THE PLAYBOOK

Bold Calls. Strategic Moves. Effective Results.

The Playbook will improve how we move goods and provide services and connect people to the places where they live, work, and play.

MDOT
MARYLAND DEPARTMENT OF TRANSPORTATION

2050 MARYLAND TRANSPORTATION PLAN

The Governor's Game Plan

WES MOORE

Our administration wants to transform the State's transportation system and provide accessible, equitable, and sustainable options to Marylanders across the State. Maryland's communities are expanding, jobs are growing, and we need to make sure that everyone throughout Maryland can get from where they live to where opportunity lies. Building a transportation system that meets the needs of all Marylanders is a core priority for our administration, and that's why MDOT is creating a long-term transportation plan to serve the State for generations to come. Whether you drive, take the bus, ride the train, bike, stroll or walk, you are a key member of the team, and this Playbook lays the groundwork for strategic moves and effective results, ensuring that transportation infrastructure investments connect all Marylanders to life's opportunities and that no one is left behind.

The Transportation Secretary's Strategy

PAUL WIEDEFELD

The Maryland Department of Transportation (MDOT) is an agency that works in partnership with the communities it serves and promotes social equity, environmental protection, and sustainable communities. The facilities and services that MDOT provides are central to the quality of life of every Marylander by providing critical access to day-to-day mobility needs, such as employment, health care, and leisure activities. Simply put, MDOT is a multimodal agency Taking You Places. Maryland is a place to ride, walk, bike, drive, fly, and cruise. It is a place to do business. Maryland is a place to work where you can make a difference. MDOT connects people to communities. MDOT is focused squarely on enhancing safety for all users. MDOT is committed to looking at everything it does through an equity lens so that MDOT can take transportation to a different place, support larger societal goals, and really listen to ALL of its customers -- internal and external -- because together we can help ensure we support Governor Moore's vision of a bolder, brighter future where no one is left behind. Thanks to this vision and months of extensive engagement with our customers and stakeholders, I am pleased to present MDOT's Playbook. The Playbook is the Department's plan to guide us in making strategic transportation investments to better serve all Marylanders. We appreciate your continued support and contributions that made this Playbook possible.

THE PLAYBOOK

Bold Calls. Strategic Moves. Effective Results.

Everyone relies on transportation. Marylanders depend on an interconnected system of facilities and assets that keep us moving and connected to jobs, goods, services, and each other. From the port and airports that deliver cargo and passengers via waterways and airways, to transit services, sidewalks, bike lanes, motor vehicles, and state highways that move people and vehicles large and small along roadways, railways, and bridges — there is one Maryland transportation system.

The 2050 Maryland Transportation Plan (MTP), the "Playbook," will improve how we move goods and services and connect people to the places where they live, work and play. The Playbook clearly outlines Maryland's vision to provide safe, reliable, accessible, equitable, and sustainable transportation options to Marylanders across the State. Everyone has a part to play in planning, delivering, and operating Maryland's multimodal transportation system.

Maryland's needs, priorities, and resources are reflected in the Playbook mission, vision, guiding principles, and goals. The Playbook will guide transportation policies and investment strategies, with a focus on delivering exemplary customer service, leveraging federal dollars, and developing the necessary workforce to deliver projects on time and within budget.

Like any good plan for a successful sports team, the Playbook is comprised of numerous scenarios, examples, and detailed options for how MDOT plans to continue delivering safe, sustainable, intelligent, exceptional, and inclusive transportation solutions for all Marylanders.

Marylanders count on the Department. People of all ages and abilities are affected by MDOT's capability to anticipate their needs, respond to challenges, and work together. They trust MDOT, and that trust is taken seriously.

Everyone has a part to play in planning, delivering, and operating Maryland's transportation system; working together to deliver a connected and integrated transportation system.

The Playbook represents a vision for the future of transportation in Maryland. In the near-term, there are real fiscal challenges that may affect the pace of progress. But working as a team, there is confidence that the game changing policies and projects to leave no one behind can be implemented.

*For more information on the Active Transportation System in Maryland, please visit the 2050 Bicycle and Pedestrian Master Plan, at **www.mdot.maryland.gov/bikeped**.*

Executive Summary

Guiding Principles are concepts that will guide MDOT in its decision-making process to support the State's goals for the transportation system in Maryland.

Equity: Integrate equity considerations in all aspects of transportation planning, programming, and operational processes.

Preservation: Preserve the condition of the existing transportation system assets to provide safe and efficient movement.

Resilience: Improve the transportation system's ability to provide reliable service throughout natural weather events and man-made threats.

Modernization: Transform the transportation system by using proven technological improvements and exploring innovative new ideas.

Experience: Improve the experience of all transportation system users.

Goals show, at the highest level, what MDOT plans to do by 2050. Together with the guiding principles they produce a vision of how the transportation system will serve Maryland, and the key outcomes MDOT desires for Maryland.

Enhance Safety and Security: By protecting the safety of all residents, workers, and visitors, Maryland will achieve zero traffic-related fatalities and serious injuries.

Deliver System Quality: By investing to achieve system quality, MDOT will create an infrastructure program that is financially sustainable, environmentally resilient, and in a state of good repair.

Serve Communities and Support the Economy: By expanding transportation options to allow Maryland's diverse communities to access opportunities and to support the movement of goods, MDOT will expand transit and active transportation use, and bolster the State's economy.

Promote Environmental Stewardship: By minimizing and mitigating the environmental effects of transportation, Maryland will achieve a 20 percent reduction from 2019 in vehicle miles traveled (VMT) per capita by 2050, a 40 percent reduction in on-road transportation sector greenhouse gas (GHG) emissions by 2031, and move towards net-zero by 2045.

MARYLAND DEPARTMENT OF TRANSPORTATION

MISSION STATEMENT
The Maryland Department of Transportation is a customer-driven leader that delivers safe, sustainable, intelligent, exceptional, and inclusive transportation solutions in order to connect our customers to life's opportunities

Plan Introduction

The transportation system binds the State together. It connects Marylanders to jobs, goods, services, and each other. Delivering an efficient transportation system can enhance communities, protect the environment, drive economic mobility, and generate more capital investment. Every five years, Maryland law requires that MDOT update its long-range transportation plan, a planning document that reflects the application of programmatic transportation goals to project prioritization over a 20-year or longer planning horizon. The Playbook provides a long-term vision for how MDOT can seize opportunities and navigate challenges in the coming decades. The vision of the Playbook is to provide safe, reliable, accessible, equitable, and sustainable transportation options across the State.

Informed by input from Marylanders, the MTP examines the most critical transportation needs, identifies noteworthy trends, and crafts statewide goals and objectives. The purpose of the plan is to identify strategies to help MDOT achieve these goals and objectives, and provide the opportunity to work together to deliver a winning future for all Marylanders. The Playbook is aligned with the Moore-Miller Administration's commitment to leave no one behind. Specifically, this plan identifies efforts to prioritize equity, the environment, and engagement with our communities, particularly our most underserved residents.

The Team

MDOT's mission is to be a customer-driven leader that delivers safe, sustainable, intelligent, exceptional, and inclusive transportation solutions in order to connect our customers to life's opportunities. A complete team effort is required to deliver on this mission. MDOT partners with federal, state, regional and local governments, stakeholders, and, most importantly, Marylanders, to solve problems and achieve progress in all regions of the State.

Marylanders are the most valuable players on the transportation team and our ultimate success is determined by how well our transportation system serves them.

MDOT'S MODAL ADMINISTRATIONS: WORKING TOGETHER TO CREATE A FAMILY OF PLANS

MDOT is comprised of six transportation modes, each of which play an important role in moving people and goods around Maryland and to neighboring states.

MARYLAND AVIATION ADMINISTRATION

The Maryland Aviation Administration (MAA) owns and operates Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall) and Martin State Airport.

MOTOR VEHICLE ADMINISTRATION

The Motor Vehicle Administration (MVA) is responsible for ensuring all Maryland vehicles (cars, trucks, motorcycles, etc.) and drivers are licensed and road ready.

MARYLAND PORT ADMINISTRATION

The Maryland Port Administration (MPA) owns 6 cargo terminals and 1 cruise terminal within the Port of Baltimore for the purpose of stimulating waterborne commerce in the State of Maryland in a manner that provides economic benefit to the citizens of the State.

MARYLAND TRANSIT ADMINISTRATION

The Maryland Transit Administration (MTA) operates local buses, light rail, Metro, Maryland Area Regional Commuter (MARC) Train Service, and a comprehensive paratransit system. MTA also manages the taxi access system and directs funding and statewide assistance to Locally Operated Transit Systems (LOTS).

STATE HIGHWAY ADMINISTRATION

The State Highway Administration (SHA) maintains Maryland's highways to provide a safe, well-maintained, reliable highway system that enables mobility choices for all customers and supports Maryland's communities, economy, and environment.

MARYLAND TRANSPORTATION AUTHORITY

The Maryland Transportation Authority (MDTA) is responsible for constructing, managing, operating, and improving the State's toll facilities, as well as for financing new revenue-producing transportation projects.

The Playbook is informed by and will inform future versions of the following MDOT modal administration plans: State Rail Plan, State Freight Plan, Bicycle and Pedestrian Master Plan, Zero Emission Bus Transition Act Legislative Report, State Zero Emission Vehicle Infrastructure Plan, Greenhouse Gas Reduction Act Plan, MAA Strategic Plan, MPA Strategic Plan, Strategic Highway Safety Plan, Strategic Asset Management Plan, Asset Management Plan, Shared Mobility Work Plan, Maryland Statewide Transit Plan, MARC Growth Transformation Plan and Connected & Automated Vehicle Strategic Framework. The Playbook is also informed by the WMATA Strategic Transformation Plan and the Moore-Miller Administration Guidance, MPO plans, long range plans from peer states, federal requirements, state priorities, public input, and stakeholder concerns. A complete diagram of MDOT's family of plans is on **page 50**.

PLAN TIMELINE

Winter 2022

- Research and Analysis

Spring 2023

- Strategic Direction Development
- Outreach Planning
- Long-Term Needs Forecasting
- Public Survey #1

Summer 2023

- Strategy Development
- Public Survey #2
- Performance Measure Selection
- Plan Review

Fall/Winter 2023

- Public Comment Period
- Recorded Webinar
- Consolidated Transportation Program Tour Meetings

January 2024

- 2050 Playbook Published
- Implement the Playbook

Engagement

As part of the Playbook development, MDOT conducted extensive engagement both internally throughout MDOT and externally with its local, state, and regional planning partners, stakeholders, and the wider public.

A full memorandum detailing the public engagement and stakeholder outreach performed in service of the Playbook can be found in the **Appendix D** and at **the Playbook website**.

The **Attainment Report Advisory Committee (ARAC)** is comprised of 20 members from public agencies, nonprofits, universities, and other organizations with a focus on transportation. The ARAC met four times to review the goals, benchmarks, and indicators, as well as to advise MDOT on the selection of appropriate performance measures and targets. More information on the ARAC can be found at **mdot.maryland.gov/ARAC**. We thank the Committee for their time and commitment.

The **MDOT Planning Council** is comprised of the Planning Directors and staff from each MDOT modal administration. The Council met four times during the Playbook development to discuss key milestones and discuss feedback.

Metropolitan Planning Organization (MPO) Roundtable Meetings were held with representatives from Maryland's seven MPOs four times during the Playbook development to discuss key milestones and seek input.

ONLINE SURVEY PARTICIPANTS
2,523

ONLINE SURVEY COMMENTS
578

The public provided feedback on the draft strategic direction, transportation needs, and budget allocation via **Public Surveys**. There were 2,523 respondents that provided 578 unique comments during two (2) rounds of surveying. Surveys were developed in MetroQuest and were available in Spanish, French, and an accessible MS Word document.

MDOT coordinated further **Digital Engagement** with its partners and the public via a project website, e-blasts/newsletters, social media posts, and a **project web video.** In addition to the feedback opportunities outlined above, updates were coordinated via the **MDOTMTP@mdot.maryland.gov** email.

Other Engagement methods included distributing bookmarks and posters with QR codes to county public libraries to distribute at local branches throughout the State. The public was invited to participate in the surveys and comment on the draft elements of the plan at various MPO meetings, active transportation outreach events, and Commuter Choice outreach events.

2/ SCOUTING REPORT

"We can be a state with a dynamic economy. We can be a state where our finances support our ambition. We can be a state that unleashes a new wave of dynamism by harnessing the great assets we already have – and getting them moving in the same direction."

**- Governor Wes Moore
Maryland Association of Counties
(MACo) Summer Conference
Keynote, 2023**

Sports teams rely on scouting reports to assess challenges, evaluate players, and develop strategies that give them the best opportunity to win. Similarly, to deliver an effective transportation system, MDOT must examine its existing system conditions and consider future trends to identify what investments are needed to ensure the system will meet future needs. Transportation investments and decisions impact people's lives and recognition of those implications is critical for making good investments and decisions. Understanding existing conditions means not only studying data, but also considering people's experience of traveling in the State. Public engagement is an important part of the scouting report. While MDOT explored many trends, this section features those that are most significant for transportation policy in the coming decades.

There are HUGE areas that would benefit from jobs that come from improving infrastructure.

Develop an alternative method to fund transportation projects that does not rely on gas tax revenues since gas taxes will shrink with the proliferation of electric vehicles and other technologies.

Spend money on complete streets to increase safety.

Port infrastructure upgrades are needed for sea level rise, etc.

These are some of the comments MDOT received from members of the public during the development of this plan.

WHAT WE HEARD!

People will not use public transport unless it is convenient, affordable, and safe. We need to increase the availability and security on public transit.

Add more real-time signs showing travel times on interstate highways.

Promote lower roadway speeds.

We must encourage viable alternatives to driving (walking, biking, etc.) through the development of safe, connected infrastructure.

Complete Streets should focus on improving safety.

To achieve Vision Zero, which takes a safe system approach, the State will need to be able to respond to crashes quickly.

Connect MARC between Baltimore and Wilmington to integrate with the SEPTA network.

Improve safety at state highway intersections including for pedestrians and cyclists.

Expand the American Legion Bridge for multimodal options and to improve transit reliability.

Provide bike lanes in rural areas that connect to employment centers.

Increase investments in complete streets and support walkable and transit-supportive communities.

To achieve Vision Zero, the State should promote a low-stress network for all modes of transportation.

These are some of the comments MDOT received from members of the public during the development of this plan.

REGIONAL GEOGRAPHY

Though Maryland is the ninth smallest state, it is geographically diverse. The State's defining geographic feature is the Chesapeake Bay, which nearly divides the State. The Bay's 7,000 miles of shoreline affords numerous natural harbors for ships large and small; of which the most prominent is the Port of Baltimore, one of the nation's busiest ports. Maryland's small size and unique shape mean that many of its cities and towns are within commuting distance of major job centers across the border in Washington, DC, Virginia, and Pennsylvania.

Maryland can be divided into five regions – the Eastern Shore, the Baltimore Metro Region, the Washington Metro Region, Southern Maryland, and Western Maryland.

» **Western Maryland**, comprised of Garrett, Allegany, and Washington Counties, is characterized by forested mountain ridges, traversed by interstates that connect the State with the Midwest.

» **Washington Metro** consists of suburban and rural areas north of Washington D.C. in Prince George's, Montgomery, and Frederick Counties.

» **Baltimore Metro**, Maryland's most populous region, comprises Baltimore City and its surrounding counties, Carroll, Harford, Anne Arundel, Baltimore, and Howard.

» **Southern Maryland**, Charles, Calvert and St. Mary's Counties, is characterized by rapid, low-density suburbanization driven by its proximity to Washington, D.C.

» **Eastern Shore** is relatively flat, mostly rural, and home to a thriving agricultural industry. It is comprised of Cecil, Kent, Queen Anne's, Caroline, Talbot, Dorchester, Wicomico, Somerset, and Worcester Counties. Its coastal beach towns are also a destination for tourists.

Each region has its own distinct needs and associated transportation system. The Playbook identifies strategies that fit these diverse needs, recognizing that our urban, suburban, and rural areas will require targeted and context-specific solutions to implement our statewide goals around mobility, economic opportunity, and the climate.

Maryland Regional Geographies

Baltimore Metro Region

Western Maryland

Washington Metro Region

Eastern Shore

Southern Maryland
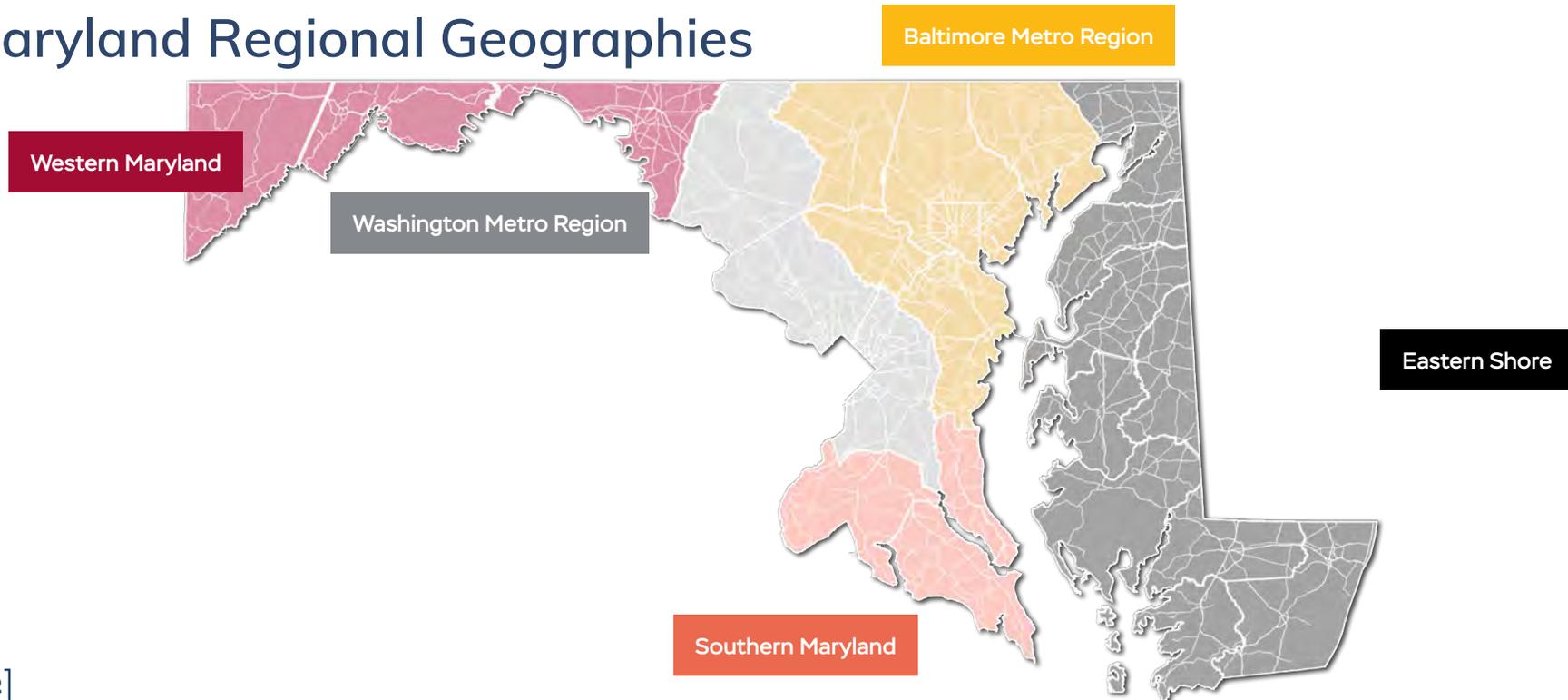
DEMOGRAPHICS

Maryland is diverse in both its geographic regions and its population. Based on U.S. Census race data, about half (51 percent) of Maryland's population identifies as "non-white, Hispanic, or more than one race." The highest percentage of non-white, Hispanic, and populations of more than one race in Maryland is in Prince George's County, followed by Baltimore City and Charles County, while the concentration of minority populations is lowest in the Western Maryland region.
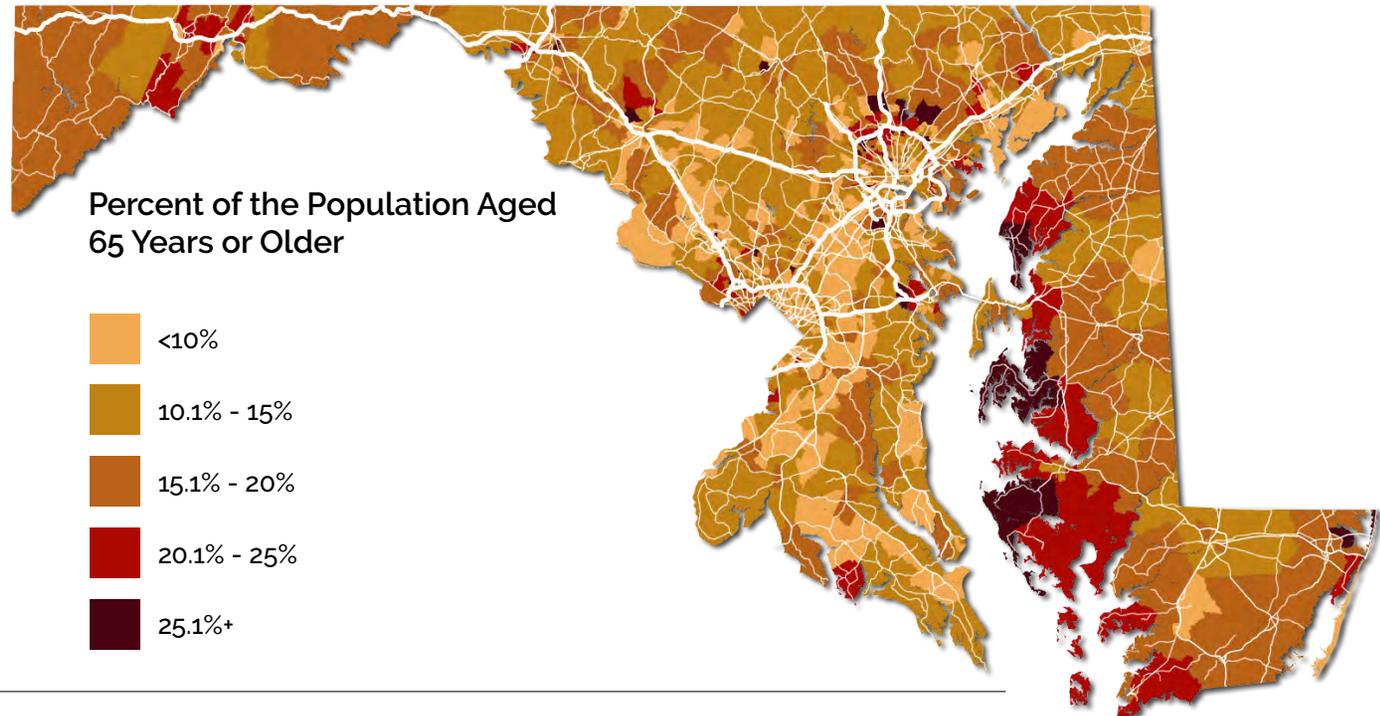
The working-age population is concentrated in areas of high employment density in and around the Baltimore and Washington, D.C. metropolitan areas. The working-age population is least concentrated on the Eastern Shore and in Western Maryland.

Maryland has a statewide poverty average of nine (9) percent. Baltimore City faces a poverty rate more than double the statewide average at twenty (20) percent. Outside of Baltimore City, poverty in Maryland tends to be concentrated in Western Maryland and the lower Eastern Shore.

Understanding where minority populations are located, along with other socioeconomic factors such as income and age, helps MDOT to identify the unique transportation needs of the regions and create strategies to meet those needs.

Maryland has experienced an aging population increase in line with national trends. In 2020, the population age 65 and over equaled 16.3 percent of the total population, compared to just 12.3 percent in 2010. This growth is expected to continue as the Baby Boomer generation ages, presenting new transportation challenges for Maryland. Aging residents often require alternative modes of transportation to help meet their needs. Improved pedestrian infrastructure and transit service are two ways the State can address this challenge.

Percent of the Population Aged 65 Years or Older

Percent of the Population Aged 65 Years or Older

- <10%
- 10.1% - 15%
- 15.1% - 20%
- 20.1% - 25%
- 25.1%+

U.S. Census Bureau, ACS 5-Year Estimates (2021)

	2020 CENSUS	2050 PROJECTIONS	% GROWTH
BALTIMORE METRO REGION	2,794,636	3,150,530	12.73%
WASHINGTON METRO REGION	2,300,979	2,690,860	16.94%
SOUTHERN MARYLAND REGION	373,177	490,480	31.43%
WESTERN MARYLAND REGION	251,617	297,490	18.23%
EASTERN SHORE REGION	456,815	553,660	21.20%
MARYLAND	6,177,224	7,183,020	16.28%

The population is projected to rise in each region of Maryland with the highest projected rise in the Southern Maryland region.

Source: Decennial Census (2020) and MSDC

POPULATION

Maryland's population is estimated at 6.2 million, making it the 18th most populous state. However, Maryland ranks 42nd in land area, making Maryland the fifth most densely populated state. Population and population density are primarily concentrated in the counties along the I-95 corridor between Washington, D.C. and Baltimore, Harford, Baltimore, Howard, Montgomery and Prince George's, and along I-270 extending from Washington, D.C. into Montgomery County. Baltimore, Silver Spring, Bethesda, and Towson are key high-density population and employment centers within this broader area. Outside of these areas, land uses become suburban in character before transitioning into more rural land uses. MDOT will continue to support smart growth and transit oriented development (TOD) that promotes efficient use of land in our dense corridors, strengthens our economy, and protects our rural and green spaces.

Maryland's population is growing. Between 2010 and 2020, the State's population grew 7.0 percent, just below the national average of 7.4 percent.

Continued population growth is expected in Maryland. By 2050, the State is projected to add just over 1,000,000 new residents, representing a 16.28 percent increase in population. Population in Southern Maryland is expected to grow more than 31 percent, the fastest among the five regions. This will put further strain on the transportation system. MDOT will continue to work with our partners in Southern Maryland on solutions to address this growth.
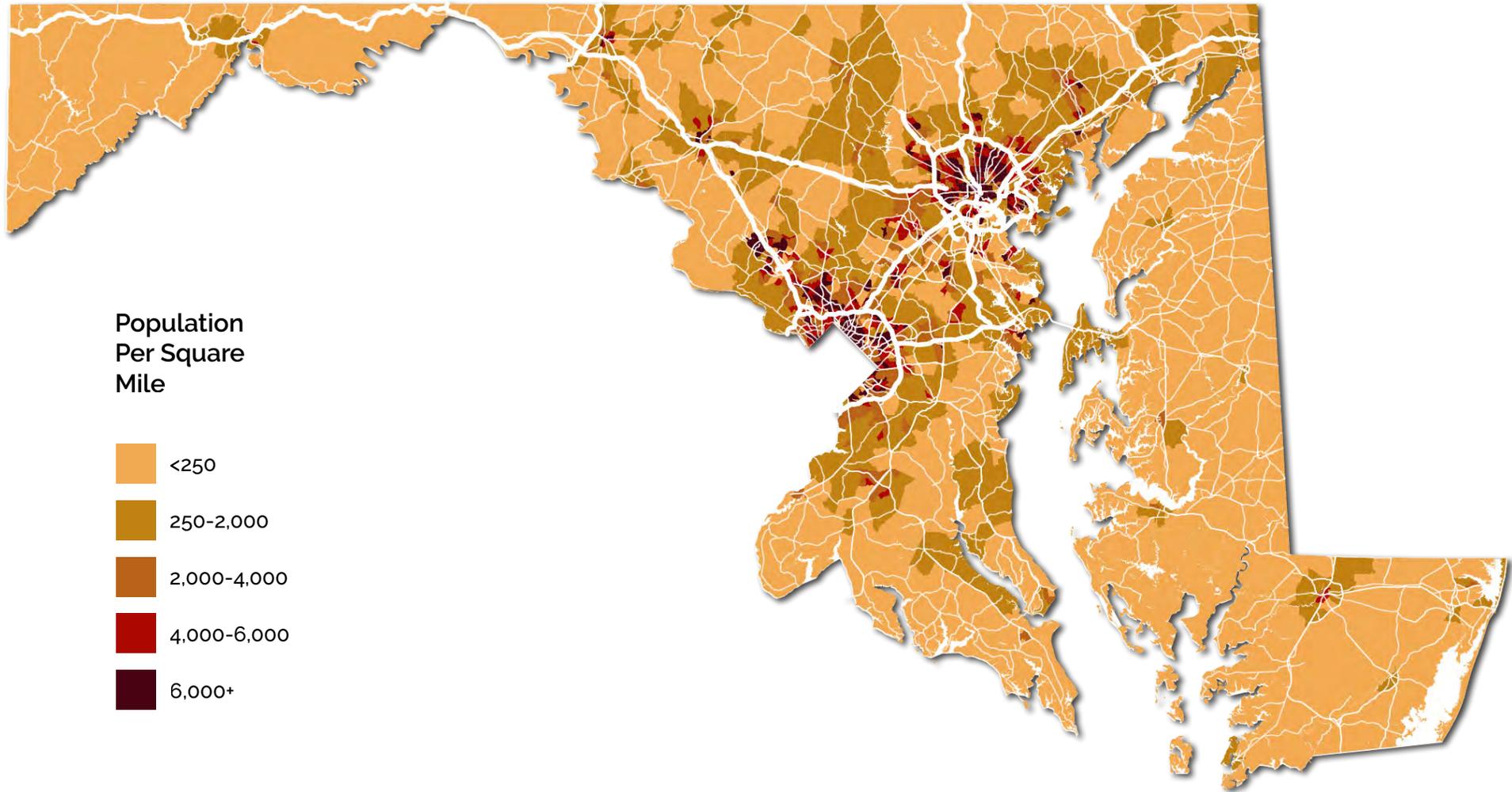
Population Density

Population Per Square Mile

- <250
- 250-2,000
- 2,000-4,000
- 4,000-6,000
- 6,000+

Maryland Transit Service Ridership (FY 2014-2023)

Legend:
- LOCAL BUS
- LOCALLY OPERATED TRANSIT SYSTEMS (LOTS)
- LIGHT RAIL
- MARC
- BALTIMORE METRO
- MOBILITY PARATRANSIT & TAXI ACCESS
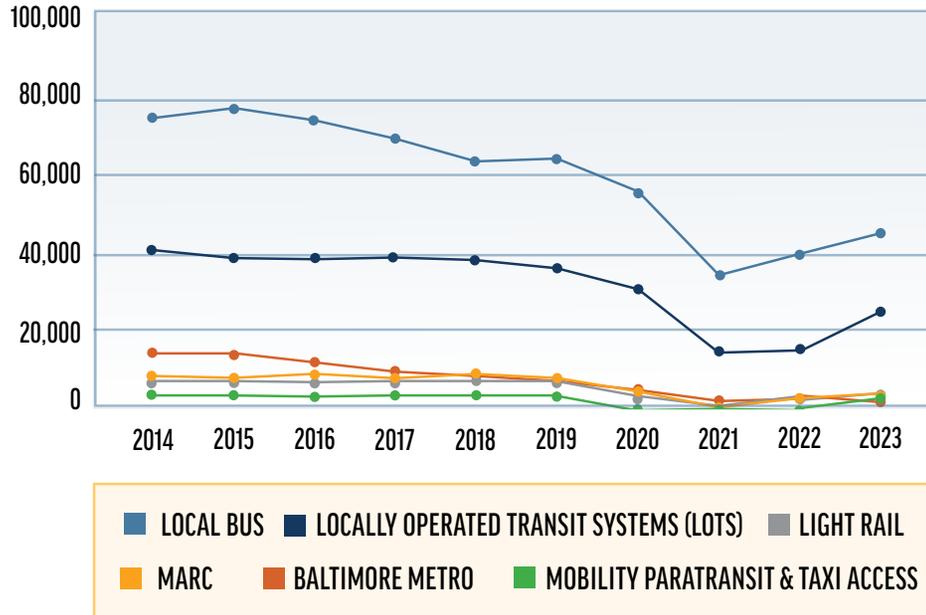
Mirroring nationwide trends, transit ridership has declined and not recovered to pre-COVID-19 levels.

Maryland-Only WMATA Annual Ridership (Millions)

HIGHER IS BETTER

Fiscal Year	Ridership
2014	121.24
2015	122.80
2016	111.65
2017	104.71
2018	103.60
2019	104.78
2020	80.10
2021*	26.23
2022*	46.29
2023**	58.99
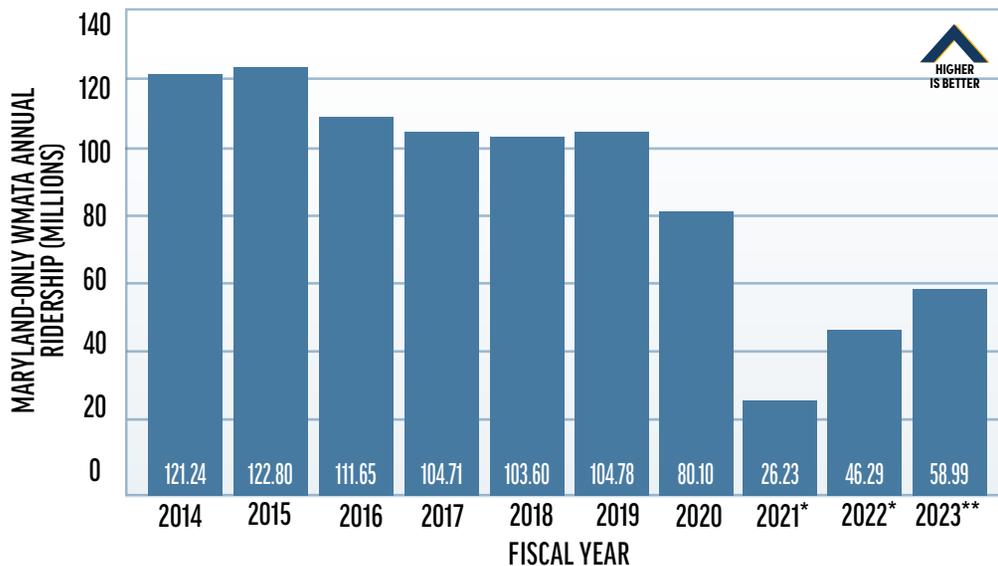
2021 and 2022 data have been revised from previous report.

**2023 data is preliminary and subject to change.

EQUITY

The 2023 Equity in Transportation Sector Law requires that equity be considered when state transportation plans, reports, and goals are developed. Further, the Climate Solutions Now Act (CSNA) (2022) is a state law with provisions to reduce negative environmental impacts on overburdened and underserved communities. Overburdened communities are defined as any census tract for which three or more of 21 environmental health indicators are above the 75th percentile. Underserved communities are defined as any census tract where the most recent census survey shows:

- » At least 25% of the residents qualify as low-income; or
- » At least 50% of the residents identify as non-white; or
- » At least 15% of the residents have limited English proficiency

MDOT is deeply committed to equity in its transportation policies and initiatives. Recognizing the historical inequities in transportation access and outcomes, MDOT strives to ensure that all communities, particularly those that have been historically marginalized or underserved, have equitable access to safe, reliable, and efficient transportation options. By prioritizing equity, MDOT aims to reduce disparities, improve accessibility, and enhance the overall quality of life for all Marylanders.

Inequities in active transportation are also present. Roadways in communities of color experience higher fatality and injury rates. Additionally, pollution burdens fall most heavily on black and brown neighborhoods.

Transit plays a critical role in providing affordable and accessible transportation options, especially for individuals who rely on it as their primary means of travel. MTA's and WMATA's transit ridership trends generally mirror national trends. By improving service quality, enhancing connectivity, and reducing barriers to access, MDOT aims to ensure that transit will be a viable and equitable mode of transportation for all residents.

TOD and the Transportation Alternatives Program are crucial in meeting the housing and community development needs of communities of color, aging populations, and the working population.

MDOT can also make meaningful change through its investment strategy by thoughtfully examining how transportation improvements, when focused in marginalized and underserved areas, can have large impacts on economic opportunity and mobility.

Underserved and Overburdened Communities

Legend:
- Underserved AND Overburdened Census Tracts
- Overburdened Census Tracts
- Underserved Census Tracts
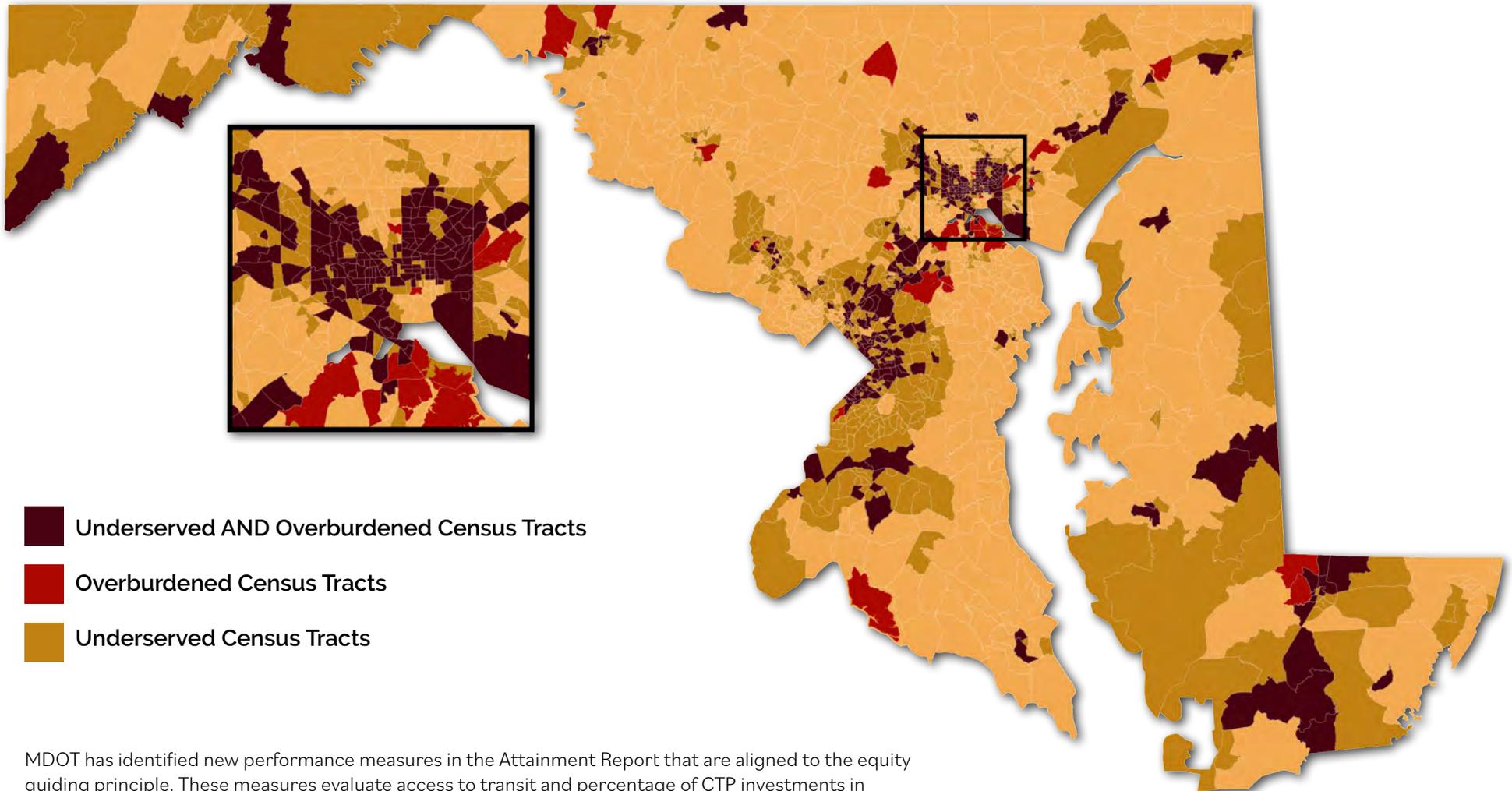
MDOT has identified new performance measures in the Attainment Report that are aligned to the equity guiding principle. These measures evaluate access to transit and percentage of CTP investments in underserved and overburdened areas as defined by the CSNA. These areas are highlighted in the map and include over 23 percent of the census tracts in Maryland and 1.3 million people in fiscal year 2023.

Existing Transportation System

Maryland's transportation system is interconnected, complex, and critical to the State's success. Residents and employers have made decisions about where to live and locate their businesses based in part on their transportation needs and how well the system meets their needs. Analyzing data about travel characteristics helps inform the Playbook and guide MDOT in prioritizing services and system investments.

17,800 State-maintained lane miles of roadways which carry 70% of the traffic in Maryland

2,966 Bridges and elevated structures

1,200 Electric vehicle charging stations

1,148 Miles of road-separated active transportation routes

900 Miles of state truck route system

886 Miles of active rail track

700 Miles of sidewalks on state-owned roads

103 MTA-operated bus and rail routes

36 Public use airports

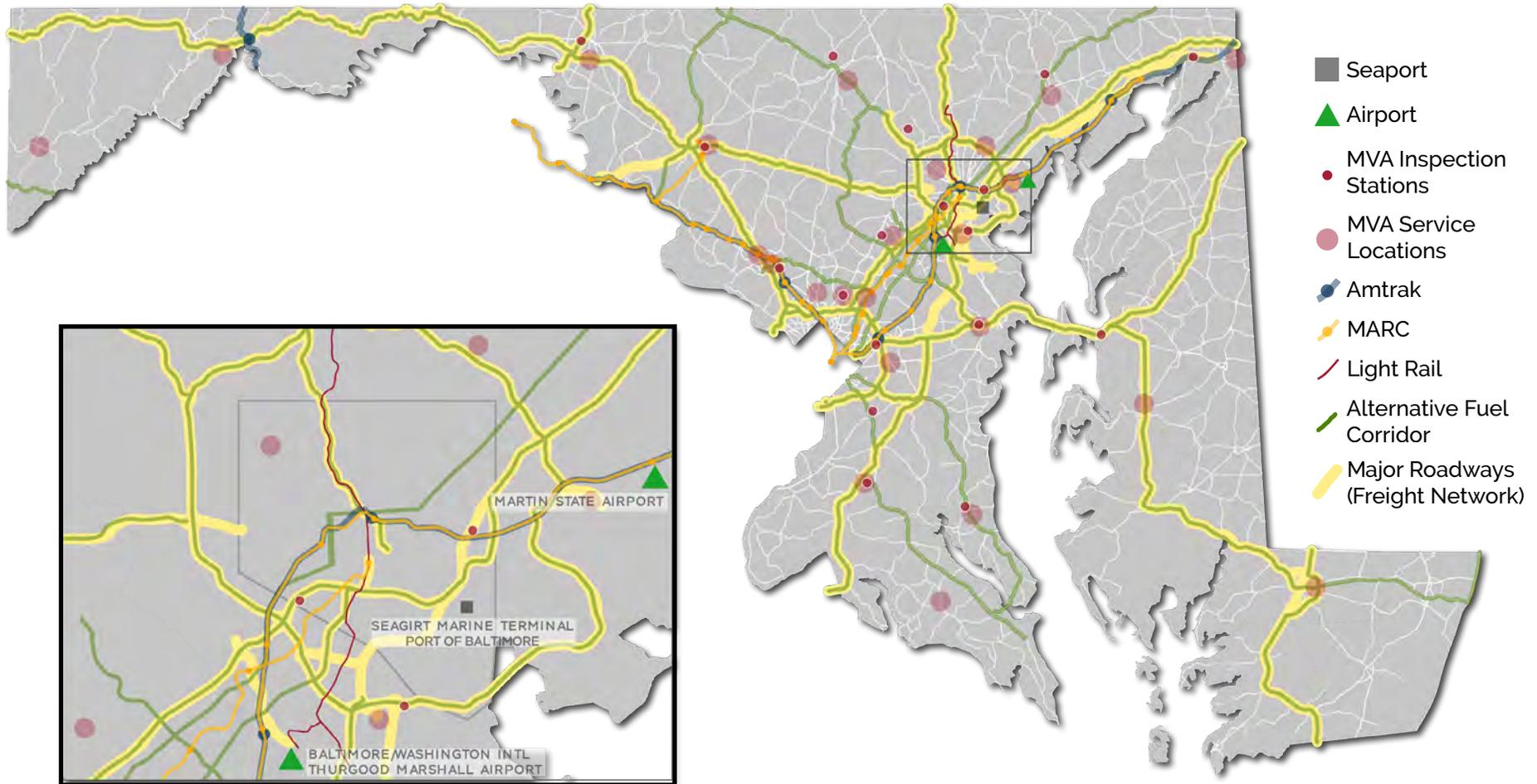**6** State-operated cargo terminals

3 Commercial service airports

2 MAA-operated airports

1 International cruise terminal

Existing Transportation System

Legend:
- ■ Seaport
- ▲ Airport
- • MVA Inspection Stations
- ● MVA Service Locations
- Amtrak
- MARC
- Light Rail
- Alternative Fuel Corridor
- Major Roadways (Freight Network)

Inset map labels:
- MARTIN STATE AIRPORT
- SEAGIRT MARINE TERMINAL / PORT OF BALTIMORE
- BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL AIRPORT

*For more information on the Active Transportation System in Maryland, please visit the 2050 Bicycle and Pedestrian Master Plan, at **www.mdot.maryland.gov/bikeped**.*

MDOT supports a major statewide transportation system, consisting of many modes of transportation, including the infrastructure, assets and services, as outlined on page 18, to facilitate access and mobility for all Marylanders and support the movement of goods and services.

CHANGES

Maryland driving habits have changed. VMT has decreased.

While Maryland's population continues to grow, the number of licensed drivers has decreased from a peak of 4.5 million in 2019. Maryland also has one of the highest rates of employees working from home, which contributes to lower VMT per capita and lower rates of driving alone to work since 2020.
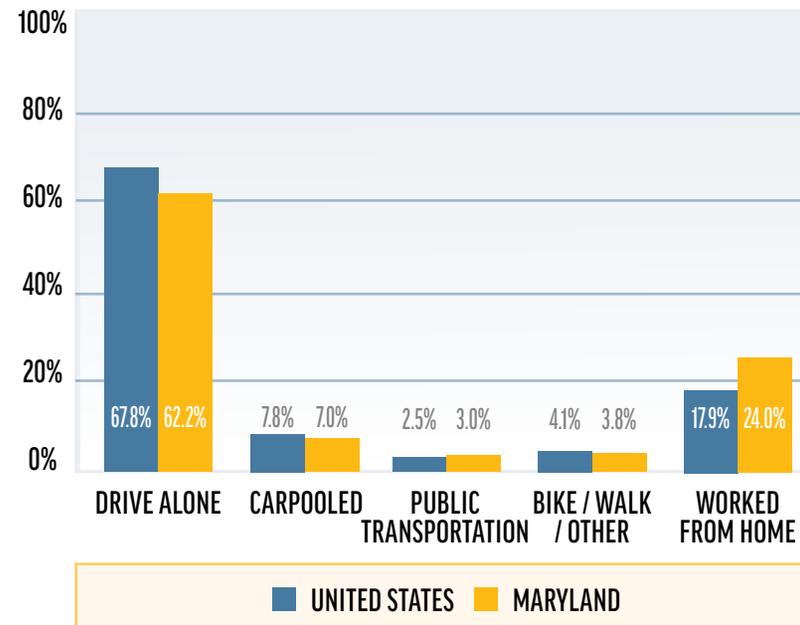
These changing travel habits can help MDOT meet goals about reducing driving alone, but they also pose new challenges for how transit and the broader transportation system operates. As fewer Marylanders hold a driver license, MDOT needs to provide more mobility options for them. As commuting patterns shift, Maryland's public transit needs to evolve, particularly services like the MARC train, to meet the new patterns of activity and serve workers.

PROJECTED POPULATION GROWTH

MILLIONS OF PEOPLE

2010	2020	2050
5.7	6.2	7.2
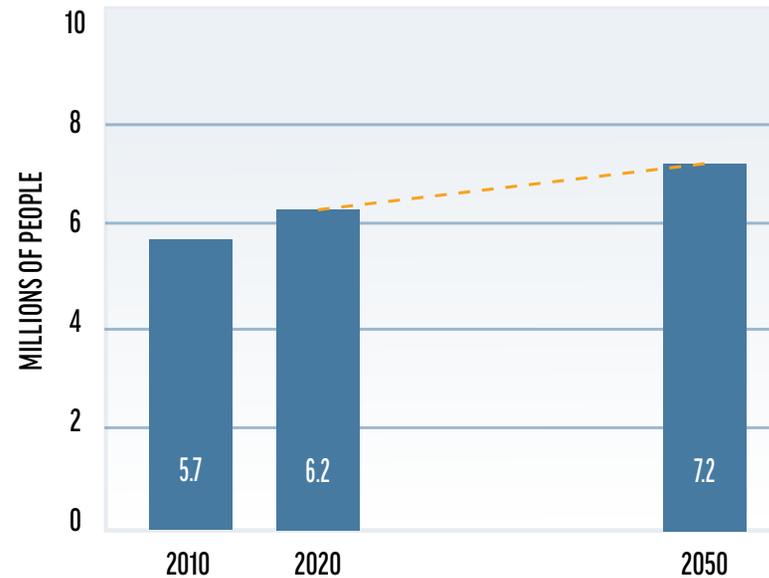
The State of Maryland will experience a steady rise in population by the year 2050.

MODE OF TRANSPORTATION TO WORK

	DRIVE ALONE	CARPOOLED	PUBLIC TRANSPORTATION	BIKE / WALK / OTHER	WORKED FROM HOME
UNITED STATES	67.8%	7.8%	2.5%	4.1%	17.9%
MARYLAND	62.2%	7.0%	3.0%	3.8%	24.0%

■ UNITED STATES   ■ MARYLAND
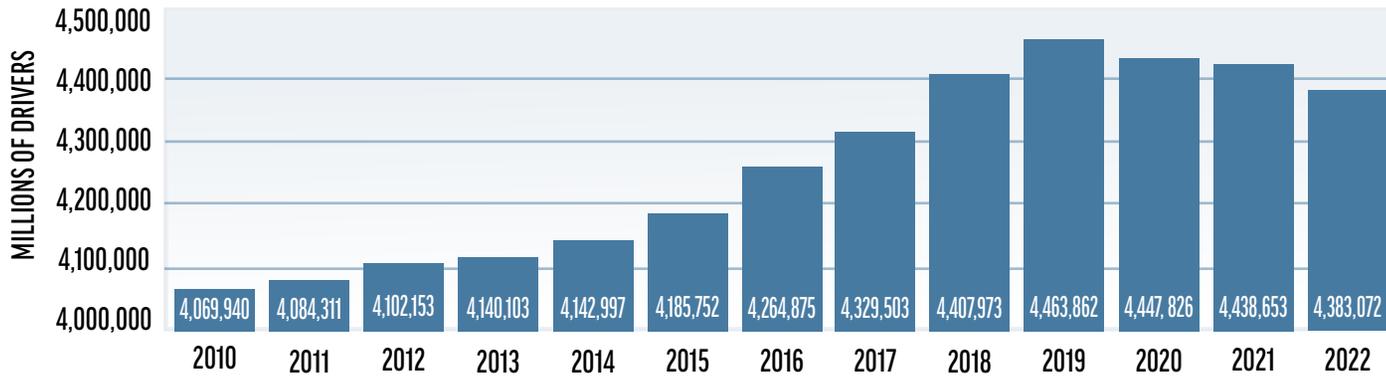
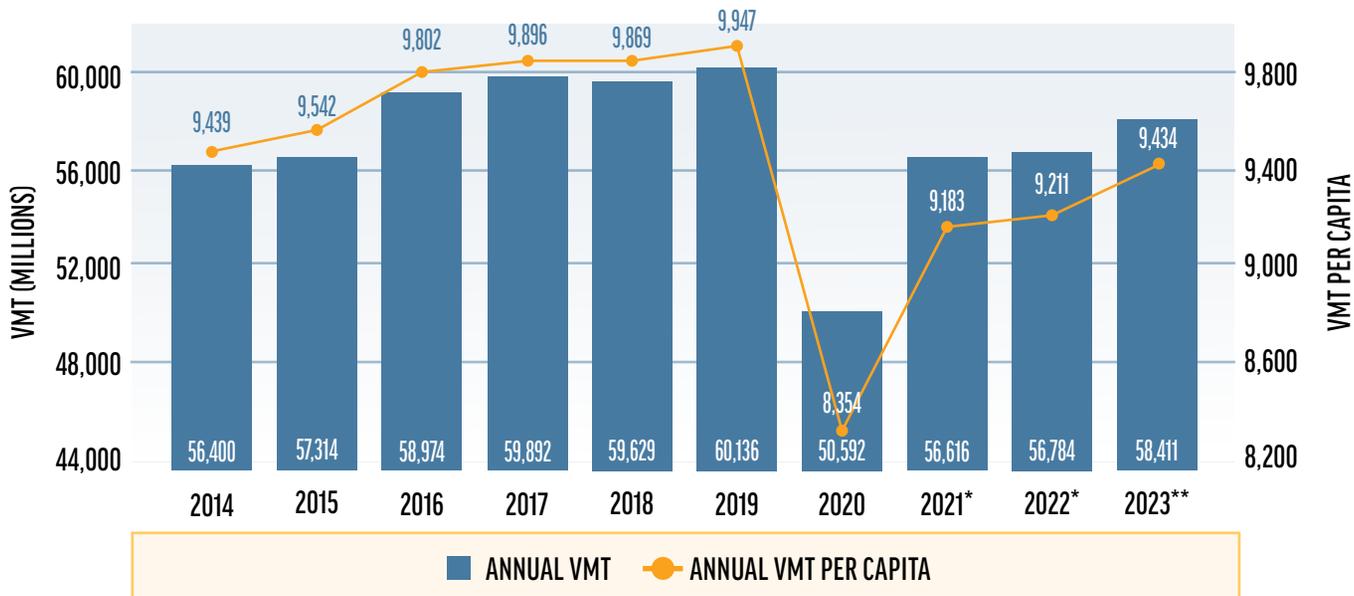The majority of people in Maryland drive alone to work with a considerable amount of people working from home.

*The most recent US Decennial Census of Population was completed in 2020.
Decennial Census (2010 and 2020) and MSDC (Preliminary Historical and Projected Total Population for Maryland's Jurisdictions) U.S. Census, American Community Survey, 2021 1-Year Estimate

LICENSED DRIVERS

Year	Millions of Drivers
2010	4,069,940
2011	4,084,311
2012	4,102,153
2013	4,140,103
2014	4,142,997
2015	4,185,752
2016	4,264,875
2017	4,329,503
2018	4,407,973
2019	4,463,862
2020	4,447,826
2021	4,438,653
2022	4,383,072

The amount of licensed drivers has increased substantially since 2010 but has been in a slow decline since 2019.

VMT / VMT PER CAPITA

Year	Annual VMT	Annual VMT Per Capita
2014	56,400	9,439
2015	57,314	9,542
2016	58,974	9,802
2017	59,892	9,896
2018	59,629	9,869
2019	60,136	9,947
2020	50,592	8,354
2021*	56,616	9,183
2022*	56,784	9,211
2023**	58,411	9,434

■ ANNUAL VMT   ● ANNUAL VMT PER CAPITA

The VMT and VMT PER CAPITA were steadily rising but have declined due to COVID-19.

2021 and 2022 data have been revised from previous report.

**2023 data are preliminary and subject to change.*

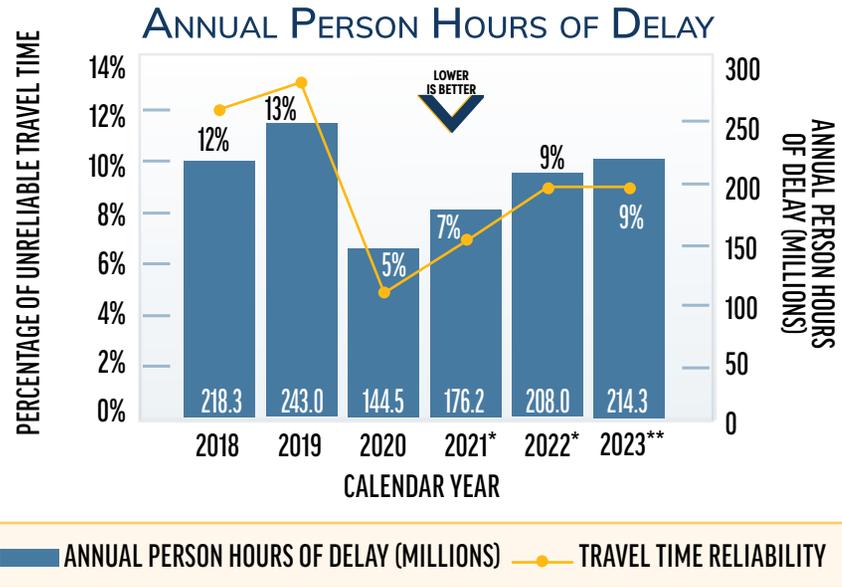*OpenData.Maryland.gov - **MVA Drivers Licenses***

2024 Annual Attainment Report on Transportation System Performance

ROADWAY CONGESTION

MDOT employs various policies, programs, and projects to help address congestion and improve roadway mobility in the most congested areas. Roadway congestion causes travel delays and increases the cost of travel for motorists. In 2022, MDOT saved more than $2 billion for roadway users in incident management by using Intelligent Transportation System (ITS) services, signal upgrades and the Coordinated Highways Action Response Team (CHART) program. Maryland has experienced changes in travel during and since the COVID-19 pandemic and continues to monitor these changes and the success of the actions implemented by the agency.

Maryland's motorists experience travel delays in congested areas of the State. In addition, traffic incidents and construction work zones can cause unreliability in the transportation system. MDOT tracks the performance related to congestion and reliability by measuring the percentage of unreliable travel time and annual person hours of delay. VMT has been increasing since 2021 after the impacts on travel caused by COVID-19 closures. Partially due to increase in travel, the percentage of unreliable travel and annual hours of person delay have increased since 2020 but are not at pre-pandemic levels. MDOT anticipates continued slow growth of VMT in the projection of delay in 2023.

ANNUAL PERSON HOURS OF DELAY

LOWER IS BETTER

Calendar Year	2018	2019	2020	2021*	2022*	2023**
Travel Time Reliability	12%	13%	5%	7%	9%	9%
Annual Person Hours of Delay (Millions)	218.3	243.0	144.5	176.2	208.0	214.3

ANNUAL PERSON HOURS OF DELAY (MILLIONS) — TRAVEL TIME RELIABILITY

*Data are preliminary

**2023 data are projected and subjected to change

Note: The methodology used for reporting the 2022 (and prior years) delay values was updated to reflect recent refinements in OPPE's Maryland Roadway Performance Tool (MRPT) and because the trends calculated seem to more reasonably reflect ADT/VMT and congestion trends. The methodology for TTR remains the same.

Congestion Cost considers the cost of time and excess fuel used. Overall, Marylanders experienced an increasing trend in annual cost of congestion on Maryland road networks. Congestion Cost generally mirrors this congestion trend and reflects inflation trends from year to year. During the COVID – 19 pandemic, Maryland experienced a drop in congestion cost (FY2020), but with the increase in VMT and inflation, this is rising. Forecasted projections show greater cost in congestion compared to pre-pandemic levels at $5.6 billion in FY 2023.

To leverage investments in the multimodal transportation network, MDOT uses Transportation Demand Management (TDM) strategies to offset vehicle congestion and reduce VMT by promoting alternatives to driving alone, such as taking transit, carpooling, walking, biking, teleworking, and taking advantage of Maryland Commuter Tax Credit and Guaranteed Ride Home. The Commuter Choice Maryland program provides options to maximize travel choices and deliver solutions that can reduce congestion, conserve energy, facilitate economic opportunity, and enhance the life of all Marylanders. SHA's CHART program continues to reduce congestion and improve travel efficiency by offering travel information, responding to incidents, and clearing obstructions from the highway quickly.

Annual Cost of Congestion (Billions) on the Maryland Roadway Network

LOWER IS BETTER

CALENDAR YEAR	DOLLARS (BILLIONS)
2014	1.7
2015	2.1
2016	3.4
2017	4.0
2018**	4.5
2019**	5.1
2020**	3.2
2021***	4.5
2022***	5.3
2023	5.6

*The methodology for this performance measure has been updated.

**2018-2022 data have been revised from previous report.

***2021 and 2022 data are preliminary; 2023 data is forecasted and subject to change.

The top 25 roadway congested segments including Maryland freeways and arterials based on person hours of delay per mile in 2022 is provided. These locations are primarily in or around urban areas including the Washington, DC metro area and the Baltimore metro area. The rank, location, and person hours of delay per mile in 2022 is provided for each congested segment.

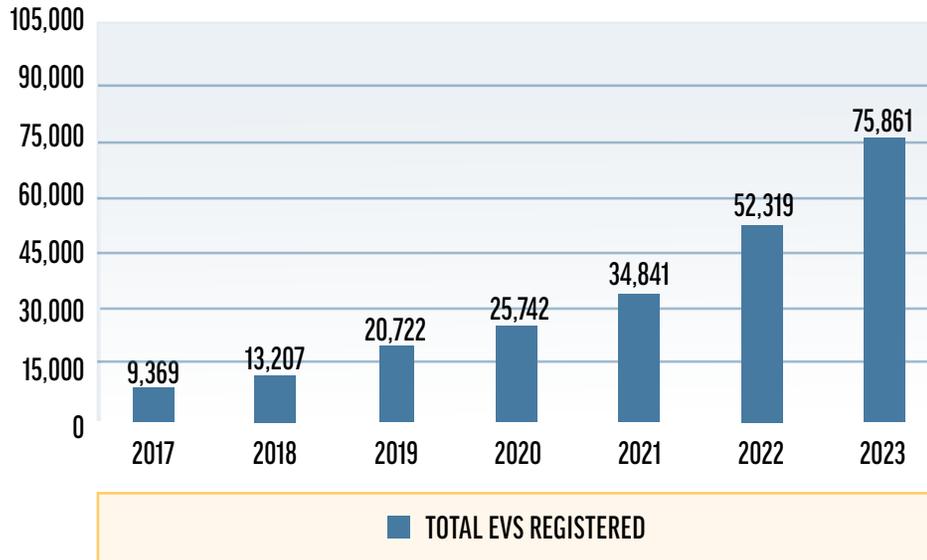## 2022 Top Congested Segments on Freeways and Arterials

MRPT RANK	ROUTE	LIMITS	COUNTY	ANNUAL PERSON HOURS OF DELAY/MILE
1	I-495	Clara Barton Parkway to MD 190	Montgomery	582,356
2	I-495	I-95 to MD 355	Montgomery/Prince George's	552,693
3	I-495	MD 190 to I-270	Montgomery	529,580
4	I-95/I-495	MD 295 to MD 201	Prince George's	503,192
5	MD 185	Grafton St to I-495	Montgomery	405,395
6	MD 97	I-495 to Randolph Rd	Montgomery	346,081
7	I-95/I-495	MD 201 to I-95	Prince George's	339,537
8	I-95/I-495	Suitland Pkwy to US 50	Prince George's	336,484
9	US 29	I-495 to MD 650	Montgomery	319,525
10	MD 97	MD 410 to I-495	Montgomery	310,929
11	MD 187	I-270 to MD 355	Montgomery	302,874
12	MD 355	I-495 to MD 187	Montgomery	293,265
13	MD 650	Washington DC Line to I-495	Montgomery/Prince George's	292,163
14	MD 5	MD 414 to Washington DC Line	Prince George's	290,342
15	I-95/I-495	US 50 to MD 295	Prince George's	284,554
16	MD 295	I-95/I-495 to MD 197	Prince George's	282,256
17	I-695	I-83 to MD 41	Baltimore	273,915
18	MD 3	US 50 to MD 424	Anne Arundel/Prince George's	259,907
19	US 301	MD 5 (Mattawoman Beantown Rd) to Cherry Tree Crossing Rd	Prince George's/Charles	258,523
20	MD 355	Montrose Pkwy to I-370	Montgomery	255,509
21	MD 355	Willard Ave to I-495	Montgomery	251,705
22	MD 187	I-495 to I-270	Montgomery	241,215
23	MD 295	MD 197 to MD 32	Anne Arundel/Prince George's	232,527
24	US 29	MD 390 to I-495	Montgomery	230,169
25	MD 637	MD 5 to Washington DC Line	Prince George's	230,150

Source: Maryland Roadway Performance Tool

» Roadway sections are MDOT-owned/maintained; county/city roadways are not included in the rankings
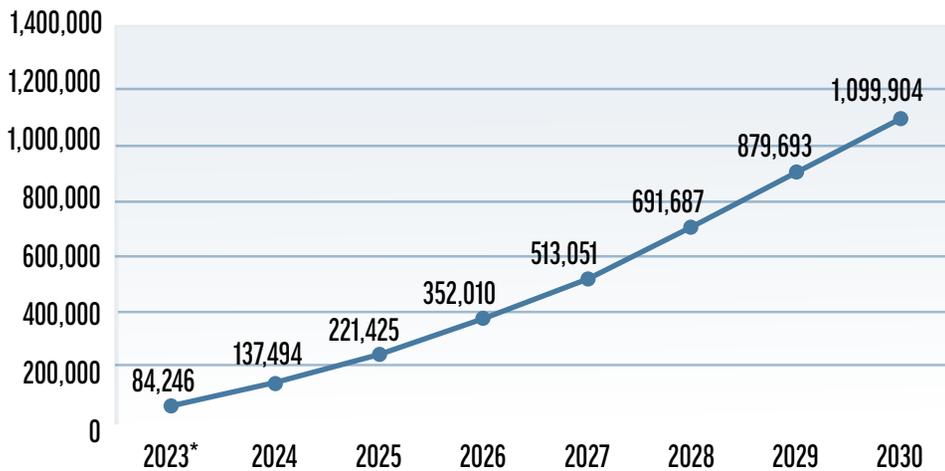
» 2022 Traffic volume data is estimated

Registered EVs (FY 2017 – 2023)

Bar chart — TOTAL EVS REGISTERED:
- 2017: 9,369
- 2018: 13,207
- 2019: 20,722
- 2020: 25,742
- 2021: 34,841
- 2022: 52,319
- 2023: 75,861

Maryland is seeing a rise in the number of registered EVs and has set an ambitious goal for registered EVs by 2030.

Source: MVA Vehicle Registration Data, (June 30, 2023)

Registered EV Projections (2023-2030)

Line chart:
- 2023*: 84,246
- 2024: 137,494
- 2025: 221,425
- 2026: 352,010
- 2027: 513,051
- 2028: 691,687
- 2029: 879,693
- 2030: 1,099,904

*2023 projection is for 12/31/23
Source: MDOT Climate Pollution Reduction Plan (CPRP) 2023, based on the CSNA
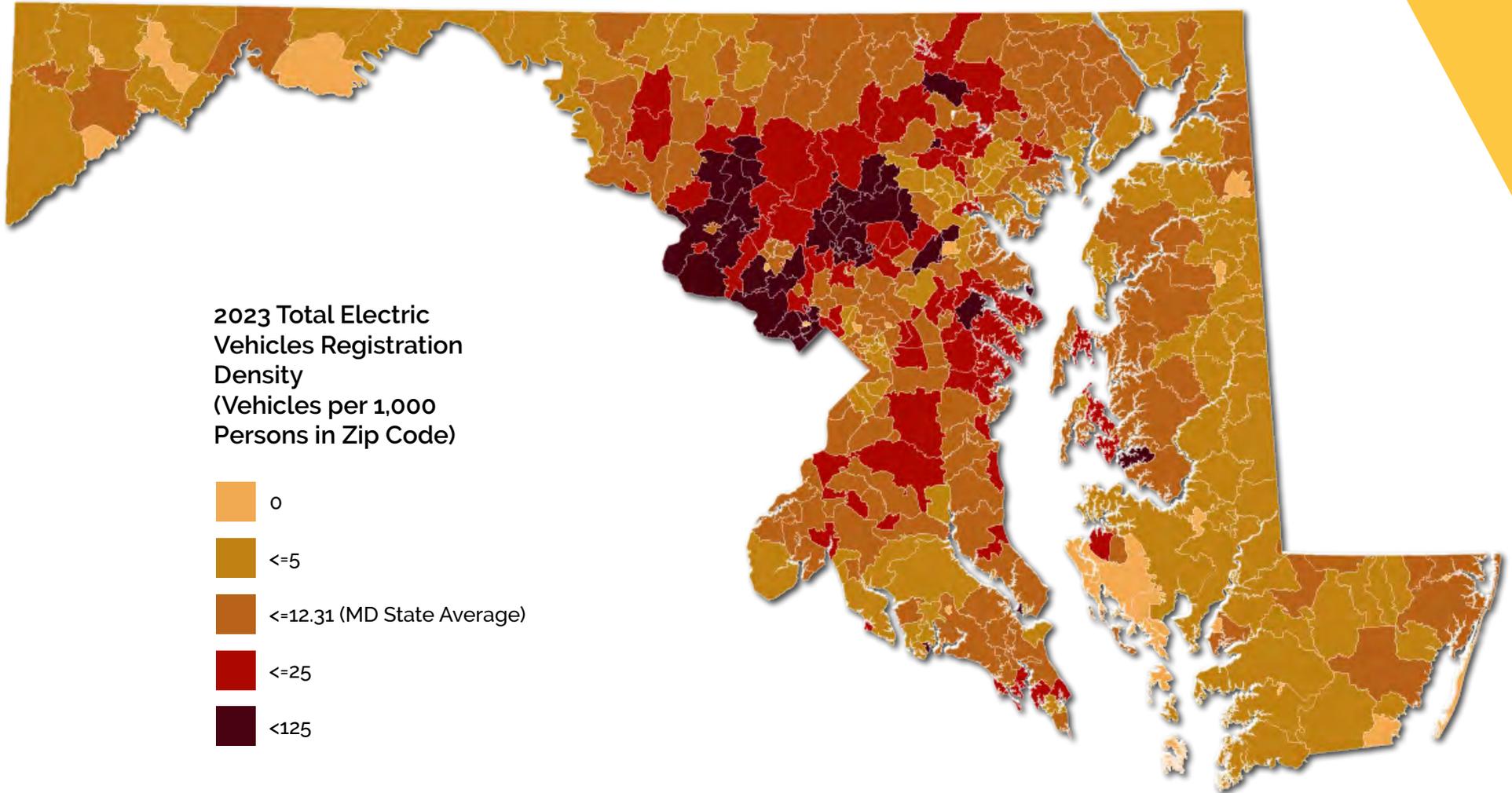
ZERO EMISSION VEHICLES

Increased adoption of Zero Emission Vehicles (ZEVs), including battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs), is a critical component of reducing the GHG emissions generated by the transportation sector.

In 2013, Maryland established goals for the registration of 300,000 light-duty ZEVs by 2025 and 600,000 ZEVs by 2030. The 2022 Maryland's CSNA set goals of a 60 percent reduction in GHG emissions from 2006 levels by 2031 and achieving net-zero emissions by 2045. In recognition of the increasingly important role that ZEVs will play in the reduction of transportation sector GHGs, Maryland passed the Advanced Clean Cars II Act in 2023, building on existing clean cars regulations. This and other programs are expected to accelerate the growth in ZEV registration in Maryland by 2030. Projections show more than 1 million ZEVs registered by 2030 as the Advanced Clean Cars II rule and plans to install ZEV supporting infrastructure are implemented.

As the lead agency of Maryland's Zero Emission Electric Vehicle Infrastructure Council (ZEEVIC), MDOT works closely with diverse stakeholders to advance Maryland's ZEV and infrastructure initiatives by identifying opportunities, addressing challenges, and analyzing uncertainty. ZEEVIC's collaborative efforts have resulted in development of policies, recommendations, and incentives that increase awareness of ZEVs, support ZEV ownership, remove barriers to ZEV adoption and infrastructure deployment, and encourage private sector investments in ZEVs.

2023 Total EVs Registered Per 1,000 Persons in Zip Code

2023 Total Electric
Vehicles Registration
Density
(Vehicles per 1,000
Persons in Zip Code)

- 0
- <=5
- <=12.31 (MD State Average)
- <=25
- <125

Maryland State Plan for National Electric Vehicle Formula Funding Deployment

ECONOMICS

31,343
Public road miles

1,152
Rail miles
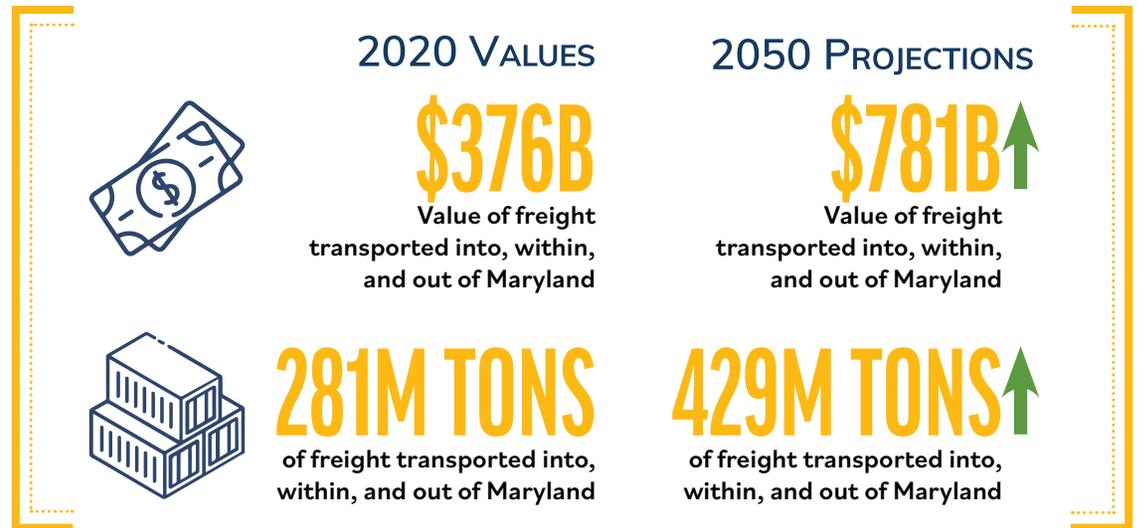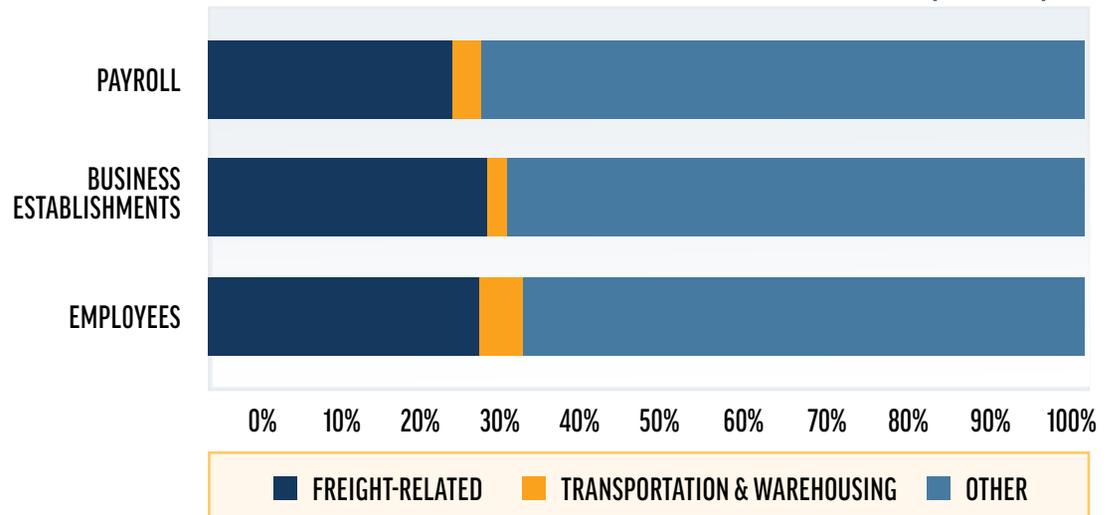
530
Inland waterway miles

52,568
Feet of air cargo runways

Goods Movement Network

The health of an economy is dependent upon the performance of the transportation system and its ability to transport goods. A reliable and cost-effective transportation network is integral to facilitating the needs of the supply chain. Simply put, the freight transportation network keeps commerce flowing.
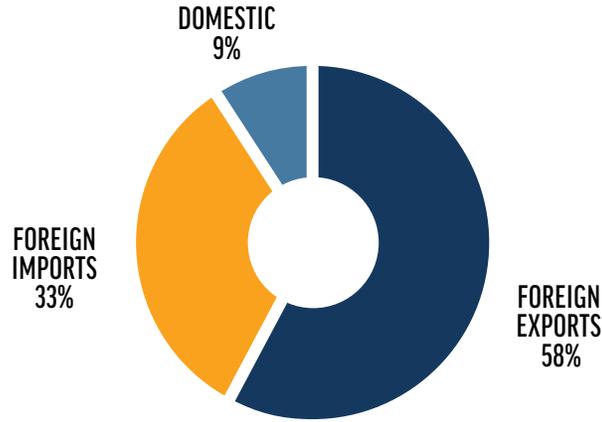
2020 Values

$376B
Value of freight transported into, within, and out of Maryland

281M TONS
of freight transported into, within, and out of Maryland

2050 Projections

$781B↑
Value of freight transported into, within, and out of Maryland

429M TONS↑
of freight transported into, within, and out of Maryland

Role of Freight Transportation, Warehousing, and Freight-Dependent Industries on Maryland's Economy (2019)

Legend: FREIGHT-RELATED | TRANSPORTATION & WAREHOUSING | OTHER

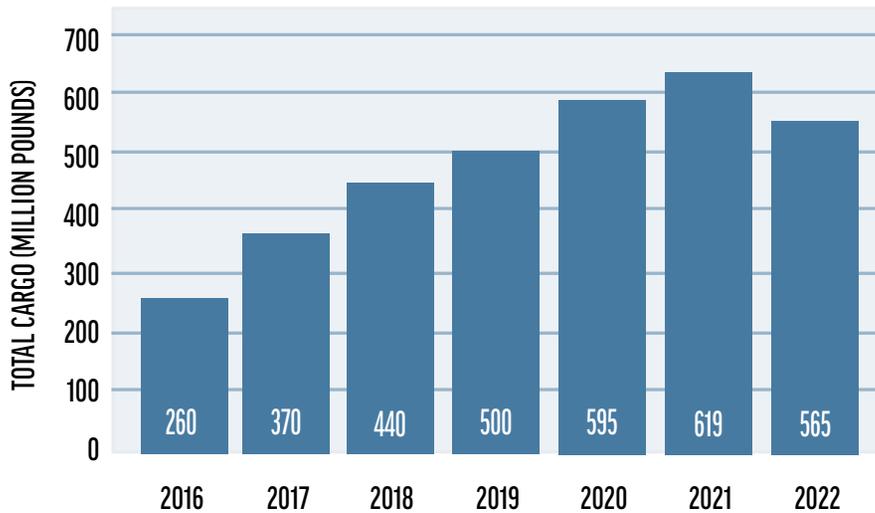(Chart with categories PAYROLL, BUSINESS ESTABLISHMENTS, EMPLOYEES, axis 0% to 100%)

Freight-related industries assumed North American Industry Classification System (NAICS) codes that encompass agriculture, forestry, fishing, and hunting (NAICS 11); mining, quarrying, and oil and gas extraction (NAICS 21); construction (NAICS 23); manufacturing (NAICS 31-33); wholesale trade (NAICS 42); retail trade (NAICS 44-45); and transportation and warehousing (NAICS 48-49).

Port of Baltimore Tonnage (2021)

- DOMESTIC 9%
- FOREIGN IMPORTS 33%
- FOREIGN EXPORTS 58%

Annual Cargo at BWI Marshall Airport (2016-2022)

TOTAL CARGO (MILLION POUNDS)

Year	Value
2016	260
2017	370
2018	440
2019	500
2020	595
2021	619
2022	565

Since 2016, BWI Marshall Airport has experienced an increase in total cargo each year aside from 2022. The growth since 2020 has been fueled by e-commerce industry growth during the COVID-19 pandemic. A 200,000 square foot expansion in 2019 has helped to accommodate the growth.

Maryland Department of Transportation, State Freight Plan, December 2022

Port of Baltimore

The Helen Delich Bentley Port of Baltimore is located in Baltimore along the tidal basins of the Patapsco River on the upper northwest shore of the Chesapeake Bay, offering the deepest harbor in Maryland's Chesapeake Bay. It has a unique geographic advantage by being the closest East Coast port to the Midwest. The Port of Baltimore generates about 15,300 direct jobs, with almost 140,000 jobs overall linked to Port activities. The Port ranks 1st among the nation's ports for volume of autos and light trucks, roll on/roll off heavy farm and construction machinery, and imported gypsum. Maryland's Port of Baltimore is ranked as the 11th largest port in the U.S. in terms of foreign cargo tonnage and 9th largest in terms of dollar value. Overall, it is one of the most diverse cargo ports in the U.S. and a top port in terms of total cargo tonnage and overall, in dollar value of cargo.

The Baltimore/Washington Thurgood Marshall International Airport (BWI) is an international airport in Anne Arundel County, Maryland. It is located 9 miles south of downtown Baltimore and 32 miles northeast of Washington, D.C. It is the busiest airport in the region, serving over 27 million passengers. BWI Marshall Airport has approximately 10,000 badged employees.

BWI Marshall Airport Total Annual Passengers

TOTAL PASSENGERS (MILLIONS)

Calendar Year	Value
2014	22.3
2015	23.8
2016	25.1
2017	26.4
2018	27.1
2019	27.0
2020	11.2
2021	18.9
2022	22.8
2023*	26.3

CALENDAR YEAR

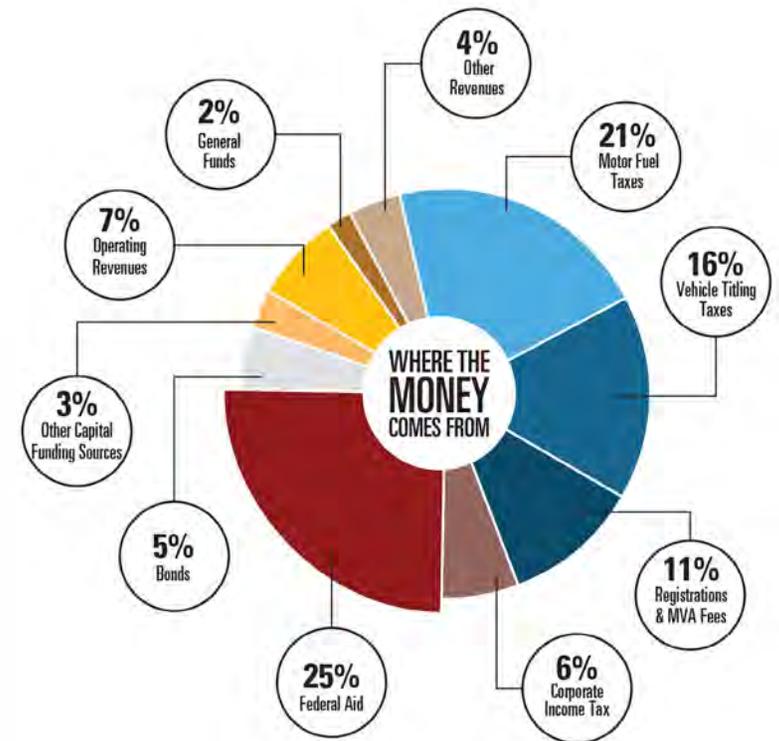**2023 data is preliminary and subject to change.*

Transportation System Revenues

Maintaining and operating Maryland's transportation system involves a variety of expenses. These costs include operation and maintenance (O&M) expenses, capital needs of each of MDOT's modal administrations, and Maryland's share of the Washington Metropolitan Area Transit Authority's (WMATA) system. O&M expenses include the costs of service for approximately 100 million annual transit trips, maintenance of highways and bridges, dredging for the Port of Baltimore, and operations for BWI Marshall Airport and Martin State Airport. Capital needs include preservation and modernization of existing assets and strategic expansion.

Funding for these transportation needs is provided through a variety of sources, which are deposited in the Transportation Trust Fund (TTF). Funds from the TTF are not necessarily earmarked for specific agencies or programs. This flexibility is critical for allowing Maryland to meet the varying service and infrastructure needs to support its diverse transportation system. Except for the MDTA, which is funded primarily through tolls and concessions revenues, all activities of MDOT are supported by the TTF. This includes debt service, maintenance, operations, administration, and capital projects. Unexpended funds remaining in the TTF at the close of the fiscal year are carried over to the next fiscal year. Disbursements for all MDOT programs and projects are made from the TTF.

Working with our partners in and outside of government, including the **Commission on Transportation Revenue and Infrastructure Needs**, MDOT will identify strategies to meet the goals and objectives defined in this plan.

TRANSPORTATION TRUST FUND FY 2023 – FY 2028 (FEDERAL AND STATE $)

WHERE THE MONEY COMES FROM

- 4% Other Revenues
- 2% General Funds
- 7% Operating Revenues
- 3% Other Capital Funding Sources
- 5% Bonds
- 25% Federal Aid
- 6% Corporate Income Tax
- 11% Registrations & MVA Fees
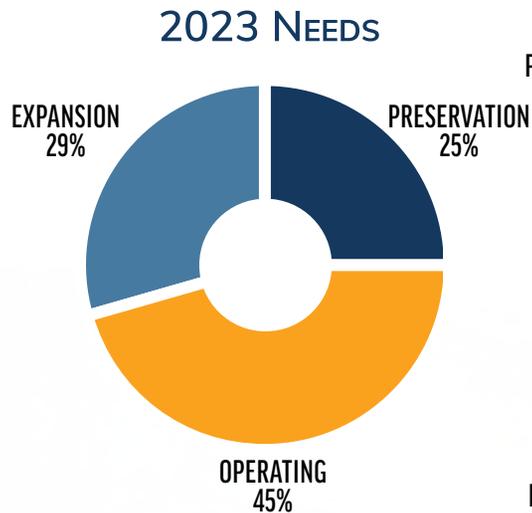- 16% Vehicle Titling Taxes
- 21% Motor Fuel Taxes

Future Seasons

Maryland has capital expansion, operations, and preservation needs across all modes that exceed existing revenue projections. It is critical for Maryland to generate greater efficiencies through innovation and capitalize on new funding opportunities in order to address as many transportation needs as possible. Doing so will allow MDOT to overcome today's financial constraints to implement a vision over the long-term.

Maryland transportation will receive additional federal funding from the Infrastructure Investment and Jobs Act (IIJA), which spans fiscal years 2022 through 2026 and provides more dollars for traditional surface transportation and modal programs as well as a significant increase in discretionary grant programs.
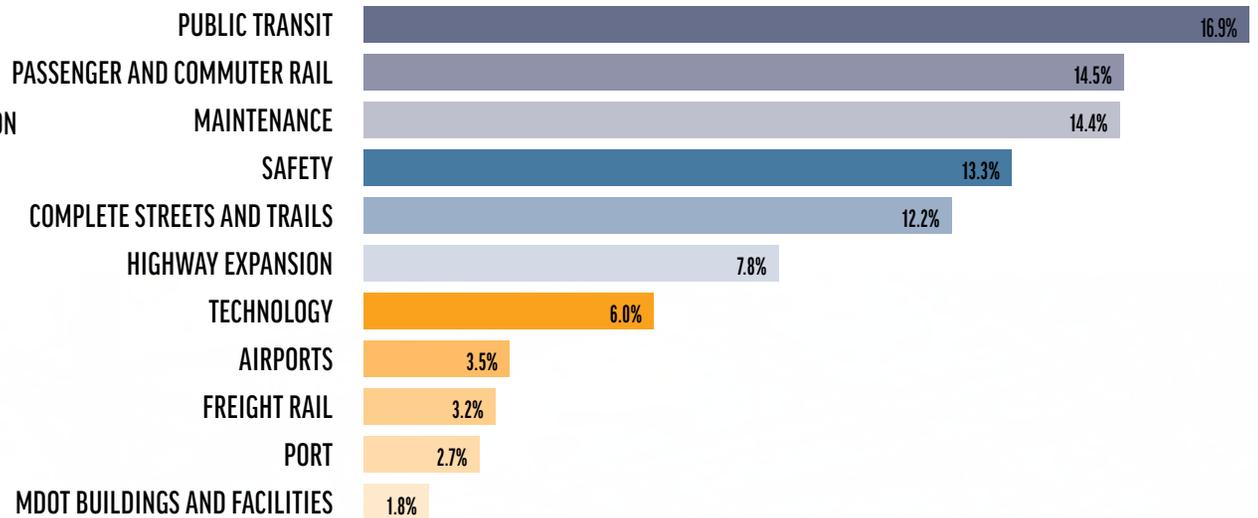
Since the passage of the IIJA, MDOT has been awarded more than 20 IIJA discretionary grants for a variety of multimodal needs. In the coming years, MDOT will continue to seek opportunities to earn more federal dollars to address essential transportation needs and implement critical mega-projects throughout the State.

Transportation System Needs

The needs of MDOT and its modal administrations can be categorized in three ways: the preservation of the existing system, daily operation needs of the agency, and capital expansion across all modes. The approximate distribution of the total MDOT needs by category is illustrated below. In 2023, operating needs are approximately 45 percent of the total MDOT needs.

2023 Needs

EXPANSION 29%

PRESERVATION 25%

OPERATING 45%

Public Survey Results: Preferred Budget Allocation

Category	Percent
PUBLIC TRANSIT	16.9%
PASSENGER AND COMMUTER RAIL	14.5%
MAINTENANCE	14.4%
SAFETY	13.3%
COMPLETE STREETS AND TRAILS	12.2%
HIGHWAY EXPANSION	7.8%
TECHNOLOGY	6.0%
AIRPORTS	3.5%
FREIGHT RAIL	3.2%
PORT	2.7%
MDOT BUILDINGS AND FACILITIES	1.8%

As part of the public engagement effort to inform this plan, Marylanders were given the opportunity via an online survey to suggest the appropriate percent of funding allocation for a variety of transportation improvements. Public transit, passenger and commuter rail, and maintenance were the improvements receiving the most support. More than 1,300 people submitted their allocations and the resulting average percentages are shown in the graphic above.

How Trends Inform Transportation Needs and Revenues

Transportation investments last for decades. To deliver lasting investments that transform the transportation system for the better, MDOT will consider how transportation needs may change in coming decades, as well as the revenue sources required to meet those needs.

Here are several ways that key trends are reshaping the prioritization of needs:

» Congestion continues to increase along major corridors, exacerbating long commute times for Maryland residents. It will be critical to implement a variety of strategies to address this congestion.

» The population of Southern Maryland is projected to grow by more than 30 percent in the next two decades. MDOT must plan for a substantial increase in demand on the transportation system in that region and identify strategies to meet these demands while still serving the needs of the other regions of the State.

» Climate change will influence transportation investment needs in the coming decades, given projected sea-level rise, increased extreme weather events, and flooding.

» Motor fuel taxes account for more than 20 percent of all TTF revenues. These tax dollars may decrease significantly as more Marylanders switch to electric and more efficient vehicles.

» Vehicle electrification requires quality charging infrastructure statewide and new facilities for MDOT's fleet of cars, trucks, buses, and heavy equipment. Transitioning to new technology may require additional up-front purchase and long-term maintenance costs.

» The reshaped commute since the COVID-19 pandemic has reduced transit ridership and created severe pressure on transit operating budgets. Rebuilding ridership and finances will require reconsidering how transit serves a new set of needs.

» The cost of construction has grown considerably due to inflation and supply chain issues. It will cost more to deliver the same program in the future.

» A renewed focus on transit investment will require new investments. New transformative capital projects, like the Baltimore Red Line, will involve a substantial State contribution.

» Maryland's aging population is expected to grow as the Baby Boomer generation ages, presenting new transportation challenges for Maryland. Aging residents often require alternative modes of transportation to help meet their needs. Improved pedestrian infrastructure and transit service are two ways the State can address this challenge.

3/ GAME PLAN

The strategic direction sets the **vision** for Maryland's transportation system to **provide safe, reliable, accessible, equitable, and sustainable transportation options across the State.**

> » **Guiding Principles**
>
> » **Goals**
>
> » **Objectives and Strategies**
>
> » **Strengthening the Team**

Building on what was learned through scouting the existing system and forecasting future trends, it's time to develop a game plan for how to shore up weaknesses and build on strengths to capitalize on opportunities. The game plan consists of a series of guiding principles, goals, and objectives, and a series of strategies for how they will be attained.

Guiding Principles are concepts that will guide MDOT in its decision-making process to support our goals for the transportation system in Maryland.

Goals show, at the highest level, what MDOT plans to do by 2050. Together with the guiding principles they produce a vision of how the transportation system will serve Maryland.

Objectives identify how MDOT will make progress towards the goals and align with the guiding principles.

Strategies are the policies, processes, and programs that MDOT will implement to achieve the objectives of the Playbook.

GUIDING PRINCIPLES

Guiding principles are concepts that will guide MDOT in its decision-making process to support the goals for the transportation system in Maryland.

Equity:
Integrate equity considerations in all aspects of transportation planning, programming, and operational processes.

Resilience:
Improve the transportation system's ability to provide reliable service throughout natural weather events and man-made threats.
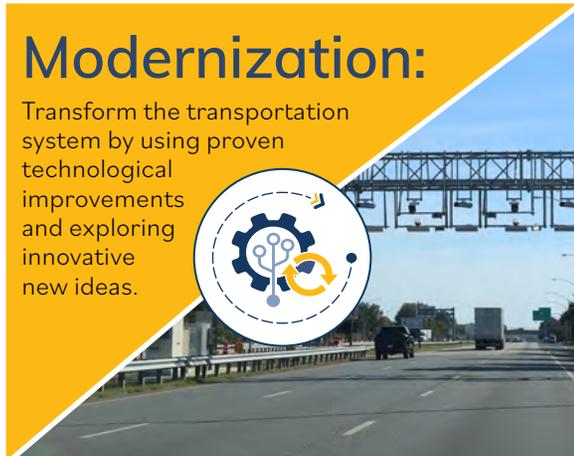
Preservation:
Preserve the condition of the existing transportation system assets to provide safe and efficient movement.

Modernization:
Transform the transportation system by using proven technological improvements and exploring innovative new ideas.

Experience:
Improve the experience of all transportation system users.

GOALS

The goals show, at the highest level, what MDOT plans to do. Together they produce a vision of how the transportation system will serve Maryland. The following sections illustrate the relationship between each of the goals, the associated actionable objectives, the strategies MDOT will implement to achieve those goals, and the guiding principles that are addressed by meeting each objective.

Enhance Safety and Security:

Protect the safety and security of all residents, workers, and visitors.

Promote Environmental Stewardship:

Minimize and mitigate the environmental effects of transportation.

Deliver System Quality:

Deliver a reliable, high-quality, integrated transportation system.

Serve Communities & Support the Economy:

Expand transportation options to allow Maryland's diverse communities to access opportunities and to support the movement of goods.

GOAL: ENHANCE SAFETY AND SECURITY

OUTCOMES

The four (4) objectives and eleven (11) strategies outlined here will enhance safety and security.

By protecting the safety of all residents, workers, and visitors, Maryland will achieve zero traffic-related fatalities and serious injuries.

KEY PERFORMANCE MEASURES

- » Annual number of fatalities and serious injuries on all roads in Maryland
- » Annual number of bicycle fatalities and serious injuries
- » Annual number of pedestrian fatalities and serious injuries
- » Annual number of fatalities and serious injuries on all roads in historically disadvantaged communities in Maryland.

OBJECTIVES	STRATEGIES
Reduce the number of lives lost and injuries sustained on Maryland's transportation system	» Implement safety improvements on roadways where the Crash Severity index is high. » Develop and implement effective engineering and technology solutions to reduce aggressive and distracted driving, using data-driven methods and proven best practices. » Identify and implement best practices for reducing transit assaults. » Expand work zone enforcement and work with partners to enhance all enforcement.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
			✓	✓	✓

OBJECTIVES	STRATEGIES
Minimize disparities in safety across Maryland's diverse communities	» Pursue community engagement with diverse communities to understand their safety concerns. » Implement system-wide roadway safety improvements and technology approaches that address the safety of vulnerable road users.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✓				

OBJECTIVES	STRATEGIES
Address multimodal safety needs to support a safe, secure, and low stress transportation system	» Provide support for safe transit stops and vehicles, including Crime Prevention Through Environmental Design. » Advance designs that reimagine auto-centric roads as accessible multimodal corridors. » Implement a sustained complete streets building program to fill in gaps in active transportation networks.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
				✓	✓

OBJECTIVES	STRATEGIES
Maintain a safe system during adverse weather events, man-made threats, and other system disruptions	» Standardize operations, response, and scene safety practices with first responders and other key partners. » Implement unified incident command with first responders.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
		✓	✓		

GOAL: DELIVER SYSTEM QUALITY

OUTCOMES

The four (4) objectives and fourteen (14) strategies outlined here will deliver system quality.

By investing to achieve system quality, MDOT will create an infrastructure program that is financially sustainable, environmentally resilient, and in a state of good repair.

KEY PERFORMANCE MEASURES

- » Percentage of lane-miles/fixed guideway transit-miles susceptible to flooding and storm surge
- » Percent of all MDOT transit service provided on time
- » Truck hours of delay
- » Percent of CTP program that is funded with federal dollars
- » Percent of projects delivered on time across MDOT
- » Percent of projects delivered on budget across MDOT

OBJECTIVES	STRATEGIES
Increase the percentage of State-owned or funded facilities and assets in a state of good repair	» Invest in MDOT roadways to maintain pavement quality. » Invest in MDOT bridges to improve the condition of bridges and preserve existing bridges in fair or good condition. » Leverage MDOT's asset management program and data-driven analyses to prioritize investments in vital infrastructure and transit assets.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✔	✔	✔	✔	

OBJECTIVES	STRATEGIES
Minimize travel delays and improve reliability and quality	» Work with local jurisdictions to prioritize the movement of transit vehicles in congested areas. » Implement improvements to enhance the existing transportation system and reduce congestion on highway systems, focusing on integrated freeway and arterial management and operations. » Improve MTA transit on-time performance through operational and staffing policies. » Address congestion and bottlenecks on nationally and regionally significant corridors to facilitate access to major employment, freight, and activity centers.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✔			✔	✔

OBJECTIVES	STRATEGIES
Provide a multimodal system resilient to changing conditions and hazards	» Identify assets that are vulnerable to flooding and inundation, and develop adaptation strategies such as reconstruction, relocation, and protective infrastructure. » Invest in technology to facilitate 24/7 roadway clearance and public information of incidents through CHART. » Prepare for future climate impacts on transportation infrastructure through site and stressor Identification, risk assessment, and adaptation development. » Consider future maintenance costs of transportation infrastructure projects.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✔	✔			✔

OBJECTIVES	STRATEGIES
Accelerate project completion through improved project delivery	» Leverage state and federal infrastructure funding with public, private, and other partners. » Refine MDOT's project delivery practices to improve decision making and reduce project risks. » Partner with local jurisdictions to implement a comprehensive federal grant strategy. » Develop a transparent project prioritization system that strategically allocates resources to maximize return on investments and align with policy goals.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✔	✔			✔

GOAL: PROMOTE ENVIRONMENTAL STEWARDSHIP

OUTCOMES

The four (4) objectives and thirteen (13) strategies outlined here will promote environmental stewardship.

By minimizing and mitigating the environmental effects of transportation, Maryland will achieve a 20 percent reduction from 2019 in VMT per capita by 2050, a 40 percent reduction in on-road transportation sector GHG emissions by 2031, and move towards net-zero by 2045.

KEY PERFORMANCE MEASURES

- » VMT/VMT per capita
- » Number of employee partners in statewide TDM programs
- » Percentage of MDOT fleet composed of EVs
- » Percent of EVs registered from total registered vehicles

OBJECTIVES	STRATEGIES
Minimize fossil fuel consumption, reduce greenhouse gas emissions, and improve air quality	» Incentivize and execute Travel Demand Management (TDM) to reduce vehicular trips. » Implement policies and incentives to encourage mode shift. » Address air pollution through emissions compliance. » Promote and/or incentivize fuel-efficient technologies for medium and heavy-duty trucks. » Expand and enhance roadways strategically through context sensitive design, in order to minimize impacts to air quality and emissions.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✓		✓	✓	✓

OBJECTIVES	STRATEGIES
Support the widespread adoption of alternative fuels, electric vehicles and innovative technologies	» Increase electric vehicle charging infrastructure, including in rural areas and overburdened and underserved areas. » Convert the MDOT fleet to EVs and alternative fuels.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✓		✓	✓	✓

OBJECTIVES	STRATEGIES
Protect and enhance the natural environment through avoidance, minimization, and mitigation of adverse impacts related to transportation infrastructure	» Conduct thorough environmental impact assessments for transportation projects to identify and address potential adverse impacts to the natural environment. » Continue to coordinate with other State agencies to heighten the awareness of the value and vulnerability of the State's water and natural resources. » Develop and implement a "Green Port Strategy" consistent with industry trends and initiatives including U.S. EPA's Strategy for Sustainable Seaports.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
		✓	✓		✓

OBJECTIVES	STRATEGIES
Employ resource protection and conservation practices in project development, construction, operations, and maintenance of transportation assets	» Incorporate innovative practices, including the efficient reuse of construction materials, to protect and conserve natural resources in the maintenance and operations of the transportation system. » Mitigate stormwater runoff with green infrastructure features to protect sensitive aquatic ecosystems like the Chesapeake Bay. » Develop a comprehensive Environmental Management System. » Implement a comprehensive transportation resilience program aligned with the federal PROTECT initiative.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
		✓	✓		✓

GOAL: SERVE COMMUNITIES AND SUPPORT THE ECONOMY

OUTCOMES

The six (6) objectives and twenty four (24) strategies outlined here will serve communities and support the economy.

By expanding transportation options to allow Maryland's diverse communities to access opportunities and to support the movement of goods, Maryland will expand transit and active transportation use, and bolster the regional economy.

KEY PERFORMANCE MEASURES

OBJECTIVES	STRATEGIES
Improve transportation system and MDOT services	» Improve the tracking, responsiveness, and time-to-resolution of all electronic, telephone, written, and in-person correspondence. » Improve traveler service transactions by implementing the MVA Customer Service Plan. » Provide enhanced training and employee development for MDOT employees interacting directly with our users. » Implement a new fare collection system that allows for transfers between MTA services and LOTS. » Improve transportation connections and mobility on the highway network.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✓	✓	✓	✓	✓

OBJECTIVES	STRATEGIES
Apply enhanced technologies to improve communication and relay real-time information	» Improve the quality, accuracy, and accessibility of real-time travel information for all modes. » Provide reliable and accessible real-time modal choice information to customers and stakeholders. » Improve MobilityLink, the MDOT app for paratransit riders to book, manage trips, and monitor vehicle location in real time. » Address the causes of missed transit trips.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✓			✓	✓

OBJECTIVES	STRATEGIES
Increase transit use, active transportation, and TOD	» Support LOTS to enhance their service to meet local needs. » Develop a statewide bicycle network through the Maryland Pedestrian and Bicycle Plan. » Jumpstart TOD activity at key locations in coordination with local jurisdictions. » Implement the Pedestrian Safety Action Plan (PSAP) to create safer conditions which would support communities and the economy. » Support mixed use development around transit stations, stops and hubs.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✓			✓	

» Access to transit (within ½ mile of a transit station/stop) by people who live in overburdened and underserved areas as defined by CSNA

» Commute mode share

» Annual transit ridership—MTA services and LOTS, including paratransit ridership

» Port of Baltimore foreign cargo tonnage and MPA general cargo tonnage

» Percentage of MPA operating budget recovered by revenues

» BWI Marshall Airport total annual passengers

» Comparative airline cost per enplaned passenger (CPE)

GOAL: SERVE COMMUNITIES AND SUPPORT THE ECONOMY

OBJECTIVES	STRATEGIES
Improve quality of life by providing active transportation and transit access to jobs and opportunities	» Increase transit, high-occupancy vehicle, carpool, and vanpool options to connect communities to jobs at key employment centers. » Coordinate with MTA, WMATA, and local transit agencies to enhance scheduling, station stops/hubs, and ticket integration to create seamless regional service. » Strategically invest to improve connectivity and comfort of pedestrian and bicycle networks within and between activity centers and for both on and off-road facilities to increase use. » Update and apply a complete streets policy on all applicable projects. » Partner with Amtrak to invest in passenger rail improvements in the Northeast Corridor. » Evolve MARC to serve as a true regional rail system that connects to interregional job hubs and supports Maryland's economy.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✓			✓	

OBJECTIVES	STRATEGIES
Prioritize the transportation needs of underserved and overburdened communities in project selection	» Identify opportunities to prioritize underserved and overburdened communities in project selection, scoping, and design. » Ensure language accessibility in transportation planning and operation. » Improve paratransit and fixed-route service.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✓				

OBJECTIVES	STRATEGIES
Improve the efficiency and competitiveness of the Port of Baltimore and BWI Marshall Airport	» Undertake robust engagement with airport, port, business, and community stakeholders to inform development plans, with a particular focus on inclusive engagement. » Improve access for cargo and the supply chain to the port, airport, and statewide to accommodate growth, with considerations of ways to limit impacts to neighboring communities. » Advance airport development plans to enhance competitiveness and customer experience.

GUIDING PRINCIPLES	Equity	Resilience	Preservation	Experience	Modernization
	✓	✓	✓	✓	✓

STRENGTHENING THE TEAM

In addition to the goal-oriented strategies outlined above, MDOT will employ the following internal strategies to ensure that it is the best agency it can be. These focus on exemplary customer service, increasing sustainable funding, and leveraging federal dollars, as well as ensuring that MDOT has the necessary workforce to deliver projects on time and within budget.

CUSTOMER SERVICE

» Expand One-Stop Shop services at MVA in partnership with local jurisdictions.
» Enhance customer experience with DriveEzMD Maryland and at MDTA Customer Services Centers.
» Deliver on-time transit service at MTA.
» Increase overall satisfaction with MDOT.

PROJECT DELIVERY

» Create a transparent scoring and prioritization system that advances better projects quickly, builds trust with local jurisdictions, and ensures that MDOT's values are advanced in every dollar spent.
» Strengthen our partnerships with small businesses and disadvantaged and minority-owned businesses.
» Improve our program to deliver results for communities.
» Rebuild state capacity through a more resilient MDOT workforce and through stronger policies that create more efficient statewide planning, project development, and delivery.

FUNDING

» Increase state capital program levels by leveraging federal funds and partnerships.

» Leverage the unprecedented federal investments in infrastructure to help state dollars go further.

» Assess needs that allow for the implementation of a transformative transportation agenda.

WORKPLACE CULTURE

» Adopt knowledge management strategies to maintain institutional knowledge.

» Foster a culture of teamwork, collaboration, innovation, and exemplary customer service within MDOT.

» Strengthen the diversity, equity, and inclusion program at MDOT.

» Promote diversity, equity, and inclusion throughout the transportation industry.

» Recognize employees through awards or thought leadership opportunities on behalf of MDOT.

» Improve job satisfaction and performance of MDOT frontline employees.

» Ensure that the MDOT workforce earns a living wage.

PARTNERSHIPS

» Transition the MTA transit and MDOT public fleets to zero emission vehicles.

» Strengthen partnerships with small, disadvantaged, minority-owned, and veteran-owned business.

» Enhance MDOT's federal grant strategy and execution to leverage state dollars.

» Partner with local jurisdictions to prioritize key infrastructure needs and improvements.

» Improve MDOT's community engagement processes.

WORKFORCE DEVELOPMENT

» Attract, promote, and retain talented employees who are representative of Maryland's population.

» Recruit effectively and decrease the MDOT vacancy rate.

» Develop and maintain workforce development programs that enhance the skills of transportation professionals and support career advancement.

» Build and sustain pipelines to create long-term, family sustaining, stable opportunities for newly trained workers.

» Create a model to connect interns and apprentices to opportunities for full-time employment in operations, trades, and professional services.

» Ensure that MDOT's projects create a pipeline of training, local hiring, and opportunity for low-income communities.
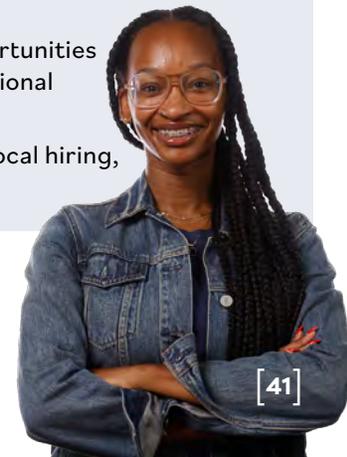
4 / IMPLEMENTING THE PLAN

GAME CHANGING PROJECTS AND PROGRAMS

In addition to the strategies MDOT will implement toward the Playbook goals, MDOT is committed to funding and completing several key multimodal transportation projects across Maryland, the locations of which are shown on the map on **page 43**. These projects represent a few of our priority projects that MDOT and its modal administrations have identified as critical to the implementation of the Playbook in order to transform transportation in Maryland. The selection of these key projects is informed by public and stakeholder input gathered throughout the Playbook planning process.
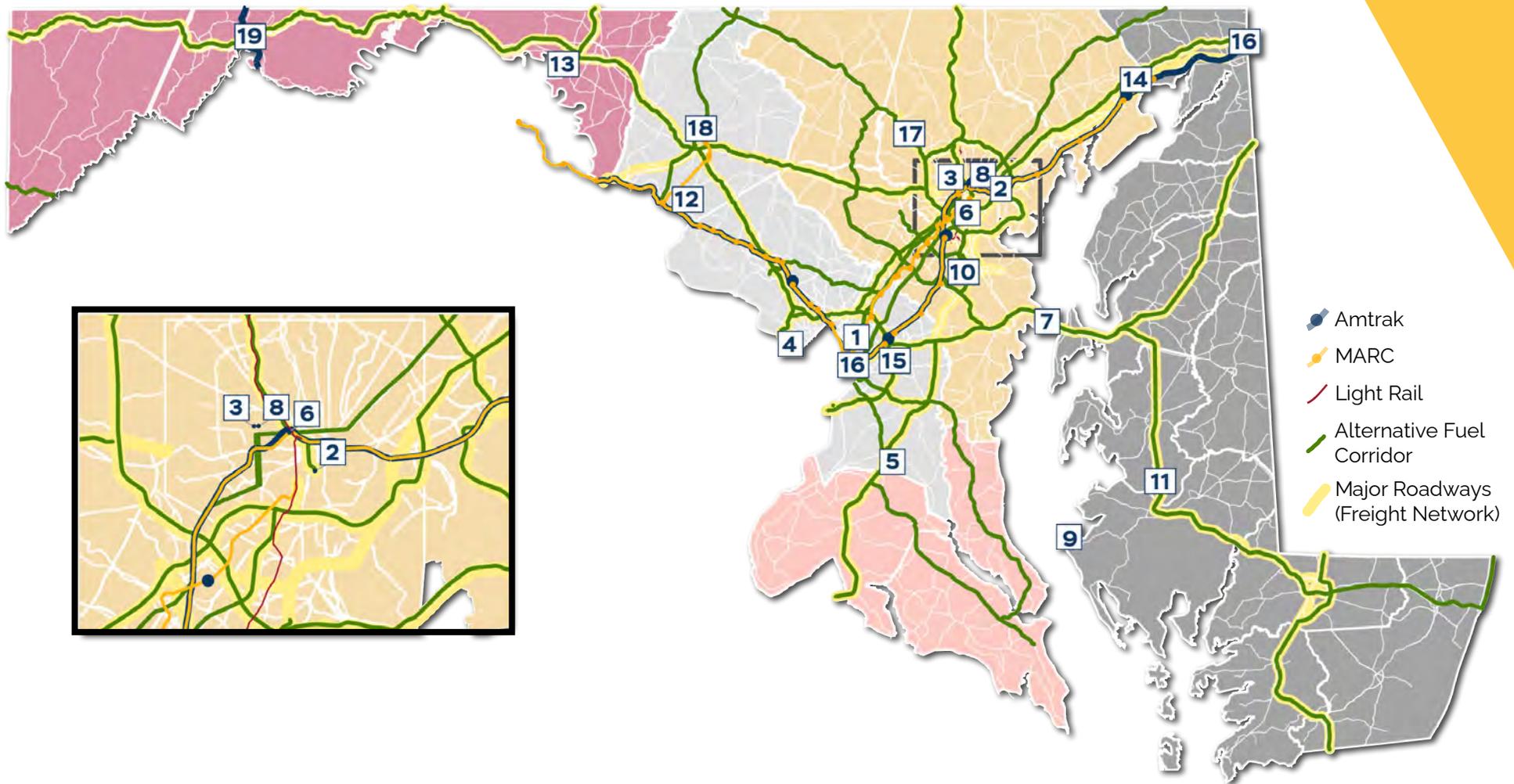
STATEWIDE PROGRAMS

» Model Complete Streets Initiative (MDOT)

» Pedestrian Safety Action Plan Implementation (SHA)

» Statewide Trail Network (SHA/TSO)

» TOD Program (TSO)

» EV Charging Infrastructure (MDOT)

» Carbon Reduction Strategy (MDOT)

» Resilience Improvement Plan (MDOT)

NOTABLE PLAYS BY MDOT TEAM MEMBERS

» In February 2022, MPA was awarded $1.8 million grant from the U.S. EPA Port's Diesel Equipment Upgrade Program to help MPA further reduce diesel emissions.

» MDOT is implementing asset criticality frameworks and scoring processes to ensure a risk-based approach to directing funding for the most critical highway asset management needs.

» The Baltimore Red Line project, relaunched by Governor Wes Moore in June 2023, will significantly enhance east-west connectivity across the Baltimore region.

» Since 2021, MDOT has won over $340 million in competitive federal grants to improve multimodal transportation for both people and freight.

A Few Game Changing Projects

Legend:
- Amtrak
- MARC
- Light Rail
- Alternative Fuel Corridor
- Major Roadways (Freight Network)

1. Purple Line (MTA)
2. Baltimore Red Line (MTA)
3. Frederick Douglass Tunnel (MTA)
4. American Legion Bridge (ALB) + 270 (SHA)
5. Southern Maryland Rapid Transit (MTA)
6. Howard Street Tunnel (MPA)
7. Bay Crossing Tier 2 NEPA Study (MDTA)
8. Baltimore Penn Station Redevelopment (MTA)
9. Mid-Bay Dredge Placement Project (MPA)
10. BWI Marshall Airport Concourse A/B Connector Project (MAA)
11. Rural Opportunities to Use Traffic Technology Enhancements (ROUTE) on US 50 (SHA)
12. MARC Brunswick Line (MTA)
13. I-81 Phase 2 Corridor Expansion (SHA)
14. Susquehanna River Crossing (MTA)
15. I-95/I-495 at Medical Center Drive (SHA)
16. MARC: Closing the Gap between Delaware and Virginia (MTA)
17. I-795 Interchange at Dolfield Boulevard (SHA)
18. US 15 and US 40 from I-70 to MD 26 (SHA)
19. I-68 Cumberland Viaduct (SHA)

Note: The map above represents a snapshot of the key projects supported by the Playbook goals and objectives. It does not represent all major MDOT projects nor all Administration priorities.

TEAM RECORD AND PLAYER STATS

Team successes are determined by a win-loss record and players performances are evaluated by multiple stats that indicate their effectiveness. Similarly, MDOT has established performance targets to measure its effectiveness in achieving its goals and objectives. This includes metrics focused on safety, conditions of highway infrastructure and transit assets, and travel time reliability. You can learn more about these targets and how MDOT is performing in the System Performance Report and Attainment Report available in the Appendix of the MTP.

With the Playbook,

The CharmPass mobile ticketing app will save Marylanders time when they transfer between MARC trains and local Baltimore buses.

The Penn Camden Connector study will link the two MARC train lines serving Baltimore, increasing capacity and reducing emissions.

People with disabilities will have increased travel options and independence because of ADA and pedestrian safety improvements in the Baltimore Red Line corridor.

Marylanders will have more opportunities to travel thanks to additional cruise ships serving Maryland.

New battery electric locomotives at the CSX Curtis Bay facilities of the Port of Baltimore will reduce pollution and noise in surrounding communities.

Maryland Wins!

Deliveries are more reliable because of improvements to cargo operations at BWI Marshall Airport and the Port of Baltimore.

The I-270 Innovative Congestion Management Program will get help to distressed motorists faster than ever.

Fleet drivers have improved efficiency thanks to new truck parking information systems and virtual weigh stations, supporting the Maryland economy.

Reliable shipping will save customers money.

Monitoring the condition of bridges will keep trucks and cars moving.

The Warner Street Highway-Rail Grade Crossing Project will deliver immediate safety improvements and fund a study to grade separate the crossing.

Improved travel time reliability will reduce time wasted sitting in traffic.

Investments at Mondawmin Transit Station, including reconstructed intersections, a dedicated bicycle trail, and ADA upgrades, will improve community connectivity in West Baltimore.

Reduced car emissions will improve air quality in neighborhoods.

Attainment Report

As part of Transportation Performance Management, state DOTs are required to establish performance targets for national performance measures related to safety, infrastructure condition, and system performance. Performance measures, which are aligned with the Playbook strategic direction, were developed by the ARAC and are outlined in the Annual Attainment Report on Transportation System Performance (**Appendix B**). We are grateful for all of the time and energy that the **ARAC members** put into developing thoughtful performance measures.

The Attainment Report provides information about the federal targets and identifies how this plan will help achieve those goals. The Attainment Report will be used to track progress toward the Playbook goals and evaluate the success of its implementation. MDOT utilizes these measures to guide investment decisions for the Consolidated Transportation Program and reevaluates performance in each cycle of the MTP development.

System Performance Report

State long-range transportation plans are required to include a System Performance Report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in §450.206(c), including progress achieved by the MPO(s) in meeting the performance targets in comparison with system performance recorded in previous reports." (23 CFR §450.216(f)). Furthermore, 23 CFR §450.206(c)(4) requires integration of transit asset management performance measures and targets as required by Title 49 CFR, Chapter 53, Public Transportation.

Appendix A: System Performance Report, focuses on national performance program measures, reflecting current conditions and targets for the respective performance period.

Implementation of the MTP:
Turning Strategies into Actions

MDOT continues to make bold calls and strategic moves by implementing safety improvements, promoting environmental stewardship, and advancing alternative transportation options.

MDOT has taken action and put into play the Red Line study, the Purple Line transitway, and improvements to I-270 to name a few. As revenues grow, MDOT wants to implement the Game Changer projects and advance the policies and programs outlined in the strategies of the MTP in order to achieve effective results throughout the transportation system.

The goals and anticipated results identified in this plan are the long-term visionary outcomes for the future. MDOT will implement the strategies identified in The Playbook over the next five years in order to:

» enhance the safety and security of transportation system users,

» deliver a reliable and high-quality multimodal transportation system,

» serve our diverse communities and businesses with expanded and improved transportation options, and

» address the environmental impacts of transportation across the State.

MDOT will work across the Department to ensure strategies turn into strategic actions and advance into implementation. MDOT will continue to adjust its project selection and programming through development of the six-year fiscally constrained capital program, the Consolidated Transportation Plan, utilizing the data and measures tracked through the annual transportation system performance review, the Annual Attainment Report, to inform agencywide decision making. This implementation process will align future plans and investments across all MDOT modes with the clear goals set forward in the MTP.

Together MDOT can reach those goals and uphold its mission to be a customer-driven leader that delivers safe, sustainable, intelligent, exceptional, and inclusive transportation solutions in order to connect customers to life's opportunities and leave no one behind.

Appendices

The Appendix includes technical memos and reports that provide further detail on the trends analysis, plan development process, and performance measures.

» **Appendix A:** System Performance Report

» **Appendix B:** Attainment Report and Attainment Report Advisory Committee

» **Appendix C:** Conditions, Trends, and Challenges Technical Memo

» **Appendix D:** Engagement Technical Memo

» **Appendix E:** Strategic Direction Technical Memo

» **Appendix F:** MTP Action Plan
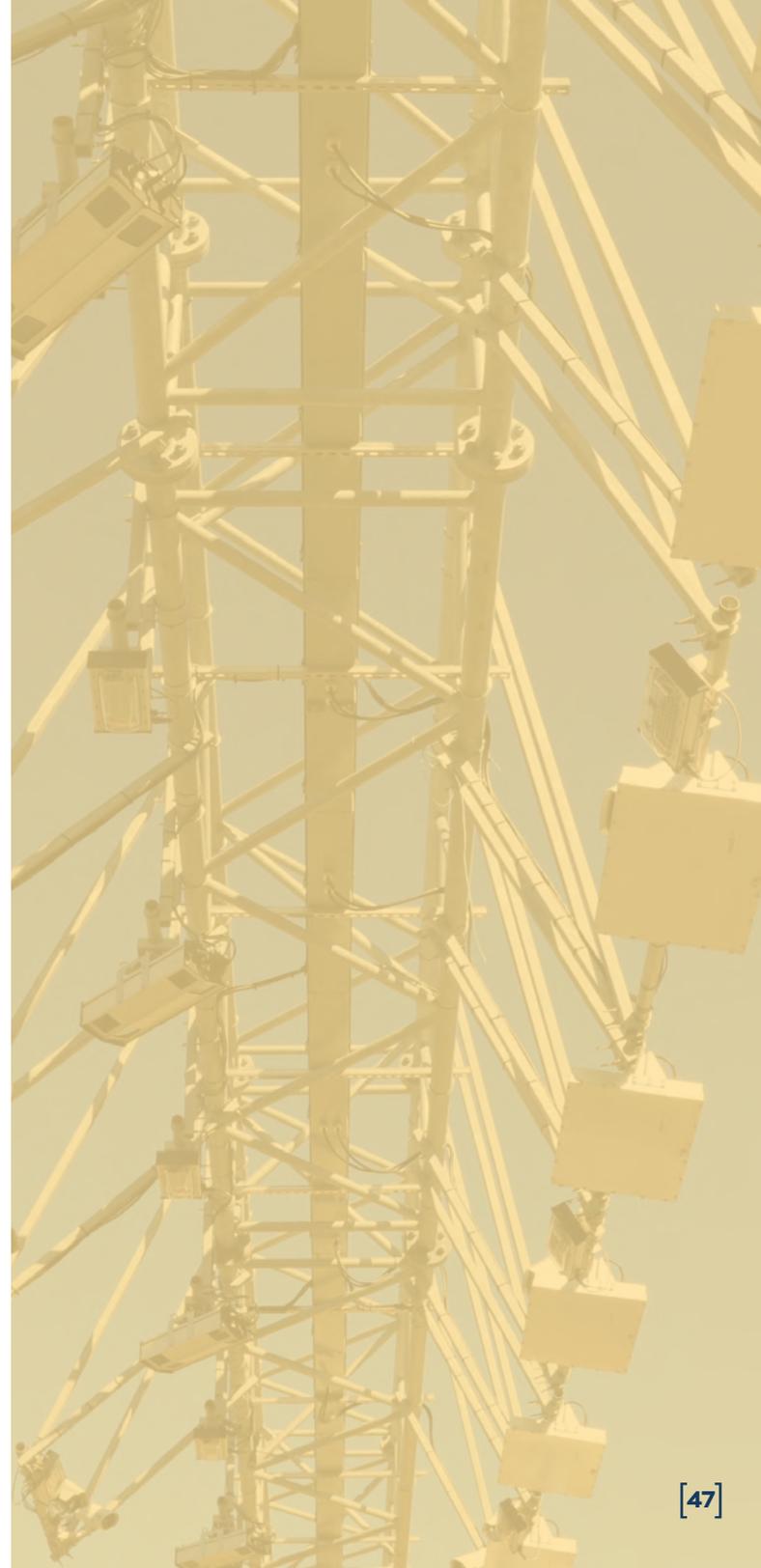
Glossary of Terms

Active Transportation: Active Transportation is using human-powered means of travel, which includes walking and bicycling with or without the use of mobility aids and may also include using other human-scaled or micro-mobility devices that may be electric-powered or electric-assisted, such as e-bikes and e-scooters.

Alternative Fuel Corridor: As designated by the FHWA, alternative fuel corridors are major national highways with EV charging, hydrogen, propane, and natural gas fueling infrastructure at strategic locations.

Annual Attainment Report on Transportation System Performance (AR): Pursuant to Transportation Article Section 2-103.1 of the Annotated Code of Maryland, the State is required to develop or update an annual performance report on the attainment of transportation goals and benchmarks in the MTP and Consolidated Transportation Program (CTP). The Attainment Report must be presented annually to the Governor and General Assembly before they may consider the MTP and CTP.

Attainment Report Advisory Committee (ARAC): Pursuant to Transportation Article 2-103.1(j), the ARAC is convened each time MDOT develops a new long-range transportation plan. The ARAC serves as an advisory group with a focus on reviewing the plan goals, benchmarks, and indicators in order to advise MDOT on the selection of appropriate performance measures and targets.

Automated Vehicles (AV): AV have numerous driving automation features, these features allow the vehicle to operate at different levels of automation depending upon the features that are in place.

Climate Solutions Now Act (CSNA): The CSNA was passed into law in 2022 and provides Maryland emissions reduction targets. The 2031 target is to reduce emissions by 60 percent and "net zero" by 2045.

Commuter Choice Maryland: An incentive program designed primarily to encourage Maryland employees to consider switching to alternative transportation choices, like transit, vanpool/ carpool, telework, or alternative work hours. www.commuterchoicemaryland.com

Coordinated Highways Action Response Team (CHART): CHART is an incident management system aimed at improving real-time travel conditions on Maryland's highway system. CHART is a joint effort of MDOT SHA, MDTA, and the Maryland State Police, in cooperation with other federal, state, and local agencies.

Consolidated Transportation Program (CTP): A six-year program of capital projects, which is updated annually to add new projects and reflect changes in financial commitments.

COVID-19 Pandemic: On March 5, 2020, a "Declaration of State of Emergency and Existence of Catastrophic Health Emergency – COVID-19" proclamation was issued in Maryland due to the outbreak of disease (COVID-19) caused by the novel coronavirus that occurred in Hubei province, China, in late 2019. There were subsequent orders from the Maryland Governor related to the ongoing pandemic, implementing closures of services and stay at home restrictions in an effort to slow/stop the spread of the virus. As of July 1, 2021, all COVID-19 related orders by the Maryland Governor had been lifted. The Center for Disease Control (CDC) and Maryland Department of Health continue to monitor the spread of the original virus and variants thereof to issue guidance in the ongoing pandemic.

Electric Vehicle (EV): Cars that are capable of traveling only on electric power supplied by a battery. There are two main types of EV currently on the market: Battery Electric Vehicles (BEV), powered solely by electricity stored in a battery pack in the car and Plug-in Hybrid Electric Vehicles (PHEV), vehicles where the battery pack lets them travel several miles on electricity before a range-extending gasoline engine takes over.

Equity: Equity: The 2050 MTP uses the Climate Solutions Now Act (CSNA) (2022), a state law with provisions to reduce negative environmental impacts on overburdened and underserved communities. Overburdened communities are defined as any census tract for which three or more of 21 environmental health indicators are above the 75th percentile. Underserved communities are defined as any census tract where the most recent census survey shows: At least 25% of the residents qualify as low-income; or At least 50% of the residents identify as non-white; or At least 15% of the residents have limited English proficiency.

Fiscal Year (FY)/ Federal Fiscal Year (FFY): A yearly accounting period covering the period between July 1 and June 30 of each reporting year (FFY: October 1 to September 30).

Greenhouse Gas (GHG): Any of various gaseous compounds (such as carbon dioxide or methane) that absorb infrared radiation, trap heat in the atmosphere, and contribute to the greenhouse effect. The transportation sector is one of the largest contributors to U.S. GHG emissions.

Locally Operated Transit Systems (LOTS): Maryland transit systems that provide primarily bus service and demand response within the local areas in which they operate. They are funded through a combination of federal, state, and local money. MDOT provides financial, technical, and operating support for these services.

Infrastructure Investment and Jobs Act (IIJA): The IIJA (also known as the Bipartisan Infrastructure Law, or BIL) was signed into law by President Biden on November 15, 2021, authorizing $1.2 trillion for transportation and infrastructure spending with $550 billion of that total going toward "new" investments and programs.

Maryland Commission on Transportation Revenue and Infrastructure Needs (the TRAIN Commission): Maryland, as directed by the General Assembly, Provisions of Chapter 455, Acts of 2023, has established the Commission to review and make recommendations to improve existing transportation revenues, investment decisions, MDOT operations, among others. The 31 members are required to submit an interim report due to the Governor and legislature by January 1, 2024, and a final report by January 1, 2025. To learn more about the Commission, visit https://www.mdot.maryland.gov/tso/Pages/Index.aspx?PageId=205

Maryland State Data Center (MSDC): MSDC is an official partner with the U.S. Census Bureau. MSDC monitors development trends, analyzes social, economic and other characteristics and prepares population, housing, employment, labor force and income projections, which provide the baseline for planning for growth and development in the State.

Metropolitan Planning Organizations (MPOs): An MPO is the policy board of an organization created and designated to carry out the metropolitan transportation planning process. MPOs are required to represent localities in all urbanized areas (UZAs) with populations over 50,000, as determined by the U.S. Census. MPOs are designated by agreement between the governor and local governments that together represent at least 75 percent of the affected population (including the largest incorporated city, based on population) or in accordance with procedures established by applicable State or local law.

Overburdened Communities: Any census tract in which three or more of the following environmental health indicators are above the 75th percentile statewide:

(I) particulate matter (PM) 2.5;

(II) ozone;

(III) National Air Toxic Assessment (NATA) diesel PM;

(IV) NATA cancer risk;

(V) NATA respiratory hazard index;

(VI) traffic proximity;

(VII) lead paint indicator;

(VIII) national priorities list superfund site proximity;

(IX) risk management plan facility proximity;

(X) hazardous waste proximity;

(XI) wastewater discharge indicator;

(XII) proximity to a concentrated animal feeding operation (CAFO);

(XIII) percent of the population lacking broadband coverage;

(XIV) asthma emergency room discharges;

(XV) myocardial infarction discharges;

(XVI) low-birth-weight infants;

(XVII) proximity to emitting power plants;

(XVIII) proximity to a toxic release inventory (TRI) facility;

(XIX) proximity to a brownfields site;

(XX) proximity to mining operations; and

(XXI) proximity to a hazardous waste landfill

Shared Mobility: Shared mobility refers to a transportation strategy by which users can access various types of services or products, including bicycles, scooters, or ride-sharing on demand. These offerings provide transportation options.

State Report on Transportation (SRT): The SRT is prepared annually and distributed to the General Assembly, local elected officials, and interested citizens. It consists of three documents, the MTP, the AR, and the CTP.

Strategic Highway Safety Plan (SHSP): A SHSP is a federally required statewide-coordinated safety plan that provides a framework for reducing highway fatalities and serious injuries on roadways.

Transit Oriented Development (TOD): In 2008, the legislature adopted a definition of TOD. As defined in statute, a TOD is: "a dense, mixed-use deliberately planned development within a half-mile of transit stations that is designed to increase transit ridership."

Travel Demand Management (TDM): TDM strategies support the use of alternatives to the traditional single-occupant vehicle through a variety of programs and incentives (e.g., carpooling, car sharing, transit, Park-and-Ride facilities, teleworking, and flexible work hours).

Vehicle Miles Traveled (VMT): A measurement of the total miles traveled by all vehicles.

Zero Emissions Electric Vehicle Infrastructure Council (ZEEVIC): The Electric Vehicle Infrastructure Council (EVIC) was established by state legislation in 2011 (and expanded in 2019 to include zero emission vehicles). ZEEVIC is charged with development of policies, recommendations, and incentives that increase awareness, support ownership, and promote investment by the private sector of and in ZEVs. ZEEVIC also develops recommendations for a statewide EV charting and hydrogen refueling infrastructure plan and other potential policies to promote and facilitate successful integration of ZEVs into Maryland's transportation network.

Zero Emissions Vehicle (ZEV): A ZEV is a vehicle that does not emit harmful emissions from the engine. ZEVs include, but are not limited to, battery electric vehicles which are 100% zero emissions, plug-in hybrid vehicles, and hydrogen fuel cell electric vehicles (FCEVs).

THE 2050 MARYLAND TRANSPORTATION PLAN (MTP)

The MTP informs, and is informed by, various multimodal plans and reports across MOOT, which is the MDOT "Family of Plans." The list below includes some, but not all plans and reports, that are part of the MTP development.

MARYLAND AVIATION ADMINISTRATION
- MDOT MAA Strategic Plan

Maryland Transportation Authority — MDTA
- Strategic Plan

STATE HIGHWAY ADMINISTRATION
- Context Driven Guide
- Transportation Asset Management Plan
- Transportation Systems Management and Operations (TSMO) Strategic Plan
- Pedestrian Safety Action Plan

M metro
- WMATA Strategic Transformation Plan (2023)

MOTOR VEHICLE ADMINISTRATION
- MDOT MVA Strategic Plan
- Maryland Strategic Highway Safety Plan
- Maryland Connected and Automated Vehicle Strategic Framework

MARYLAND DEPARTMENT OF TRANSPORTATION
- Maryland Transportation Plan
- Maryland Consolidated Transportation Program
- Maryland's Annual Attainment Report on Transportation System Performance
- State Freight Plan
- Maryland State Rail Plan
- Maryland Strategic Asset Management Plan
- Maryland Bicycle and Pedestrian Master Plan
- MDOT Transportation Resilience Improvement Plan (TRIP) (2024)
- Carbon Reduction Strategy (2023)

(More information can be found at www.mdot.maryland.gov/climate)

MARYLAND TRANSIT ADMINISTRATION
- Maryland Statewide Transit Plan
- Central Maryland Regional Transit Plan
- MDOT MTA Draft Transit Plan (2022)
- MDOT MTA Strategic Plan (2020)
- MARC Growth and Transformation Plan

MARYLAND PORT ADMINISTRATION
- MDOT MPA Strategic Plan

Not all plans represented

Please visit the website at **www.playbook.mdot.maryland.gov** or **www.mdot.maryland.gov/MTP** for more information

THE PLAYBOOK
Bold Calls. Strategic Moves. Effective Results.

MDOT
MARYLAND DEPARTMENT OF TRANSPORTATION
Taking you places!

2050 MARYLAND TRANSPORTATION PLAN

7201 Corporate Center Drive
Hanover, MD 21076

Wes Moore
Governor

Aruna Miller
Lt Governor

Paul J. Wiedefeld
Secretary