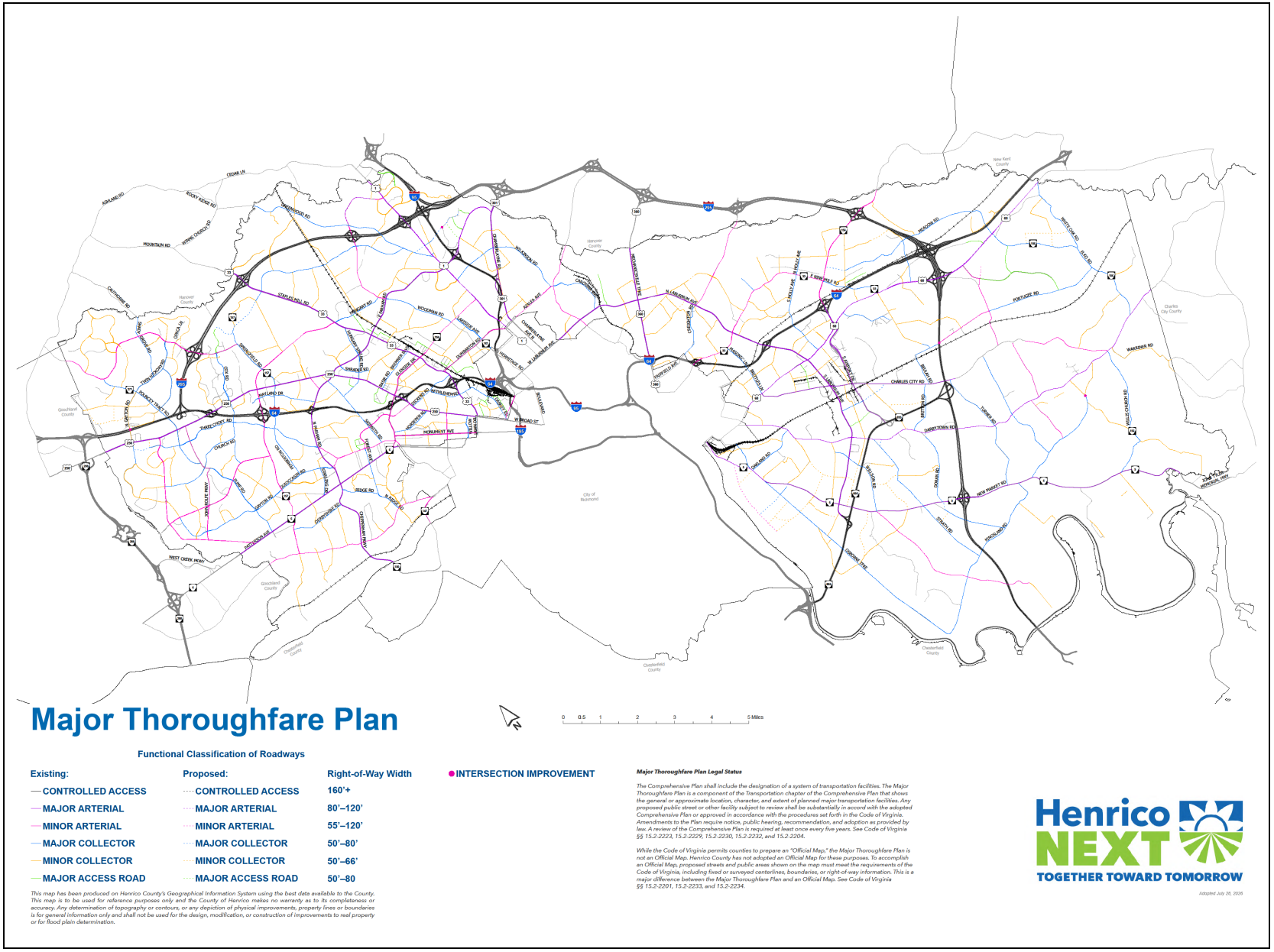
Corridor / Area	*Identified Transportation Network Deficiencies*
Staples Mill Road/US 33 and Staples Mill Station Area	Deficiencies include passenger rail access, transit connections, pedestrian and bicycle access, parking, station-area circulation, safety, and corridor operations. Specific locations include the Staples Mill Station area and intersections between Aspen Avenue/Townhouse Road and Janway Road, including Penick Road, Hilliard Road/Glenside Drive, Crockett Street, Bremner Boulevard, Wistar Road, Hermitage Road, and Stoneman Road. Arrive Alive Henrico identifies Staples Mill Road as a Tier 1 High-Injury Network roadway and notes additional safety needs at Staples Mill Road/Glenside Drive/Hilliard Road and Staples Mill Road/Springfield Road. Safety lighting and opportunities for dedicated bike/pedestrian infrastructure on existing bridges should be explored throughout this and all other major corridors.
Brook Road/US 1, Chamberlayne Road/ US 301, and the Best Products Reimagined/ Brook Road Corridor	Deficiencies include safety, pedestrian access, transit access, bicycle gaps, redevelopment access, access management, multimodal connectivity, and corridor operations. Specific areas include Brook Road from Villa Park Drive to Hilliard Road, the Lakeside Avenue/Brook Road intersection, the Best Products Reimagined site near I-295 and I-95, and the Brook Road business corridor from Magellan Parkway to approximately Hilliard Road. Arrive Alive Henrico identifies Brook Road and Chamberlayne Road among corridors with high numbers of fatal and serious injury crashes and identifies Brook Road as a high-volume PSI segment. Safety lighting and opportunities for dedicated bike/pedestrian infrastructure on existing bridges should be explored throughout this and all other major corridors.
Nine Mile Road/ Route 33	Deficiencies include pedestrian safety, bicycle access, transit access, crossing conditions, corridor operations, and access between neighborhoods, schools, parks, and commercial areas. Specific locations include Newbridge Road to Lee Avenue, Nine Mile Road at Newbridge Road, Richmond-Henrico Turnpike, Laburnum Avenue, Airport Drive, Kenway Avenue, Gordon Lane, Dabbs House Road, and eastern Henrico activity areas. Arrive Alive Henrico identifies Nine Mile Road as a Tier 1 High-Injury Network roadway and a top-priority pedestrian and bicyclist safety corridor. Safety lighting and opportunities for dedicated bike/pedestrian infrastructure on existing bridges should be explored throughout this and all other major corridors.

Corridor / Area	*Identified Transportation Network Deficiencies*
Laburnum Avenue	Deficiencies include pedestrian crossings, sidewalk and bicycle gaps, transit access, interchange-area safety, drainage and stormwater coordination, and multimodal connections to parks, schools, employment areas, and commercial destinations. Specific areas include North, East, and South Laburnum Avenue near I-64; Mechanicsville Turnpike; Nine Mile Road; Williamsburg Road; and Route 5/New Market Road. Arrive Alive Henrico identifies E. Laburnum Avenue as a Tier 1 High-Injury Network roadway and identifies safety needs at locations including S. Laburnum Avenue/Gay Avenue, Nine Mile Road/Laburnum Avenue, Mechanicsville Turnpike/E. Laburnum Avenue, S. Laburnum Avenue/Williamsburg Road, and N. Laburnum Avenue/Creighton Road. Safety lighting and opportunities for dedicated bike/pedestrian infrastructure on existing bridges should be explored throughout this and all other major corridors.
Mechanicsville Turnpike/US 360	Deficiencies include safety, pedestrian and bicycle access, transit access, crossing conditions, access management, and corridor operations. Arrive Alive Henrico identifies Mechanicsville Turnpike among the corridors with the highest numbers of fatal and serious injury crashes and as a Tier 1 High-Injury Network roadway. Specific safety need locations include Mechanicsville Turnpike at Crump Street/Bloom Lane, E. Laburnum Avenue, Byron Street, and Rescue Avenue. Safety lighting and opportunities for dedicated bike/pedestrian infrastructure on existing bridges should be explored throughout this and all other major corridors.
Williamsburg Road/US 60, Airport Drive, and Richmond International Airport Area	Deficiencies include transit access, pedestrian and bicycle connectivity, airport access, freight movement, safety, and corridor operations. Specific areas include Williamsburg Road near Laburnum Avenue, Airport Drive, White Oak Village, Sandston, the Williamsburg Road-Nine Mile Road-Beulah Road area, and access routes serving Richmond International Airport. Arrive Alive Henrico identifies Williamsburg Road as a Tier 1 High-Injury Network roadway, reinforcing the need for safety and multimodal access improvements along the corridor. Safety lighting and opportunities for dedicated bike/pedestrian infrastructure on existing bridges should be explored throughout this and all other major corridors.

Corridor / Area	*Identified Transportation Network Deficiencies*
Patterson Avenue/Route 6	Deficiencies include pedestrian and bicycle access, crossing conditions, safety, access management, and corridor operations, particularly near major intersections and neighborhood or commercial access points. Specific areas include Parham Road, Gaskins Road, Gayton Road, Pump Road, Maybeury Drive, and western Henrico neighborhood and commercial areas. These needs are supported by VTrans, County project information, public input, and the County's broader safety and multimodal network findings. Safety lighting and opportunities for dedicated bike/pedestrian infrastructure on existing bridges should be explored throughout this and all other major corridors.
Parham Road, Gaskins Road, Nuckols Road, Gayton Road, and Related Interchange Areas	Deficiencies include growth-related demand, intersection operations, pedestrian and bicycle access, multimodal connectivity, and transit-supportive improvements. Specific areas include Parham Road at Staples Mill Road, Parham Road at Hungary Spring Road, Nuckols Road near Broad Meadows Road and Francistown Road, Sadler Road/Sadler Place, Shady Grove Road, Old Nuckols Road, and connections to I-64 and I-295. Arrive Alive Henrico identifies additional safety needs at N. Parham Road/Mayland Drive, N. Parham Road/Skipwith Road, N. Parham Road/Homeview Drive, E. Parham Road/Sanctuary Drive, and the Gaskins Road/I-64 interchange area. Safety lighting and opportunities for dedicated bike/pedestrian infrastructure on existing bridges should be explored throughout this and all other major corridors.
I-64, I-95, I-195, and I-295 Corridors and Interchanges	Deficiencies include congestion, reliability, safety, capacity preservation, freight movement, regional access, and travel demand management. Specific interchange areas include those serving W. Broad Street, Parham Road, Staples Mill Road, Brook Road, Laburnum Avenue, Williamsburg Road, Nuckols Road, Woodman Road, and Short Pump. Arrive Alive Henrico identifies I-64 and I-95 among corridors with high numbers of fatal and serious injury crashes, and VDOT PSI analysis identifies I-64, I-95, and I-295 as high-volume segments with more crashes than expected for similar facilities.

Corridor / Area	*Identified Transportation Network Deficiencies*
New Market Road/ Route 5 and Eastern Henrico/Varina Connections	Deficiencies include bicycle and trail access, transit and microtransit access, rural roadway safety, recreational connectivity, airport-area access, and connections between neighborhoods, parks, schools, and regional trail facilities. Specific areas include New Market Road/Route 5, Messer Road, Dorey Park, Varina High School, New Market Heights, Osborne Turnpike, Meadow Road, and connections to the Virginia Capital Trail. Arrive Alive Henrico identifies Varina as one of the districts with a high share of High-Injury Network mileage, reinforcing the need for safety improvements in eastern Henrico. Safety lighting and opportunities for dedicated bike/pedestrian infrastructure on existing bridges should be explored throughout this and all other major corridors.
Redevelopment Areas and Activity Centers	Deficiencies include walking, biking, transit access, roadway operations, parking management, access management, and safe connections between residential, commercial, employment, civic, and recreational destinations.

The deficiencies identified above do not represent every transportation need in Henrico County, but they provide a location-specific basis for connecting documented safety, access, congestion, infrastructure, and growth-related needs to planned improvements, funding opportunities, development review, and interagency coordination.


Major Thoroughfare Plan
Functional Classification of Roadways
Existing:
CONTROLLED ACCESS
MAJOR ARTERIAL
MINOR ARTERIAL
MAJOR COLLECTOR
MINOR COLLECTOR
MAJOR ACCESS ROAD
Proposed:
CONTROLLED ACCESS
MAJOR ARTERIAL
MINOR ARTERIAL
MAJOR COLLECTOR
MINOR COLLECTOR
MAJOR ACCESS ROAD
Right-of-Way Width
160'+
80'–120'
55'–120'
50'–80'
50'–66'
50'–80
INTERSECTION IMPROVEMENT
0 0.5 1 2 3 4 5 Miles
This map has been produced on Henrico County's Geographical Information System using the best data available to the County. This map is to be used for reference purposes only and the County of Henrico makes no warranty as to its completeness or accuracy. Any determination of topography or contours, or any depiction of physical improvements, property lines or boundaries is for general information only and shall not be used for the design, modification, or construction of improvements to real property or for flood plain determination.
Major Thoroughfare Plan Legal Status
The Comprehensive Plan shall include the designation of a system of transportation facilities. The Major Thoroughfare Plan is a component of the Transportation chapter of the Comprehensive Plan that shows the general or approximate location, character, and extent of planned major transportation facilities. Any proposed public street or other facility subject to review shall be substantially in accord with the adopted Comprehensive Plan or approved in accordance with the procedures set forth in the Code of Virginia. Amendments to the Plan require notice, public hearing, recommendation, and adoption as provided by law. A review of the Comprehensive Plan is required at least once every five years. See Code of Virginia §§ 15.2-2223, 15.2-2229, 15.2-2230, 15.2-2232, and 15.2-2204.
While the Code of Virginia permits counties to prepare an "Official Map," the Major Thoroughfare Plan is not an Official Map. Henrico County has not adopted an Official Map for these purposes. To accomplish an Official Map, proposed streets and public areas shown on the map must meet the requirements of the Code of Virginia, including fixed or surveyed centerlines, boundaries, or right-of-way information. This is a major difference between the Major Thoroughfare Plan and an Official Map. See Code of Virginia §§ 15.2-2201, 15.2-2233, and 15.2-2234.
Henrico NEXT
TOGETHER TOWARD TOMORROW
Adopted July 28, 2026

TRANSPORTATION AND MOBILITY POLICIES AND STRATEGIES

Henrico County will pursue the following policies and strategies to achieve the vision for a safe, efficient, and effective transportation network.

Policy SCS 1: Safe and Efficient System

Henrico County's transportation system will be safe and efficient, support the local economy, and minimize traffic congestion.

STRATEGY SCS 1-1: SAFE STREETS FOR ALL

Reduce traffic-related deaths and serious injuries by implementing the Arrive Alive Henrico Safe Streets and Roads for All Safety Action Plan (adopted in May 2025).

STRATEGY SCS 1-2: COORDINATION OF TRAFFIC SIGNAL TIMING PLANS

Continue to coordinate traffic signal timing plans along strategic corridors.

STRATEGY SCS 1-3: MONITOR LEVELS OF SERVICE

Monitor levels of service to identify changes in traffic congestion and evaluate alternative countermeasures to maintain or improve traffic conditions in the County.

STRATEGY SCS 1-4: TRAFFIC MANAGEMENT IN GROWING AND REDEVELOPMENT AREAS

Implement smart traffic management solutions, such as adaptive signals, real-time monitoring, and enhanced pedestrian crossings, to improve safety and traffic flow in redevelopment areas and other parts of the County experiencing population growth, land use changes, or increased travel demand.

STRATEGY SCS 1-5: INFRASTRUCTURE MODERNIZATION FOR REDEVELOPMENT

Upgrade roads, intersections, transit accessibility, and pedestrian facilities in aging commercial corridors to align with redevelopment efforts and improve multimodal access. This includes deploying safety technologies, such as LiDAR-based intersection detection, where appropriate to better identify conflicts and support targeted safety improvements, building on the County's recent Safe Streets and Roads for All (SS4A) implementation funding award for these efforts. Areas with missing or limited bus stop infrastructure such as landing pads, lighting, shelters, benches, and trash receptacles should be identified and targeted for improvement as new development occurs.

STRATEGY SCS 1-6: FREIGHT AND DELIVERY MANAGEMENT IN MIXED-USE AREAS

Develop strategies to balance freight needs with pedestrian and transit access in redeveloped corridors, including designated loading zones and off-peak delivery incentives.

Policy SCS 2: Mobility Choice

Support alternative modes of travel (walking, biking, and transit) to provide mobility choices for the people who live, work, and play in Henrico County.

STRATEGY SCS 2-1: SIDEWALKS

Require sidewalks and other pedestrian pathways along all new and reconstructed major thoroughfares (see Major Thoroughfare Plan Map), excluding interstate highways and other controlled-access roads. In addition, pedestrian and bicycle accommodations should be incorporated into all new or reconstructed bridges, overpasses, and interchange projects to maintain safe and continuous connectivity across major corridors, in alignment with the sidewalk prioritization plan (underway).

STRATEGY SCS 2-2: CREATE LONG-DISTANCE BICYCLE ROUTES

Facilitate bicycle travel along all planned and existing designated, long-distance bicycle routes in the county (such as the Fall Line Trail, Routes 1, 76, Trail, Virginia Capital Trail, Three Notched Trail, and East Coast Greenway) through signage, shared lanes, bike lanes, and shared-use paths.

STRATEGY SCS 2-3: ACCOMMODATE BICYCLE FACILITIES ON MAJOR ROAD PROJECTS

Consider the accommodation of bicycles in the planning and design of all major road projects, where feasible.

STRATEGY SCS 2-4: MONITOR SATISFACTION WITH GRTC

As a member of the GRTC Board of Directors and a funding partner through the Central Virginia Transportation Authority (CVTA), Henrico County will continue to provide oversight of GRTC service and advocate for a bus system that provides reliable, efficient, and equitable service to the county's residents and workforce.

STRATEGY SCS 2-5: ENCOURAGE PRIVATE DEVELOPMENT TO INCLUDE BICYCLE, PEDESTRIAN, AND TRANSIT FACILITIES

Encourage new developments to install bicycle, pedestrian, and transit facilities/amenities to create connections to other neighborhoods and critical destinations, such as schools, libraries, and parks.

STRATEGY SCS 2-6: COMPLETE STREETS APPROACH

Implement a complete streets policy to enhance pedestrian, bicycle, and transit safety in redeveloping corridors, mixed-use areas, and existing neighborhoods. Where feasible, retrofit residential streets with traffic calming measures, such as speed humps, curb extensions, signage, and narrowed travel lanes, to reduce speeding and improve safety for people walking and biking.

STRATEGY SCS 2-7: SUPPORT BIKE SHARE PROGRAMS

Partner with public and private entities to expand access to bike share programs, particularly in high-density, mixed-use, and transit-accessible areas. Explore opportunities to pilot bike share hubs near key destinations such as colleges, employment centers, parks, and trailheads.

Policy SCS 3: Coordinated Land Use and Transportation

Use a coordinated land use and transportation planning approach in partnership with agencies in the region to serve future development activities with concurrent transportation infrastructure improvements.

STRATEGY SCS 3-1: UPDATE THE MAJOR THOROUGHFARE PLAN

Periodically review the Major Thoroughfare Plan/Map and amend it as necessary to reflect changes in the Future Land Use Map.

STRATEGY SCS 3-2: ENSURE ADEQUATE PUBLIC FACILITIES

Ensure that public facilities are adequate to support new development by requiring that infrastructure needs are identified and addressed prior to approval. New development should only be approved when it can be demonstrated that adequate public facilities, consistent with the standards established in this plan, will be available upon completion. Development proposals should contribute to necessary improvements, including through proffers, to enhance connectivity and maintain operational standards.

STRATEGY SCS 3-3: PROMOTE HIGH-QUALITY DEVELOPMENT

Promote high-quality development through compliance with site plan review and the Design Guidelines Manual, particularly regarding landscaping, traffic, pedestrian circulation, signage, building design, placement, and orientation. Encourage higher-density housing developments in coordination with major thoroughfares to support efficient land use, transit access, and walkability.

STRATEGY SCS 3-4: ENCOURAGE PEDESTRIAN ORIENTATION IN MIXED USE DEVELOPMENTS

Encourage pedestrian orientation as the emphasis of Mixed-Use developments when designing buildings and public space. Discourage the accommodation of the automobile as a prominent land use or dominant visual feature. Promote structured parking to preserve land within Mixed-Use developments for open space or more economically beneficial uses.

STRATEGY SCS 3-5: INCORPORATE TRANSIT-ORIENTED DEVELOPMENT IN MIXED USE AREAS

Consider potential transit station locations in the design of mixed-use developments, particularly in areas where preferred routes have been identified.

Policy SCS 4: Connected Network

Maximize mobility on major roads by limiting driveway access and encouraging connectivity between developments.

STRATEGY SCS 4-1: INTERCONNECTED NETWORKS IN MIXED-USE DEVELOPMENTS

Promote the careful planning and management of traffic circulation and access so that each mixed-use development operates as a coordinated circulation system. A strong interconnected street network is essential to the function of these areas, which can be

developed using a grid or curvilinear design with sufficient crossroads and access locations to promote adequate service levels as specified in this plan.

STRATEGY SCS 4-2: ACCESS MANAGEMENT IN RETAIL/COMMERCIAL AREAS

Encourage access management to improve roadway safety and support the success of retail/commercial uses. Access points should provide adequate egress/ingress for businesses while mitigating negative impacts on roadway safety and operations. In supporting more walkable communities, providing consolidated access points reduces the number of potential crossing conflicts pedestrians may encounter, improving safety and reducing stress. Consolidated access points can also enhance the visibility and appearance of commercial entrances.

STRATEGY SCS 4-3: ACCESS MANAGEMENT IN REDEVELOPMENT

Give special attention to access management and site configuration when existing retail/commercial areas are redeveloped to improve safety, pedestrian accessibility, accommodate transit, and reduce traffic impacts often associated with automobile-oriented development.

STRATEGY SCS 4-4: RESIDENTIAL CONNECTIVITY

Use the road network in residential areas to promote safety and connectivity with existing and future development. Rather than focusing traffic on a few arterial or collector streets, more "through streets" are encouraged to disperse traffic and reduce isolated impacts at specific points. When possible, avoid cul-de-sacs and promote connectivity between neighborhoods for pedestrian, bicycle, and vehicle connectivity.

STRATEGY SCS 4-5: CONNECT EXISTING AND FUTURE DEVELOPMENTS

Design new developments to interconnect existing and future developments through stub streets. Encourage the use of traffic calming measures to reduce traffic impacts on existing communities.

STRATEGY SCS 4-6: DISCOURAGE STRIP DEVELOPMENT

Discourage strip development along existing or new thoroughfares. This practice creates an undesirable development pattern, causing traffic and access issues and preventing access from major corridors to large tracts of land that may be developed later.

STRATEGY SCS 4-7: PARKING AND CURBSIDE MANAGEMENT IN REDEVELOPMENT AREAS

Implement shared parking solutions, demand-based pricing, and flexible curbside policies to support evolving transportation needs.

Policy SCS 5: Technology Solutions

Support technology that provides travelers with real-time information to make route choice decisions.

STRATEGY SCS 5-1: INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

Identify strategic opportunities that leverage artificial intelligence (AI), connected vehicle data, LiDAR-based detection, transit signal priority, queue jumps, emergency vehicle

preemption updates, and other emerging technologies to provide real-time traveler information, improve transit operations, enhance traffic management, improve safety, and optimize system performance for all transportation network users.

Policy SCS 6: Sustainable Transportation

Advance a multimodal transportation system that supports environmental sustainability, climate resilience, and long-term ecological health while reducing dependence on fossil fuels.

STRATEGY SCS 6-1: SUSTAINABLE TRANSPORTATION INFRASTRUCTURE

Invest in transportation infrastructure that supports low-impact, resilient, and multimodal mobility. Focus on street and facility design that accommodates walking, biking, and transit while minimizing environmental impacts through sustainable materials, green design practices, and climate-adaptive features.

STRATEGY SCS 6-2: SUSTAINABLE ROADWAY CONSTRUCTION PRACTICES

Incorporate sustainable practices into roadway construction to reduce environmental impact, conserve resources, and improve long-term performance. Use recycled and low carbon materials, and prioritize techniques that reduce greenhouse gas emissions during construction. Integrate green infrastructure elements, such as permeable pavement, bioswales, and native landscaping, to manage stormwater and mitigate heat island effects. Support ecosystem health by minimizing construction impacts on natural areas and incorporating pollinator-friendly and wildlife-sensitive design. Utilize energy-efficient equipment and design for long-term durability to extend asset life and reduce maintenance-related emissions.

STRATEGY SCS 6-3: CLEAN MOBILITY INCENTIVES

Accelerate the transition to low- and zero-emission vehicles by expanding electric vehicle charging networks, adopting green fleets, and promoting shared mobility and carpooling programs.

STRATEGY SCS 6-4: SUSTAINABLE LAND USE AND TRANSPORTATION COORDINATION

Coordinate land use and transportation decisions to reduce travel distances and vehicle dependence. Support compact, mixed-use development patterns that encourage walking, biking, and transit use, while reducing greenhouse gas emissions and preserving open space. Incorporate green infrastructure, such as permeable surfaces, native plantings, and shade trees, into transportation corridors to manage stormwater and reduce urban heat.