



MARYLAND DEPARTMENT  
OF TRANSPORTATION

*Taking you places!*

# 2024 STATE REPORT ON TRANSPORTATION

Maryland Department of Transportation  
Office of Planning and Capital Programming

*February 2024*

# Presentation Purpose

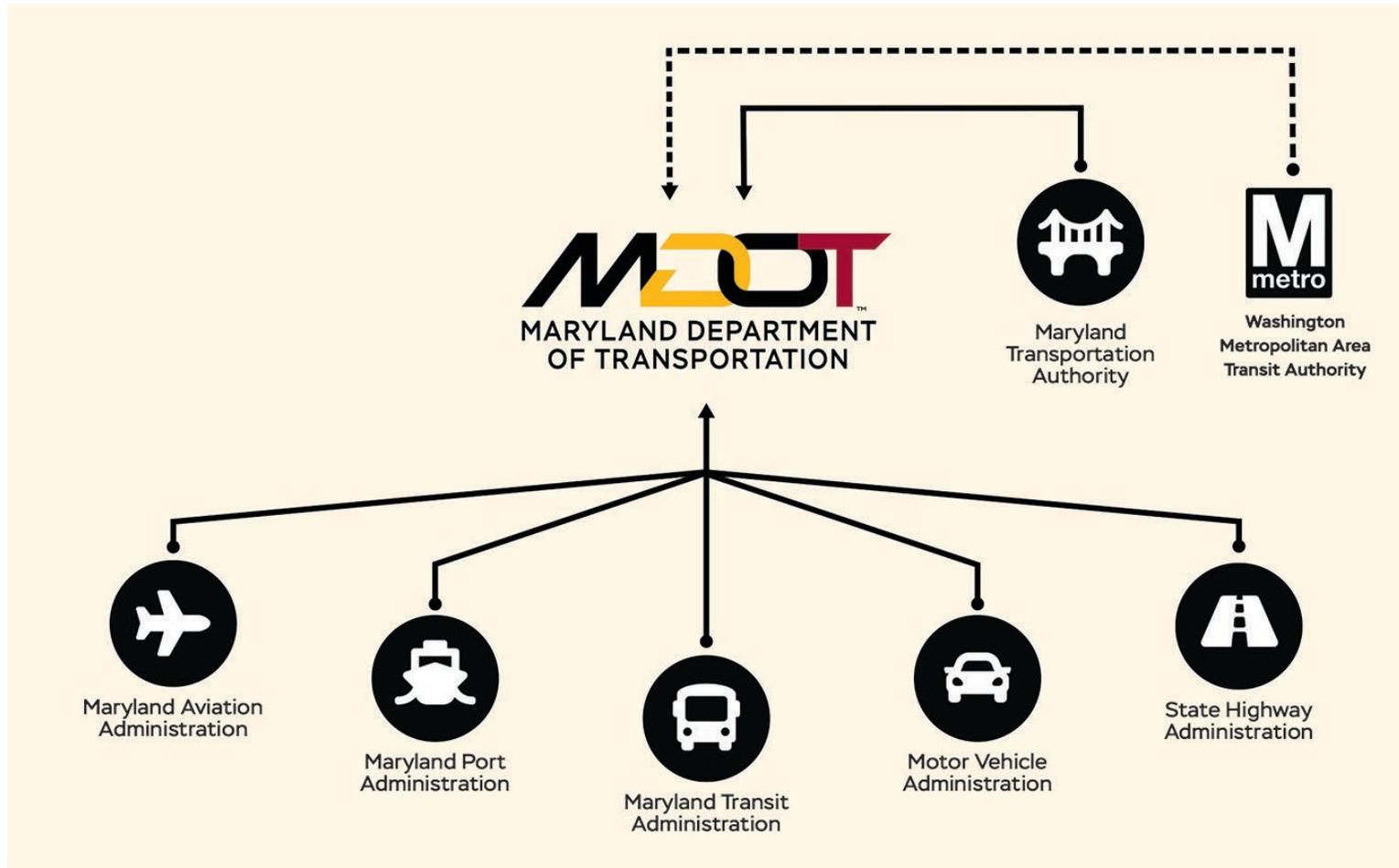
1. Overview of the New 2050 Maryland Transportation Plan  
("The Playbook")
2. State Report on Transportation
3. Overview of the 2024 Annual Attainment Report
4. Review Key 2024 AR Measures and Strategies
5. Possible BRTB Support to Improve Trends

# MDOT At-A-Glance



## 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.*

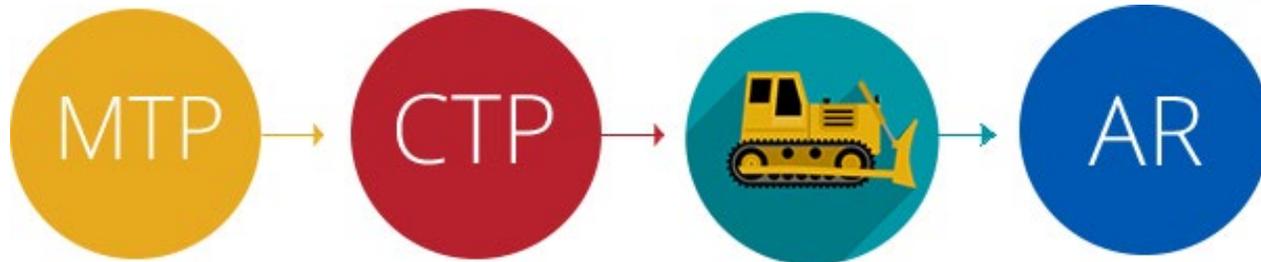


# What is the State Report on Transportation?

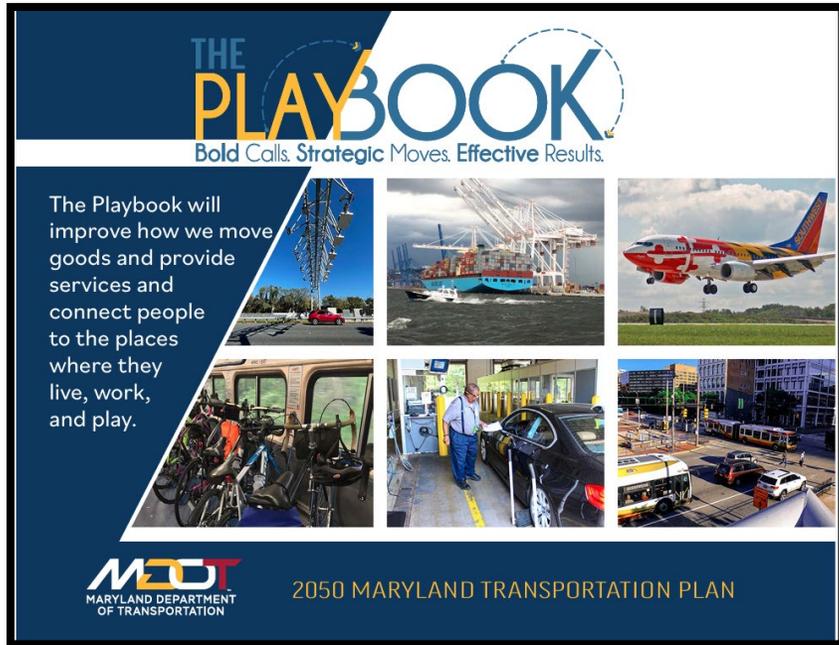
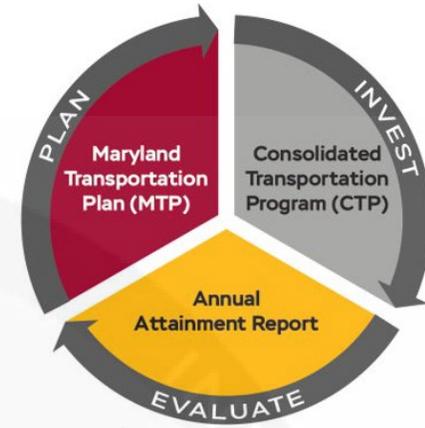
The State Report on Transportation is legislatively required, submitted each year on the third Wednesday in January to the Maryland General Assembly.

It contains 3 important documents:

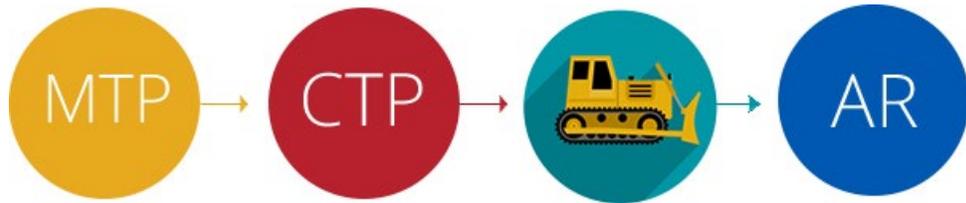
1. 2050 Maryland Transportation Plan (MTP), “The Playbook”
2. Final FY 2024 - FY 2029 Consolidated Transportation Program (CTP)
3. 2024 annual Attainment Report (AR) on Transportation System Performance



# The Maryland Transportation Plan (MTP)



- The Maryland Transportation Plan (MTP)
  - Outlines the State’s transportation policies and priorities;
  - Helps guide Statewide investment decisions for all methods of transportation; and
  - Is revised every 4-5 years through a public participation process to address current and future challenges.
- The 2050 MTP is an integrated, performance-based long-range plan.
- The MTP contains over 75 strategies to guide and strategically align our MDOT modal plans, projects, and programs.

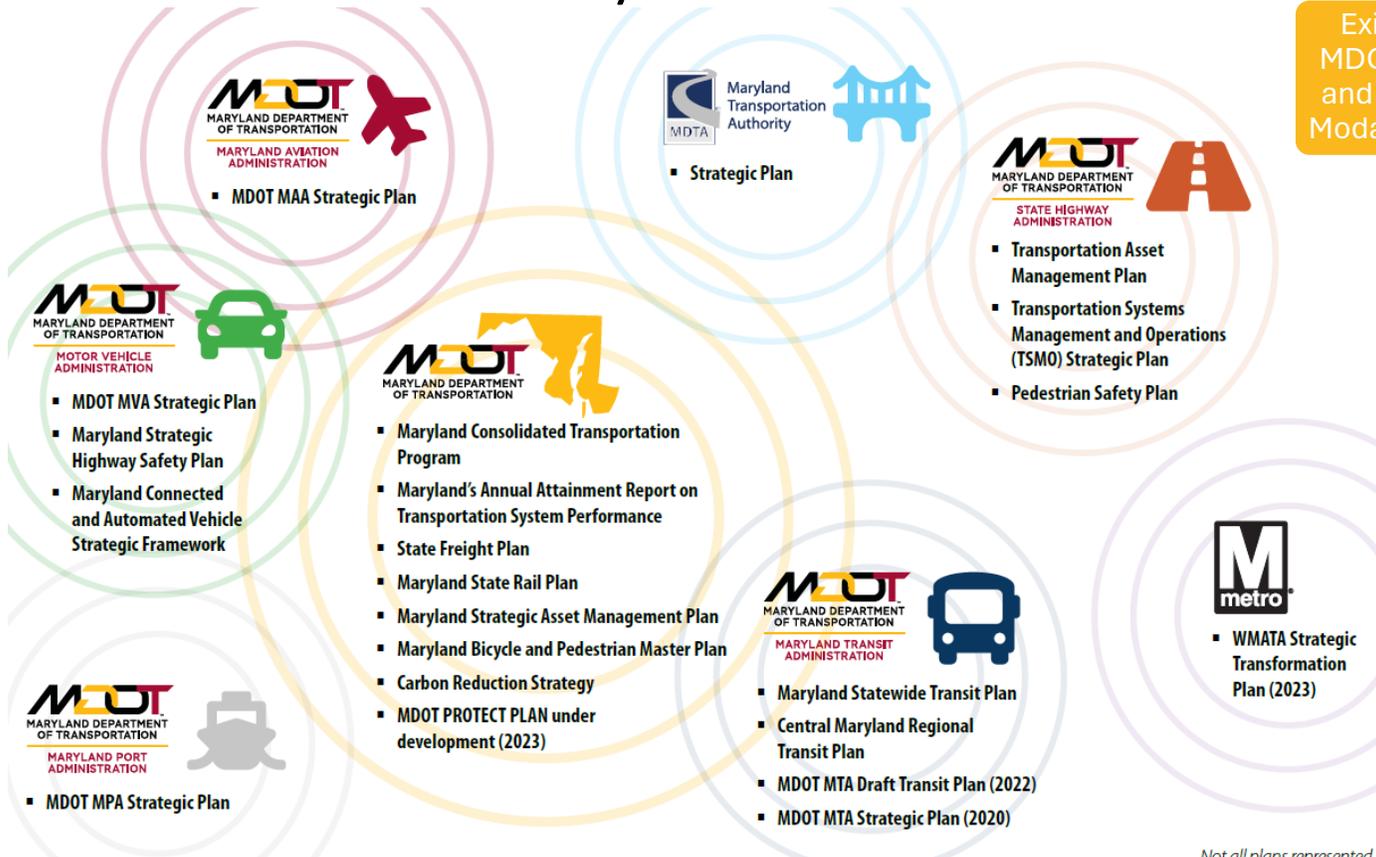


[Link to the Playbook \(2050 MTP\)](#)

# Inputs into the 2050 MTP



## “Family of Plans”



**Draft Vision, Guiding Principles, Goals, Objectives, and Strategies**

*The importance of collaborating and coordinating with our partners internal and external to MDOT!*

Not all plans represented

# MTP Guiding Principles and Goals

**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.




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

**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.




**GOALS** show, at the highest level, what MDOT plans to do. Together they produce a vision of how the transportation system will serve Maryland.

**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: 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 transitmiles 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

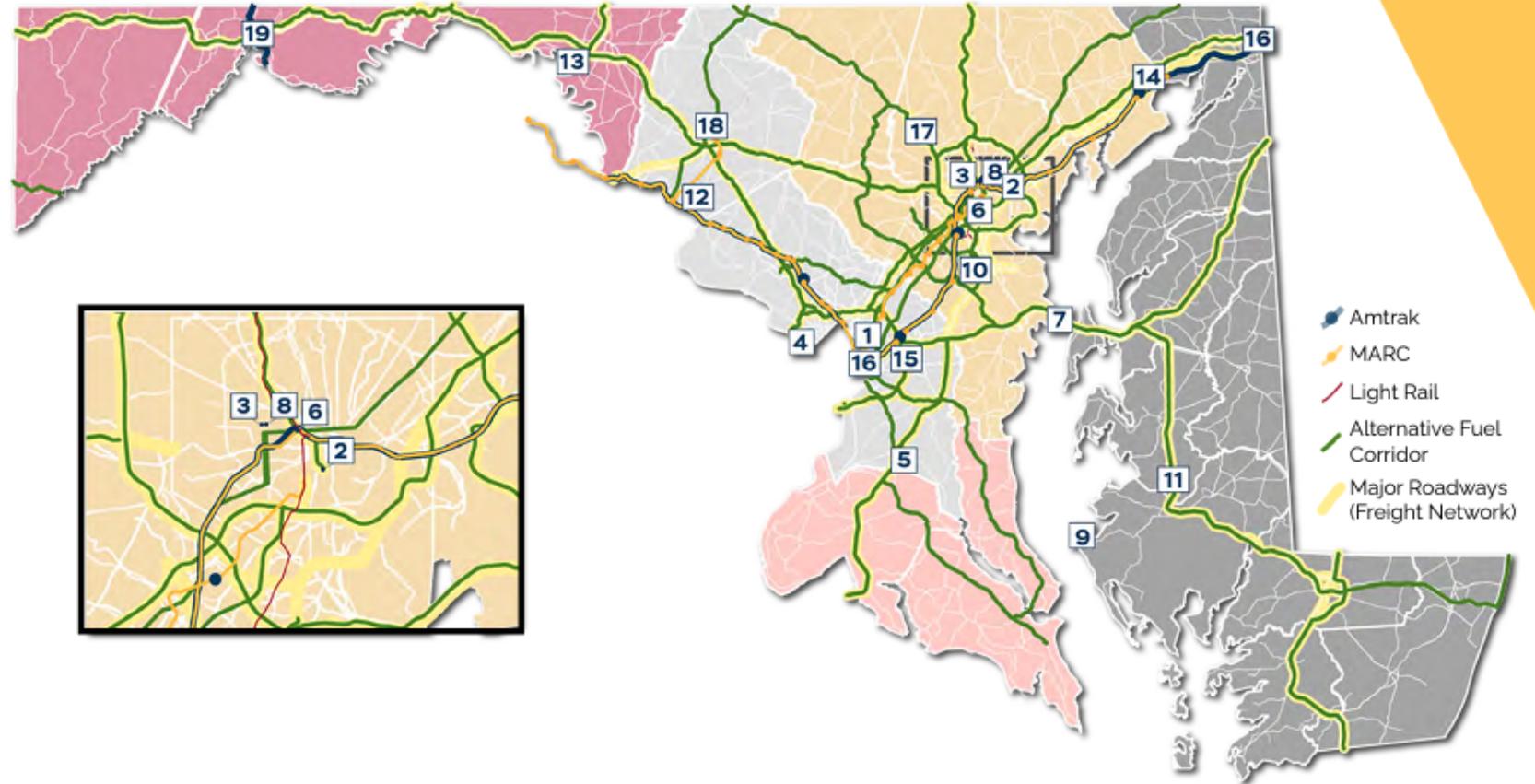
OBJECTIVES	STRATEGIES				
Increase the percentage of State-owned or funded facilities and assets in a state of good repair	» Invest in MDOT roadways to maintain pavement quality. » Invest in MDOT bridges to improve the condition of bridges and preserve existing bridges in fair or good condition. » Leverage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

# A Few Game Changing Projects and Programs



## STATEWIDE PROGRAMS

- [Model Complete Streets Initiative \(MDOT\)](#)
- [Pedestrian Safety Action Plan Implementation](#)
- [Statewide Trail Network \(SHA/TSO\)](#)
- [TOD Program \(TSO\)](#)
- [EV Charging Infrastructure \(MDOT\)](#)
- [Carbon Reduction Strategy \(MDOT\)](#)
- [Resilience Improvement Plan \(MDOT\)](#)



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

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.

# Implementing the MTP



- MDOT is creating an “Action Plan” to implement the strategies outlined in the MTP.
- The implementation plan actions include but are not limited to project development, process improvement, relationship building, and research.

2050 MTP ACTION PLAN TO IMPLEMENT THE STRATEGIES OF THE PLAYBOOK

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION Taking you places!

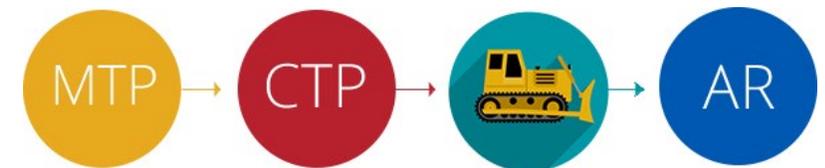
THE PLAYBOOK Bold Calls. Strategic Moves. Effective Results.

GOAL: ENHANCE SAFETY AND SECURITY

OBJECTIVES	STRATEGIES	IMPLEMENTATION PLAN ACTIONS	RESPONSIBLE AGENCY (IES)
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.	<ul style="list-style-type: none"> <li>• Implement safety mitigations based on the crash severity index</li> <li>• Implement <a href="#">SHA PSAP improvements</a></li> <li>• Implement updated Bicycle Facility Selection</li> <li>• Pursue grants to implement engineering and technology solutions</li> </ul>	SHA
	Develop and implement effective engineering and technology solutions to reduce aggressive and distracted driving, using data driven methods and proven best practices.	<ul style="list-style-type: none"> <li>• Operator training, legislative efforts</li> </ul>	SHA MVA MHSO
	Identify and implement best practices for reducing transit assaults.		MTA
	Expand work zone enforcement and work with partners to enhance all enforcement.	<ul style="list-style-type: none"> <li>• Implement <a href="#">work zone safety</a> task force recommendations</li> <li>• Outreach and engagement on safety issues/needs</li> <li>• Enhanced <a href="#">demographic tracking</a> of crash data</li> </ul>	SHA MVA MHSO
MINIMIZE DISPARITIES IN SAFETY ACROSS MARYLAND'S DIVERSE COMMUNITIES	Pursue community engagement with diverse communities to understand their safety concerns.	<ul style="list-style-type: none"> <li>• Implement <a href="#">SHA PSAP improvements</a> in diverse communities</li> <li>• Pursue grants to implement engineering and technology solutions in diverse communities</li> </ul>	SHA MVA MHSO
	Implement system-wide roadway safety improvements and technology approaches that address the safety of vulnerable road users	<ul style="list-style-type: none"> <li>• Develop guidelines for roadway/facility owners to incorporate Crime Prevention Through Environmental Design (CPTED) strategies to transit stops and stations</li> </ul>	MTA SHA
ADDRESS MULTIMODAL SAFETY NEEDS TO SUPPORT	Provide support for safe transit stops and vehicles, including Crime Prevention Through Environmental Design.		MDOT TSO and

# Annual Attainment Report (AR)

- MDOT has a long history of measuring progress towards state level goals and objectives through its annual Attainment Report on Transportation System Performance (AR), mandated through Transportation Article 2-102.1(j) **since 2002**.
- The Attainment Report (AR) provides an overview of the Maryland transportation system performance, system investment, mobility, and accessibility.
- ***Through the AR, MDOT assesses progress toward achieving its overarching strategic goals and objectives.***



[Link to MDOT 2024 AR](#)

# Attainment Report Advisory Committee (ARAC)

- The Governor's Attainment Report Advisory Committee is convened when MDOT develops a new long-range plan.
- The ARAC reviews performance measures and provides advice/recommendations on goals, indicators, and benchmarks.
- With the ARAC, MDOT reviewed and updated more than 50 performance measures this past summer (2023).
- ***It is important to see how well we are performing in order to continue to improve.***

## Attainment Report Advisory Committee (ARAC) 2023

Pursuant to **Transportation Article 2-103.1(j)**, we convene the Advisory Committee each time the Maryland Department of Transportation (MDOT) develops a new long-range transportation plan. **The ARAC is an advisory group with a primary focus on reviewing the long term goals, benchmarks, and indicators and advising the Department on the selection of appropriate performance measures and targets.** The MDOT reports annually to the Governor, the Maryland General Assembly, and the public on its performance through the Annual Attainment Report on Transportation System Performance.

### Final ARAC Summary Report

#### 2023 Meeting Schedule:

- **May 23** | Agenda | Meeting Slides | Meeting #1 Summary
- **June 8** | Agenda | Meeting Slides | Meeting #2 Summary
- **June 20** | Agenda | Meeting Slides | Meeting #3 Summary
- **July 11** | Agenda | Meeting Slides | Meeting #4 Summary
- **October 18** | Agenda | Meeting Slides

*\*All the meetings are virtual at 1:00 pm. Members of the public were welcome to join these meetings.*

The **Advisory Committee on Transportation Goals, Benchmarks, and Indicators** was authorized in October 2000 (Chapter 303, Acts of 2000).

2023 Attainment Report Advisory Committee Roster

[Link to ARAC webpage](#)

# 2024 AR Updates – What’s New?

- With the advice and guidance of the ARAC, we have:
  - A new Executive Summary (20 pages)
  - A revised 2024 AR Report (60+ pages)
  - 20+ New Measures covering new and existing initiatives:
    - Electric Vehicles (EVs) and fleet conversion,
    - CTP investments related to federal funding and overburdened and underserved communities,
    - number of employer partners,
    - access to transit / jobs / essential services, and
    - asset management.
  - Noteworthy trends and topics: safety, transit ridership, accessibility, equity and resiliency.
- [www.mdot.Maryland.gov/AR](http://www.mdot.Maryland.gov/AR)



# 2050 MTP Alignment with the Federal Transportation System Performance Report

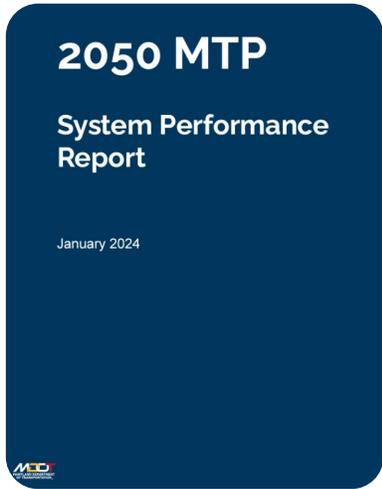


Table 1. Federal Performance Area Alignment with 2050 MTP Guiding Principles and Goals

Performance Area	2050 MTP Guiding Principles	2050 MTP Goals
Safety		<b>Enhance Safety and Security</b> Protect the safety and security of all residents, workers, and visitors.
Infrastructure Condition	<b>Preservation</b> Preserve the condition of the existing transportation system assets to provide safe and efficient movement.	<b>Deliver System Quality</b> Deliver a reliable, high-quality, integrated transportation system.
		<b>Promote Environmental Stewardship</b> Minimize and mitigate the environmental effects of transportation.
System Performance	<b>Experience</b> Improve the experience of all transportation system users.	<b>Serve Communities and Support the Economy</b> Expand transportation options to allow Maryland’s diverse communities to access opportunities and to support the movement of goods.
	<b>Resilience</b> Improve the transportation system’s ability to provide reliable service throughout natural weather events and man-made threats.	<b>Deliver System Quality</b> Deliver a reliable, high-quality, integrated transportation system.

## Seven National Transportation Goals (consistent with 2021 IIJA)

1. Safety
2. Infrastructure Condition
3. Congestion Reduction
4. System Reliability
5. Freight Movement and Economic Vitality
6. Environmental Sustainability
7. Reduced Project Delivery Delays



## GOAL ENHANCE SAFETY AND SECURITY: PROTECT THE SAFETY AND SECURITY OF ALL RESIDENTS, WORKERS AND VISITORS

Key Outcomes: The four objectives and 12 performance measures outlined here will enhance safety and security. By protecting the safety of all residents, workers and visitors, we will achieve zero traffic-related fatalities and serious injuries.

- Goal: Enhance Safety & Security has 4 objectives and 12 performance measures.
- **Maryland’s goal of zero roadway fatalities and serious injuries.**
- The six safety emphasis areas are:
  - Distracted driving;
  - Impaired driving;
  - Infrastructure;
  - Occupant protection;
  - Pedestrians and bicyclists;
  - Speed and aggressive driving.

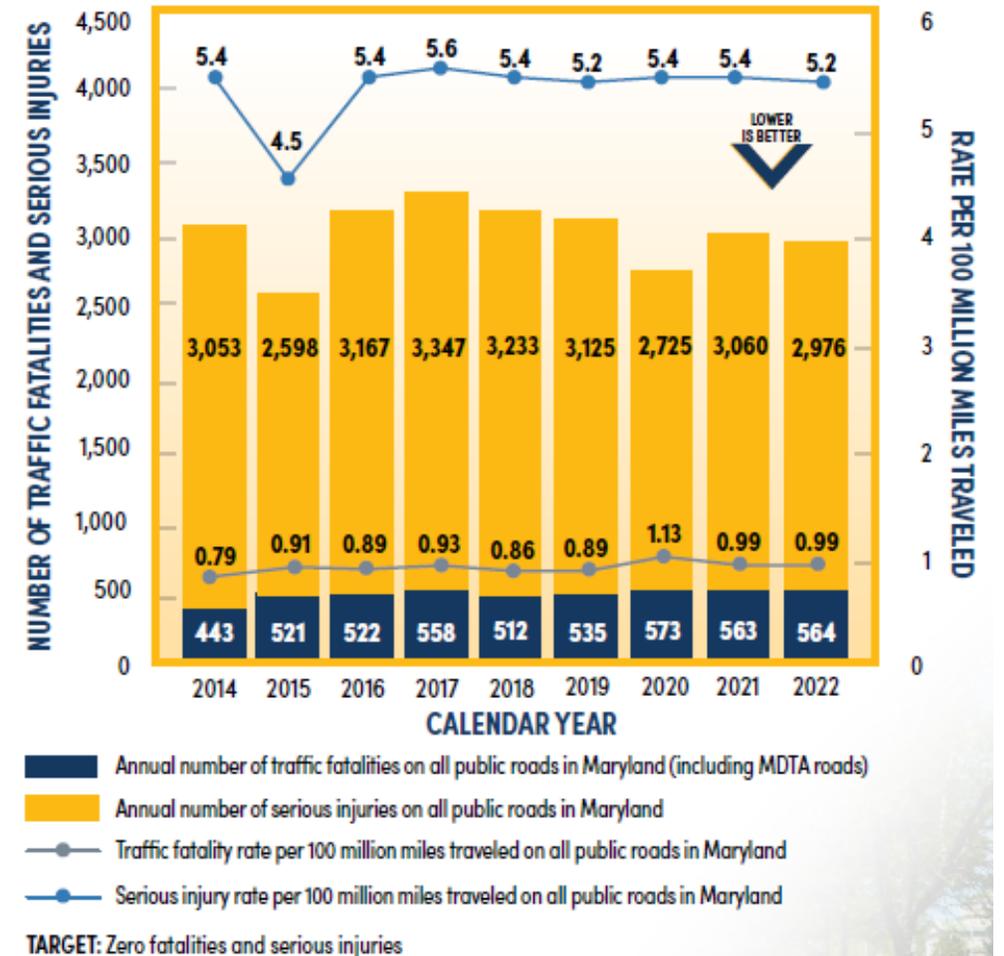
## Performance Measures

OBJECTIVES	PERFORMANCE MEASURE	RATING
Reduce the number of lives lost and injuries sustained on Maryland’s transportation system	Annual Number of Fatalities on All Maryland Public Roads	FACING CHALLENGES
	Annual Number of Serious Injuries on All Maryland Public Roads	FACING CHALLENGES
	Annual Number of Bicycle and Pedestrian Fatalities and Serious Injuries on All Maryland Public Roads	FACING CHALLENGES
	Annual Number of Transit Passenger Fatalities and Serious Injuries	FACING CHALLENGES
	Annual Number of At-Grade Railroad Crossing Incidents Resulting in Injury or Fatality	MAKING PROGRESS
Minimize disparities in safety across Maryland’s diverse communities	Annual Number of Fatalities and Serious Injuries on Maryland Public Roads in Transportation Disadvantaged Communities	FACING CHALLENGES
Address multimodal safety needs to support a safe, low stress and secure transportation system	Preventable Incidents Per 100,000 Vehicle Miles on Transit	MAKING PROGRESS
	Percentage of State-Owned Roadway Directional Miles Within Urban Areas That Have Sidewalks	N/A*
	Percent of Sidewalks That Meet Americans With Disabilities Act (ADA) Compliance	MAKING PROGRESS
	Miles of Lower Level of Traffic Stress (LTS) Score	MAKING PROGRESS
Maintain a safe system during adverse weather events, man-made threats and other system disruptions	Incident (Coordinated Highways Action Response Team, or CHART) Response Rates/Times	TARGET ACHIEVED
	Average Time to Restore Normal Operations After a Weather Event (Roadway Clearance Times for Weather Events)	MAKING PROGRESS

\*Target under development

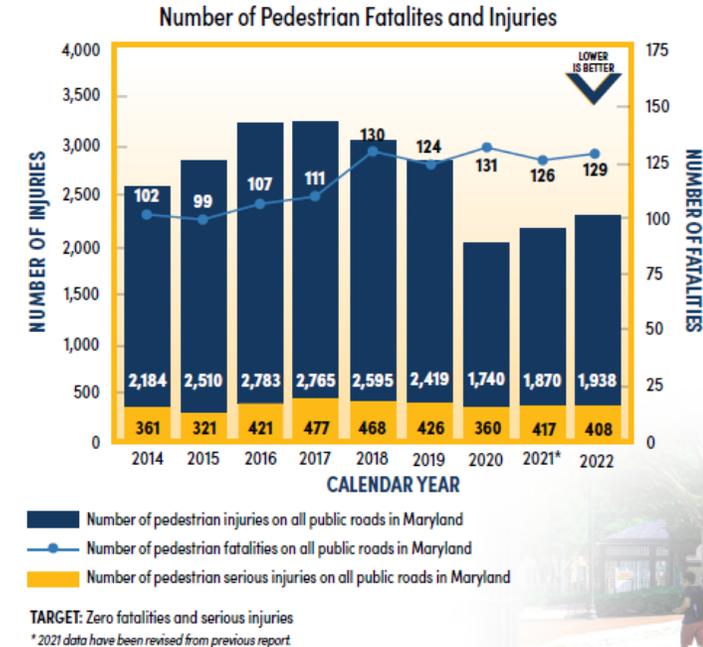
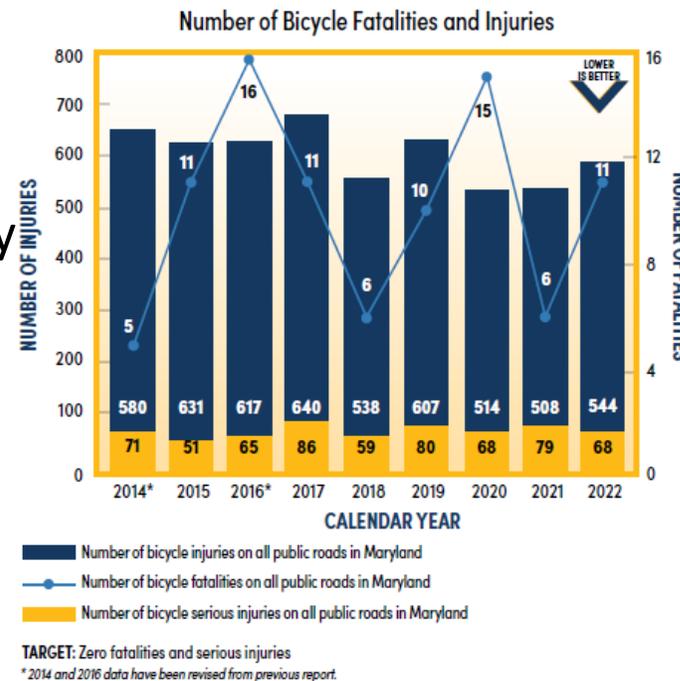
# Annual Number of Fatalities/Serious Injuries on all Maryland Public Roads

- The number of fatal crashes on Maryland’s roadways has increased since 2014 and unfortunately surpassed 600 fatalities in 2023, the most since 2007.
- Serious injuries has seen increases and decreases since 2014.
- In 2023, MDOT acquired \$11.5 million in federal highway safety grants, distributed to 85 agencies, organizations and programs.
- Strategies to improve work zone safety:
  - Work Zone Safety;
  - Mobility Program using ITS technologies;
  - **Providing training [and education];** and
  - Partnering with the law enforcement and the construction industry.
- **MDOT and partners can continue to significantly invest annually in education, training and campaigns to implement Vision Zero.**



# Annual Number of Bicycle and Pedestrian Fatalities/Serious Injuries on all Maryland Public Roads

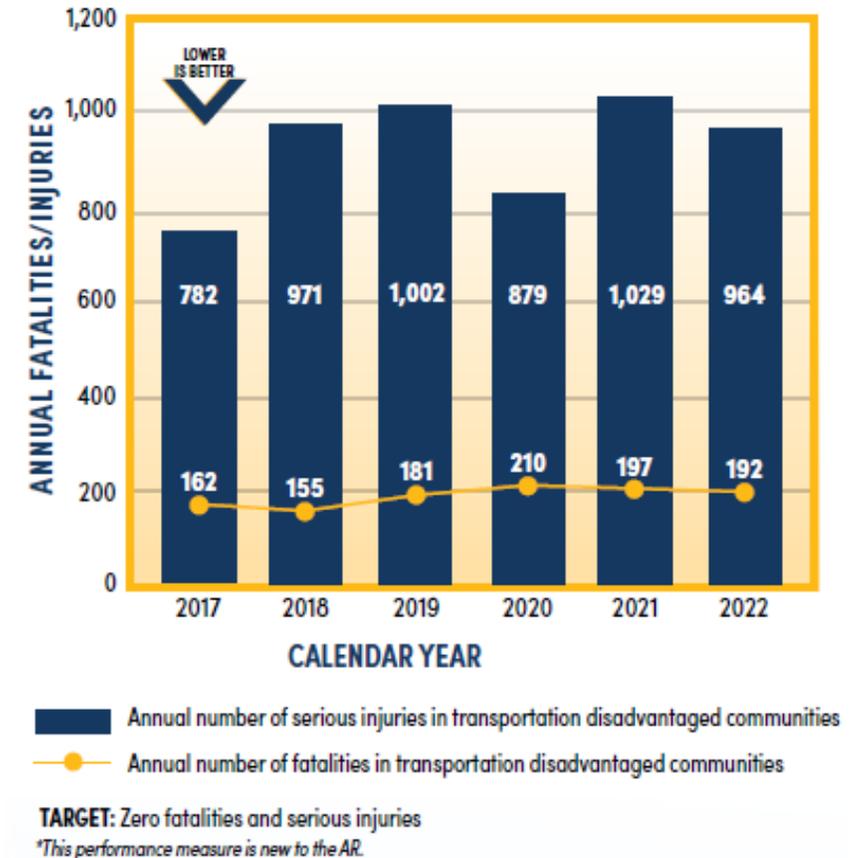
- Maryland has observed an almost doubling of bicycle fatalities between 2021 and 2022.
- Pedestrian fatalities have increased by 2.4%.
- Non-motorist (all types) deaths now represent nearly 1 in 4 of all traffic fatalities.
- In FY 2024, \$25.5 million in grants for bicycle, pedestrian and trail projects across Maryland.
- Pedestrian and bicycle safety high visibility enforcement campaigns, *Look Alive* (Baltimore MPO) and *Street Smart* (Washington MPO).



- Several Maryland localities have also received the USDOT Safe Streets for All (SS4A) grants, including the City of Baltimore, the City of Salisbury and Prince George's County.
- Support local grants for Safe Streets for All.

# Annual Number of Fatalities and Serious Injuries on all Maryland Public Roads in Transportation Disadvantaged Communities

- New performance measure - counts the fatalities and serious injuries occurring within the disadvantaged census tracts using the USDOT's ETC Explorer application.
- Transportation disadvantaged communities are defined by USDOT as communities and places that spend more, and take longer, to get where they need to go.
- There are 1,465 census tracts in Maryland; **365 (26% of all tracts) are determined to be transportation disadvantaged.**
- While fatalities in transportation disadvantaged communities in 2022 are 18.5% higher than 2017, they are 8.5% lower than 2020.
- Serious injuries in transportation disadvantaged communities increased by over 23% from 2017 to 2022.





# GOAL DELIVER SYSTEM QUALITY: DELIVER A RELIABLE, HIGH-QUALITY, INTEGRATED TRANSPORTATION SYSTEM

Key Outcomes: The 4 objectives and 16 performance measures outlined here will deliver system quality. By investing to achieve system quality, we will create an infrastructure program that is financially sustainable, environmentally resilient and in a state of good repair.

- Goal: Deliver System Quality has 4 objectives and 16 performance measures.
- Create an infrastructure program that is financially sustainable, environmentally resilient and in a state of good repair.
- Reduce truck delays and congestion, leverage state and federal infrastructure funding and refine project delivery.
- In 2022, MDOT saved more than \$2 billion for roadway users in incident management by using ITS services, signal upgrades and the Coordinated Highways Action Response Team (CHART) program.

## Performance Measures

OBJECTIVES	PERFORMANCE MEASURE	RATING
Provide a multimodal system resilient to changing conditions and hazards	Percentage of Lane-Miles/Fixed Guideway Transit-Miles Susceptible to Flooding and Storm Surge	N/A*
	Unfunded State of Good Repair Backlog	N/A*
Increase the percentage of state-owned or funded facilities and assets in a state of good repair	Percentage of the Maryland State Highway Network In Overall Preferred Maintenance Condition	TARGET ACHIEVED
	Overall Acceptable Pavement Condition	TARGET ACHIEVED
	Percentage of All Maryland Bridges That Are in Poor Condition	N/A*
Minimize travel delays and improve reliability and quality	Percent of All MDOT Transit Service Provided on Time	MAKING PROGRESS
	Annual Person Hours of Delay and Travel Time Reliability on Maryland Public Roads	ON TARGET
	Truck Hours of Delay And Truck Reliability on Maryland Public Roads	FACING CHALLENGES
	Annual Cost of Congestion (Billions) on the Maryland Public Roadway Network	ON TARGET
	User Cost Savings for the Traveling Public Due to Incident Management	ON TARGET
Accelerate project completion through improved project delivery	Percent of CTP Program That Is Funded With Federal Dollars	N/A*
	Percent of Projects Delivered on Time Across MDOT	N/A*
	Percent of Projects Delivered On-Budget Across MDOT	N/A*
	Percent of MDTA Tolling Transactions Collected Via E-ZPass® vs. Video Tolls vs. Pay-By-Plate	N/A*
	MVA Alternative Service Delivery (ASD) Transactions As Percent of Total Transactions	TARGET ACHIEVED
	MVA Average Cost Per Transaction	TARGET ACHIEVED

\*Target under development

# Trucks Hours of Delay and Truck Reliability on Maryland Public Roads

- Measures delay heavy-duty truck drivers experience in both recurring congestion (everyday conditions) and non-recurring congestion (incidents, weather, work zones, etc.).
- The truck hours of delay for 2020 was significantly less than 2019 due to decrease in vehicle miles traveled (VMT) associated with the pandemic.
- As VMT returns to pre-pandemic levels, there has been a gradual increase in truck hours of delay, starting in 2021.
- **However, TDM could mitigate or manage congestion.**
- MDOT is looking at modernization of transportation infrastructure including Intelligent Transportation Systems (ITS) and Transportation Systems Management and Operations (TSMO) strategies.



Truck hours of delay (millions)

Truck reliability

TARGET: 2030: 5.3 million hours; 2050: 5.3 million hours

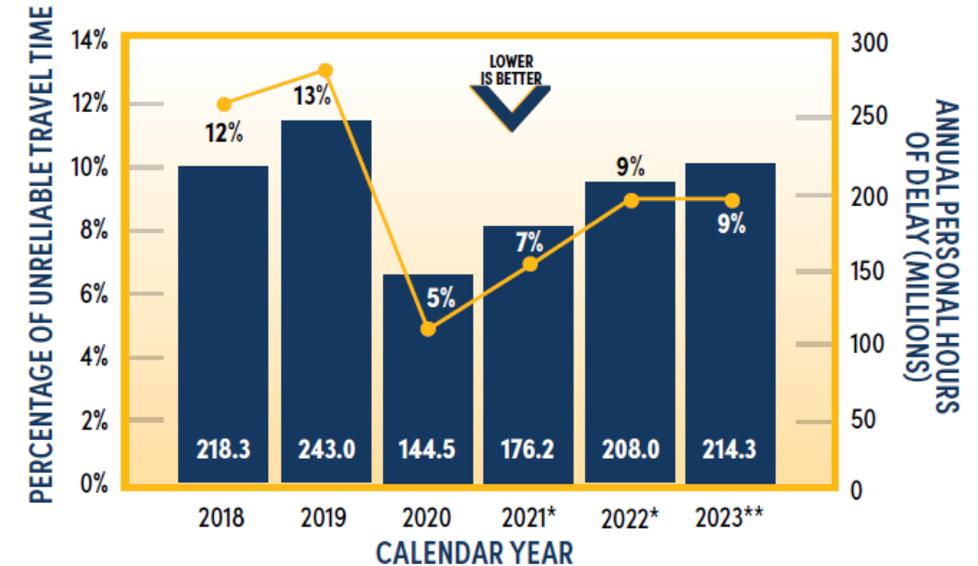
\*Data are preliminary

\*\*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 MRPT and because the trends calculated seem to more reasonably reflect ADT/VMT and congestion trends. The methodology for truck reliability index remains the same.

# Annual Person Hours of Delay and Travel Time Reliability on Maryland Public Roads

- SHA uses private sector vehicle probe data to monitor travel time reliability on the highway network and uses Planning Time Index (PTI) (the percent of time that the highway network is considered to be highly unreliable).
- Gradual increases in delay seems to correlate with the recovery of the VMT starting in 2021.
- Projected/estimated delay is lower due to more travel outside of peak hours and VMT increasing more slowly.
- **Strategies:** ITS strategies, active traffic management and integrated corridor management capabilities. Examples include the CHART patrol program, deploying ITS from the Bay Bridge to the Eastern Shore and Transportation Systems Management and Operations (TSMO) projects like ramp-metering along I-270.
- **TDM strategies could also mitigate or manage congestion.**



■ Annual person hours of delay (millions)  
—●— Travel time reliability  
**TARGET:** 2030: 202 million hours; 2050: 201 million hours

*\*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.*

# Percent of CTP that is Funded with Federal Dollars

- Calculates how well MDOT leverages state dollars by how much of the CTP is funded using federal dollars.
- IJA substantially increased the availability of funding for federal discretionary grant programs. Maryland effectively competed for federal grants in the past year. MDOT developed numerous resources, including a newsletter and grant webpages to support state and local partners.
- Support grants through letters of support, data, research, in-kind match, and spreading the opportunities to local partners.

For FY 2023, the state received **40%** of CTP funding from federal sources.

\*This performance measure is new to the AR.

# Unfunded State of Good Repair Backlog

- Annual assessment of its critical assets that are in need of updating to a state of good repair (a condition sufficient for the asset to operate at a full level of performance).
- With limited state funds, MDOT uses a strategic asset management plan to assess useful life across the system.
- MDOT's modal administrations develop, implement and evaluate modal-specific needs to support the overall MDOT asset management framework.

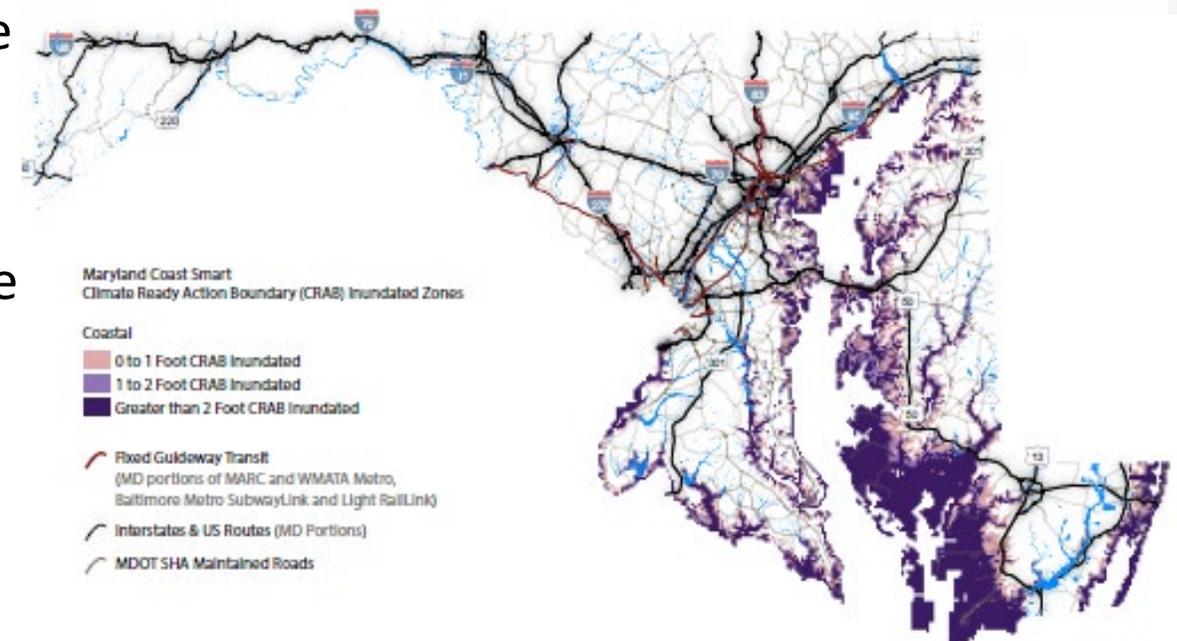
In FY 2023, there were **\$3.14 billion** projects still unfunded from the state of good repair.

\*This performance measure is new to the AR.

# Percent of Lane-Miles/Fixed Guideway Transit-Miles Susceptible to Flooding and Storm Surge

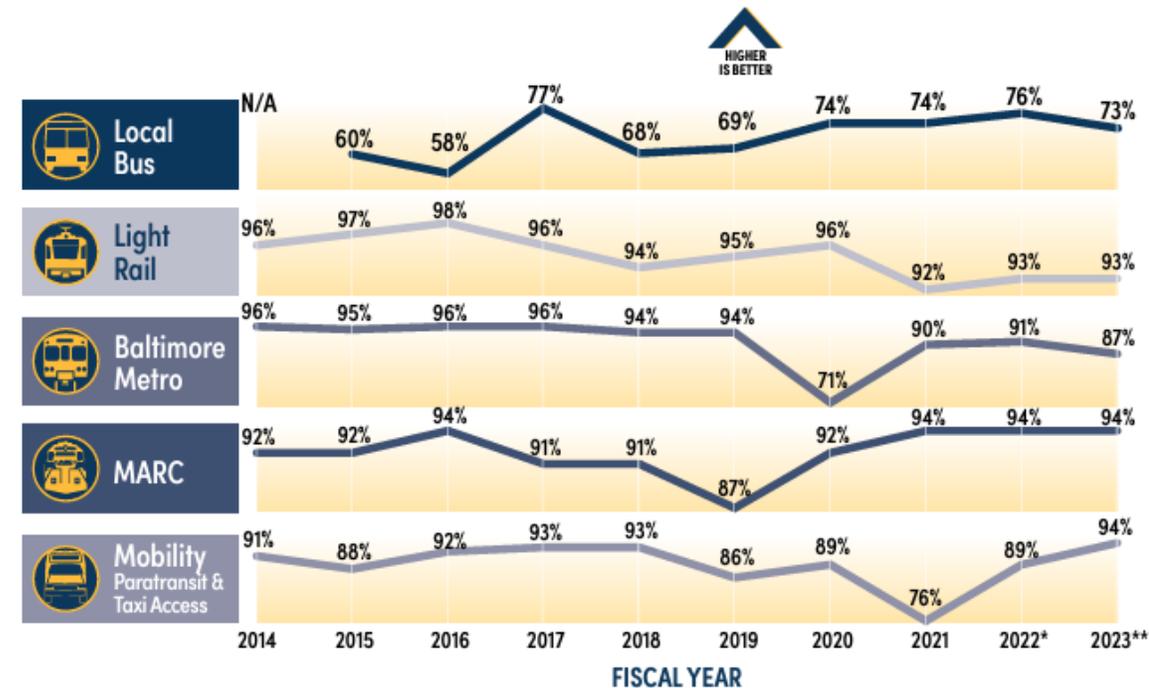
- Identifies the percentage of highway/street lane miles and segments of fixed guideway transit infrastructure that are prone to damage during a storm and flooding.
- MDOT assessed vulnerability using climate data and compiled an index to show their risks to storm events.
- Inventory of susceptible assets to manage and monitor the prospective risks and take proactive actions to mitigate hazards.
- **Support opportunities to continue research and support actions to mitigate hazards.**

In FY 2023, a total of **6.5%** of lane-miles/ fixed guideway transit-miles were susceptible to flooding and storm surge.



# Percent of All MDOT Transit Service Provided On Time (On Time Performance)

- In 2022, there was an increase in OTP across all transit modes with substantial improvements for Mobility Paratransit and Taxi Access, from 76% in 2021 to 94% in 2023.
- MDOT is investing in transit projects and applying for grants to build better routes and operator schedules.
- In August 2023, MTA introduced express services such as QuickLink 40, which reduced approximately 25 minutes of travel time for riders.
- FY 2022 CRISI federal grant for \$8.8 million for the Penn-Camden Connector Project to improve transit operations and reliability.
- Support grants through letters of support, data, research, in-kind match, and spreading the opportunities to local partners.



TARGET: 2030: 99% for all except Local Bus; 2050: 90%

\*2022 data have been revised from previous report.

\*\*Besides Local Bus, 2023 data is estimated and subject to change.



## GOAL PROMOTE ENVIRONMENTAL STEWARDSHIP: MINIMIZE AND MITIGATE THE ENVIRONMENTAL EFFECTS OF TRANSPORTATION

Key Outcomes: The four objectives and 11 performance measures outlined here will promote environmental stewardship. By utilizing environmentally-focused strategies and setting sustainability goals, MDOT will protect Maryland's natural, historic and cultural resources and minimize the impacts of fossil fuel consumption and other environmentally harmful practices.

- Goal: Promote Environmental Stewardship has 4 objectives and 11 performance measures.
- To protect Maryland's natural, historic, and cultural resources and minimize impacts to fossil fuel consumption.
- Well-rounded approach to environmental stewardship, focusing on **climate change mitigation** by reducing greenhouse gas (GHG) emissions and **climate change adaptation** through resiliency efforts.
- With the passage of the Climate Solutions Now Act (CSNA) in 2022, Maryland has **committed to a nation-leading interim goal of a 60% reduction below 2006 carbon emissions by 2031**, progressing to a requirement to reach net-zero emissions by 2045.

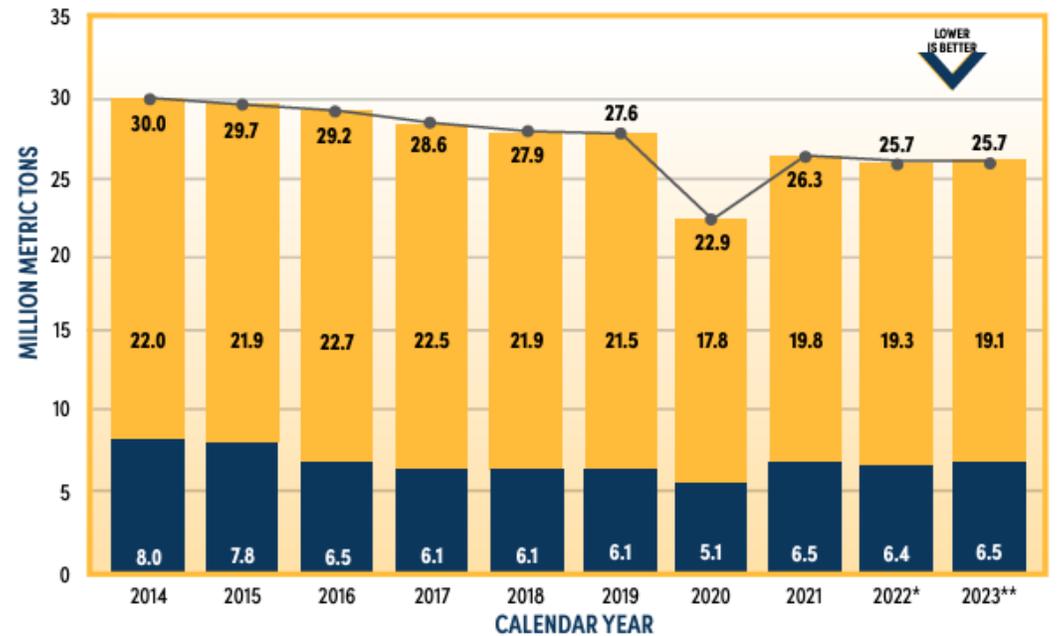
## Performance Measures

OBJECTIVES	PERFORMANCE MEASURE	RATING
Protect and enhance the natural environment through avoidance, minimization, and mitigation of adverse impacts related to transportation infrastructure	Percent of MDOT's Five-year Municipal Separate Storm Sewer System (MS4) Permits Attained	N/A*
Employ resource protection and conservation practices in project development, construction, operations and maintenance of transportation assets	Diversion Rate and Weight of Municipal Solid Waste; Demolition, Construction and Maintenance (DC&M) Waste; and Hazardous Waste	N/A*
	Annual Dredged Material Capacity Remaining for Harbor and Poplar Island Material (Million Cubic Yards)	 MAKING PROGRESS
	Increase the Beneficial Use and Innovative Reuse of Dredged Materials	 FACING CHALLENGES
Minimize fossil fuel consumption, reduce greenhouse gas emissions, and improve air quality and support the growth of alternative fuels	Vehicle Miles Traveled (VMT)/VMT Per Capita	 FACING CHALLENGES
	Number of Employee Partners in Statewide Transportation Demand Management (TDM) Programs	 FACING CHALLENGES
	Greenhouse Gas (GHG) Emissions From LDV VMT (Light-Duty) Vehicles and MHDV VMT (Medium-Heavy-Duty) Vehicles Statewide TDM Programs	N/A*
	Statewide Vehicle Emissions Inspection Program (VEIP) Testing Compliance Rate	 MAKING PROGRESS
Support the widespread adoption of alternative fuels electric vehicles, and innovative technologies	Percentage of MDOT Fleet Composed of Electric Vehicles (EVs)	N/A*
	Percent of Electric Vehicles (EVs) Registered From Total Registered Vehicles	 MAKING PROGRESS
	Level 2 and DC Fast Charging Ports Per 1000 Residents	N/A*

\*Target under development

# GHG Emissions from Light-Duty Vehicles (LDV) VMT and Medium-Heavy-Duty Vehicles (MHDV) VMT

- SHA is replacing light duty fleet vehicles with electric vehicle (EV) models.
- MTA is planning facility upgrades and installation of charging infrastructure in preparation for introducing zero emission buses (ZEBs) into the transit bus fleet.
- MAA and MPA are electrifying many of their vehicles used at airports and seaports to promote this objective as well.
- Support for local and private EV charging infrastructure.
- Support for alternative fuel opportunities and fleet transitions.



Legend: GHG Emission from LDV VMT (Yellow), GHG Emission from HDV VMT (Dark Blue), GHG Emissions Total from LDV VMT and HDV VMT (Grey line).

TARGET: Baseline target in first year  
\*2022 revised from previous report to reflect final 2022 HPMS.  
\*\*2023 data are preliminary and subject to change

# Vehicle Miles Traveled (VMT) / VMT Per Capita

- Truck VMT decreased in Maryland while passenger VMT increased since 2021.
- VMT generally increases during times of greater economic prosperity and decreases during economic depressions.
- The COVID-19 pandemic affected traffic patterns. VMT has been recovering steadily.
- MDOT aims to achieve 10% reduction in VMT per capita by 2030 and a 20% reduction by 2050.
- **Strategies:** expand transit services, implement active transportation policies and infrastructure (bike lanes, share-use paths, etc.) and promote TDM strategies and incentives such as rideshare, alternative work hours, work from home and Guaranteed Ride Home to reduce VMT.

In CY 2022, MDOT achieved **48** partners in its Commuter Choice Maryland's Employer Partner Program

*\*This performance measure is new to the AR.*

TARGET: 500 partners by 2030 and 1,000 partners by 2050



TARGET: 10% decrease of VMT per capita by 2030 and 20% decrease by 2050

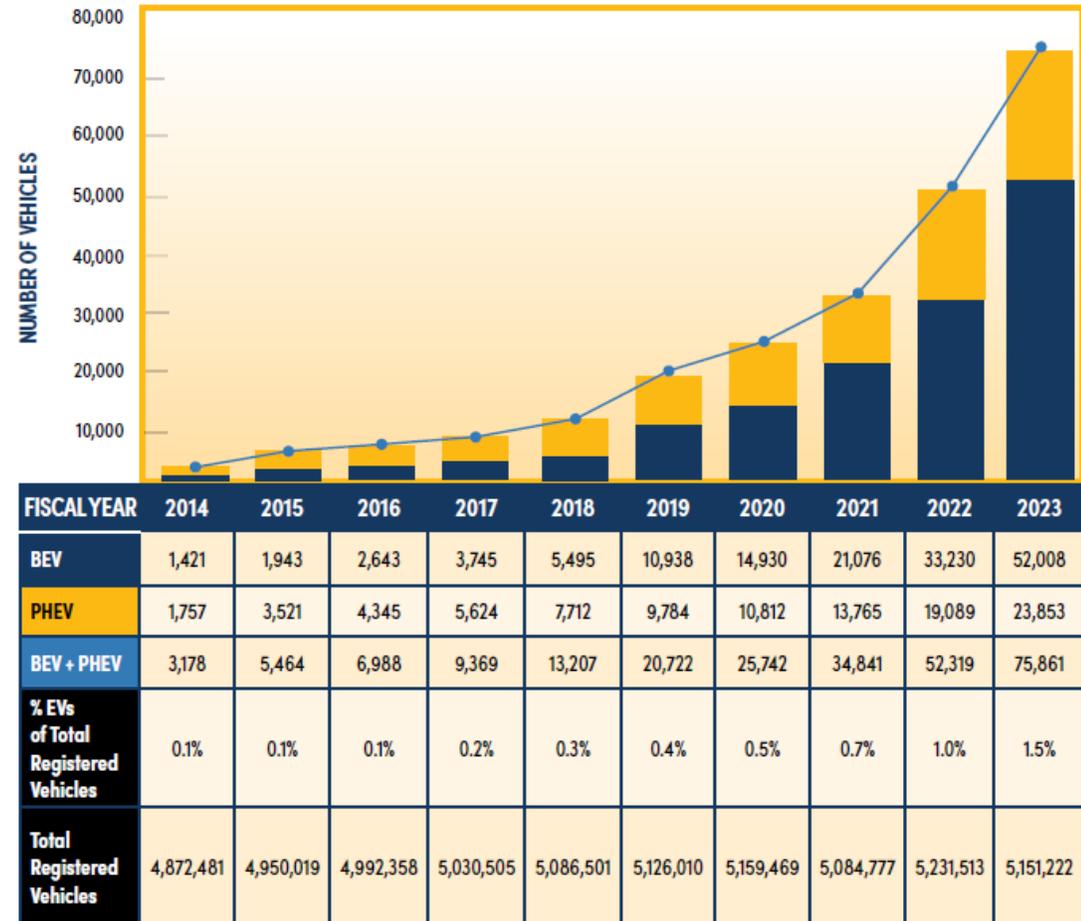
\*2022 data have been revised from previous report.

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

# Percent of Electric Vehicles (EVs) Registered From Total Registered Vehicles

EVs accounted for nearly **8%** of the new vehicle sales in Maryland for CY 2022

- EVs now represent 1.5% of all registered vehicles in Maryland.
- Maryland has a goal of over one million EVs registered by 2030.
- Maryland has over 75,000 EVs registered as of FY 2023. This represents a 45% growth in the number of EVs on the road in Maryland.
- **Drivers in Maryland are encouraged to buy EVs through educational efforts**, tax benefits and rebates. The Maryland EV Tax Credit introduced in July 2023 allows buyers to claim a state tax credit of up to \$3,000 for the purchase of a new EV.



TARGET: 1.1 million EVs in 2030

Source: MVA Office of Data Management, EV Registration Data 6/30/2023



# GOAL SERVE COMMUNITIES AND SUPPORT THE ECONOMY: EXPAND TRANSPORTATION OPTIONS TO ALLOW MARYLAND'S DIVERSE COMMUNITIES TO ACCESS OPPORTUNITIES AND TO SUPPORT THE MOVEMENT OF GOODS

Key outcome: The six objectives and 21 performance measures 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, we will expand transit and active transportation use, and bolster the regional economy.

- Goal: Serve Communities and Support the Economy has 6 objectives and 21 performance measures.
- Access opportunities and support the economy.
- Maryland's multimodal options are growing with the construction of the Purple Line, the relaunch of the Red Line, the Commuter Choice Maryland program, and the completion of long-range transportation plans and working with our partners.
- Maryland's extensive transportation system, including BWI and the Port of Baltimore, strengthens economic growth by connecting communities within Maryland, as well as the global economy.

## Performance Measures

OBJECTIVES	PERFORMANCE MEASURE	RATING
Enhance Marylanders' satisfaction with the transportation system and MDOT services	Overall Satisfaction With MDOT	N/A*
	Percentage of MVA Customers With a Wait Time Under 10 Minutes	 MAKING PROGRESS
Apply enhanced technologies to improve communication and relay real-time information	Percentage of Modal Administration Services That Provide Real-Time Information	N/A*
Prioritize the transportation needs of underserved and overburdened communities in project selection and scoping	Access to Transit (Within ½ Mile of a Transit Station/Stop) By People Who Live In Overburdened and Underserved Areas As Defined By the Climate Solutions Now Act (CSNA)	N/A*
	Relative Percentage of CTP Investment That Is In Overburdened and Underserved Communities	N/A*
Improve quality of life by providing active transportation and transit access to jobs and opportunities	Commute Mode Share	N/A*
	Multimodal Access to Essential Services/Destinations	N/A*
Increase transit use, active transportation and transit oriented development (TOD)	Annual Transit Ridership (Thousands)	 MAKING PROGRESS
	Total Maryland-Only WMATA Annual Ridership	 MAKING PROGRESS
	MTA Average Weekday Transit Ridership	 TARGET ACHIEVED
	Population Within ½ Mile of a Transit Station/Stop	N/A*
	Number of Jobs Within ½ Mile of a Transit Station/Stop	N/A*
	Fixed-Route Ridership By Seniors And People With Disabilities	N/A*
	Annual Revenue Vehicle Miles of MTA Service Provided	 MAKING PROGRESS

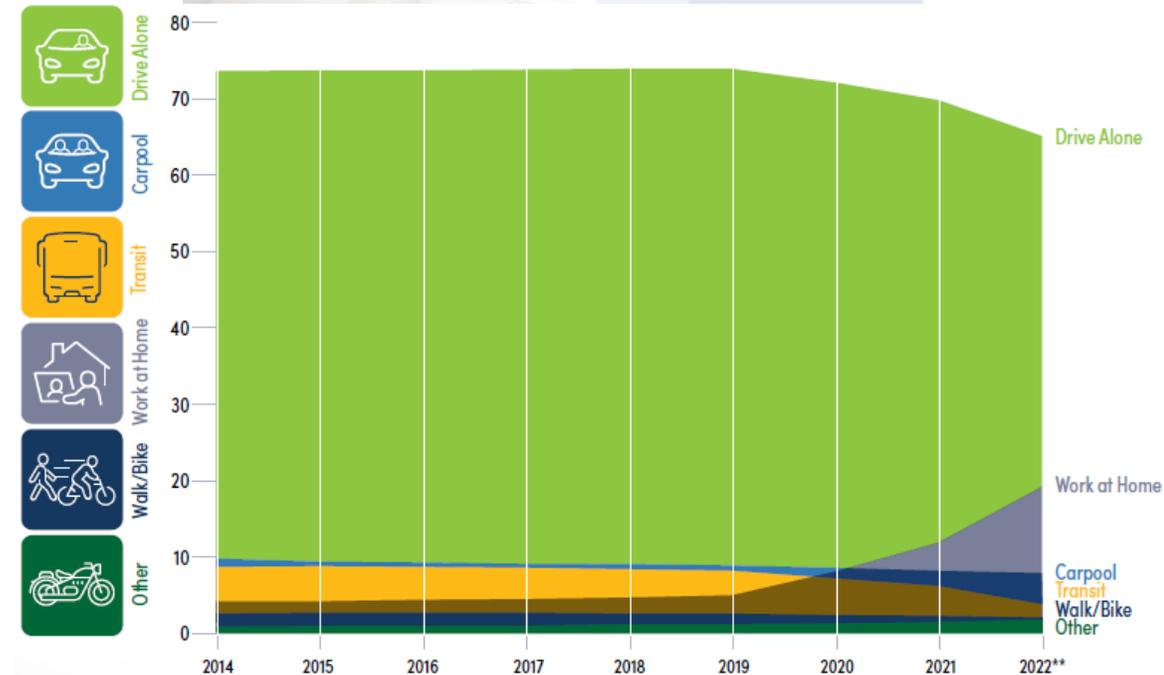
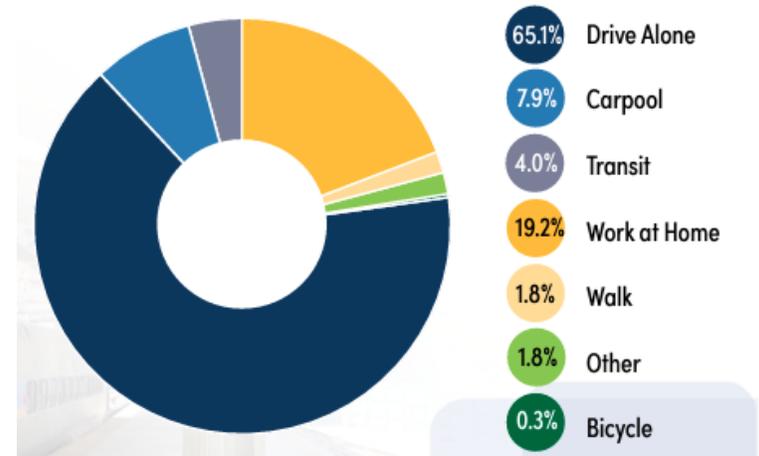
\*Target under development

\*\*More performance measures for the Objective "improve the efficiency and competitiveness of the Port of Baltimore and BWI Thurgood Marshall Airport"

# Commute Mode Share

- Work at home was at a high of 11.9% in 2021 and increased in 2022 to 19.2%, as per ACS 1-year estimates. **A significant portion of Marylanders working from home is likely to continue.**
- The drop in commuters driving alone to work since the COVID-19 pandemic is largely due to the trend to work at home.
- Transit mode share saw a decline from 7.4% in 2020 to 6.4% in 2021 due to the COVID-19 pandemic. Based on ACS 1-year estimates, transit mode share further dropped to 4.0% in 2022.
- **Promote transit, teleworking and ridesharing through education and marketing.**

CY 2022\*\* Commute Mode Share



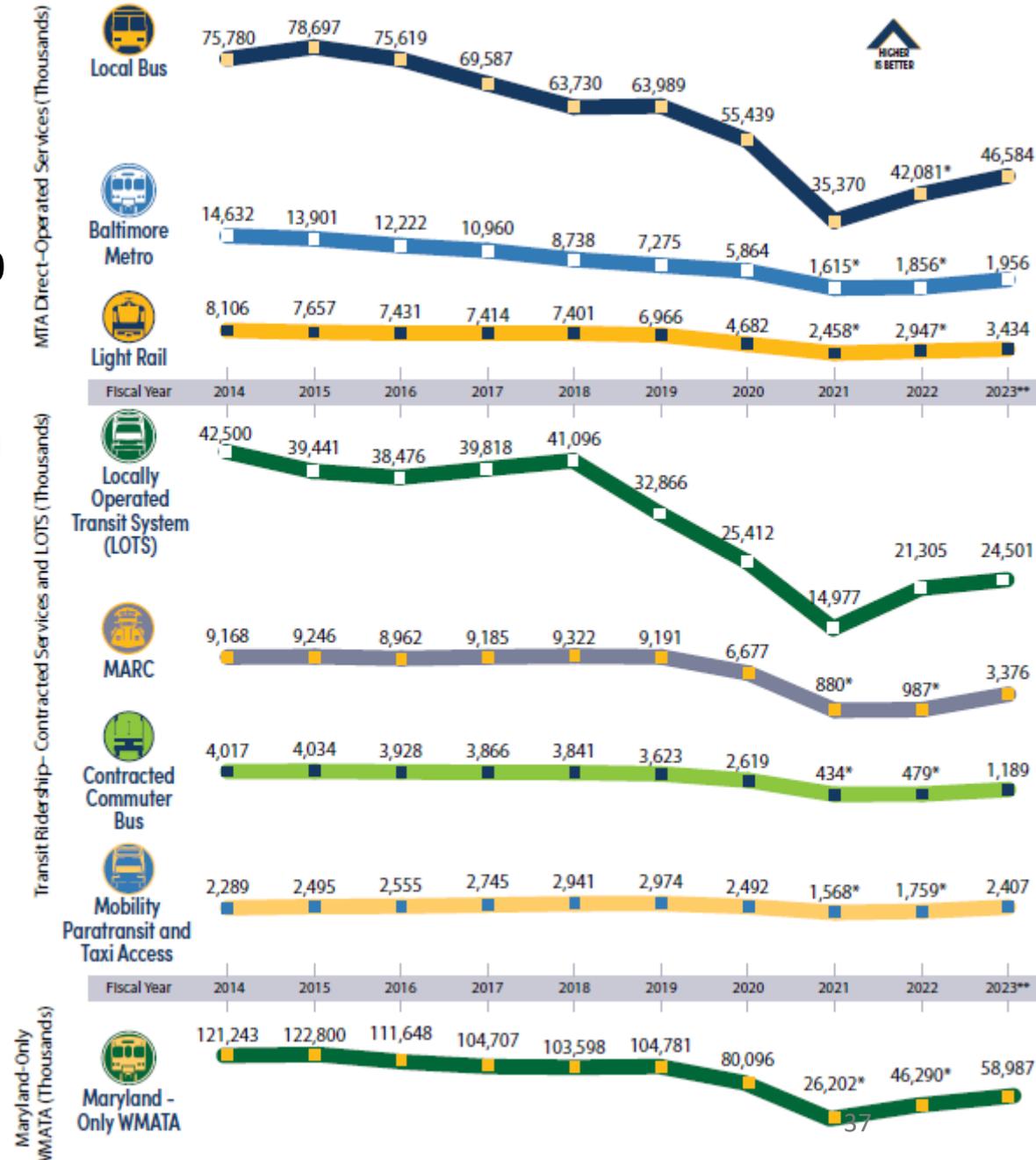
\*Several historic data points have been updated, including "Carpool" in 2015 and 2017 and "Transit" and "Work at Home" in 2017.

\*\*2022 American Communities Survey (ACS, U.S. Census) uses ACS 1-year tables and should not be compared with other ACS data (5-year).

\*\*\*Other includes motorcycle, taxicab, and "other" in the ACS data.

# Annual Transit Ridership (Thousands)

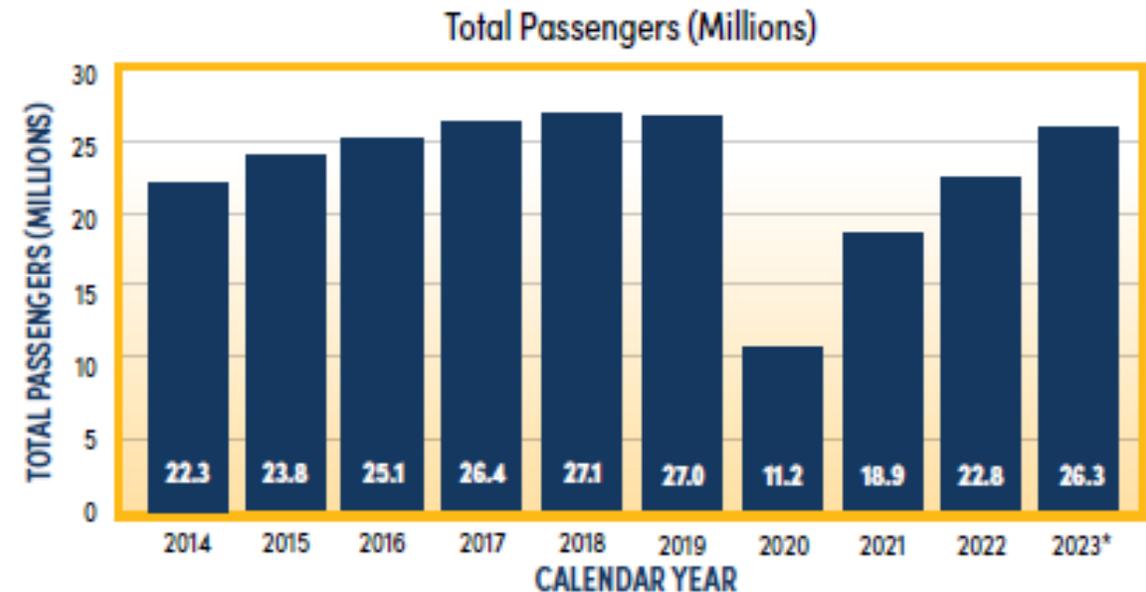
- Annual transit ridership dropped significantly in 2020 due to COVID-19, which for MTA direct operated services had been showing a decline.
- For all the transit modes, the ridership has been on a rise since 2020, but is still below 2019 numbers.
- Maryland-only WMATA ridership also increased overall, with the largest increase in Metrorail ridership.
- WMATA and MTA are working hard to adjust to new travel patterns, offer incentives to entice riders back on transit and maintain a safe rider experience.
- In the last year, WMATA increased rail service levels by 50% across the system and opened seven new rail stations.
- **Promote transit through education and marketing.**



# BWI Marshall Airport Annual Passengers

- Air service at BWI Marshall Airport in FY 2022 rebounded from the COVID-19 pandemic, with many airlines returning service that had been suspended.
- Airline network growth reached pre-COVID-19 numbers in 2023.
- BWI Marshall Airport has consistently met its target for the comparative airline cost per enplaned passenger (CPE) as it is below the mean CPE of comparable airports every year.

**BWI Marshall CPE**  
**\$10.25**  
**Comparative Airports**  
**CPE Mean Amount**  
**\$14.49**  
**(FY2023)**

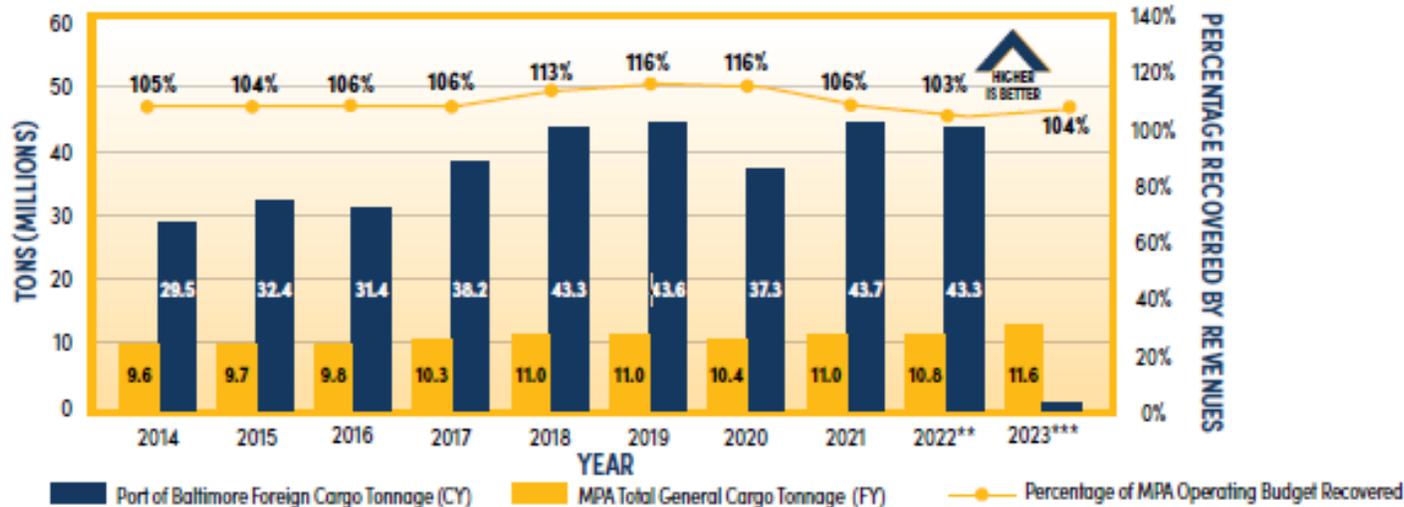


TARGET: Increase

\*2023 data is preliminary and subject to change.

# Port of Baltimore Foreign Cargo Tonnage and MPA General Cargo Tonnage

- Port of Baltimore had a year of high performance in 2022 handling 43.3 million tons of foreign cargo, the value of which reached a new record high at \$74.3 billion (and \$80 billion in 2023!).
- The Port of Baltimore is ranked as the 12th largest port in the USA in terms of foreign cargo tonnage and 10th largest in terms of dollar value.



TARGET: None

\* MPA cargo data is provided by fiscal year, but Port information is reported using the latest full calendar year because Port statistics combine data for public and private marine terminals that use different fiscal year reporting timeframes. Therefore, 2023 data cannot be reported until early 2024.

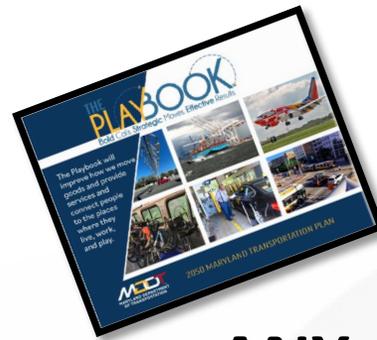
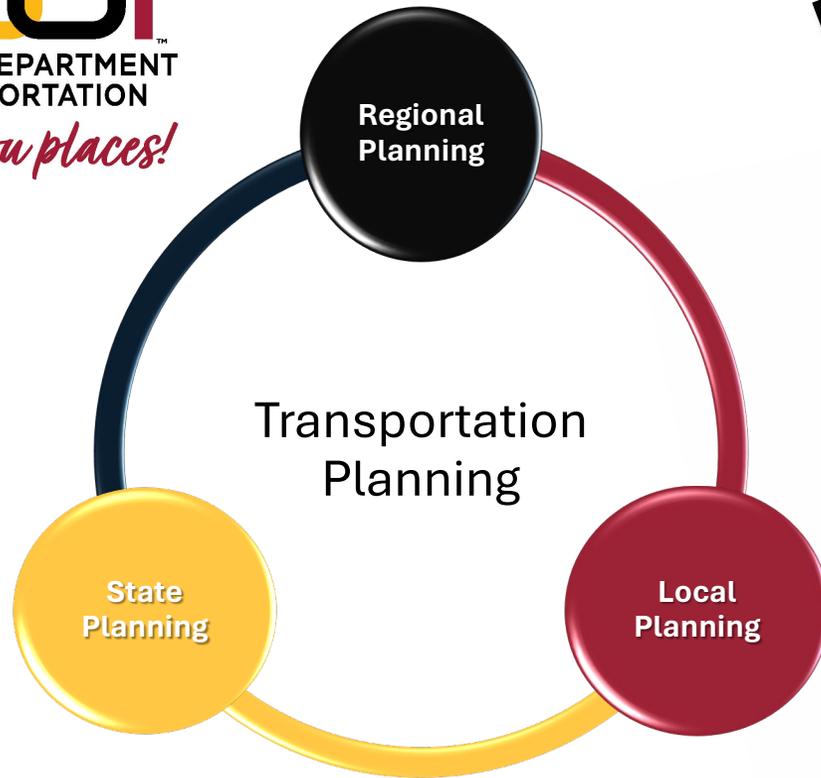
\*\*2022 data have been revised from previous report.

\*\*\* (2023) MPA general cargo includes both foreign and domestic waterborne cargo whereas Port-wide data includes only foreign waterborne cargo. Port-wide data for calendar year 2023 is not yet available; fiscal data for 2023 is an estimate.

# ***BRTB Strategies to Improve Trends***



- **PROMOTE**: Promote safety, transit usage, ridesharing, alternative work hours, EV usage, and teleworking within our organizations ("practice what we preach").
- **RESEARCH & DEVELOPMENT**: Continue data collection, research, and mapping support for MDOT programs, including safety, TDM (ridesharing, teleworking, etc.), transit use, innovation, and climate.
- **PARTNERSHIPS**: Advance transportation policies and infrastructure development, including safety, TDM, TOD, transit ridership, alternative fuels, mileage-based user fees, EV/EV Charging infrastructure.
- **GRANT SUPPORT**: Letters of support, outreach to local partners, research, data, and in-kind matches. Support local government in pursuit of grants, including Smart Streets for All, Reconnecting Neighborhoods, RAISE grants, etc.
- **OUTREACH, EDUCATION, & ENAGEMENT**:
  - TDM/ Commuter Choice Maryland
  - Transit Ridership and VMT reduction
  - Climate Mitigation and Adaptation
  - TOD designation and development
  - Active Transportation
  - Complete Streets Policy
  - VisionZero (including *Look Alive*)
  - Work Zone Safety
  - Alternative Fuels
  - EV education and infrastructure development



## ANY QUESTIONS?

**MICHELLE MARTIN**

Deputy Director

MDOT Office of Planning and Capital Programming

[mmartin@mdot.Maryland.gov](mailto:mmartin@mdot.Maryland.gov)

**AVIVA KLUGH**

Strategic Planning Manager

MDOT Office of Planning and Capital Programming

[aklugh@mdot.Maryland.gov](mailto:aklugh@mdot.Maryland.gov)

### USEFUL MDOT SRT-RELATED LINKS:

- [www.mdot.Maryland.gov/Planning](http://www.mdot.Maryland.gov/Planning)
- [www.mdot.Maryland.gov/MTP](http://www.mdot.Maryland.gov/MTP)
- [www.ctp.Maryland.gov](http://www.ctp.Maryland.gov)
- [www.mdot.Maryland.gov/AR](http://www.mdot.Maryland.gov/AR)
- [www.mdot.Maryland.gov/bikeped](http://www.mdot.Maryland.gov/bikeped)

