

Chapter 3: The Transportation System

Chapter Summary

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Chapter 3: The Transportation System

3.1 How do Transportation Plans Address Needs?

Planning for transportation improvements in the C-SMMPO planning area is carried out at local, regional, and statewide levels. The Transportation Chapter, sometimes referred to as the Circulation Element, of a county, city, or town comprehensive plan typically addresses existing conditions and plans for the jurisdiction's transportation system.

Local Plans

At the local level, both Calvert and St. Mary's counties identify transportation improvement projects and policies through their comprehensive planning processes. Both counties also plan for improvements through separate transportation plans developed in coordination with the comprehensive planning process.

Calvert County

The Calvert County Transportation Plan (2010) describes four major elements to be implemented to achieve the goals and objectives of the Comprehensive and Transportation plans. The plan acknowledges the limited resources available for improvements and instead focuses on getting the most out of the existing system before committing to costly capital projects.

The four major elements and a summary of select recommendations in each element include:

Transportation System Management (TSM)

- Implement highway access management techniques with the long-term goal of converting MD 2-4 to a controlled access freeway south of Prince Frederick.
- Create a traffic management team with local, regional, and state representatives.
- Evaluate replacing intersections with roundabouts where feasible.
- Expand commuter parking capacity including a new lot in Solomons.

Highway System Maintenance and Improvement

- Match land use regulation to functional classifications on roadways.
- Implement collector highway system improvements including extending Rousby Hall Road and improvements to Dowell Road.

Public Transit

- Provide an express bus route between Solomons and Prince Frederick.
- Develop transit centers at key town centers including Solomons.

Land Use and Community Design

- Continue to implement adopted town center master plan improvements including bicycle and pedestrian improvements in Solomons.
- Implement sidewalk improvements in Solomons along MD 765, Newtown Road, and Dowell Road.
- Prepare a detailed county bicycle facilities plan.

St. Mary's County

The 2010 St. Mary's County Comprehensive Plan and 2006 St. Mary's County Transportation Plan both have a stated goal to provide *"an integrated transportation plan that will assist all aspects of transportation including motor vehicles, mass transportation, horse and buggy, bicycles, pedestrians, waterways, and air transportation while considering the cultural resources throughout the county."*

In order to achieve this goal, a series of objectives, policies, and actions were developed.

Objective: *Provide safe, efficient, economical roads that support community, revitalization, economic development, and environmental stewardship.*

Policies:

- Identify which locations will experience congestion in the future and which roadway improvements will be required to ensure efficient travel through those areas.
- Require joint-use access driveways for ingress/egress to contiguous properties. Require access driveway consolidation to reduce the existing number of ingress and egress points.
- Develop and implement transportation plans and standards that support and promote resource protection, environmental stewardship, community revitalization, economic development, rural character, corridor preservation, and cost containment goals.

Objective: *Ensure adequate capacity and safety for the traveling public and the appropriate level of access:*

Policies:

- Develop a list of recommended upgrades and downgrades to the classification of St. Mary's County roadways to assure that development and road improvement projects are planned in accordance with transportation needs for the foreseeable future.

Objective: *Identify conflicts between horse and buggy traffic and motorized vehicles by evaluating County roadways based on vehicular volume, speed, and geometric conditions.*

Policies:

- Initiate improvements that improve safety and reduce the number of conflict locations, especially on roadways with insufficient passing opportunities, and where there are moderate to high motor vehicle volumes.

St. Mary's County is currently in the process of updating the **Lexington Park Development District Master Plan**. The purpose of the plan is to shape the way the Lexington Park Development District grows and develops in the coming years. The Plan's transportation element places an emphasis on the development of a balanced transportation system that will make Lexington Park a more inviting place to live and work. The transportation vision for Lexington Park includes a balanced transportation system that:

- Makes efficient use of available road capacity;
- Elevates the role of pedestrians, cyclists, and transit service;
- Improves access to shopping and employment;
- Decreases household transportation costs;
- Reduces vehicle miles travelled; and
- Improves air quality, reduces greenhouse gas emissions, and promotes public health.

State Plans

The Maryland State Highway Administration (SHA) initiated the **MD 4 Project Planning Study** in December 2006. The study is a joint effort between the SHA, Federal Highway Administration (FHWA), and Calvert and St. Mary's counties. The study limits extend from the MD 2-4 intersection at Patuxent Point Parkway in Calvert County to the MD 4 intersection at MD 235 in St. Mary's County. The study corridor is approximately 4.1 miles long and includes the **Thomas Johnson Bridge**.

The purpose of the project is to improve existing capacity and traffic operations, increase MD 4 vehicular and

Thomas Johnson Bridge
 The Thomas Johnson Bridge connects Calvert County to St. Mary's County across the Patuxent River. Bridge replacement has been identified as top priority by both counties. Improvements are needed due to worsening traffic conditions and overall operations and safety concerns. Currently, the state, region, and counties are studying long-term capacity improvements to the bridge and the local roadway network.

bicycle/pedestrian safety, and support existing and planned development in Calvert and St. Mary's counties. The need for the project is a result of existing and projected traffic volumes generated by rapid growth, which will increase congestion and increase traffic volumes on the Thomas Johnson Bridge. Presently the bridge carries one lane in each direction with no shoulders and is a major bottleneck when crashes occur or maintenance is scheduled near or on the bridge. Additionally, there are no dedicated bicycle/pedestrian facilities on the bridge. A detailed description of this project is located in **Chapter 4**.

Planning Coordination

One of the core responsibilities of the C-SMMPO and function of Moving Forward 2040 is to play a coordinating role between the local planning departments while maintaining a focus on the overall needs of the region. While Calvert and St. Mary's counties share many of the same priorities for transportation improvements, the projects presented in Moving Forward 2040 are reflective of regional needs and priorities.

3.2 What is the Region's Roadway Network?

The roadway system in the C-SMMPO region is focused on the north-south axis of MD 2-4 travelling from Calvert County to St. Mary's County crossing the Patuxent River on the Thomas Johnson Bridge. MD 4 connects with MD 235 (Three Notch Road) in St. Mary's County near California. MD 235 facilitates east-west traffic in the region connecting to the Naval Air Station Patuxent River (NAS PAX) to the east. MD 237 (Chancellors Run Road) in St. Mary's County connects the MD 235 corridor to MD 5 via MD 246 (Great Mills Road) in the Lexington Park area. These arterial roads facilitate a majority of the vehicular traffic and are state maintained.

The roadway network is completed with a series of local and collector roads that are generally county maintained that collect traffic from local roads and convey it to the arterial highways. Collectors and local roads also provide circulation and access to businesses in town centers.

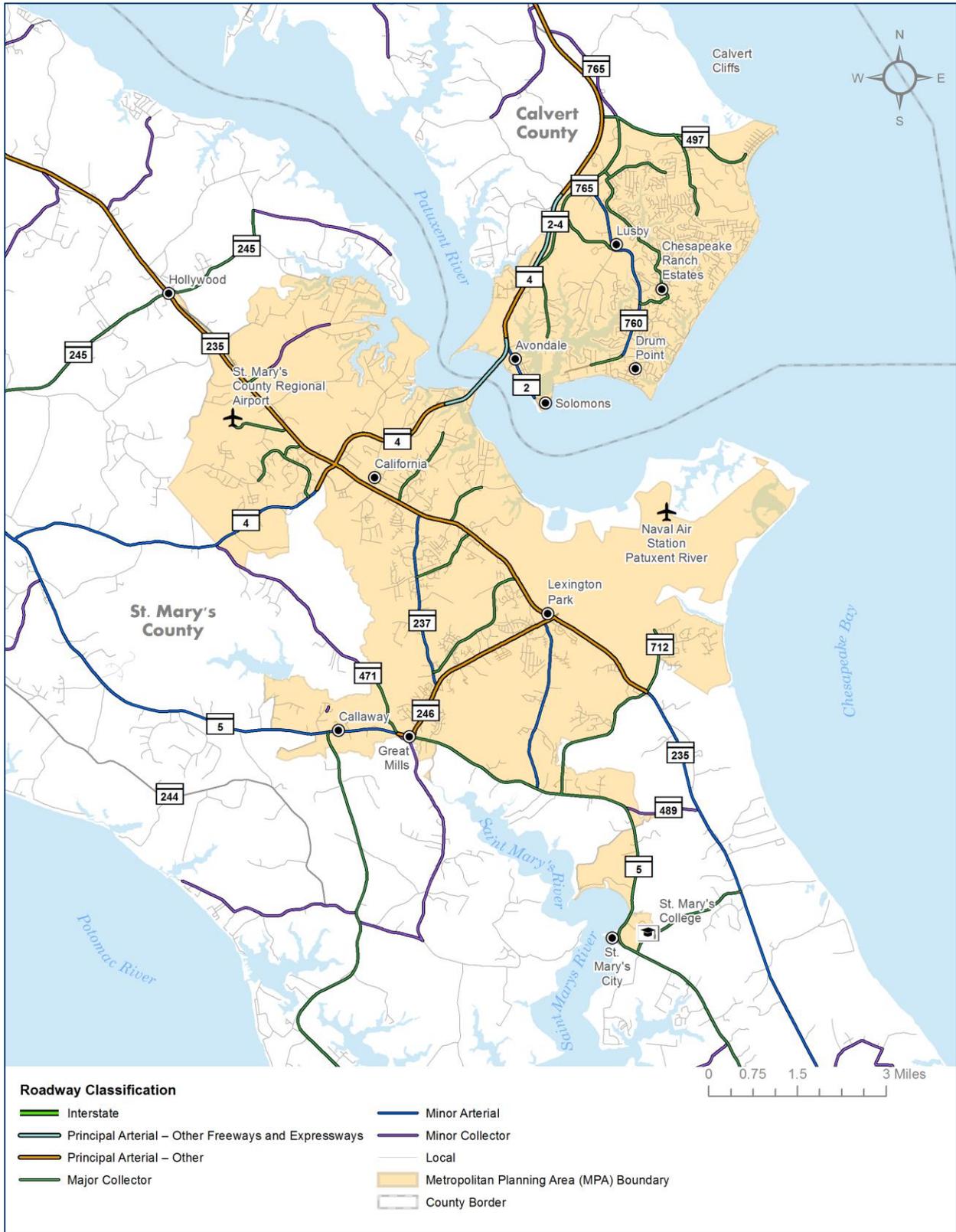
Collector roads in Calvert County include Dowell Road, H.G. Trueman Road, Southern Connector Boulevard, Cove Point Road, and Thunderbird Road. Collector roads in St. Mary's County include Airport Road, Wildewood Parkway, Town Creek Drive, Milestone Landing Road, and Pegg Road. **Figure 3.1** illustrates the arterial, collector, and local roadway network in the Moving Forward 2040 region.

Access and Mobility

All roads are not created equal and they do not serve the same purpose in the transportation network. While wide lanes and a faster speed limit might make sense for varying regional through traffic and long-haul trucks on MD 4, slower speeds, narrower lane widths, on-street parking, bicycle accommodations, and sidewalks might be a better fit for a local street used by residential and commercial developments. The functional classification system helps to prioritize types of improvements and levels and sources of investment.

The functional classification of the street and highway network (see **Figure 3.1**) is an essential step in the development of an efficient transportation network for the C-SMMPO area. Functional classification is the process of grouping streets and highways into classes or systems according to the character of service they are intended to provide. The intended function of a road provides a planning basis for determining appropriate system management techniques. A functional classification system also provides a means for prioritizing new construction or other road improvements to upgrade access and mobility for existing and new developments consistent with a logical pattern. The Maryland State Highway Administration (SHA), in cooperation with Calvert and St. Mary's counties, has classified roadways within the region in accordance with the FHWA Highway Functional Classification system. The C-SMMPO area contains both urban and rural systems, with the rural system located outside of the designated UA.

Figure 3.1: Roadway Network



Source: Maryland State Highway Administration

Three different classes of roadways (arterial, collector, and local) are part of the network that provides the region with both access – helping people reach their destinations, and mobility – allowing people to travel distances. For example, a minor arterial can be described as offering a lower level of traffic mobility than a principle arterial; it has lower speeds and more intersections and driveways. These same characteristics, however, mean that the minor arterial provides a higher level of access than the principal arterial. **Figure 3.2** illustrates these differences across the spectrum of roadway type. **Figure 3.3** provides descriptions and examples of the functional classifications in the region.

Figure 3.2: Relationship between Functional Classification and Travel Characteristics

Travel Characteristics	Arterial	Collector	Local
Distance Served and Length of Route	Longest	Medium	Shortest
Access Points	Few	Medium	Many
Speed Limit	Highest	Medium	Lowest
Distance Between Routes	Longest	Medium	Shortest
Usage (AADT, VMT)*	Highest	Medium	Lowest
Significance	Statewide	Medium	Local
Number of Travel Lanes	More	Medium	Fewer

Source: Highway Functional Classification Concepts, Criteria and Procedures, Federal Highway Administration, 2013

*AADT: Annual average daily traffic (see Section 3.2)

*VMT: Vehicle miles traveled (see Section 3.2)

Figure 3.3: Functional Classifications

Functional Classification	Description	C-SMMPO Example
Principal Arterial: Freeway/Expressway	Provide continuous and efficient routes for movement of high-volume traffic; supports regional mobility; typically funded and maintained by the state	 <p>MD 4 Thomas Johnson Bridge</p>
Principal Arterial: Other Principal Arterial	Provide continuous and efficient routes for movement of high-volume traffic; supports regional mobility; typically funded and maintained by the state or local government	 <p>MD 235 near California</p>
Minor Arterial	Serve shorter trips; may include sidewalks, signalized intersections, or on-street parking; generally maintained by local government, but capital costs may be the responsibility of state government	 <p>MD 760 near Lusby</p>
Collector: Urban Collector; Rural Major Collector	Support access to nearby land uses and provide connections to arterials; generally designed, constructed, and funded by local government	 <p>Pegg Road, Lexington Park</p>
Local Road	Provides the greatest access to adjacent land uses; serves short travel distances; generally designed, constructed, and funded by local government	 <p>Charles Street, Solomons</p>

Source: Highway Functional Classification Concepts, Criteria and Procedures, Federal Highway Administration, 2013

Existing and Forecasted Traffic Conditions

There are several key metrics that are used to monitor the region's traffic conditions: traffic volume, expressed as **average annual daily traffic (AADT)** and **vehicle miles traveled (VMT)**, and capacity or congestion, expressed as **level-of-service (LOS)**.

Traffic Volume

According to the Institute for Traffic Engineers (ITE), traffic volume is the most basic and widely used parameter in traffic engineering. While there are different definitions and methods used to collect, analyze, and describe traffic volume data, **AADT** is one common measure. AADT is used for determining the present demand on the roadway, developing the major or arterial street system, locating areas where new facilities or improvements to existing facilities are needed, and programming capital improvements.

In order to evaluate the need for future roadway improvements, travel demand forecasts need to be developed. A traffic volume based scenario is developed using existing roadway network and future socioeconomic data, to account for population, housing, and employment growth in the region.

In Calvert County, the travel demand forecasts and analysis of historical AADT data show that MD 2-4 traffic volumes in the Lusby/Solomons area have remained fairly stable over the recent years and are forecasted to do so in the immediate future. One area in the C-SMMPO region where growth in traffic volumes may necessitate roadway improvements is on some of the minor arterials and collectors bringing traffic to MD 2-4.

In St. Mary's County, travel demand forecasts were performed for the 2006 Transportation Plan showing what future traffic conditions will be without improvements to the existing roadway network. In Lexington Park, the traffic volumes along MD 235 north of MD 237 are anticipated to increase to over 70,000 vehicles per day. Other roadways such as MD 246, MD 5, MD 4, and MD 237 will see volume increases such that over 20,000 vehicles per day will utilize these facilities. In the California area, MD 235 between MD 4 and MD 245 will see increases between 15,000 to 20,000 vehicles per day.

What is Average Annual Daily Traffic (AADT)?

Average daily traffic on a section of roadway for all days of the week during a period of one year, expressed in vehicles per day (vpd).

Vehicle Miles Traveled (VMT)

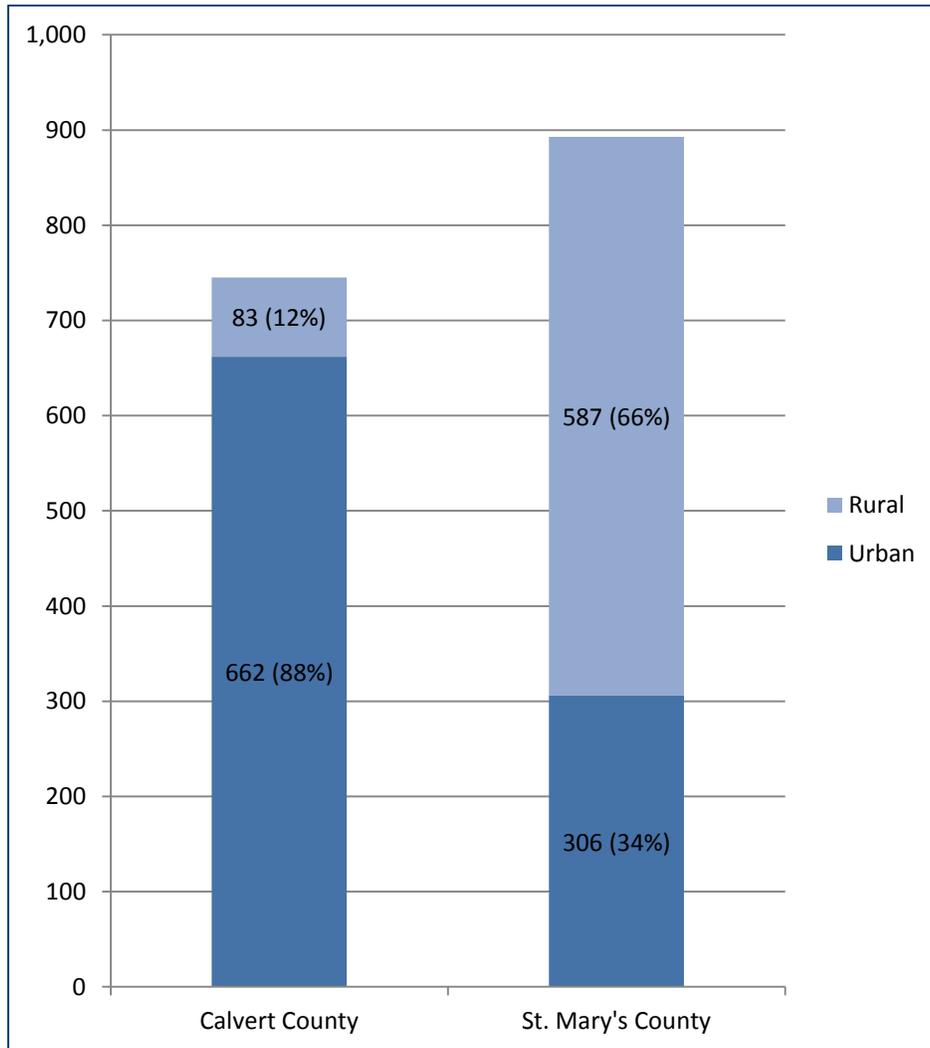
Annual data on the number of miles that vehicles travel on different types of roadways is another important metric for understanding how the roadway system changes over time. **VMT** is a tool to measure vehicle travel, as well as a lens into larger trends in travel patterns. For example, while personal automobile use has been on the decline in many urban parts of the United States, Maryland has seen a small but steady increase in VMT from 56.2 billion miles traveled to 56.4 billion miles traveled for the 2010-2014 time period (2014 Maryland State Highway Mobility Report).

MDOT collects annual VMT data by county and functional classification as part of FHWA's Highway Performance Monitoring System. In 2014, VMT for Calvert County was 745,000,000 miles, while the figure for St. Mary's County was 893,000,000 miles. These figures have fluctuated over the past four years but show an overall downward trend over the past ten years. As shown in **Figure 3.4**, the large majority of the vehicle miles traveled in Calvert County are on urban roads (88%), while in contrast, St. Mary's County has the majority of vehicle miles traveled on rural roads (66%).

What are Vehicle Miles Traveled (VMT)?

A measurement of the number of miles traveled by vehicles in a specified region during a specified time period. This statistic is compiled by FHWA and may be used to measure performance and to evaluate road pricing programs.

Figure 3.4: Vehicle Miles Traveled in Calvert and St. Mary's Counties, 2014 (miles, in millions)



Sources: Maryland State Highway Administration, Annual Highway Mileage Reports (State, State Toll, County, and Municipal System)

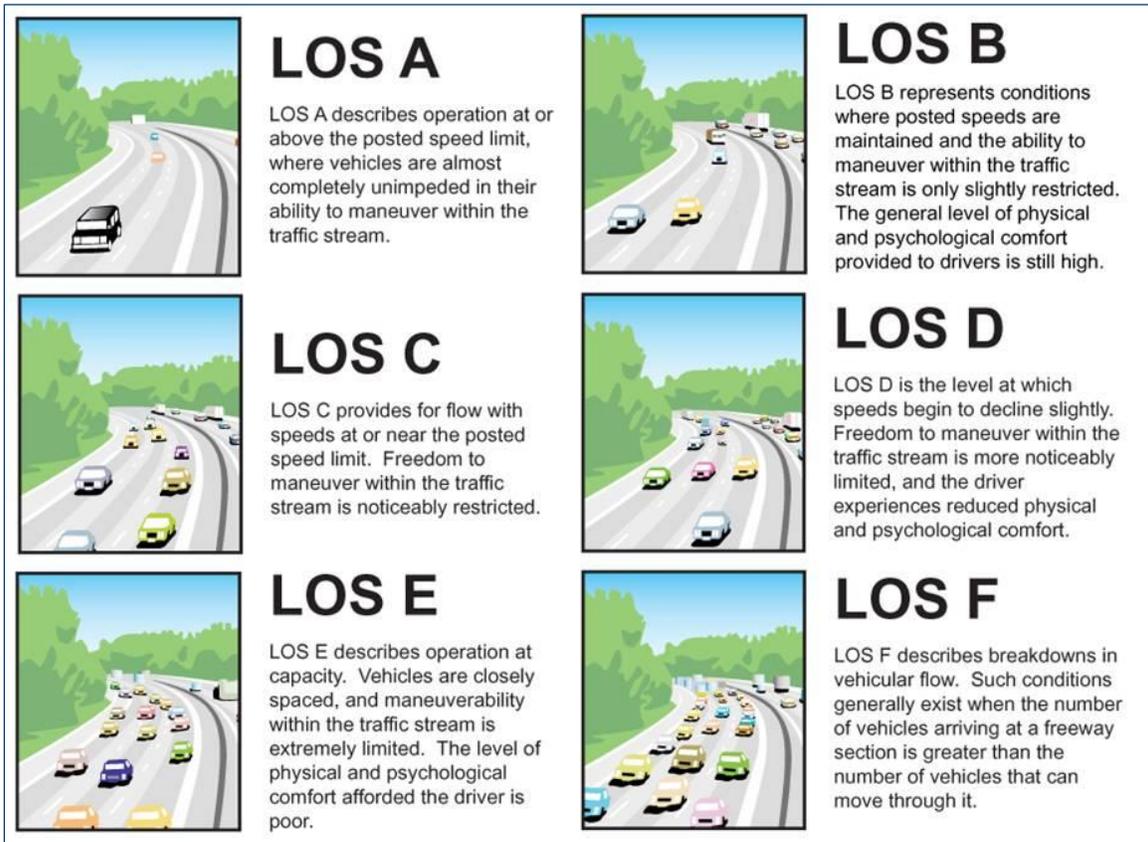
Traffic Congestion

Traffic engineers often use the **level of service (LOS)** metric to analyze and compare the relative levels of congestion on a stretch of road or at an intersection. The volume-to-capacity ratio (v/c ratio) expresses the relationship between the actual or projected traffic volume and the actual or projected capacity.

What is Level of Service (LOS)?

A qualitative performance metric used by traffic engineers to compare the volume and capacity of roadways. There are six standard levels of service given letter designations like school grades, as illustrated in **Figure 3.5**.

Figure 3.5: Level of Service (LOS)



Source: Maryland Transportation Authority, <http://www.mdt.maryland.gov>

Currently, MD 4 in both Calvert and St. Mary's counties is experiencing moderate to heavy congestion based on LOS. In Calvert County, MD 4 experiences heavy congestion in the southbound direction approaching the Thomas Johnson Bridge in the morning peak period hours and moderate congestion going northbound. In the afternoon peak period hours, there is heavy congestion near the bridge in both directions and moderate congestion northbound on MD 2-4 approaching the intersection with Rousby Hall Road (MD 760) and southbound on Rousby Hall Road toward Chesapeake Ranch Estates.

In St. Mary's County, MD 4 experiences heavy congestion from the Thomas Johnson Bridge southbound to MD 235 and moderate congestion northbound from Indian Bridge Road to the bridge in the morning peak period. In the afternoon peak period, MD 4 has heavy congestion in both directions from MD 235 to the bridge and moderate congestion on MD 235 northbound and along segments of MD 245 and MD 5 in the Moving Forward 2040 planning area.

Given that these areas already are experiencing traffic congestion, it is likely that congestion on these roadways will increase over the lifespan of Moving Forward 2040. Furthermore, as population and development in the MPA rises, demand on existing transportation systems will increase. As a result, roadways that currently experience free-flow movement will likely become moderately congested in the future.

Roadway Safety

This section examines regional safety trends, statistics, plans, and programs in place to improve safety on the transportation system and how the region plans for emergency evacuations.

The number and type of motor vehicle crashes are an important indicator of the safety of a region's roadways. Enhancing traffic safety is critical to the health and well-being of the citizens of the C-SMMPO region and those who travel on its streets and highways. The National Highway Traffic Safety Administration (NHTSA) provides nationwide reporting on traffic safety statistics, including fatalities and alcohol-related incidents. At a regional level, the most recent data covers 2009-2013. **Figure 3.6** details the fatalities for Calvert County and St. Mary's County.

“Toward Zero Deaths”
 Maryland has adopted the “Toward Zero Deaths” strategy developed by the American Association of State Highway Transportation Officials.

Figure 3.6: Fatalities and Alcohol Impaired Fatalities Suffered in Motor Vehicle Crashes (2009-2013)

County	Fatalities					Fatalities per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
All Fatalities										
Calvert County	9	8	7	9	11	10.20	8.99	7.84	10.03	12.16
St. Mary's County	16	11	15	14	6	15.49	10.40	13.92	12.84	5.47
Alcohol Impaired Fatalities										
Calvert County	0	4	1	4	2	0.00	4.5	1.12	4.46	2.21
St. Mary's County	1	1	1	6	1	0.97	0.95	0.93	5.50	0.91

Source: National Highway Traffic Safety Administration (NHTSA)

Improving safety for all transportation system users is a C-SMMPO priority. The plans, policies, and programs developed at a statewide and local level play an important role in coordinating efforts to reduce and eliminate the number of deaths and serious injuries on public roads.

In Maryland, the Strategic Highway Safety Plan (SHSP) serves as MDOT's overarching plan identifying the State's key safety needs and priorities and establishes a program of strategies to reduce or eliminate identified safety issues. The SHSP is coordinated with the individual plans of MDOT's modal administrations, including SHA, MTA, MDTA, and MVA.

The 2016-2020 Maryland SHSP consists of the following six major emphasis areas targeting various users of the roadway system:

- Distracted Driving;
- Impaired Driving;
- Aggressive Driving;
- Occupant Protection;
- Highway Infrastructure; and
- Pedestrian Crashes.

For each of the emphasis areas, the SHSP provides program goals, safety performance measures, and an action plan to achieve the stated goals.

SHA District 5 is responsible for overseeing all areas of state road operations, including traffic, construction, maintenance, engineering systems, right-of-way, utilities, and safety improvements for the Moving Forward 2040 region. SHA reviews safety data, identifying high-crash locations on state roads (road sections, intersections, ramps, etc.) and making recommendations for the allocation of safety funds for the region.

Safety-related road projects identified in the 2016-2021 **Maryland Consolidated Transportation Program (CTP)** for the C-SMMPO region are as follows:

- MD 4 (Patuxent Beach Road); MD 235 to Patuxent Boulevard; resurface and widen
- MD 235 (Three Notch Road) in California, MD; drainage improvement
- Various locations in District 5; installation of rumble strips – Calvert and St. Mary's counties

Roadway Security and Emergency Evacuation

The Moving Forward 2040 region is susceptible to a wide range of threats and hazards, including both human-caused and naturally-occurring disasters, catastrophic acts of violence and terrorism, and the isolated or systematic failure of critical infrastructure. The ability to address the risks associated with these potential events is directly tied to the preparedness of all of the region's communities, levels of government, private and nonprofit organizations, and individual residents and visitors. Many of the hazards potentially affecting the region can have significant impacts to the transportation system. Planning for emergencies is carried out at the local, regional, and statewide level.

Calvert County

The Calvert County Emergency Management Division is responsible for developing and maintaining an ongoing program of mitigation, preparedness, response, and recovery in the event of an extraordinary emergency including any manmade, natural, wartime, terrorist, or technological disaster. In 2003, Exelon Energy, the nuclear power plant, installed a new outdoor warning system as part of its relicensing agreement.

The division is responsible for the following emergency operating plans:

- Emergency Operating Plan (EOP): This is a comprehensive plan covering the response to any emergency, major disaster, or enemy action that occurs in Calvert County. It is a directive to the county government to prepare for and execute emergency tasks to ensure maximum survival of the population and property in the event of an emergency or disaster. A chapter on terrorism was added to the plan.
- Radiological Emergency Plan (REP): The purpose of this plan is to coordinate and implement an immediate, effective, and comprehensive County and State response to a radiological emergency at the Calvert Cliffs Nuclear Power Plant.
- Cove Point Liquid Natural Gas Receiving Terminal Emergency Plan: This plan provides for the protection of plant personnel and the general public and for the prevention of property damages resulting from an incident at the terminal.
- Cove Point-Loudoun Pipeline Emergency Plan: This plan provides information and guidance for operating personnel responding to any pipeline emergency involving company facilities.
- Calvert Cliffs Nuclear Power Plant Emergency Response Plan: This plan consists of an Emergency Response Plan and an offsite emergency plan to protect plant personnel and the general public in the event of accident at the plant.

St. Mary's County

The St. Mary's County Emergency Management Division is responsible for developing, coordinating and promoting the emergency management program incorporating planning, preparedness, response, and recovery activities related to emergencies and/or disasters in St. Mary's County. Some of the hazards that could potentially affect the region include:

- Biological Threats or Chemical Threats,
- Droughts and Extreme Heat
- Explosions,
- Fires and Wildfires,
- Floods,
- Hurricanes and Tropical Storms,
- Severe Thunderstorms and Tornadoes; and
- Winter Storms and Extreme Cold

The County provides information to the public on how to be aware of and prepare for the hazards listed above. In the event of an emergency where evacuation is needed, the County has identified four major evacuation routes including MD 5/MD 235, MD 4, and MD 234. Recent improvements to Pegg Road from MD 237 to MD 5 will help with an evacuation from NAS PAX.

3.3 What is the Region's Transit System?

Both Calvert and St. Mary's counties operate local transit service in the C-SMMPO. The Maryland Transit Administration (MTA) also provides commuter bus service to both counties connecting to WMATA Metrorail stations in Prince George's County, which connect to Washington, D.C.

Calvert County

Calvert County's Department of Community Resources-Public Transportation Division, provides public transit service for the general public as well as the specialized services for the elderly and persons with disabilities. The county provides seven fixed routes (see **Figure 3.7**) and four demand-response/paratransit routes to link residents with major shopping, medical, and employment destinations, as well as with public services in Prince Frederick. Three fixed routes operate in the C-SMMPO region in Calvert County.

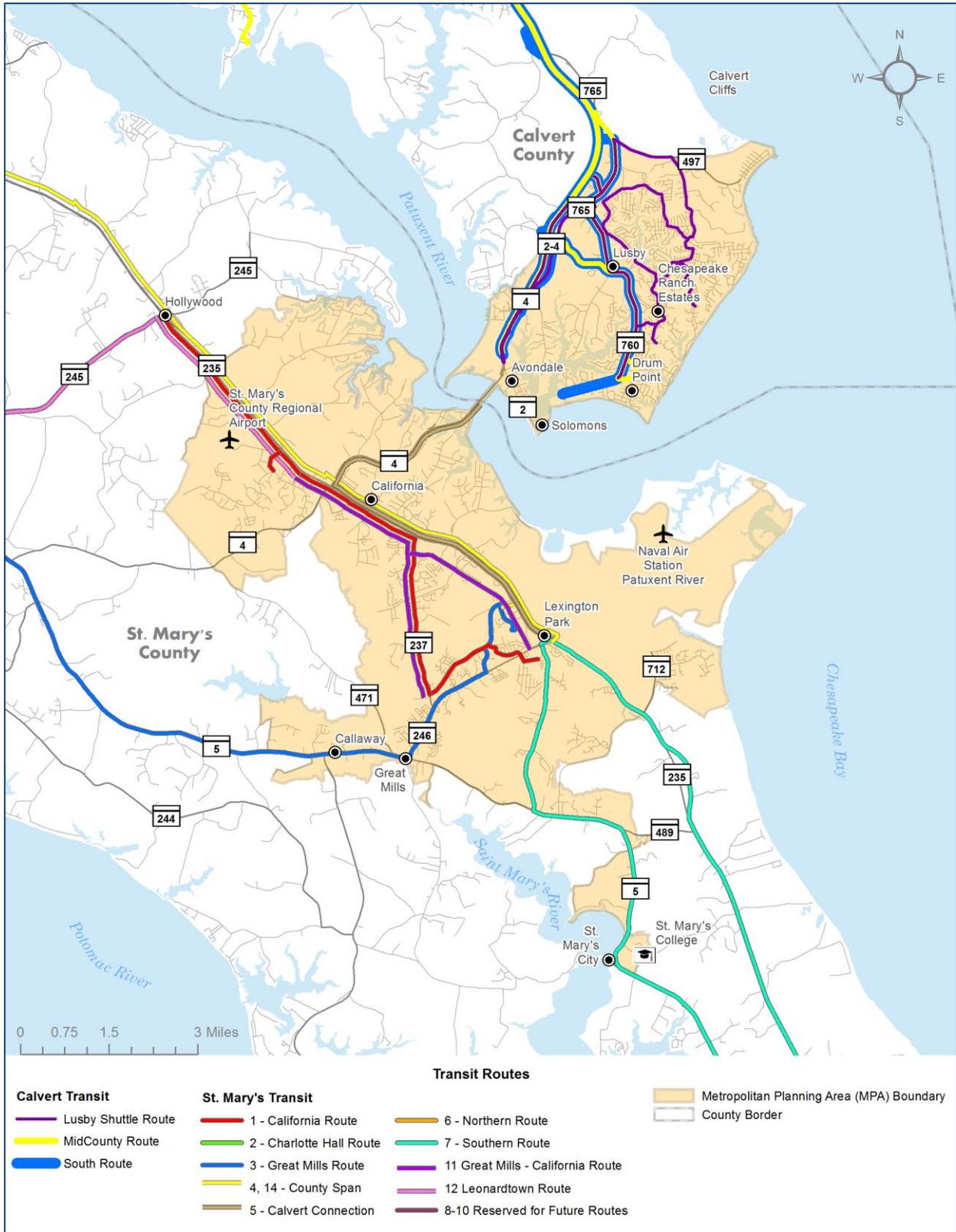
Figure 3.7: Calvert County Transit Fixed Routes

Routes	Operating Days
Dunkirk Route (Orange Route)	Monday – Friday
Prince Frederick Shuttle I (White Shuttle)	Monday – Saturday
Prince Frederick Shuttle II (Green Shuttle)	Monday – Friday
Lusby Shuttle (Gold Shuttle)	Monday – Friday
Lusby Summer Shuttle (Purple Shuttle)	Monday – Friday
Mid-County (Yellow Route)	Monday – Friday
North Route (Pink Route)	Monday – Saturday
South Route (Blue Route)	Monday – Saturday

Source: Calvert County Public Transportation

Calvert County Public Transportation provides demand response services for disabled persons. This includes the North County, Mid-County, South County, and ADA paratransit routes. ADA paratransit service is available to eligible disabled persons who are unable to use fixed-route service.

Figure 3.8: Transit Routes



Source: St. Mary's Transit System and Calvert County Public Transportation

St. Mary's County

St. Mary's Transit System (STS), a service of St. Mary's County's Department of Public Works and Transportation, provides community transportation throughout the county. STS services include nine fixed routes (**Figure 3.9**) that serve the county's more populated corridors and demand response services. As the population of St. Mary's County has grown, STS ridership has also grown, with annual passenger trips increasing 11% between FY 2007 and FY 2012. Total ridership in FY 2012 was approximately 425,000 passenger trips. As the system has grown, the fixed routes have been extended and additional stops and destinations included.

Figure 3.9: St. Mary's Transit Fixed Routes

Routes	Operating Days (Times)
California (Leonardtown to Lexington Park via California)	Monday – Friday (6 a.m. to 6 p.m.)
Charlotte Hall (Leonardtown to Charlotte Hall via Loveville)	Monday – Friday (6 a.m. to 6 p.m.)
Great Mills (Lexington Park to Leonardtown via Great Mills)	Monday – Friday (6 a.m. to 6 p.m.)
County Span (Lexington Park to Charlotte Hall)	Monday – Saturday (6 a.m. to 7 p.m.)
Calvert Connection (Lexington Park to Solomons)	Monday – Friday (7 a.m. to 6 p.m.)
Northern Route (Charlotte Hall to Budds Creek via Mechanicsville)	Monday – Saturday (7 a.m. to 6 p.m.)
Southern Route (Lexington Park to Ridge to St. Mary's City)	Monday – Saturday (6 a.m. to 7 p.m.)
Great Mills/California (California to Great Mills)	Monday – Sunday (6 a.m. to 11 p.m.)
Leonardtown (California to Charlotte Hall via Leonardtown)	Monday – Saturday (6 a.m. to 9 p.m.)

Source: St. Mary's Transit System

STS provides complementary ADA paratransit service for eligible riders within ¼-mile of all fixed routes. Fares are \$2.00 one-way, \$4.00 round trip, and \$2.00 for each additional stop request. Demand-response transportation for seniors and persons with disabilities is provided in all other areas of the county through the Statewide Special Transportation Assistance Program (SSTAP).

SSTAP picks up riders in the morning (approximately 10:00 a.m.) and returns them home between noon and 1:00 p.m. SSTAP fares are \$3.00 one-way, with \$3.00 for each additional stop request and/or attendant. SSTAP service is divided into zones by the day of the week as shown in **Figure 3.10**:

Figure 3.10: SSTAP Routes

Routes	Operating Days
Ridge, Lexington Park, Great Mills, Callaway, Piney Point, Tall Timbers, St. Inigoes, and Mechanicsville areas	Zone 1: Monday
Mechanicsville, Charlotte Hall, and Golden Beach areas	Zone 2: Tuesday
Lexington Park, Leonardtown, Hollywood, Breton Bay, Compton, Avenue, Chaptico, and Wicomico Shores areas	Zone 3: Wednesday
All zones or all County on this day	Zone 4: Thursday
Lexington Park, Wildewood, California, Hollywood, and Oakville areas	Zone 5: Friday

Source: Statewide Special Transportation Assistance Program

MTA provides commuter express bus service to Washington, D.C., on nine routes from park-and-ride lots in Calvert and St. Mary's counties. The majority of the routes and stops serve the northern portions of both counties outside of the Moving Forward 2040 region; however, Route 725 provides direct service to and from the MPO region with a stop in California at the St. Mary's County Regional Airport.

Transit System Improvements

Planning for transit improvements uses a similar model to the overall transportation planning process where local, regional, and statewide efforts identify gaps in service and propose improvements to the system.

Calvert County

The **Calvert County Transportation Plan (2010)** recommendations for improvements are largely conceptual in nature and should serve as a guide to future development of the transit system in the county. The plan recommends focusing transit service improvements on town centers and transit services that connect residents to major employment centers. It recommends the following system improvements in the Moving Forward 2040 planning area:

- Rapid Transit Expansion and Improvement – Improve and expand commuter bus service to Washington, D.C. and employment centers, as warranted, along the existing MD 2-4 corridor.
- Express Transit Expansion and Improvement – Improve and expand express transit service to serve as a feeder network to the rapid transit system.
- Local Transit Expansion and Improvement – Improve local transit links from residential areas to shopping, recreational, educational, and other major land uses. Continue to provide and improve on-demand response services.
- Specific service improvement recommendations include:
 - Provide transit busses with traffic signal preemption capabilities along MD 2-4
 - Study the feasibility of providing transit bus service along MD 2-4 from Prince Frederick to NAS PAX in St. Mary's County
 - Provide an express bus route between Solomons and Prince Frederick
 - Develop transit stations in town centers including Solomons

The **2008 Calvert County Transit Development Plan (TDP)** prepared for MTA identified areas in Calvert County that had the highest potential demand for transit service. The TDP identified that the Lusby, Solomons, and Drum Point areas in the Moving Forward 2040 planning area had some of the highest population densities, largest senior citizen populations, and the highest numbers of households without access to a vehicle. The TDP recommends restructuring the service in the Drum Point/Chesapeake Ranch Estates area; provide more direct routes between Prince Frederick and Solomons, and improvements to the demand response service to better serve the transit dependent population.

St. Mary's County

The **2006 St. Mary's County Transportation Plan** describes improvement projects for roadways, transit, bicycle facilities, trails, and sidewalks based on existing county conditions and travel demand forecasts through 2025. Like the 2010 St. Mary's County Comprehensive Plan, the Transportation Plan notes rapid growth in STS service and ridership. It recommends the following system improvements in the Moving Forward 2040 planning area:

- Provide Sunday bus service in the Lexington Park/California/Leonardtwn area
- Add bus stop amenities at major transfer locations (First Colony in California and the MVA in Loveville)
- Add services along the remainder of the MD 4 corridor, Indian Bridge Road, MD 249, MD 243, St. Clements Shore, and Colton Point
- Coordinate with the NAS PAX to improve connections to the base from nearby locations such as Tulagi Place
- Increase service frequency from hourly to half-hourly in Lexington Park, Leonardtown, and California. These areas have the highest load volumes and at times demand exceeds capacity
- Increase service frequency after 6:30 p.m. along major routes
- Improve bus service over the Thomas Johnson Bridge from Calvert County
- Explore providing real time information at bus stops.

The **2013 St. Mary's County Transit Development Plan (TDP)** prepared for MTA identified that the greatest concentrations of transit-dependent persons are in the Lexington Park, California and Hollywood areas. The TDP also identified that many important origins and destination are found along the MD 235 corridor within the Moving Forward 2040 planning area. The TDP recommends improved connections to NAS PAX, increased frequency of service on local bus routes in Lexington Park, and longer term information systems and vehicle improvements to better serve the transit dependent population.

In the early 2000s, MTA and the local counties initiated the **Southern Maryland Commuter Rail Service Feasibility Study**. The study examined the feasibility of operating MARC commuter rail service on existing railroad rights-of-way from Bowie to Southern Maryland. The purpose of the study was to examine the existing facilities in a focused way and identify the possibilities, the challenges, and order-of-magnitude construction cost estimates to establish and develop commuter rail service.

The study's overall conclusion was that commuter rail service between Southern Maryland and Washington, D.C., is potentially feasible, but would be costly and difficult to implement. Any expansion of commuter rail service to Southern Maryland will be contingent upon identifying sufficient financial resources to make the project happen, consistent with the State's Rail Plan. For commuter rail to be viable, it must "beat the bus" in terms of trip time and convenience. Finally, investment in commuter rail service within the Southern Maryland corridor will need to be evaluated by MTA and weighed against other investment needs, in the context of its statewide mission and core services.

Transit Funding

Local transit services in the Moving Forward 2040 planning area are funded through a combination of local, state, and federal funding programs. In Maryland, the MTA Office of Local Transit Support (OLTS) manages a number of federal funding programs available to transportation operators described below. These programs support both public transportation and specialized transportation services. The primary purpose of OLTS is to provide a variety of technical assistance services to the local operating transit systems (LOTS) in Maryland. These include:

- Federal and State regulatory compliance;
- Operations;
- Management;
- Planning; and,
- Training.

Federal Funding

Federal funding for public transportation programs is provided through Moving Ahead for Progress in the 21st Century (MAP-21), the current transportation authorization. The law authorized \$10.7 billion in FY 2014 and \$11.0 billion in FY 2015 for public transportation. MAP-21 furthered several important goals, including safety, state of good repair, performance, and program efficiency.

MAP-21 gave the Federal Transit Administration (FTA) significant new authority to strengthen the safety of public transportation systems throughout the United States. The Act put new emphasis on restoring and replacing aging public transportation infrastructure by establishing a new needs-based formula program and new asset management requirements. In addition, it established performance-based planning requirements that align federal funding with key goals and tracks progress toward these goals. Finally, MAP-21 improved the efficiency of administering grant programs by consolidating several programs and streamlining the major capital investment grant program known as “New Starts.” **Figure 3.11** summarizes the federal funding programs provided in MAP-21.

Figure 3.11: MAP-21 Federal Funding Programs

Section	Objective/Goal
5307 - Urbanized Area Formula Grants	The largest of FTA’s grant programs, this program provides grants to urbanized areas to support public transportation. Funding is distributed by formula based on the level of transit service provision, population, and other factors.
5311 - Rural Area Formula Grants	This section provides capital, planning, and operating assistance to support public transportation in rural areas with fewer than 50,000 residents.
5310 - Mobility of Seniors and Individuals with Disabilities	This program provides formula funding to increase the mobility of seniors and persons with disabilities. Funds are apportioned based on each state’s share of the targeted populations and are now apportioned to States (for all areas under 200,000) and large urbanized areas (over 200,000). The former New Freedom program (5317) is folded into this program.
5329 - Safety	Establishes a comprehensive program to oversee the safety of public transportation. Requires local transit providers to develop agency safety plans the include performance measures.
5337 - State of Good Repairs	A new grant program to maintain public transportation systems in a state of good repair.

Section	Objective/Goal
5326 - Asset Management	Requires transit authorities to establish asset management plans, including inventories, condition assessments, and investment prioritization.
5339 - Bus and Bus Facilities	Provides funding for capital improvements, including replacement, rehabilitation, and purchases of buses and related equipment, as well as the construction of bus-related facilities.
5324 - Emergency Relief	Provides assistance to states and public transportation systems with emergency-related expenses when emergencies are declared by governors or the president.
5316 - Job Access and Reverse Commute Program (JARC)	The goal of the JARC program is to improve access to transportation services to employment for welfare recipients and eligible low-income individuals, and to transport residents of urbanized areas and non-urbanized areas to suburban employment opportunities.
Statewide Special Transportation Assistance Program (SSTAP)	SSTAP is a state-funded program to provide general purpose transportation to the elderly and persons with disabilities. These funds are annually apportioned to the counties and Baltimore City based on a formula. Funds can be used for operating and capital costs with a local share required.

3.4 What is the Region’s Bicycle and Pedestrian Network?

Walking and cycling are modes of transportation as well as recreational activities. Such activities are undertaken by adults and children, local residents and visitors, people seeking exercise as well as those seeking enjoyment of the natural environment. Bicycle and pedestrian routes in the region also link activity centers within the region or connect to areas beyond the region.

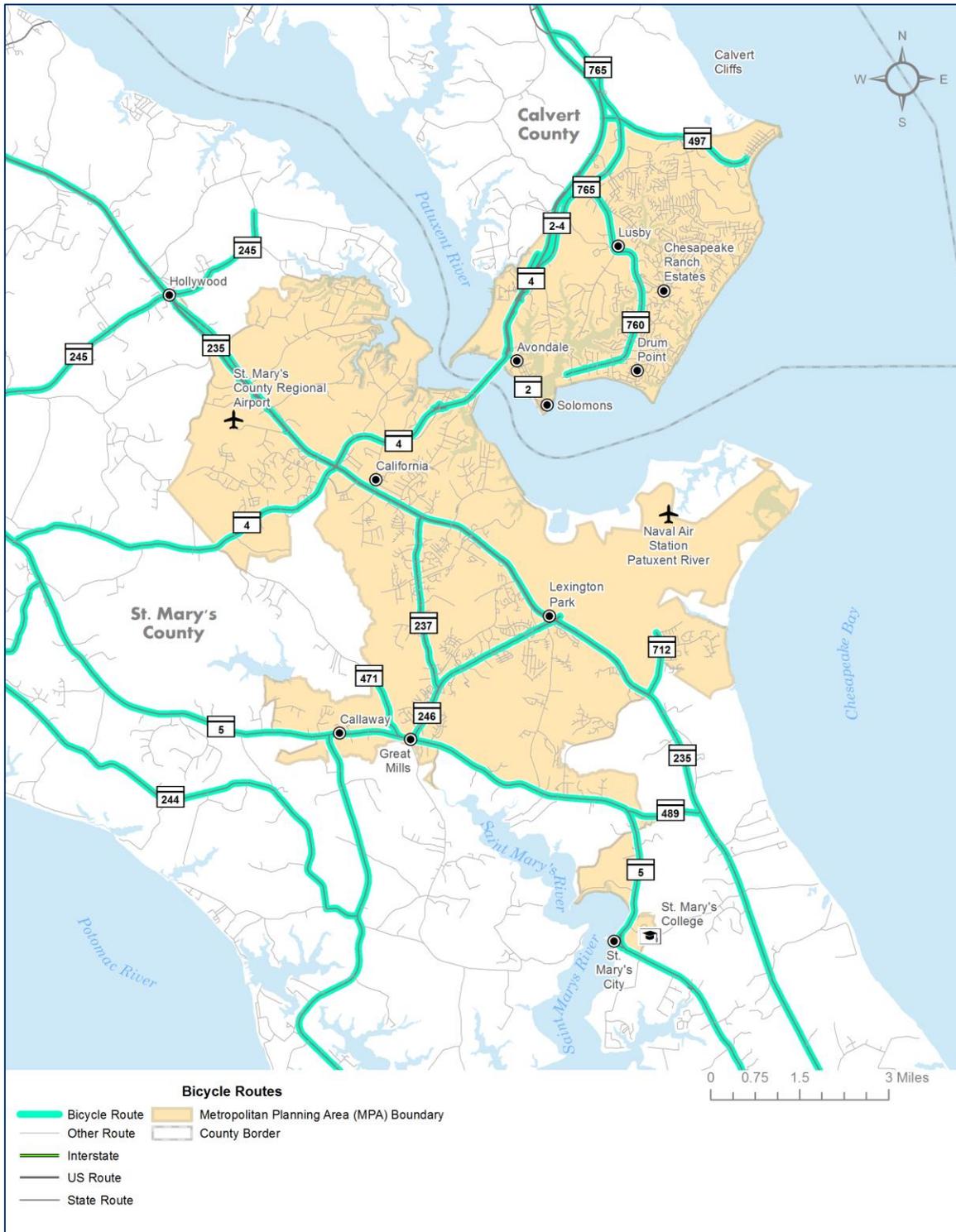
A variety of facility types help to meet the wide range of demand and the features of trails and bike paths intended for recreational use may be different from the sidewalks and on-road bike facilities sought by commuters. Pedestrian facilities are numerous and can be exclusively use by pedestrians such as sidewalks or share use with bicyclists or motorists. **Figure 3.12** provides a list of the types of pedestrian facility elements.

Figure 3.12: Pedestrian Facility Elements

Element	Description
Sidewalks	The linear elements of the pedestrian facility along a street
Off-Road Path	Paved or unpaved pedestrian facility in rural or low density suburban areas
Shared-Use Path	Paths developed for use by pedestrians and bicyclists
Shared Roadway	Shared use of a road for people walking and driving (usually roads with extremely low vehicle speeds)
Overpass/Underpass	A grade-separated walkway for pedestrian use

There are several types of bicycle facilities that meet different types of needs as shown in **Figure 3.13** and as explained in **Figure 3.14**. On-street bicycle facilities may include marked bike lanes, side paths, paved shoulders, and shared lanes. Off-road facilities may include bike trails and multi-use paths intended for bicycling, as well as walking, jogging, in-line skating, and potentially horseback riding. There are a number of elements that support both on-street and off-street pedestrian and bicycle facilities.

Figure 3.13: Bicycle Routes



Source: Maryland State Highway Administration

Figure 3.14: Bicycle Facility Elements

Element	Description
Bikeway	The generic term for any road, street, path, or way which is specifically designated for bicycle travel.
On-Road Routes	Roads that may be well-suited and/or retrofitted for future bike routes. They include both roads with and without shoulders.
Roads with Shoulders	On roads with shoulders, dedicated bike lanes could be designated.
Roads without Shoulders	On roads without shoulders, dedicated bike lanes will not be possible and cyclists will have to share a travel lane with vehicular traffic.
Off-Road Routes	Off-road locations where trails could be built to connect to on-road trails or greenway connections that connects to major hubs.
Rails-to-Trails / Rails-with-Trails	Off-road trails that use former railroad rights-of-way either along the rail right-of-way adjacent to an operating railroad or on former railroad bed.
Conventional Bicycle Lanes	A bicycle lane is a portion of the roadway that has been designated by striping, signing, and/or pavement markings for the preferential and/or exclusive use of bicyclists. Bicycle lanes are ideally located on both sides of the road, except on one way streets, and carry bicyclists in the same direction as adjacent motor vehicle traffic.
Buffered Bicycle Lanes	Buffered bike lanes typically have a desired width of 6 feet and minimum of 5 feet against a curb with white paint lines and bicycle symbols painted on the bikeway.

Bicycle and Pedestrian System Improvements

There are numerous ways to implement sidewalk, trail, and bicycle network improvements. Initiatives may be undertaken by state, county, or municipal agencies as stand-alone projects or as part of larger programs. Bikeway and pedestrian circulation improvements may be implemented as roadway construction occurs or conducted as a part of an overall pedestrian or bicycle program. Bicycle and off-road trail projects may be implemented in association with park improvements or recreation programs. Both bicycle and pedestrian improvements can be undertaken by private developers as a result of negotiations in the local jurisdiction development approval process. Since so many different entities can have a role in contributing to these networks, it is important to have plans to guide initiatives.

As described in the 2006 St. Mary's Transportation Plan, the Moving Forward 2040 region's relatively flat terrain and the historic villages that mark the countryside are among the attributes that make the area attractive to cycling enthusiasts. Over the last two decades, Southern Maryland has become one of the fastest growing regions in the state. The rapid increase in growth has created dramatic changes in land use and transportation. In response to growth trends in the region, the transportation system needs to be enhanced to accommodate increased traffic volumes. As improvements to the transportation system occur, vehicular, bicycle, and pedestrian movements should be considered.



On-road bicycle route with a striped shoulder (left) and on-road bicycle route with a wide outside shoulder (right)



Conventional on-road bike lane (left) and shared-use hiking and biking trail (right)

Calvert County

The Calvert County Transportation Plan calls for the expedited inclusion of all town center projects with sidewalk elements. It also lists guidelines for providing sidewalks in town centers and newly developed areas of the county. The Transportation Plan calls for developing a detailed bicycles facilities plan for the county. The bicycle plan should identify a recommended network of bicycle facilities within existing town centers and provide specifications to accommodate bicycle travel along existing roads and proposed roads. The bicycle plan should identify specific impediments to safe bicycle travel. The Transportation Plan also recommends that all roadway and highway improvement projects include accommodations for bicycle improvements going forward.

St. Mary's County

The bicycle section of the St. Mary's County Transportation Plan provides a strategy for the development of a countywide bicycle network. The vision of the bicycle plan promotes a safe, comfortable, and bicycle-friendly environment that encourages people to use bicycle facilities both for transportation and recreation purposes. The vision for the bicycle plan is supported by the following three goals along with a comprehensive set of recommendations and implementation strategies:

- To enhance public awareness of the bicycle so that it is considered a viable and safe mode of transportation.
- To create and maintain an extensive network of bikeways that will enhance access to cultural resources throughout the county including residential, recreational, educational, institutional, and commercial areas within St. Mary's County.
- To provide support for people and their bicycles once they reach their destinations.

3.5 What is the Region's Airport?

The Moving Forward 2040 planning area is served by one public airport located in California. St. Mary's County Regional Airport opened in 1969. Some notable aviation activities that regularly occur at the airport include use by the Maryland State Police, medical evacuation operations, air access for tourists, flight instruction, and corporate aviation operations. Businesses using the airport include A.T. Massey Coal Company, Boeing, Coleman Microwave Company, and Washington Hospital Center. The airport is often used by tourists for access to such events as the Budds River Motorcycle Races, the Potomac Jazz and SeaFood Festival, as well as the St. Mary's County Fair.

Several airport master plans have been developed for the St. Mary's County Regional Airport through the years. The first Airport Master Plan was started in 1978 under a federal grant. The current Master Plan was adopted by the Commissioners of St. Mary's County in 2002.



Since that time, approved revisions to the airport layout drawing incorporated an additional 50,000 square feet of hangar space to the south of the existing airport property. Other improvements that are being evaluated include recommendations for land acquisition, improved signage and navigational aids, and evaluation of future commuter and commercial aviation use.

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