MDOT Attainment Report Advisory Committee (ARAC)

June 8, 2023

Meeting #2

MARYLAND DEPARTMENT OF TRANSPORTATION

Agenda

- Introductions/Roll Call
- Meeting #1 Overview
- Overview of Performance Measures
- Performance Measures by Goals
- Next Steps
- Public Comments

MARYLAND DEPARTMENT OF TRANSPORTATION

01

Introductions/Roll Call

ARAC Members

Dr. Mansoureh Jeihani, Transportation Demand Management (ARAC Chair)
Morgan State University

Alexander Austin, Business
Prince George's County Chamber of Commerce

Ben Groff, Transit Users
MTA Citizens Advisory Committee, Chair
Red Line Now PAC Chair

Brian Patrick Wivell, Transportation Labor
Maryland State & DC AFL-CIO, Legislative & Political Director

Charlotte Davis, Rural Interests
Rural Maryland Council

Dr. Chester Harvey, Pedestrian/Bicyclists
National Center for Smart Growth, University of Maryland

Charles Boyd, Planning
Director of Planning Coordination, Maryland Department of Planning

Deborah Price, Maryland Counties Demographic Planner, Harford County

Dennis Enslinger, Maryland Municipalities
Gaithersburg Deputy City Manager

Derrick Waters, Disabled Citizens
US Treasury IRS

Gustavo Torres, Immigrant Community
Executive Director, CASA Maryland

Jacqueline Allsup, NAACP
Vice President, Maryland State NAACP

Jaime McKay, Transit Users
Transit Services Division, Frederick County

Lindsey Mendelson, Environmental Advocacy
Sierra Club Maryland

Louis Campion, Goods Movement Industry
Maryland Motor Truck Association

Ragina Ali, Auto Users Group
AAA Mid-Atlantic

Robert A. Holsey, Jr., Construction Industry
International Union Of Operating Engineers Local 37

Sheila Somashekhar, Transit Users
University of Maryland
Purple Line Coalition

Dr. Shima Hamidi, Health Equity
Johns Hopkins University
Environmental Health & Engineering

Dr. Ting Ma, Transportation Performance Management
TRB Standing Committee on Performance Management

** Information on the ARAC at www.mdot.Maryland.gov/ARAC*

02

Meeting #1 Overview

Meeting Summary: ARAC Feedback

- PROPOSED GUIDING PRINCIPLES
  - Add Safety as a Guiding Principle
  - Refine definition of Equity
  - Include Public Health and Quality of Life into the last principle
- GOALS
  - Add mitigation to the Environmental Stewardship goal
  - Reference environmental justice and improving climate, air, and water quality
- KEY OUTCOMES
  - Update emission reduction targets
  - Reconsider timeline for Vision Zero
  - Emphasize transit improvements for disadvantaged areas

MARYLAND DEPARTMENT OF TRANSPORTATION

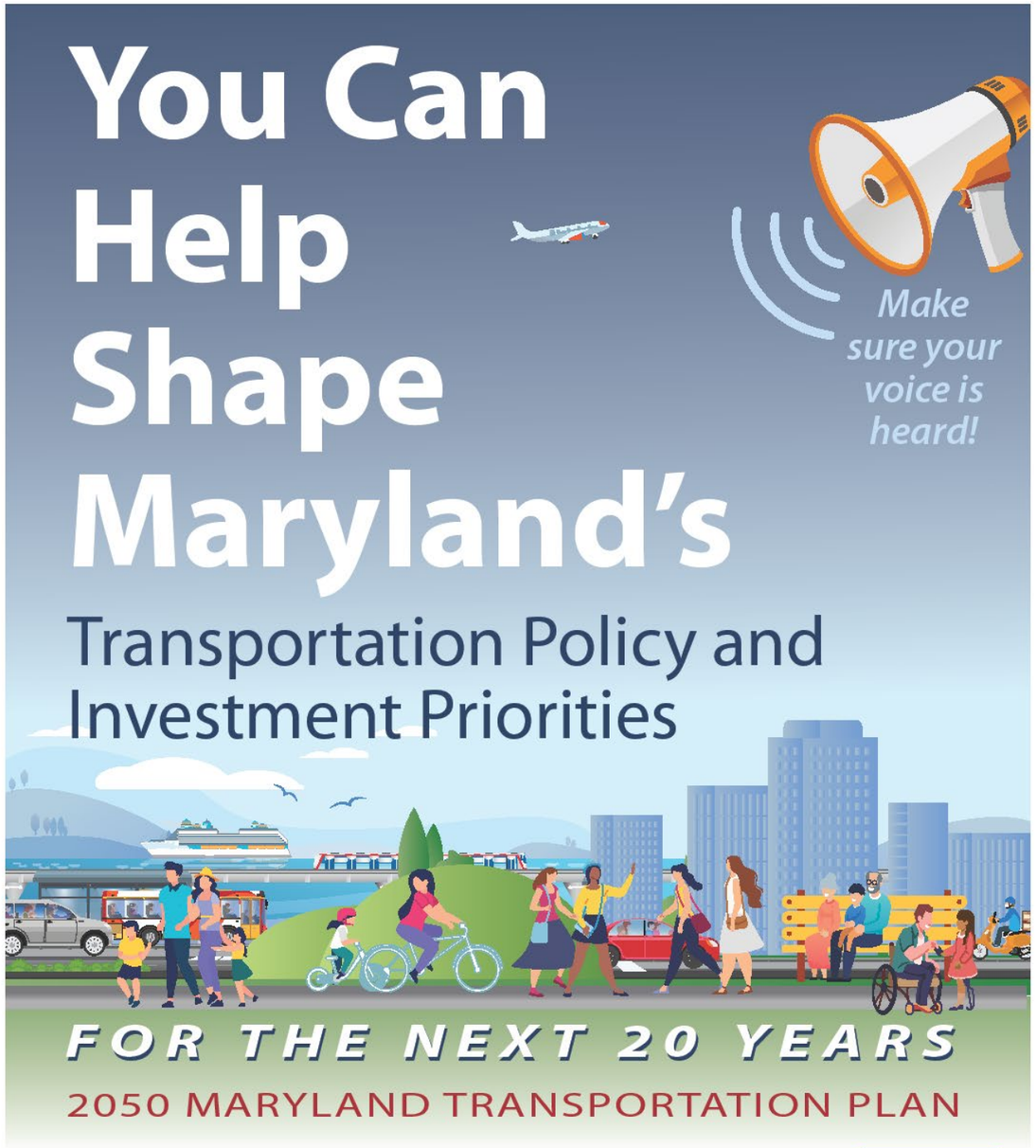
MTP Survey #2

MTP Survey #2 is available now on the MTP Web page: www.mdot.Maryland.gov/MTP

- *Survey #2 is focused on getting public input on the following:*
  - *Key outcomes desired for the 2050 MTP*
  - *Transportation needs around the state*
  - *Transportation investments priorities*

- *Survey will be available through July 10*

- *Please help to spread the word to your Maryland colleagues, family, and friends*



03

Overview of Performance Measures

Key Considerations for Selecting Measures

In today's meeting, ARAC will begin reviewing and discussing performance measures to retain or to add to the AR.

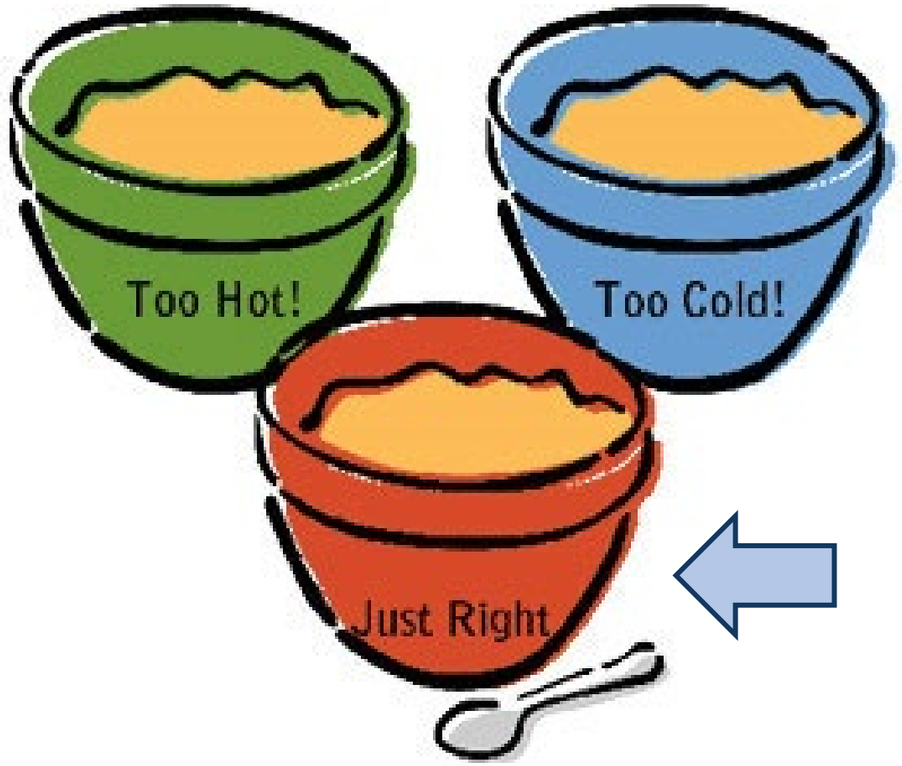
Selection criteria provide a lens for evaluating which measures to include.

- *Currently too many measures in the AR.*
- *Determine a select number of impactful measures to illustrate how well the transportation system is performing.*
- *Identify 1-3 measures per 2050 MTP Objective*

MARYLAND DEPARTMENT OF TRANSPORTATION

Key Considerations for Selecting Measures: Goldilocks Effect

Too many PMs



Too few PMs

Just Right!

Selection Criteria

1. **State and Federally Required**
2. Strategic (Aligned with the MTP)
3. Technically Feasible
4. Efficient, Comprehensive and Balanced
5. Understandable, Easily Communicated

- *Is it required by state legislation?*
  - *Overall AR requirements*
  - *Addressing urban and rural needs*
- *Is it required by federal legislation, including new and existing federal transportation laws?*
- *Can there be efficiencies and alignment of metrics to avoid very similar metrics for statewide reporting vs federal reporting?*

MARYLAND DEPARTMENT OF TRANSPORTATION

Selection Criteria

1. State and Federally Required
2. **Strategic (Aligned with the MTP)**
3. Technically Feasible
4. Efficient, Comprehensive and Balanced
5. Understandable, Easily Communicated

- *Does this measure align with MTP goals?*
- *Does the measure speak to one or more objectives?*

MARYLAND DEPARTMENT OF TRANSPORTATION

Selection Criteria

1. State and Federally Required
2. Strategic (Aligned with the MTP)
3. **Technically Feasible**
4. Efficient, Comprehensive and Balanced
5. Understandable, Easily Communicated

- *Is MDOT or modal administration already tracking this measure?*
- *Is the proposed measure quantitative?*
- *Is there existing data? Historical data?*
- *Is the data available on a yearly cycle/consistent in quality and availability?*
- *What is the level of effort to collect and report this data?*

MARYLAND DEPARTMENT OF TRANSPORTATION

Selection Criteria

1. State and Federally Required
2. Strategic (Aligned with the MTP)
3. Technically Feasible
4. **Efficient, Comprehensive and Balanced**
5. Understandable, Easily Communicated

- *Is this the best way to measure/evaluate the topic?*
- *Does the measure speak to how well the system is performing?*
- *Does the measure change with investments from year to year (is it responsive enough to change annually for reporting in an annual report)?*
- Does the metric lend toward an AR that is balanced by mode or modal administration?

MARYLAND DEPARTMENT OF TRANSPORTATION

Selection Criteria

1. State and Federally Required
2. Strategic (Aligned with the MTP)
3. Technically Feasible
4. Efficient, Comprehensive and Balanced
5. **Understandable, Easily Communicated**

- *Is the measure easily understood by the public?*

MARYLAND DEPARTMENT OF TRANSPORTATION

The objective – Set targets high enough to be challenging, but not so high they're unreachable

Methods for Setting Performance Targets

- Extrapolate historical performance trend
- Determine what is "achievable"
- Base on policy considerations and desired outcome
- Predict performance depending on funding level

MARYLAND DEPARTMENT OF TRANSPORTATION

Setting Targets - Challenges

- Measures need sufficient data and history
  - Historical information is needed to set a realistic target
- Targets are not appropriate for all measures
  - System volume trends (e.g., enplaned passengers at BWI)
- Measures may be impacted by factors outside of an agency's control
  - People are often wary of being held accountable for external factors (e.g., changing economy)
- Targets should be challenging but realistic
  - Setting targets too high may cause people to ignore them or cause misallocation of resources

MARYLAND DEPARTMENT OF TRANSPORTATION

04

Performance Measures by Goals

Proposed MTP 2050 Goals

Goals are broad statements with desired results that reflect the overall MDOT mission statement.

Enhance Safety and Security: Protect the safety and security of all residents, workers, and visitors.

Deliver System Quality: Deliver a reliable, high-quality, integrated transportation system.

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.

Promote Environmental Stewardship: Minimize and mitigate the environmental effects of transportation.

Performance Measure Document Summary

Goals & Objectives

Broad statements with desired results that reflect the overall MDOT mission statement.

Enhance Safety and Security

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

Key Outcomes for this Goal to achieve through the 2050 MTP:

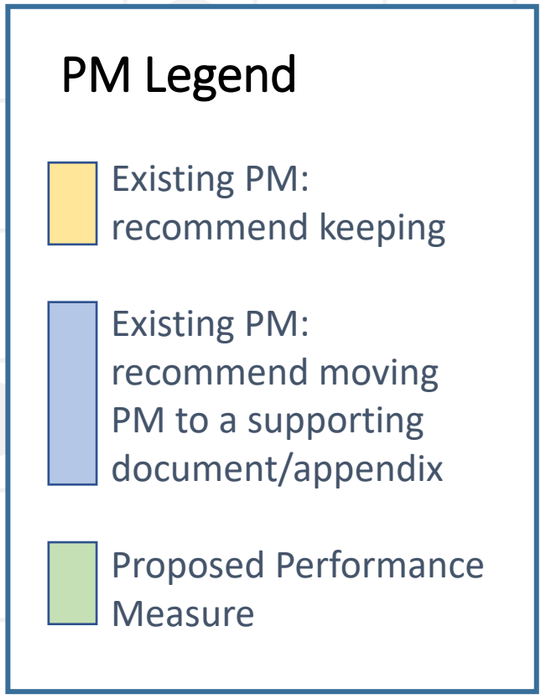
- Achieve zero traffic-related deaths
- Achieve roadway clearance within 60 minutes of an emergency
- Achieve a low stress statewide transportation infrastructure across all modes

Objectives/Focus Areas to Measure	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
Prioritize efforts that will reduce the number of lives lost and injuries sustained on Maryland's transportation system.			X	X	X
1. Annual Number of Fatalities and Injuries on All Roads in Maryland (MFR) 2. Annual Number of Bicycle Fatalities and Injuries (MFR) 3. Annual Number of Transit Passenger Fatalities and Injuries 4. Number of Pedestrian Fatalities and Injuries (MFR) 5. Number of at-grade railroad crossing incidents resulting in injury or fatality					
Minimize disparities in safety across Maryland's diverse communities.	X				
1. Traffic fatalities and serious injuries in historically disadvantaged communities					
Address multimodal safety needs to support a safe and secure transportation system.	X			X	X
1. Preventable Incidents Per 100,000 Vehicle Miles on Transit 2. Miles of lower level of traffic stress (LTS 2 or better)					
Maintain a safe system during adverse weather events, man-made threats, and other system disruptions.		X	X		
1. Roadway clearance times 2. Incident (CHART) response rates/times					

MARYLAND DEPARTMENT OF TRANSPORTATION

Goals to discuss during ARAC Meeting #2

- **Enhance Safety and Security**
  Protect the safety and security of all residents, workers, and visitors.
- **Deliver System Quality**
  Deliver a reliable, high-quality, integrated transportation system.
- **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.
- **Promote Environmental Stewardship**
  Minimize and mitigate the environmental effects of transportation.



MARYLAND DEPARTMENT OF TRANSPORTATION

4A

Goal: Enhance Safety and Security

Enhance Safety and Security

Objectives/Focus Areas to Measure	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
Prioritize efforts that will reduce the number of lives lost and injuries sustained on Maryland's transportation system.			X	X	X
1. Annual Number of Fatalities and Injuries on All Roads in Maryland (MFR) 2. Annual Number of Bicycle Fatalities and Injuries (MFR) 3. Annual Number of Transit Passenger Fatalities and Injuries 4. Number of Pedestrian Fatalities and Injuries (MFR) 5. Number of at-grade railroad crossing incidents resulting in injury or fatality					
Minimize disparities in safety across Maryland's diverse communities.	X				
1. 1. Traffic fatalities and serious injuries in historically disadvantaged communities					
Address multimodal safety needs to support a safe and secure transportation system.	X			X	X
1. Preventable Incidents Per 100,000 Vehicle Miles on Transit 2. Miles of lower level of traffic stress (LTS 2 or better)					
Maintain a safe system during adverse weather events, man-made threats, and other system disruptions.		X	X		
1. Roadway clearance times 2. Incident (CHART) response rates/times					

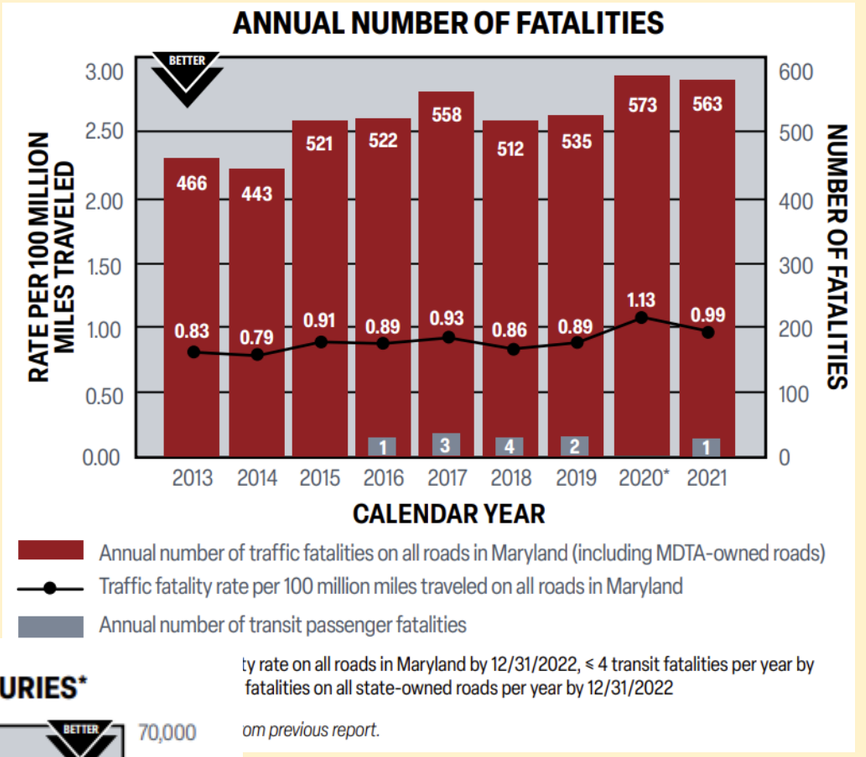
MARYLAND DEPARTMENT OF TRANSPORTATION

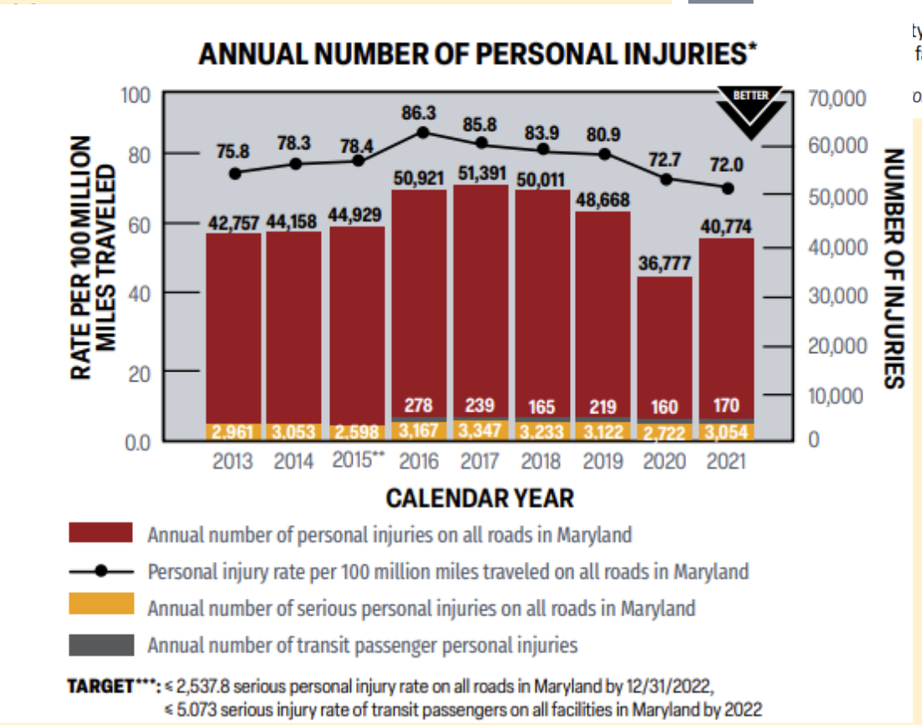
Enhance Safety & Security

Objective 1: Prioritize efforts that will reduce the number of lives lost and injuries sustained on Maryland's transportation syste

Performance Measure:

a. *Annual Number of Fatalities and Injuries on All Roads in Maryland (MFR)*





MARYLAND DEPARTMENT OF TRANSPORTATION

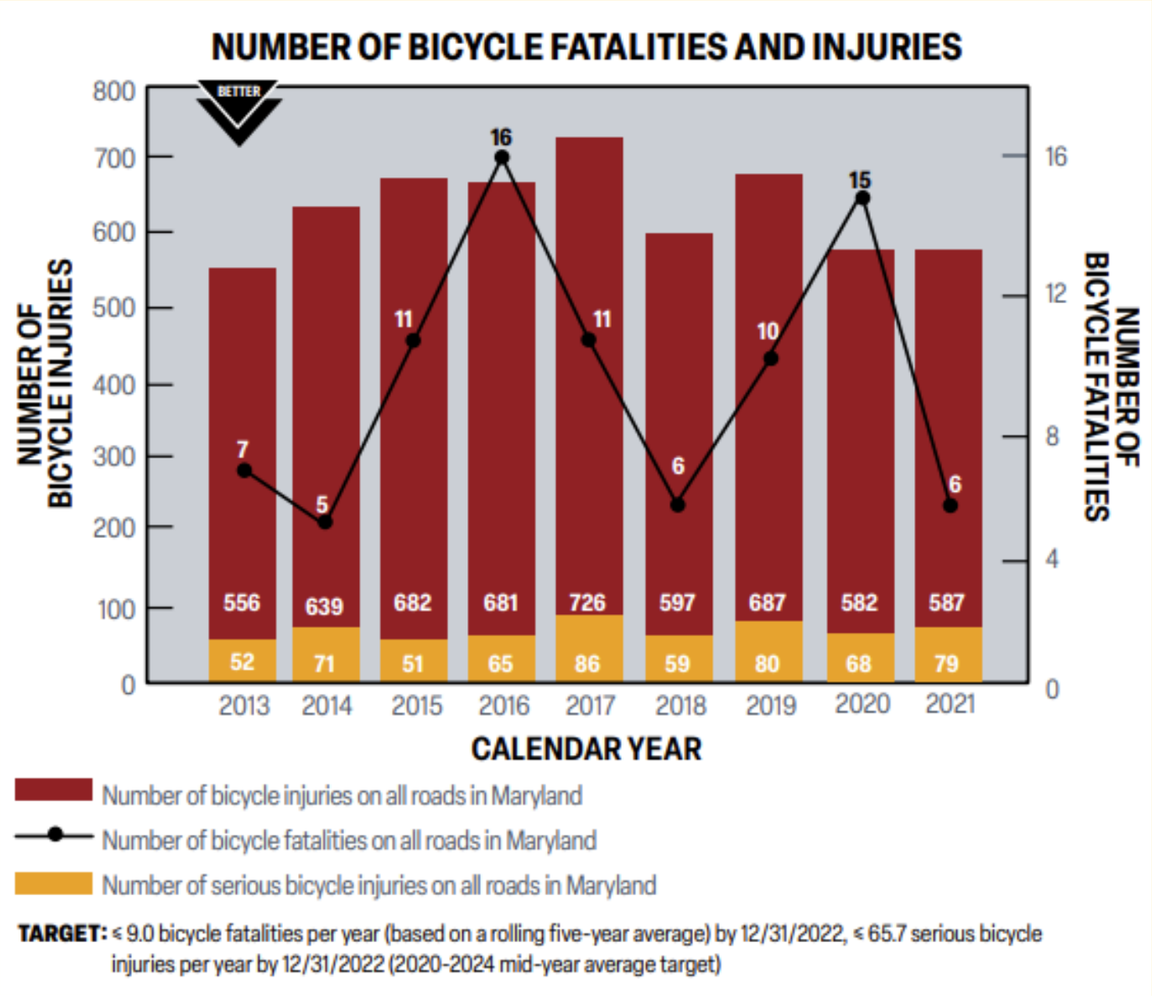
Source: 2023 Annual Attainment Report On Transportation System Performance

Enhance Safety & Security

Objective 1: Prioritize efforts that will reduce the number of lives lost and injuries sustained on Maryland's transportation system.

Performance Measure:

b. Annual Number of Bicycle Fatalities and Injuries (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

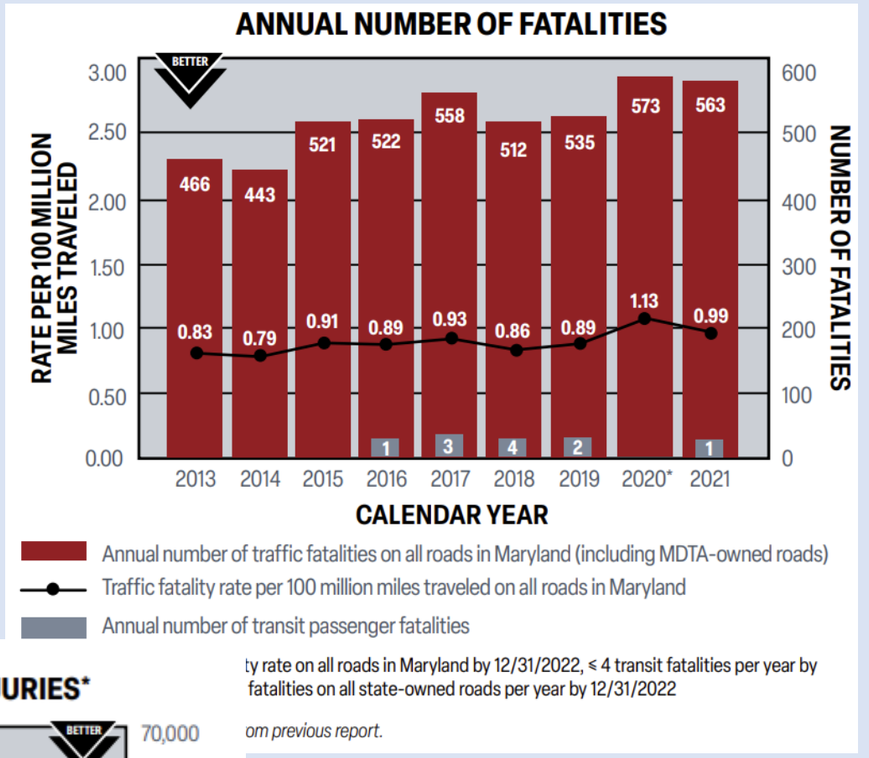
Source: 2023 Annual Attainment Report On Transportation System Performance

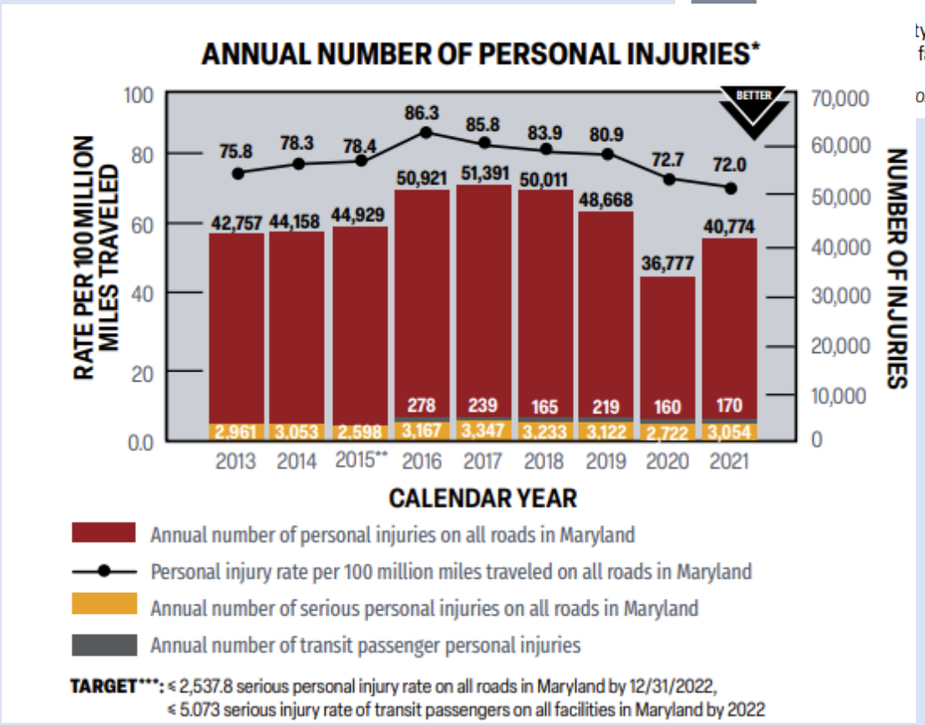
Enhance Safety & Security

Objective 1: Prioritize efforts that will reduce the number of lives lost and injuries sustained on Maryland's transportation system.

Performance Measure:

c. *Annual Number of Transit Passenger Fatalities and Injuries*





MARYLAND DEPARTMENT OF TRANSPORTATION

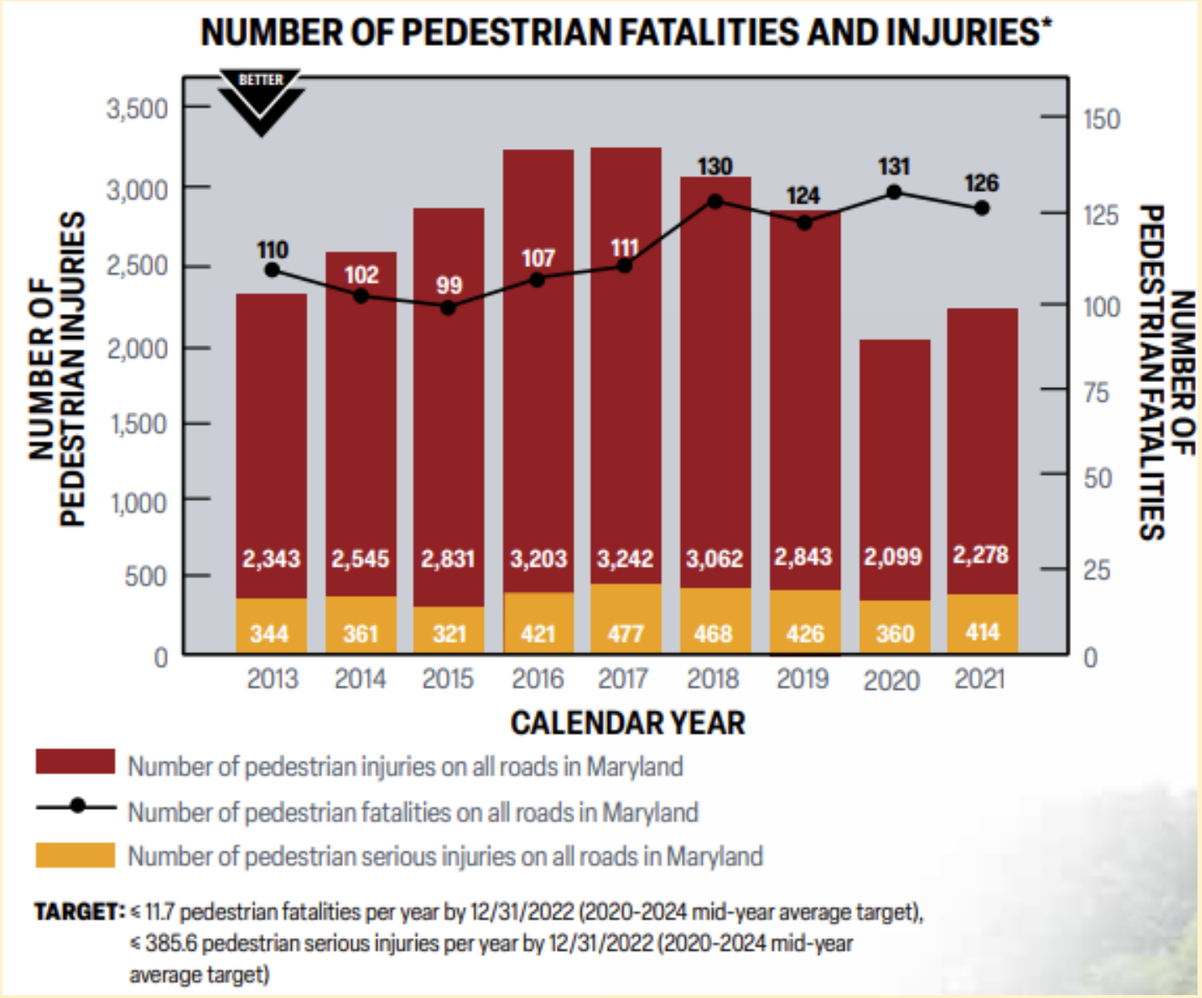
Source: 2023 Annual Attainment Report On Transportation System Performance

Enhance Safety & Security

Objective 1: Prioritize efforts that will reduce the number of lives lost and injuries sustained on Maryland's transportation system.

Performance Measure:

d. Number of Pedestrian Fatalities and Injuries (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Enhance Safety & Security

Objective 1: Prioritize efforts that will reduce the number of lives lost and injuries sustained on Maryland's transportation system.

Performance Measure:

e. *Number of at-grade railroad crossing incidents resulting in injury or fatality*

Measure Details:

- *Investments made for at-grade crossing safety*
- *Currently tracked in the Section 130 report by the MDOT Secretary's Office (TSO)*
- *Reported in the 2022 rail plan up to 2019. The FRA database is two years behind (currently has 2021 data):* https://railroads.dot.gov/safety-data/accident-and-incident-reporting/accidentincident-dashboards-data-downloads

MARYLAND DEPARTMENT OF TRANSPORTATION

Enhance Safety & Security

Objective 2: Minimize disparities in safety across Maryland's diverse communities.

Proposed Performance Measure:

a. Traffic fatalities and serious injuries in historically disadvantaged communities

Measure Details:

- *Reflects federal and state focus and investment on equity*
- *Data will be based on the U.S. DOT Equitable Transportation Community (ETC) Explorer*

MARYLAND DEPARTMENT OF TRANSPORTATION

Enhance Safety & Security

Objective 3: Address multimodal safety needs to support a safe and secure transportation system.

Performance Measure:

a. *Preventable Incidents Per 100,000 Vehicle Miles on Transit*

CALENDAR YEAR	2015	2016	2017	2018	2019	2020	2021*	2022	TARGET
PREVENTABLE INCIDENTS PER 100,000 VEHICLE MILES									
Local Bus	1.43	1.54	1.54	1.44	1.76	1.50	0.07	0.07	**1.50**
Light Rail	0.14	0.24	0.02	0.03	0.37	0.03	0.01	0.01	**0.25**
Baltimore Metro	0.00	0.06	0.06	0.02	0.01	0.01	0.02	0.02	**0.06**
Paratransit/Taxi Access	0.79	1.04	1.04	0.77	1.32	1.10	0.02	0.02	**1.00**

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Enhance Safety & Security

Objective 3: Address multimodal safety needs to support a safe and secure transportation system.

Proposed Performance Measure:

b. Center line miles of lower level of traffic stress (LTS 2 or better)

Measure Details:

- *Updated from bicycle level of comfort (BLOC), beginning in the last AR (2023).*
- *This transition is in coordination with the implementation of MDOT SHA's Context Driven Guide and other national and departmental initiatives.*
- *Data is already being collected through the recent update to the LTS model from SHA.*

Moved to Serve Communities and Support the Economy

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

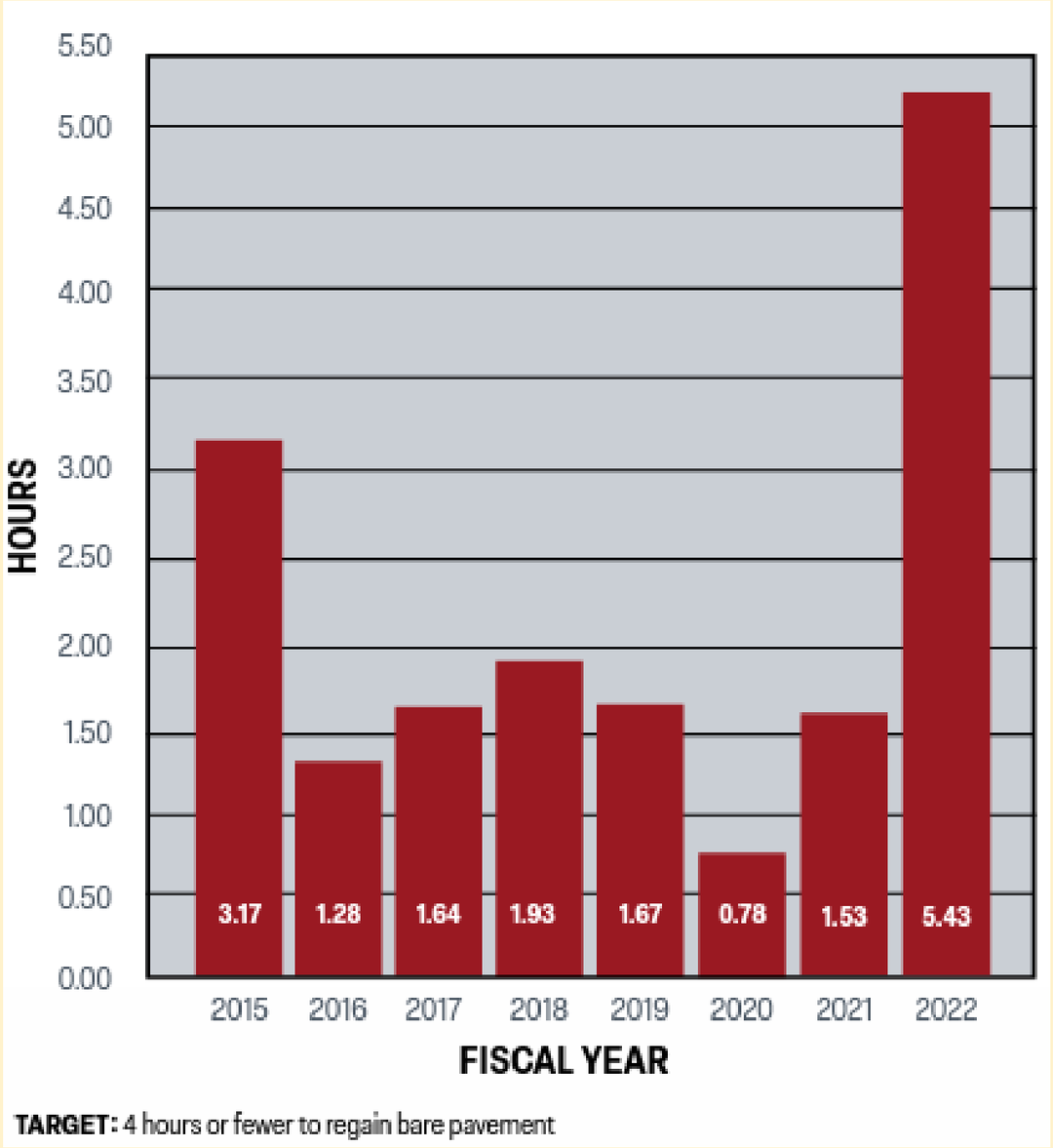
Enhance Safety & Security

Objective 4: Maintain a safe system during adverse weather events, man-made threats, and other system disruptions.

Performance Measure:

a. *Time to bare pavement after a winter storm*

(Previously listed as roadway clearance time)



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Enhance Safety & Security

Objective 4: Maintain a safe system during adverse weather events, man-made threats, and other system disruptions.

Proposed Performance Measure:

b. Incident Coordinated Highways Action Response Team (CHART) response rates/times

Measure Description:

- *This will be based on data provided by Civil and Environmental Engineering Department of the University of Maryland, College Park (UM) to the Office of Transportation Mobility & Operations (OTMO) at State Highway Administration (SHA)*
- *Data is already being collected and reported annually in the CHART Performance Evaluation and Benefit Analysis Report.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Enhance Safety and Security

Objectives/Focus Areas to Measure	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
Prioritize efforts that will reduce the number of lives lost and injuries sustained on Maryland's transportation system.			X	X	X
1. Annual Number of Fatalities and Injuries on All Roads in Maryland (MFR) 2. Annual Number of Bicycle Fatalities and Injuries (MFR) 3. Annual Number of Transit Passenger Fatalities and Injuries 4. Number of Pedestrian Fatalities and Injuries (MFR) 5. Number of at-grade railroad crossing incidents resulting in injury or fatality					
Minimize disparities in safety across Maryland's diverse communities.	X				
1. 1. Traffic fatalities and serious injuries in historically disadvantaged communities					
Address multimodal safety needs to support a safe and secure transportation system.	X			X	X
1. Preventable Incidents Per 100,000 Vehicle Miles on Transit 2. Miles of lower level of traffic stress (LTS 2 or better)					
Maintain a safe system during adverse weather events, man-made threats, and other system disruptions.		X	X		
1. Roadway clearance times 2. Incident (CHART) response rates/times					

MARYLAND DEPARTMENT OF TRANSPORTATION

4B

Goal: Deliver System Quality

Deliver System Quality

Objectives/Focus Areas to Measure	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
Provide a multimodal system resilient to changing conditions and hazards.		X	X		X
1. Preparedness of the transportation system for weather conditions and hazards 2. Percentage of lane-miles/transit-miles that cannot withstand a storm + sea level rise (100-year storm)					
Preserve and maintain State-owned or funded facilities in a state of good repair.		X	X	X	X
1. Unfunded State of Good Repair Backlog 2. Percentage of the Maryland State Highway Network in Overall Preferred Maintenance Condition (MFR) 3. Overall Acceptable Pavement Condition (MFR) 4. Percent of all Maryland Bridges that are in Poor Condition (MFR)					
Minimize travel delays and improve reliability and quality on all modes.	X			X	X
1. Annual Cost of Congestion (Billions) on the MDOT highway network (MFR) 2. User cost savings for the traveling public due to incident management (MFR) 3. Percent of all MDOT Transit Service Provided On Time (MFR) 4. Percent of VMT in Congested Conditions on Arterials in Maryland During the Evening Peak Hour (MFR) 5. Percent of VMT in Congested Conditions on Freeways/Expressways in Maryland During the Evening Peak Hour (MFR) 6. Percentage of State-Owned Roadway Directional Miles Within Urban Areas that Have Sidewalks (MFR) 7. Truck Hours of Delay (All traffic hours of delay in appendix) (MFR)					
Accelerate project completion through improved project delivery.		X	X		X
1. Percent of toll transactions collected by *E-ZPass*® vs. video tolls (MFR) 2. MDOT MVA Alternative Service Delivery (ASD) Transactions as Percent of Total Transactions (MFR) 3. MDOT MVA Average Cost Per Transaction (MFR)					

MARYLAND DEPARTMENT OF TRANSPORTATION

Deliver System Quality

Objectives/Focus Areas to Measure	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
4. Percent of program funds in the CTP that are leveraging partnership and discretionary grant program dollars 5. Percent of On-time project delivery across MDOT (determine how best to measure) 6. Percent of on budget projects delivered across MDOT (determine how best to measure)					
Improve the efficiency of the Port of Baltimore and BWI Thurgood Marshall Airport with respect for surrounding communities.	X	X	X	X	X
1. Port of Baltimore Foreign Cargo Tonnage and MPA General Cargo Tonnage (MFR) 2. Freight Originating and Terminating in Maryland by Mode – Total Tonnage 3. Freight Originating and Terminating in Maryland by Mode – Total Value 4. BWI Marshall Airport Total Annual Passengers (MFR) 5. Airline Cost Per Enplaned Passenger (CPE) (MFR) 6. Number of Nonstop Airline Markets Served (MFR) 7. MPA's Operating Cost (TBD)					

MARYLAND DEPARTMENT OF TRANSPORTATION

Deliver System Quality

Objective 1: Provide a multimodal system resilient to changing conditions and hazards.

Proposed Performance Measure:

a. *Percentage of interstate and US routes that have a Freeway Traffic Incident Management (FITM) plan developed or updated (5 years old or newer).*

Measure Details:

- *This metric explores how prepared we are/ the transportation system is to changing conditions and hazards, including weather conditions and hazards.*
- *Preparedness could include plans, technology (alerts), pre-treatment, etc.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Deliver System Quality

Objective 1: Provide a multimodal system resilient to changing conditions and hazards.

Proposed Performance Measure:

b. Percentage of lane-miles/transit-miles that cannot withstand a storm + sea level rise (100-year storm)

Measure Details:

- *This metric aims to show how resilient the transportation system is to large (100-year) storms to prevent flooding and ensure continued access.*
- *Utilize 100-year GIS flood maps compared against the transportation system and transit lines/bus routes, etc.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Deliver System Quality

Objective 2: Preserve and maintain State-owned or funded facilities in a state of good repair.

Proposed Performance Measure:

a. Unfunded State of Good Repair Backlog

Measure Details:

- *This metric aims to show how many projects are still unfunded from the state of good repair backlog in order to show progress towards system preservation.*
- *The desire is to decrease the backlog.*
- *Trying to show no more than 2- or 3-to-1 ratio when compared to the state annual capital budget.*

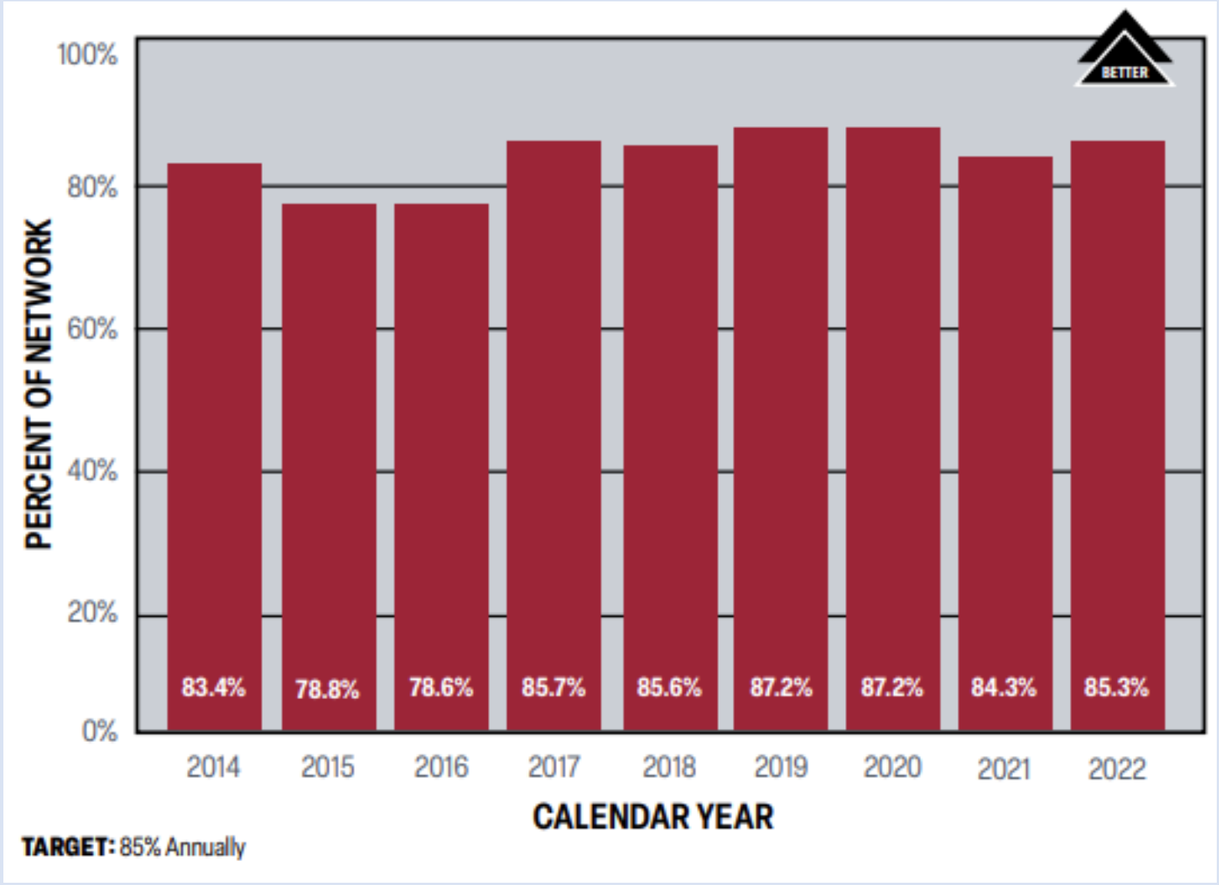
MARYLAND DEPARTMENT OF TRANSPORTATION

Deliver System Quality

Objective 2: Preserve and maintain State-owned or funded facilities in a state of good repair.

Performance Measure:

b. Percentage of the Maryland State Highway Network in Overall Preferred Maintenance Condition (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

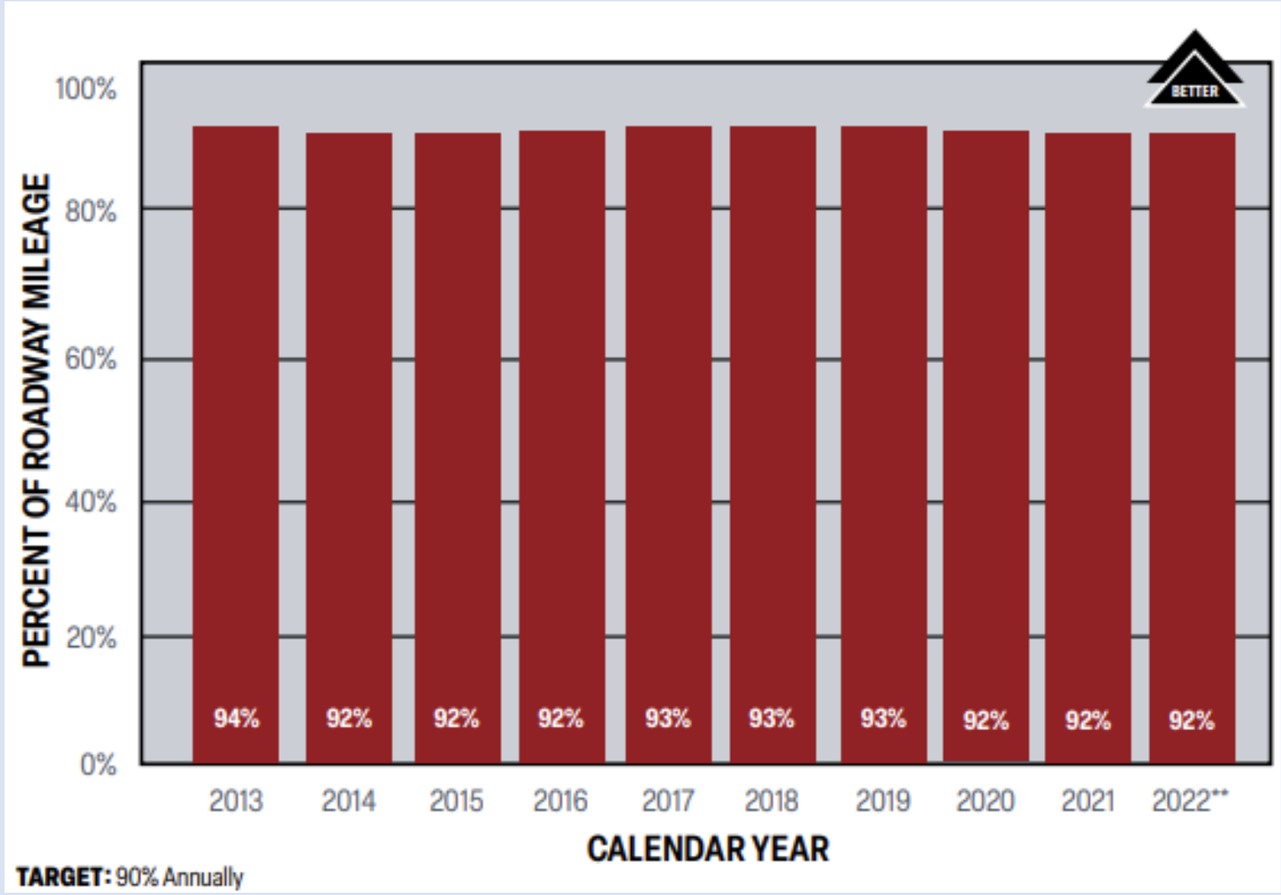
Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 2: Preserve and maintain State-owned or funded facilities in a state of good repair.

Performance Measure:

c. *Overall Acceptable Pavement Condition (MFR)*



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 2: Preserve and maintain State-owned or funded facilities in a state of good repair.

Performance Measure:

d. Percent of all Maryland Bridges that are in Poor Condition (MFR)

CALENDAR YEAR	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*
Number of MDTA Bridges in Poor Condition	4	1	1	1	1	1	1	1	0	0
Number of MDOT SHA Bridges in Poor Condition	87	81	69	69	67	62	52	36	29	26
Total Number of Bridges in Poor Condition	91	82	70	70	68	63	53	37	29	26

**2022 data are preliminary and subject to change.*

MARYLAND DEPARTMENT OF TRANSPORTATION

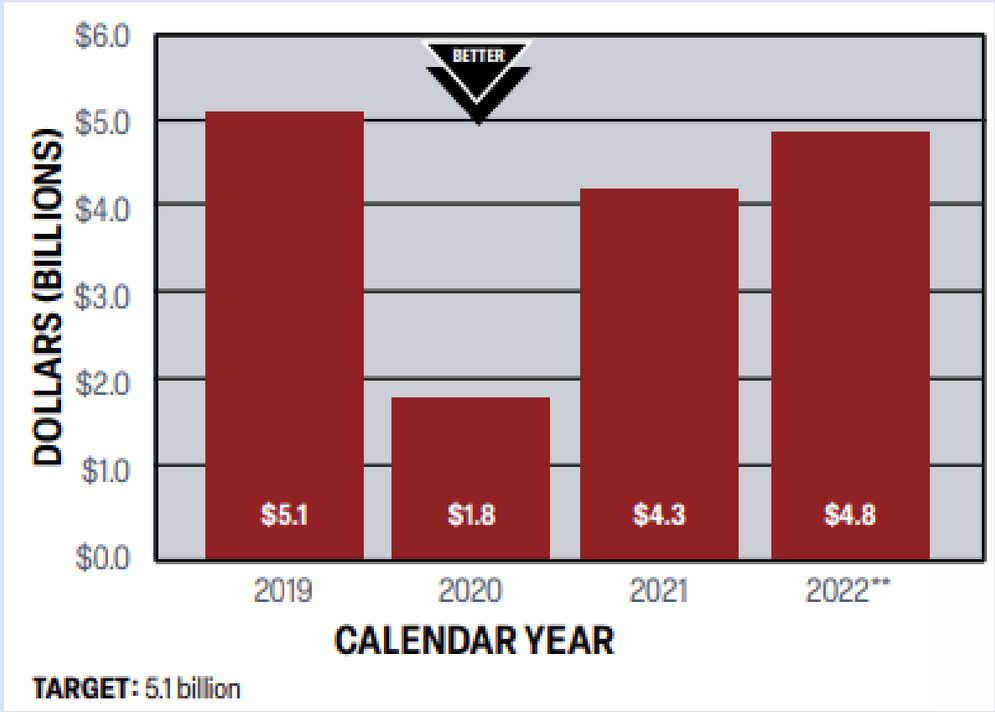
Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 3: Minimize travel delays and improve reliability and quality on all modes.

Performance Measure:

a. *Annual Cost of Congestion (Billions) on the MDOT highway network (MFR)*



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 3: Minimize travel delays and improve reliability and quality on all modes.

Performance Measure:

b. User cost savings for the traveling public due to incident management (MFR)

Measure Description :

- *This will be based on data provided by Civil and Environmental Engineering Department of the University of Maryland, College Park (UM) to the Office of Transportation Mobility & Operations (OTMO) at State Highway Administration (SHA)*

- *Data is already being collected and reported annually in the CHART Performance Evaluation and Benefit Analysis Report.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 3: Minimize travel delays and improve reliability and quality on all modes.

Performance Measure:

c. *Percent of all MDOT Transit Service Provided On Time (MFR)*

MODE*	2013	2014	2015	2016	2017	2018	2019	2020	2021**	2022	LONG-TERM TARGET
Local Bus	82%	81%	81%	85%	77%	68%	69%	74%	74%	74%	**85%**
Light Rail	97%	96%	97%	98%	96%	94%	95%	96%	92%	96%	**96%**
Baltimore Metro	97%	96%	95%	96%	96%	94%	94%	71%	90%	96%	**96%**
MARC	93%	92%	92%	94%	91%	91%	87%	92%	94%	92%	**96%**
Mobility Paratransit & Taxi Access	89%	91%	88%	92%	93%	93%	86%	89%	76%	91%	**95%**

**Besides Local Bus, 2022 data is estimated and subject to change.*

***2021 data has been revised from previous report.*

MARYLAND DEPARTMENT OF TRANSPORTATION

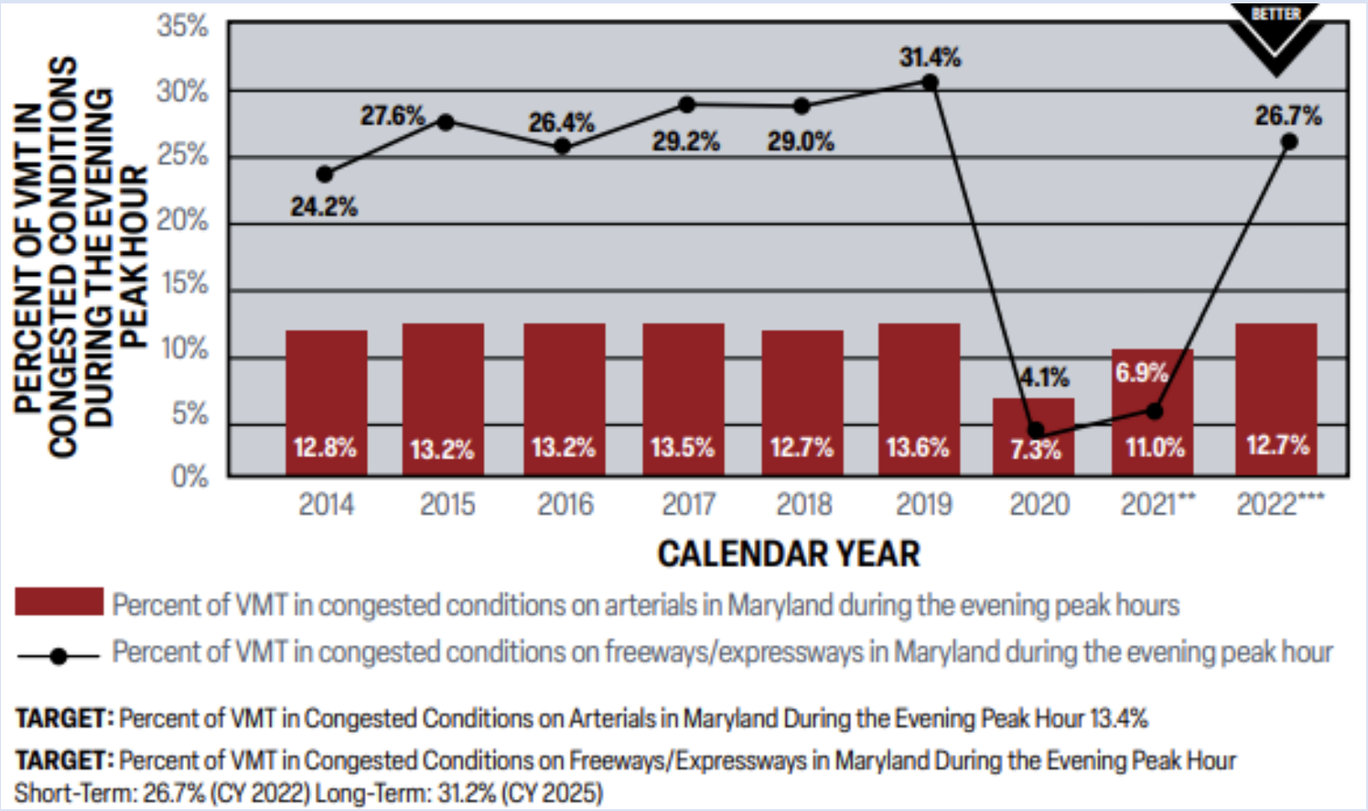
Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 3: Minimize travel delays and improve reliability and quality on all modes.

Performance Measure:

d. Percent of VMT in Congested Conditions on Arterials in Maryland During the Evening Peak Hour (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

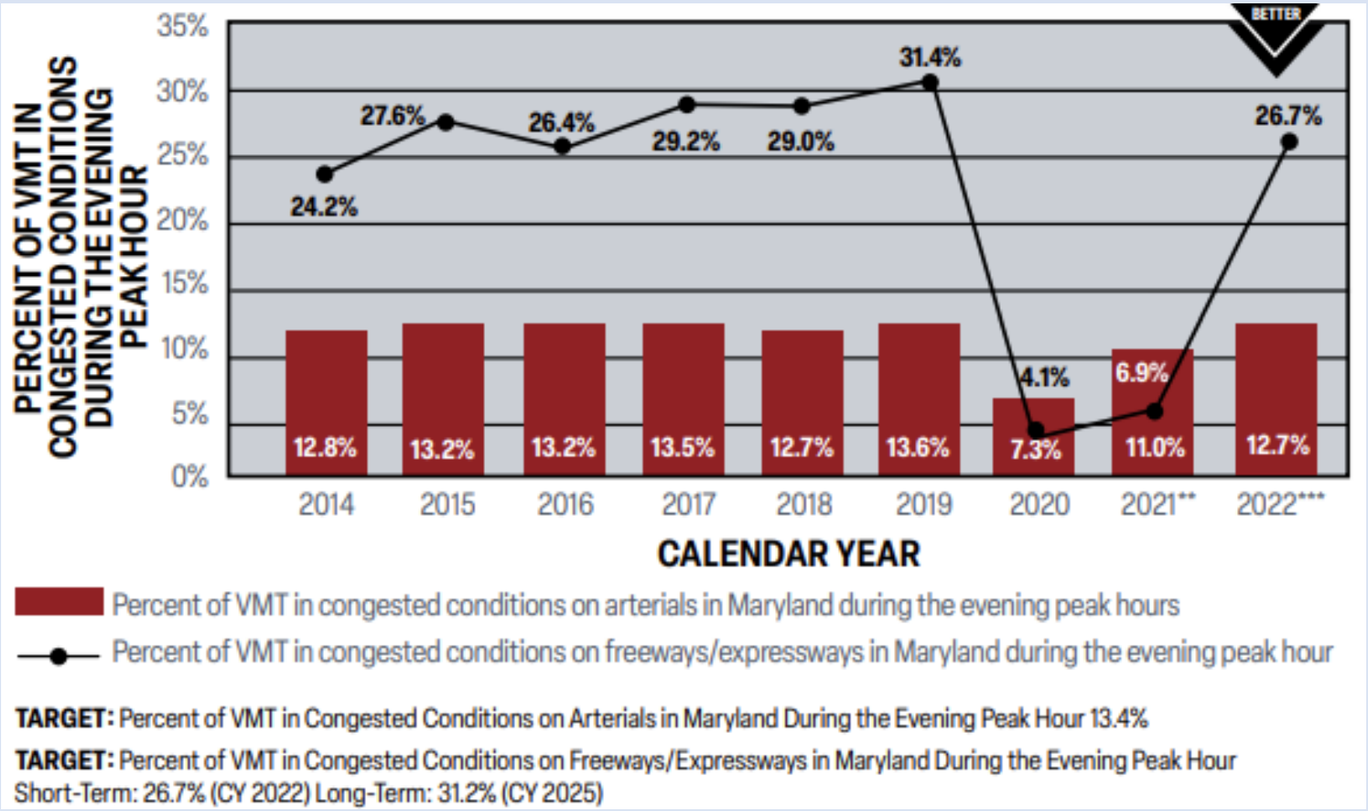
Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 3: Minimize travel delays and improve reliability and quality on all modes.

Performance Measure:

e. *Percent of VMT in Congested Conditions on Freeways/Expressways in Maryland During the Evening Peak Hour (MFR)*



MARYLAND DEPARTMENT OF TRANSPORTATION

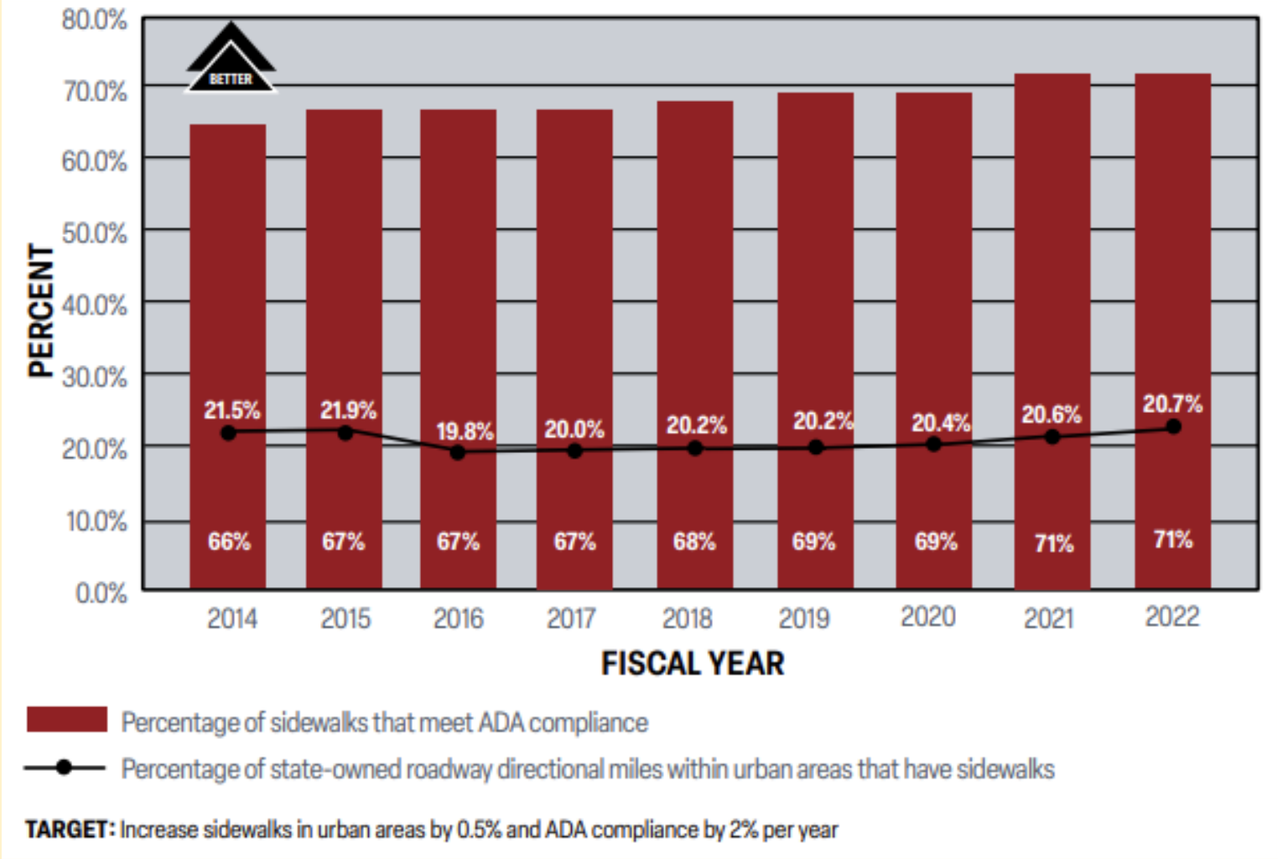
Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 3: Minimize travel delays and improve reliability and quality on all modes.

Performance Measure:

f. Percentage of State-Owned Roadway Directional Miles Within Urban Areas that Have Sidewalks (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 3: Minimize travel delays and improve reliability and quality on all modes.

Proposed Performance Measure:

g. *Truck Hours of Delay (All traffic hours of delay in appendix) (MFR)*

Measure Details:

- *This metric explores the efficiency of goods movement on Maryland Roads.*
- *Replaces Truck Travel Time Reliability Index.*
- *The measure is being reported by the State Highway Administration (SHA).*

MARYLAND DEPARTMENT OF TRANSPORTATION

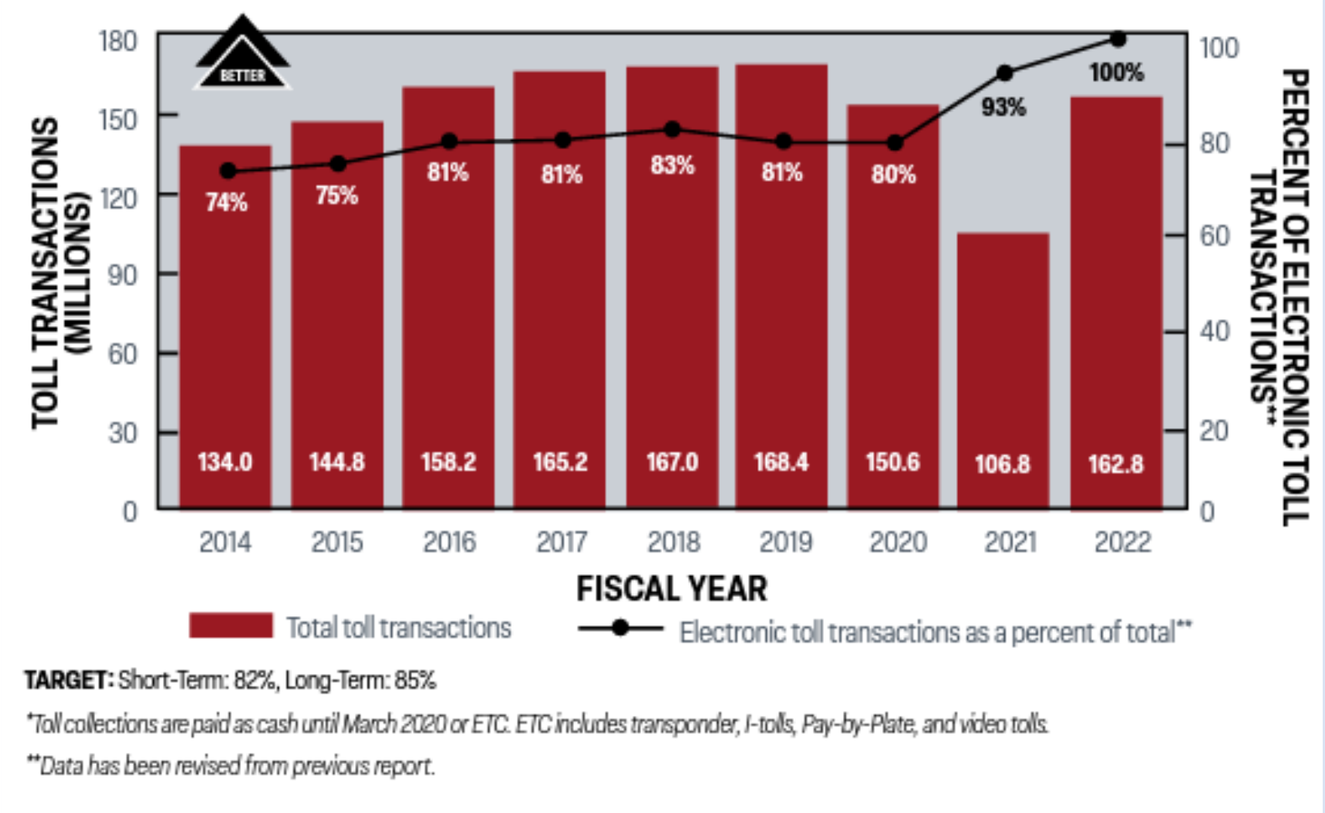
Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 4: Accelerate project completion through improved project delivery.

Performance Measure:

a. *Percent of toll transactions collected by E-ZPass® vs. video tolls (MFR)*



MARYLAND DEPARTMENT OF TRANSPORTATION

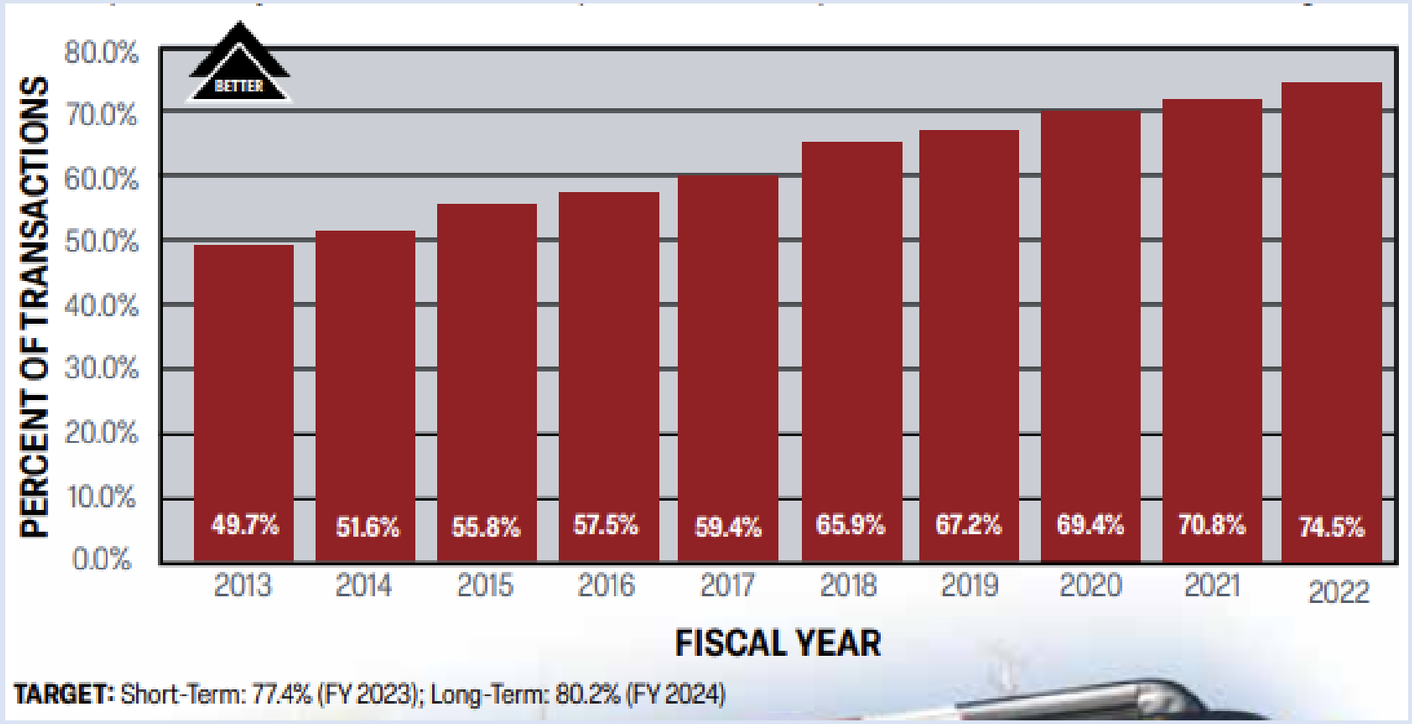
Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 4: Accelerate project completion through improved project delivery.

Performance Measure:

b. MDOT MVA Alternative Service Delivery (ASD) Transactions as Percent of Total Transactions (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

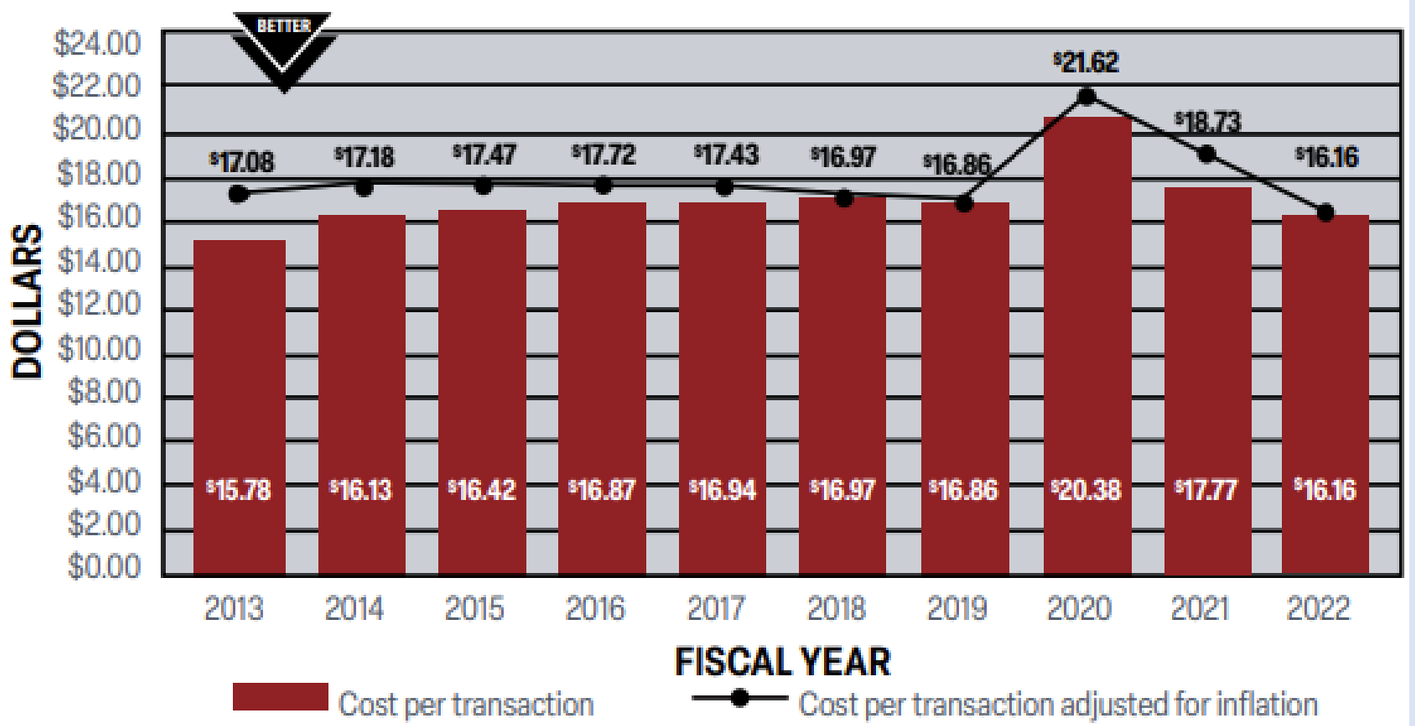
Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 4: Accelerate project completion through improved project delivery.

Performance Measure:

c. MDOT MVA Average Cost Per Transaction (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 4: Accelerate project completion through improved project delivery.

Proposed Performance Measure:

d. Percent of program funds in the CTP that are leveraging partnership and discretionary grant program dollars

Measure Details:

- *This metric aims to depict how well the Department leverages state dollars by comparing how much of (what percentage of) the capital consolidated transportation program is funded using private, local and federal partners.*
- *Will have to think through which year these investments are reflected so monies aren't counted more than once. Maybe base it only on the current year of expenditures.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Deliver System Quality

Objective 4: Accelerate project completion through improved project delivery.

Proposed Performance Measure:

e. Percent of on-time project delivery across MDOT

Measure Details:

- *The purpose of this measure is to show how well the Department is doing in delivering projects on-time.*
- *Still exploring how to track this information, what data is available across all of the modal administrations.*
- *Would the measure be rolled up to an MDOT measure or show by modal administration.*
- *Would the measure include if the contracts included on-time incentives, etc.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Deliver System Quality

Objective 4: Accelerate project completion through improved project delivery.

Proposed Performance Measure:

f. Percent of on budget projects delivered across MDOT

Measure Details:

- *The purpose of this measure is to show how well the Department is doing in delivering projects within budget.*
- *Still exploring how to track this information, what data is available across all of the modal administrations.*
- *Would the measure be rolled up to an MDOT measure or show by modal administration.*
- *Would the measure include if the contracts included on-time incentives, etc.*

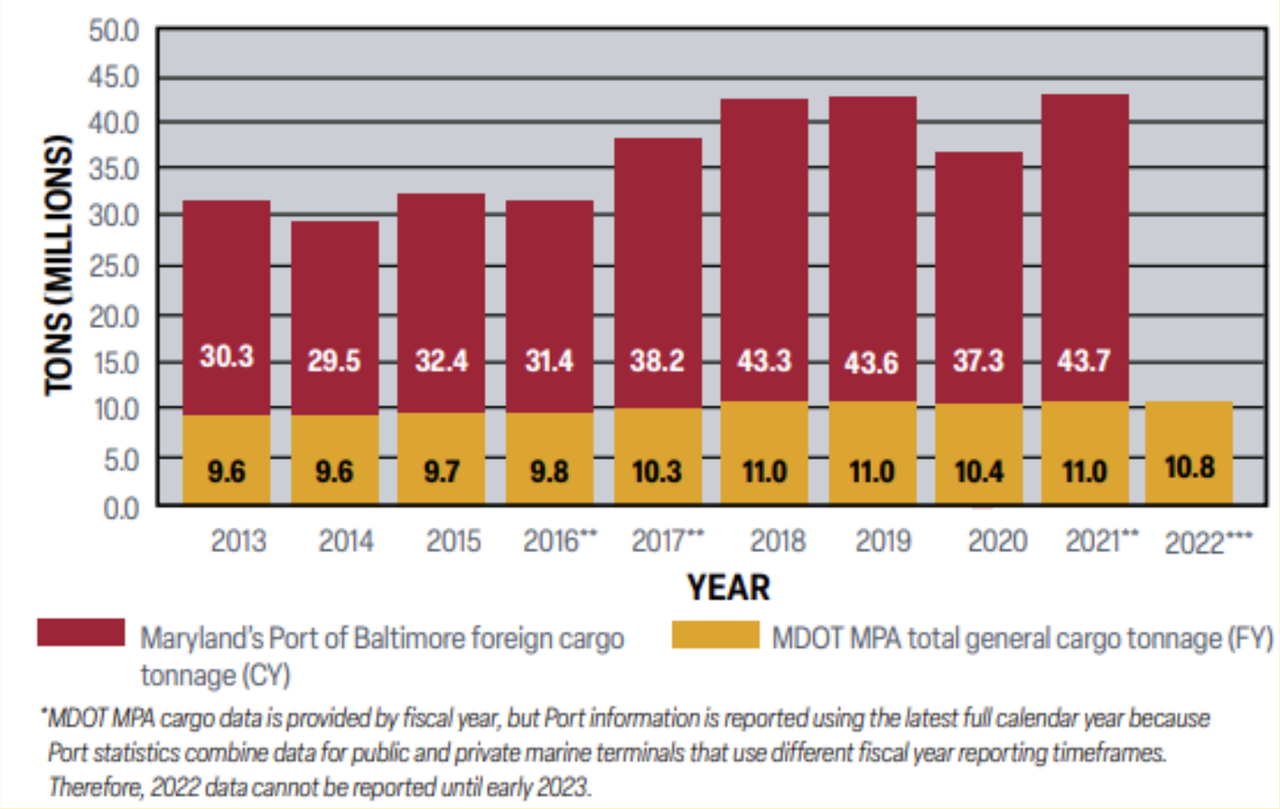
MARYLAND DEPARTMENT OF TRANSPORTATION

Deliver System Quality

Objective 5: Improve the efficiency of the Port of Baltimore and BWI Thurgood Marshall Airport with respect for surrounding communities.

Performance Measure:

a. *Port of Baltimore Foreign Cargo Tonnage and MPA General Cargo Tonnage (MFR)*



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 5: Improve the efficiency of the Port of Baltimore and BWI Thurgood Marshall Airport with respect for surrounding communities.

Performance Measure:

b. Freight Originating and Terminating in Maryland by Mode – Total Tonnage

METHOD FOR MOVING FREIGHT	TOTAL VALUE (MILLIONS)	TOTAL TONNAGE (THOUSANDS) SATISFIED
Air	$6,143	58
Other**	$286	96
Pipeline	$6,794	33,299
Rail	$12,549	21,341
Truck	$296,685	220,765
Water	$540	3,138
All Freight	$389,751	285,206
Multiple Modes & Mail Goods	$66,753	6,509

*Source: U.S. Department of Transportation Freight Analysis Framework (FAF5) the FAF version is 5.0, Freight Analysis Framework (FAF) (ornl.gov). FAF 5 is based on 2017 data. This version makes changes from previous versions in that it includes additional modal detail or classification than in the past. Therefore, previous FAF assessments cannot be accurately compared as value and tonnage may be attributed to different modes in previous versions. Prior to this version of FAF, MDOT was using a growth rate relative to GDP and the economy to factor the base year FAF data.

**Category "Other" includes movements not elsewhere classified such as flyaway aircraft, and shipments for which the mode cannot be determined as stated in the documentation for the Freight Analysis Framework Version 5.0.

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 5: Improve the efficiency of the Port of Baltimore and BWI Thurgood Marshall Airport with respect for surrounding communities.

Performance Measure:

c. *Freight Originating and Terminating in Maryland by Mode – Total Value*

METHOD FOR MOVING FREIGHT	TOTAL VALUE (MILLIONS)	TOTAL TONNAGE (THOUSANDS) SATISFIED
Air	$6,143	58
Other**	$286	96
Pipeline	$6,794	33,299
Rail	$12,549	21,341
Truck	$296,685	220,765
Water	$540	3,138
All Freight	$389,751	285,206
Multiple Modes & Mail Goods	$66,753	6,509

*Source: U.S. Department of Transportation Freight Analysis Framework (FAF5) the FAF version is 5.0, Freight Analysis Framework (FAF) (ornl.gov). FAF 5 is based on 2017 data. This version makes changes from previous versions in that it includes additional modal detail or classification than in the past. Therefore, previous FAF assessments cannot be accurately compared as value and tonnage may be attributed to different modes in previous versions. Prior to this version of FAF, MDOT was using a growth rate relative to GDP and the economy to factor the base year FAF data.

**Category "Other" includes movements not elsewhere classified such as flyaway aircraft, and shipments for which the mode cannot be determined as stated in the documentation for the Freight Analysis Framework Version 5.0.

MARYLAND DEPARTMENT OF TRANSPORTATION

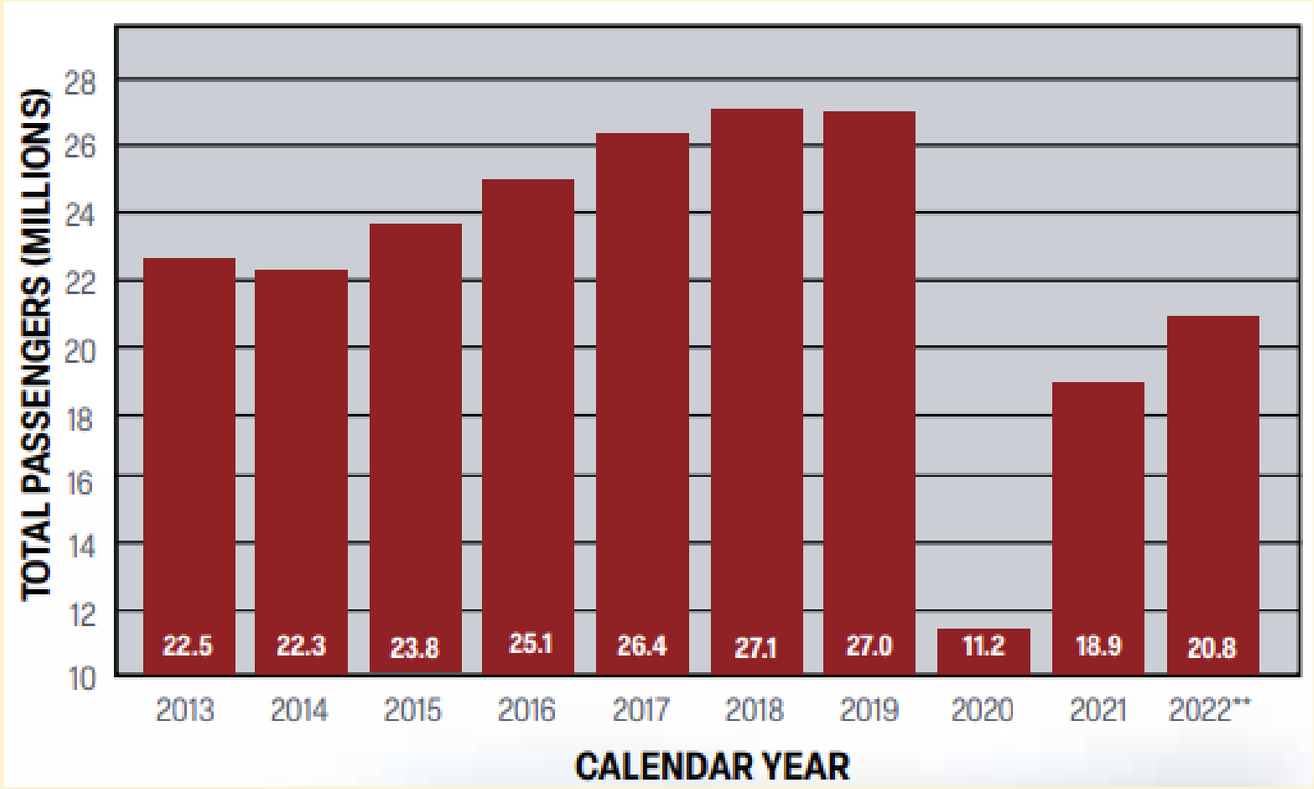
Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 5: Improve the efficiency of the Port of Baltimore and BWI Thurgood Marshall Airport with respect for surrounding communities.

Performance Measure:

d. BWI Marshall Airport Total Annual Passengers (MFR)

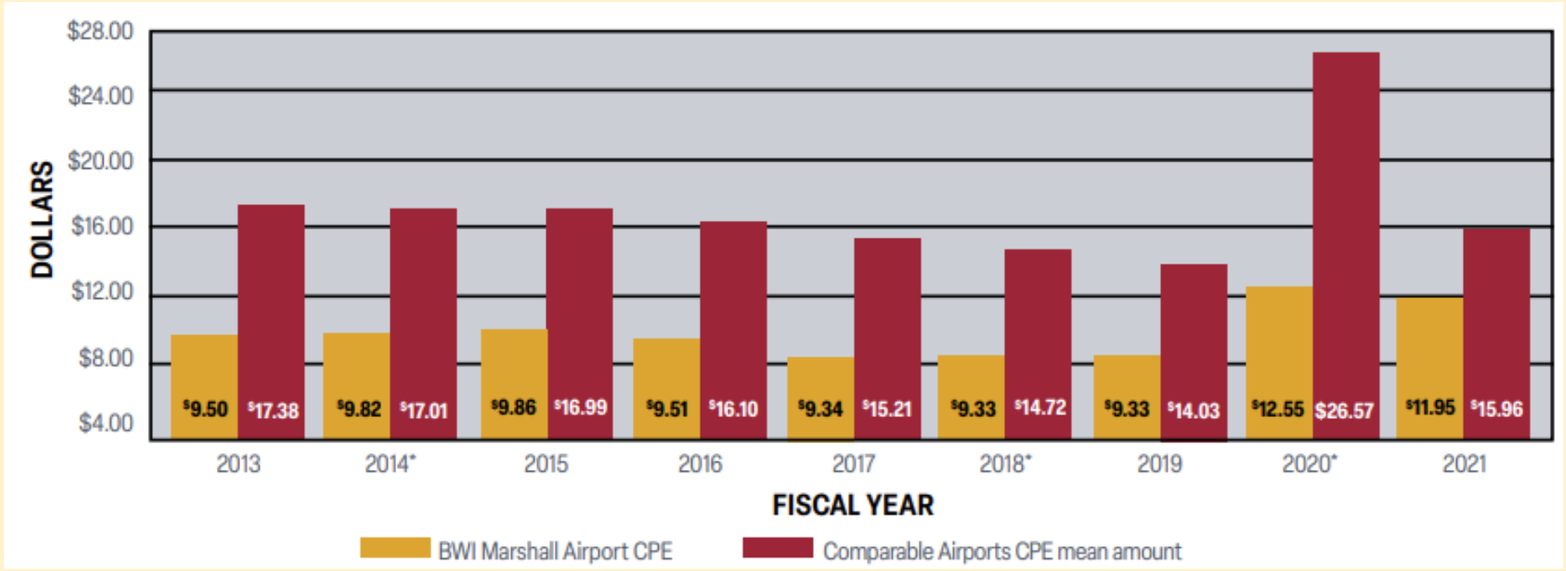


MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 5: Improve the efficiency of the Port of Baltimore and BWI Thurgood Marshall Airport with respect for surrounding communities.



Performance Measure:

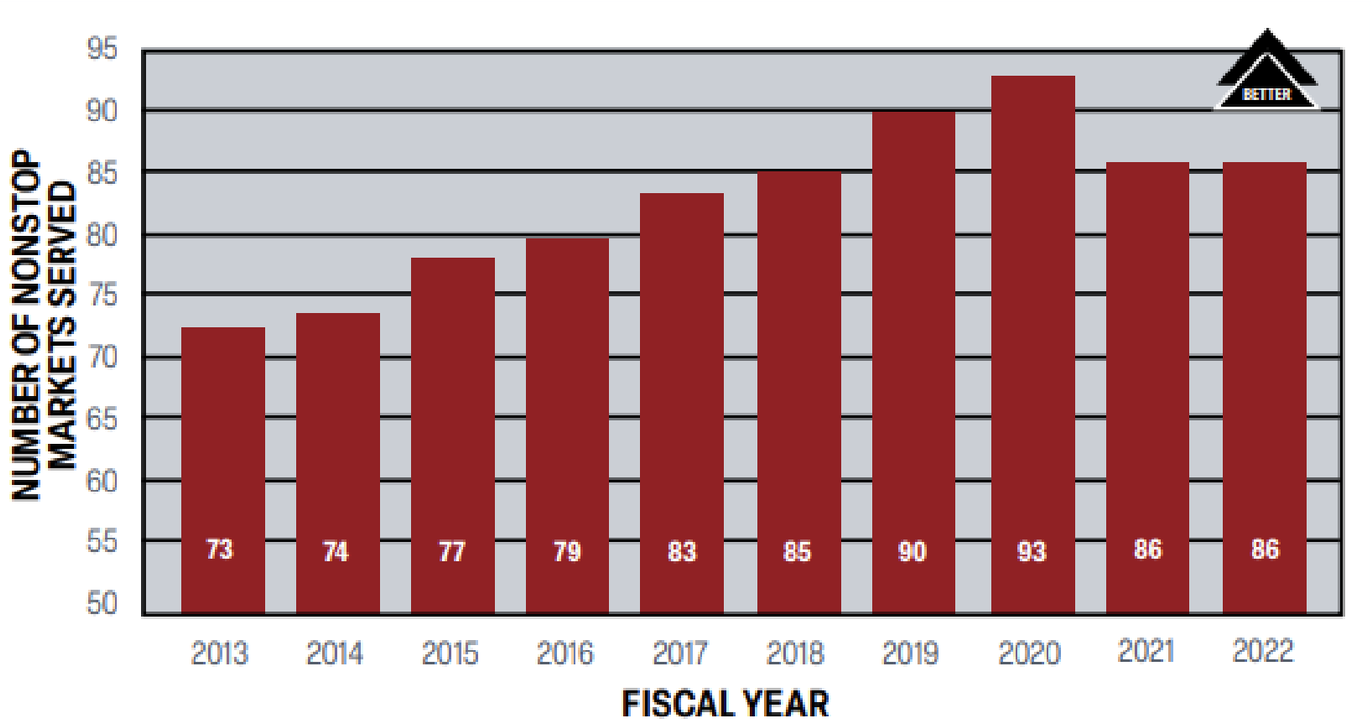
e. Airline Cost Per Enplaned Passenger (CPE) (MFR)

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 5: Improve the efficiency of the Port of Baltimore and BWI Thurgood Marshall Airport with respect for surrounding communities.



Performance Measure:

f. Number of Nonstop Airline Markets Served (MFR)

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 5: Improve the efficiency of the Port of Baltimore and BWI Thurgood Marshall Airport with respect for surrounding communities.

Proposed Performance Measure:

g. *MPA Cost Efficiency Measure (i.e., Operating cost per ton of cargo moving through MPA facilities)*

Measure Details:

- *The purpose of this measure is to provide data to show the efficiency of the Port and freight movement at the Port.*
- *Since the MPA does not operate all of the Port of Baltimore facilities, and many are private, this is difficult to measure.*
- *Operating cost per ton of cargo could be a little misleading, because it gives preference towards heavier cargo. However, these are the only costs we can currently track and tons are the only common denominator between all of our cargo units.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Deliver System Quality

Objectives/Focus Areas to Measure	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
Provide a multimodal system resilient to changing conditions and hazards.		X	X		X
1. Preparedness of the transportation system for weather conditions and hazards 2. Percentage of lane-miles/transit-miles that cannot withstand a storm + sea level rise (100-year storm)					
Preserve and maintain State-owned or funded facilities in a state of good repair.		X	X	X	X
1. Unfunded State of Good Repair Backlog 2. Percentage of the Maryland State Highway Network in Overall Preferred Maintenance Condition (MFR) 3. Overall Acceptable Pavement Condition (MFR) 4. Percent of all Maryland Bridges that are in Poor Condition (MFR)					
Minimize travel delays and improve reliability and quality on all modes.	X			X	X
1. Annual Cost of Congestion (Billions) on the MDOT highway network (MFR) 2. User cost savings for the traveling public due to incident management (MFR) 3. Percent of all MDOT Transit Service Provided On Time (MFR) 4. Percent of VMT in Congested Conditions on Arterials in Maryland During the Evening Peak Hour (MFR) 5. Percent of VMT in Congested Conditions on Freeways/Expressways in Maryland During the Evening Peak Hour (MFR) 6. Percentage of State-Owned Roadway Directional Miles Within Urban Areas that Have Sidewalks (MFR) 7. Truck Hours of Delay (All traffic hours of delay in appendix) (MFR)					
Accelerate project completion through improved project delivery.		X	X		X
1. Percent of toll transactions collected by *E-ZPass*® vs. video tolls (MFR) 2. MDOT MVA Alternative Service Delivery (ASD) Transactions as Percent of Total Transactions (MFR) 3. MDOT MVA Average Cost Per Transaction (MFR)					

MARYLAND DEPARTMENT OF TRANSPORTATION

Deliver System Quality

Objectives/Focus Areas to Measure	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
4. Percent of program funds in the CTP that are leveraging partnership and discretionary grant program dollars 5. Percent of On-time project delivery across MDOT (determine how best to measure) 6. Percent of on budget projects delivered across MDOT (determine how best to measure)					
Improve the efficiency of the Port of Baltimore and BWI Thurgood Marshall Airport with respect for surrounding communities.	X	X	X	X	X
1. Port of Baltimore Foreign Cargo Tonnage and MPA General Cargo Tonnage (MFR) 2. Freight Originating and Terminating in Maryland by Mode – Total Tonnage 3. Freight Originating and Terminating in Maryland by Mode – Total Value 4. BWI Marshall Airport Total Annual Passengers (MFR) 5. Airline Cost Per Enplaned Passenger (CPE) (MFR) 6. Number of Nonstop Airline Markets Served (MFR) 7. MPA's Operating Cost (TBD)					

MARYLAND DEPARTMENT OF TRANSPORTATION

4C

Goal: Serve Communities and Support the Economy

Serve Communities and Support the Economy

Objectives	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
Enhance Marylanders' satisfaction with the transportation system and MDOT services.	X	X	X	X	X
1. Overall Satisfaction with MDOT – U of M survey results OR MDOT MTA Customer Satisfaction Survey Results 2. MVA Branch Office Wait Time under 15 Minutes (MFR)					
Apply enhanced technologies to improve communication and to relay real-time information.				X	X
1. Percentage of modal administration assets that provide real-time information					
Prioritize the transportation needs of underserved and overburdened communities in project selection and scoping.	X				
1. Investment in equity emphasis areas (determine how best to measure progress towards equity goals) 2. Access to Jobs within 45 minutes by car/60 minutes by transit for residents in equity emphasis areas					
Deliver a system that improves access to opportunities and quality of life by non-auto modes.	X			X	
1. Access to Jobs within 60 minutes by transit 2. Percent of 10 largest job centers in Maryland within 0.5 miles of a transit stop served by all-day frequent transit service 3. Percent of Sidewalks that Meet ADA Compliance (MFR) 4. Vehicle Miles Traveled (VMT) (MFR) 5. Number of MDOT SHA centerline mileage with a LTS score of 1 6. MDOT MTA Average Weekday Transit Ridership (MFR) 7. Transit Ridership – MDOT MTA direct-operated services (thousands) (MFR) 8. Transit Ridership – Contracted services and LOTS (thousands) (MFR) 9. Total Maryland – only WMATA annual ridership (MFR) 10. Annual Revenue Vehicle Miles of MDOT MTA Service Provided (MFR) 11. Commute Mode Share					
Increase transit-oriented development.	X			X	
1. Percentage of all residents and residents 30% AMI and below living within a half mile of a transit service station, stop or hub 2. Percent of higher educational centers within 0.5 miles of a transit stop served by all-day frequent transit service 3. Percent of head start centers within .5 miles of transit stop served by all-day frequent transit service					

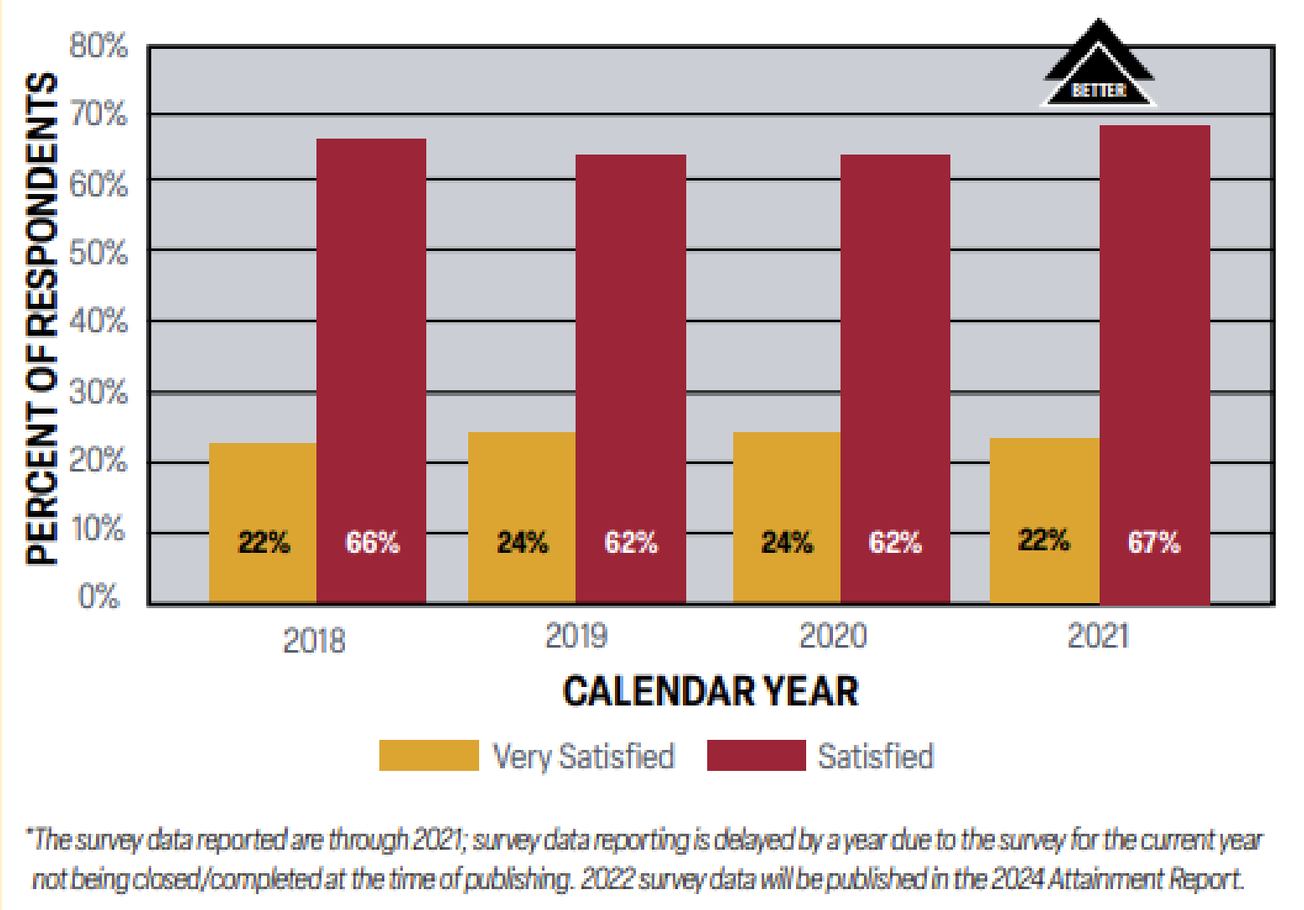
MDOT
MARYLAND DEPARTMENT OF TRANSPORTATION

Serve Communities and Support the Economy

Objective 1: Enhance Marylanders' satisfaction with the transportation system and MDOT services.

Performance Measure:

a. *Overall Satisfaction with MDOT (utilizing data from an annual University of Maryland commuter survey)*



*The survey data reported are through 2021; survey data reporting is delayed by a year due to the survey for the current year not being closed/completed at the time of publishing. 2022 survey data will be published in the 2024 Attainment Report.

MARYLAND DEPARTMENT OF TRANSPORTATION

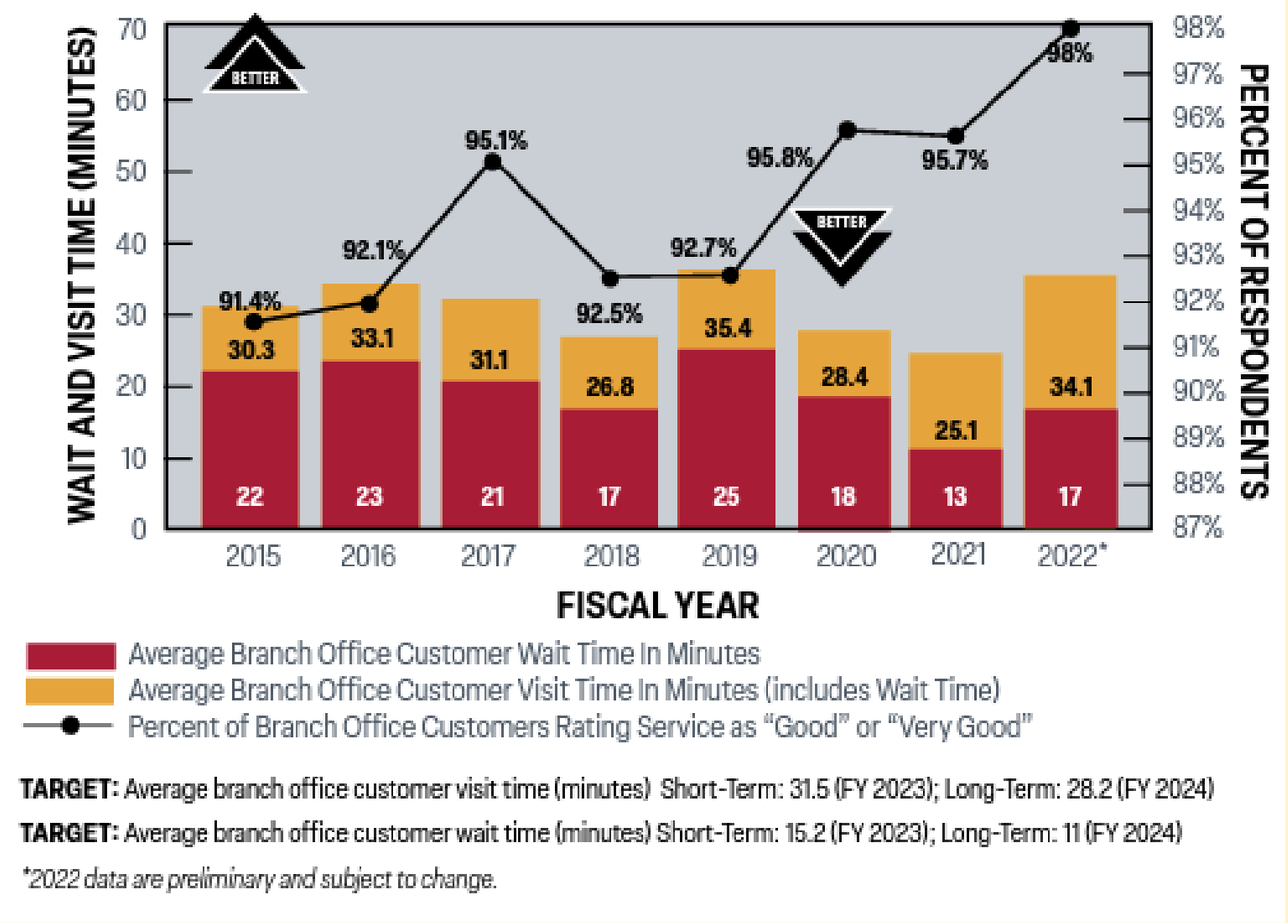
Source: 2023 Annual Attainment Report On Transportation System Performance

Serve Communities and Support the Economy

Objective 1: Enhance Marylanders' satisfaction with the transportation system and MDOT services.

Performance Measure:

b. MVA Branch Office Wait Time under 15 Minutes (MFR)



TARGET: Average branch office customer visit time (minutes) Short-Term: 31.5 (FY 2023); Long-Term: 28.2 (FY 2024)

TARGET: Average branch office customer wait time (minutes) Short-Term: 15.2 (FY 2023); Long-Term: 11 (FY 2024)

**2022 data are preliminary and subject to change.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Serve Communities and Support the Economy

Objective 2: Apply enhanced technologies to improve communication and to relay real-time information.

Proposed Performance Measure:

a. Percentage of modal administration assets that provide real-time information

Measure Details:

- *The purpose of this measure is to show how well the Department is providing real-time travel information to the traveling public.*
- *This is important to best serve our customers of all abilities in Maryland by all modes of transportation and all services provided.*
- *Proposal is that each modal administration would report this to MDOT in order to report an overall percentage.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Serve Communities and Support the Economy

Objective 3: Prioritize the transportation needs of underserved and overburdened communities in project selection and scoping.

Proposed Performance Measure:

a. Investment in equity emphasis areas (determine how best to measure progress towards equity goals)

Measure Details:

- *The purpose of this measure is to depict how well the Department is investing in transportation across the state to ensure everyone has access to transportation options.*
- *This could be a key metric of prioritizing the needs of underserved and overburdened communities is investment.*
- *Examples include those assets over which MDOT has jurisdiction, such as transit, transit stations and hubs, etc.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Serve Communities and Support the Economy

Objective 3: Prioritize the transportation needs of underserved and overburdened communities in project selection and scoping.

Proposed Performance Measure:

b. Access to Jobs within 45 minutes by car/60 minutes by transit for residents in equity emphasis areas

Measure Details:

- *The purpose of this measure is to show improvement towards access to jobs across Maryland.*
- *Measures accessibility for underserved and overburdened communities*
- *Need to refine measurement: census tract?*

MARYLAND DEPARTMENT OF TRANSPORTATION

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Proposed Performance Measure:

a. Access to Jobs within 60 minutes by transit

Measure Details:

- *The purpose of this measure is to show improvement towards access to jobs across Maryland.*
- *Measures accessibility for underserved and overburdened communities*
- *Measure is used by neighboring states and MPOs.*
- *Need to refine measurement: census tract?*

MARYLAND DEPARTMENT OF TRANSPORTATION

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Proposed Performance Measure:

b. Percent of 10 largest job centers in Maryland within 0.5 miles of a transit stop served by all-day frequent transit service

Measure Details:

- *The purpose of this measure is to show improved access to jobs/job centers across Maryland.*
- *Measure aims to show gaps in accessibility to opportunities.*
- *Would require coordination with local and regional land use.*

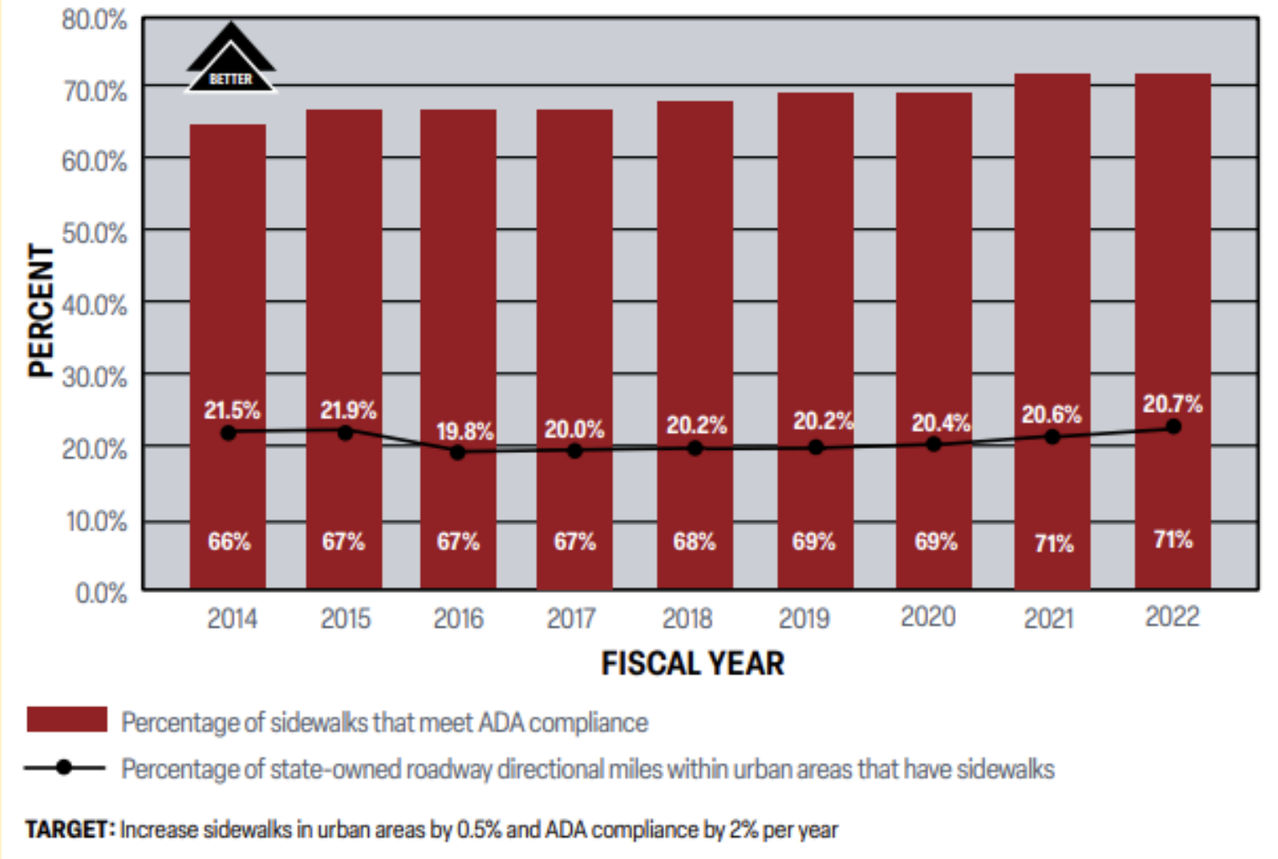
MARYLAND DEPARTMENT OF TRANSPORTATION

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Proposed Performance Measure:

b. Percent of Sidewalks that Meet ADA Compliance (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

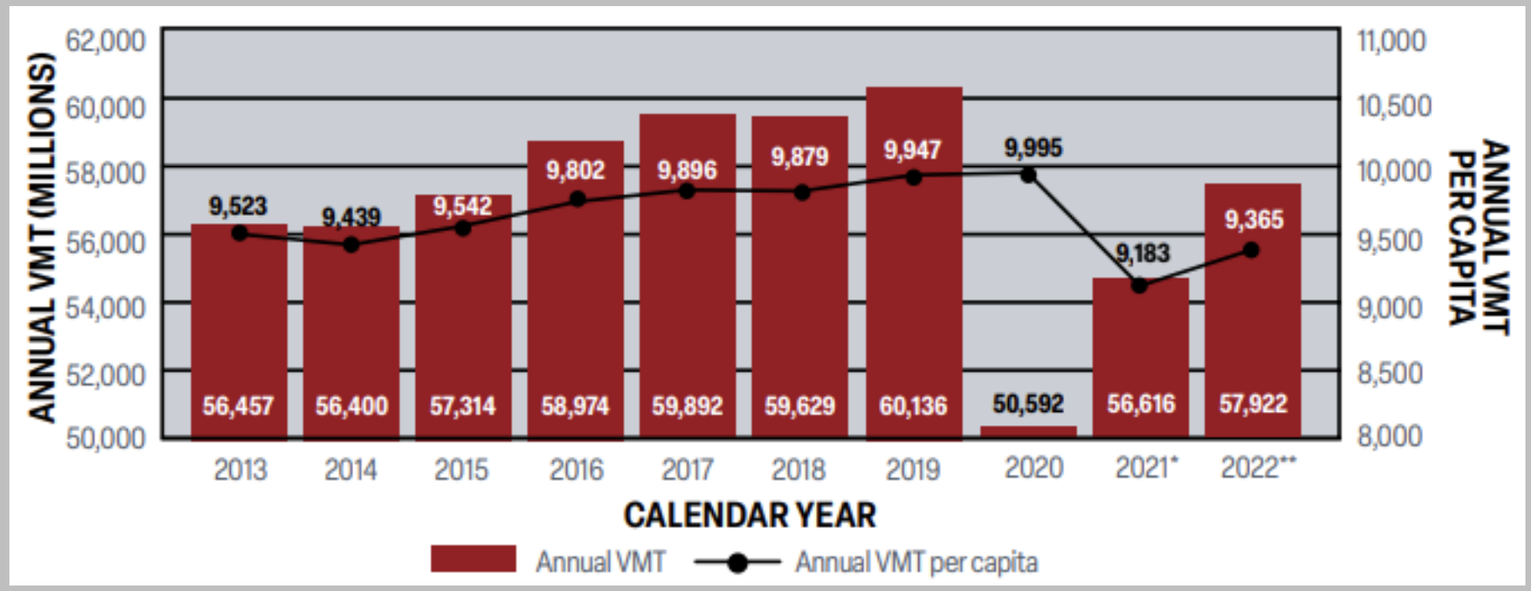
Source: 2023 Annual Attainment Report On Transportation System Performance

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Performance Measure:

c. *Vehicle Miles Traveled (VMT) and VMT per capita (MFR)*



Moved to Promote Environmental Stewardship

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Performance Measure:

d. Number of MDOT SHA centerline mileage with a LTS score of 2 or better

Measure Details:

- *Updated from bicycle level of comfort (BLOC), beginning in the last AR (2023). This transition is in coordination with the implementation of MDOT SHA's Context Driven Guide and other national and departmental initiatives.*
- *Data is already being collected through the recent update to the LTS model from SHA.*

LTS	TARGET AUDIENCE	BICYCLE FACILITY TYPES
0	All ages and abilities	A rail-trail, shared-use path
1	Almost everyone	Protected bikeways, sidepaths
2	Interested, but concerned	Bike lanes, bike boulevards
3	Enthused and confident	Bike lanes, shared lanes, shoulders
4	Strong and fearless	No bike facility or on arterial road-ways
5	Bike Access Prohibited	Bicycle access is prohibited by managing roadway agency

As MDOT continues to develop an LTS baseline, LTS roadway goals will be developed in conjunction with the Context Driven Guide and the Pedestrian Safety Action Plan (PSAP).

Source: 2023 Annual Attainment Report On Transportation System Performance

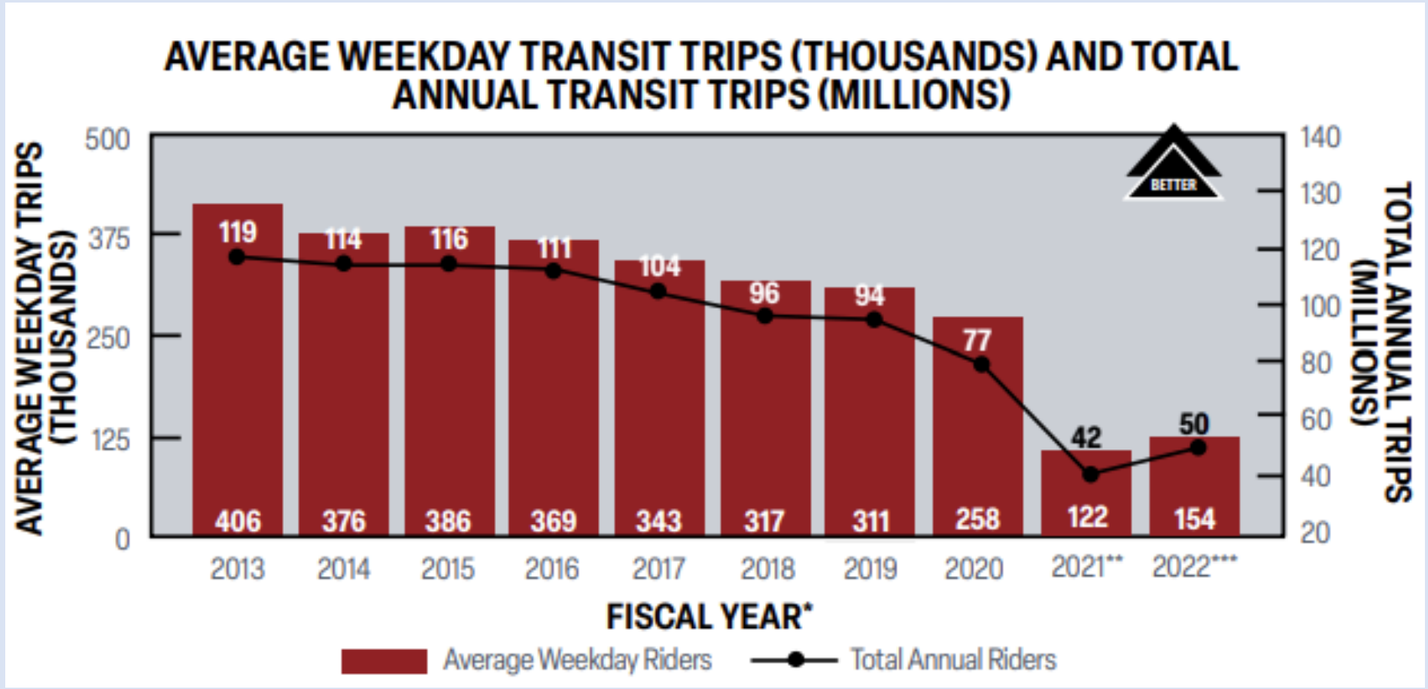
MARYLAND DEPARTMENT OF TRANSPORTATION

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Performance Measure:

e. MDOT MTA Average Weekday Transit Ridership (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Performance Measure:

f. Transit Ridership – MDOT MTA direct-operated services (thousands) (MFR)

FISCAL YEAR	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022**
TRANSIT RIDERSHIP–MDOT MTA DIRECT-OPERATED SERVICES (THOUSANDS)										
Local Bus	80,071	75,780	78,697	75,619	69,587	63,730	63,989	55,439	35,370	40,163
Baltimore Metro	15,208	14,632	13,901	12,222	10,960	8,738	7,275	5,864	1,616*	2,252
Light Rail	8,647	8,106	7,657	7,431	7,414	7,401	6,966	4,682	2,454*	2,910
TRANSIT RIDERSHIP–CONTRACTED SERVICES AND LOTS (THOUSANDS)										
MARC	9,062	9,168	9,246	8,962	9,185	9,322	9,191	6,677	846*	2,271
Contracted Commuter Bus	4,187	4,017	4,034	3,928	3,866	3,841	3,623	2,619	431*	809
Mobility Paratransit & Taxi Access	2,084	2,289	2,495	2,555*	2,745*	2,941	2,974	2,492	1,576*	1,831
Local Operating Transit System (LOTS)	40,281	42,500	39,441	38,476	39,818	41,096	32,866*	25,412	14,977*	16,538

1 Unlinked Passenger Trips (UPT): The number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Performance Measure:

g. *Transit Ridership – Contracted services and LOTS (thousands) (MFR)*

FISCAL YEAR	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022**
TRANSIT RIDERSHIP–MDOT MTA DIRECT-OPERATED SERVICES (THOUSANDS)										
Local Bus	80,071	75,780	78,697	75,619	69,587	63,730	63,989	55,439	35,370	40,163
Baltimore Metro	15,208	14,632	13,901	12,222	10,960	8,738	7,275	5,864	1,616*	2,252
Light Rail	8,647	8,106	7,657	7,431	7,414	7,401	6,966	4,682	2,454*	2,910
TRANSIT RIDERSHIP–CONTRACTED SERVICES AND LOTS (THOUSANDS)										
MARC	9,062	9,168	9,246	8,962	9,185	9,322	9,191	6,677	846*	2,271
Contracted Commuter Bus	4,187	4,017	4,034	3,928	3,866	3,841	3,623	2,619	431*	809
Mobility Paratransit & Taxi Access	2,084	2,289	2,495	2,555*	2,745*	2,941	2,974	2,492	1,576*	1,831
Local Operating Transit System (LOTS)	40,281	42,500	39,441	38,476	39,818	41,096	32,866*	25,412	14,977*	16,538

1 Unlinked Passenger Trips (UPT): The number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

MARYLAND DEPARTMENT OF TRANSPORTATION

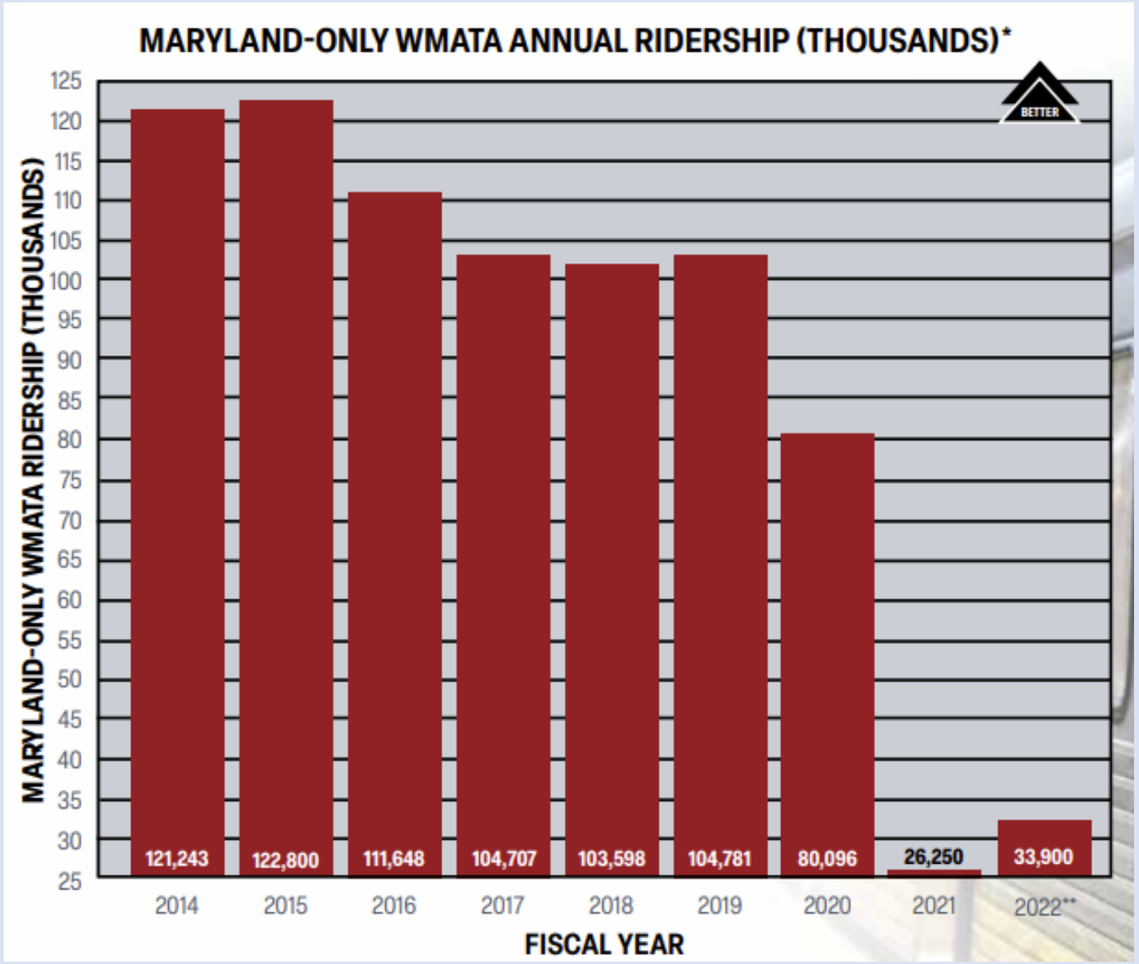
Source: 2023 Annual Attainment Report On Transportation System Performance

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Performance Measure:

h. Total Maryland – only WMATA annual ridership (MFR)



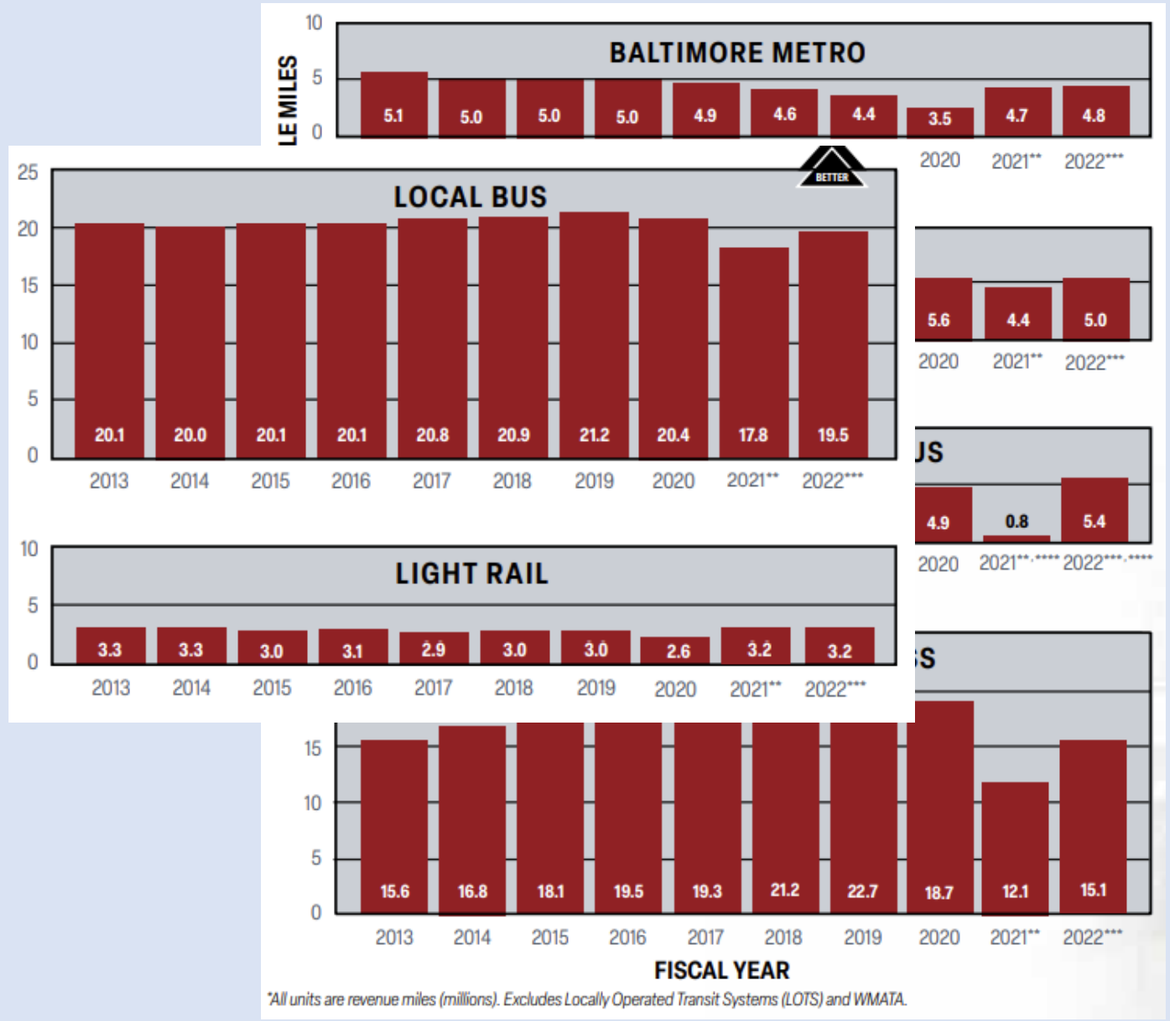
Source: 2023 Annual Attainment Report On Transportation System Performance

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Performance Measure:

i. Annual Revenue Vehicle Miles of MDOT MTA Service Provided (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Serve Communities and Support the Economy

Objective 4: Deliver a system that improves access to opportunities and quality of life by non-auto modes.

Performance Measure:

i. Commute Mode Share

	2013	2014	2015	2016	2017	2018	2019	2020*	2021**
DRIVE ALONE	73.5%	73.6%	73.6%	73.7%	73.7%	73.9%	73.9%	72.1%	62.2%
CARPOOL	10.0%	9.8%	9.8%	9.3%	9.5%	9.0%	8.9%	8.6%	7.0%
TRANSIT	8.9%	8.9%	8.9%	8.9%	9.0%	8.6%	8.4%	7.4%	3.0%
WORK AT HOME	4.2%	4.2%	4.2%	4.4%	4.2%	4.7%	5.0%	8.1%	24.0%
WALK	2.4%	2.3%	2.3%	2.4%	2.4%	2.3%	2.3%	2.1%	1.8%
OTHER***	0.8%	0.9%	0.9%	1.0%	0.9%	1.1%	1.2%	1.3%	1.8%
BICYCLE	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Serve Communities and Support the Economy

Objective 5: Increase transit-oriented development.

Proposed Performance Measure:

a. Percentage of all residents and residents 30% area median income (AMI) and below living within a half mile of a transit service station, stop, or hub

Measure Details:

- *The purpose of this measure is to show how transportation can improve access to jobs and opportunities.*
- *This measure shows how many Marylanders, especially those with a lower income, live within a ½ mile of transit.*
- *Metric provides information on socioeconomic equity in access to transit.*
- *Need to determine availability of the data to map this measure, may take some time and evaluation.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Serve Communities and Support the Economy

Objective 5: Increase transit-oriented development.

Proposed Performance Measure:

b. *Percent of higher educational centers within 0.5 miles of a transit stop served by all-day frequent transit service*

Measure Details:

- *The purpose of this measure is to show how transportation can improve access to education opportunities.*
- *Metric serves as a measure of accessibility to educational opportunities.*
- *Need to learn more about the availability of the data to map this measure, may take some time and evaluation.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Serve Communities and Support the Economy

Objective 5: Increase transit-oriented development.

Proposed Performance Measure:

c. *Percent of head start centers within 0.5 miles of transit stop served by all-day frequent transit service*

Measure Details:

- *The purpose of this measure is to show transportation/transit access to day care centers to provide opportunities for those who need these facilities to work but don't have a vehicle.*
- *Metric provides information on socioeconomic equity in access to transit.*
- *Need to determine availability of data to map this measure, may take some time and evaluation.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Serve Communities and Support the Economy

Objectives	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
Enhance Marylanders' satisfaction with the transportation system and MDOT services.	X	X	X	X	X
1. Overall Satisfaction with MDOT – U of M survey results OR MDOT MTA Customer Satisfaction Survey Results 2. MVA Branch Office Wait Time under 15 Minutes (MFR)					
Apply enhanced technologies to improve communication and to relay real-time information.				X	X
1. Percentage of modal administration assets that provide real-time information					
Prioritize the transportation needs of underserved and overburdened communities in project selection and scoping.	X				
1. Investment in equity emphasis areas (determine how best to measure progress towards equity goals) 2. Access to Jobs within 45 minutes by car/60 minutes by transit for residents in equity emphasis areas					
Deliver a system that improves access to opportunities and quality of life by non-auto modes.	X			X	
1. Access to Jobs within 60 minutes by transit 2. Percent of 10 largest job centers in Maryland within 0.5 miles of a transit stop served by all-day frequent transit service 3. Percent of Sidewalks that Meet ADA Compliance (MFR) 4. Vehicle Miles Traveled (VMT) (MFR) 5. Number of MDOT SHA centerline mileage with a LTS score of 1 6. MDOT MTA Average Weekday Transit Ridership (MFR) 7. Transit Ridership – MDOT MTA direct-operated services (thousands) (MFR) 8. Transit Ridership – Contracted services and LOTS (thousands) (MFR) 9. Total Maryland – only WMATA annual ridership (MFR) 10. Annual Revenue Vehicle Miles of MDOT MTA Service Provided (MFR) 11. Commute Mode Share					
Increase transit-oriented development.	X			X	
1. Percentage of all residents and residents 30% AMI and below living within a half mile of a transit service station, stop or hub 2. Percent of higher educational centers within 0.5 miles of a transit stop served by all-day frequent transit service 3. Percent of head start centers within .5 miles of transit stop served by all-day frequent transit service					

MDOT
MARYLAND DEPARTMENT OF TRANSPORTATION

4D

Goal: Promote Environmental Stewardship

Promote Environmental Stewardship

Objectives	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
Protect and enhance the natural environment through avoidance, minimization, and mitigation of adverse impacts related to transportation infrastructure.		X	X		X
1. Water Quality Treatment to Protect and Restore the Chesapeake Bay					
Employ resource protection and conservation practices in project development, construction, operations, and maintenance of transportation assets.		X	X		X
1. Diversion rate and cost of disposing construction, demolition, and maintenance materials in landfills and incinerators 2. Annual Dredged Material Capacity Remaining for Harbor and Poplar Island Material (cubic yards) (millions) (MFR)					
Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.	X		X		X
1. Utility Electricity Use & Renewable Energy Generation 2. Transportation-Related Air Pollution Reduction (TPM) 3. VMT per capita 4. Percent of Electric Vehicles (EVs) registered from Total Registered Vehicles (MFR) 5. Percentage of MDOT fleet comprised of EVs (data not readily available) 6. GHG emissions from LDV VMT (light duty) vehicles and MHDV VMT (medium heavy duty) vehicles 7. Level 1 and level 2 charging ports per 1000 residents 8. Total number of EV AFCs/number that are certification-ready 9. Number of employee partners in Statewide TDM programs 10. Number of stations along EV Alternate Fuel Corridors (AFCs) that comply with federal minimum requirements/targets 11. Number of Vehicles Tested at VEIP (MFR) 12. VEIP Testing Compliance Rate of Vehicles Registered in Non - Attainment Counties					

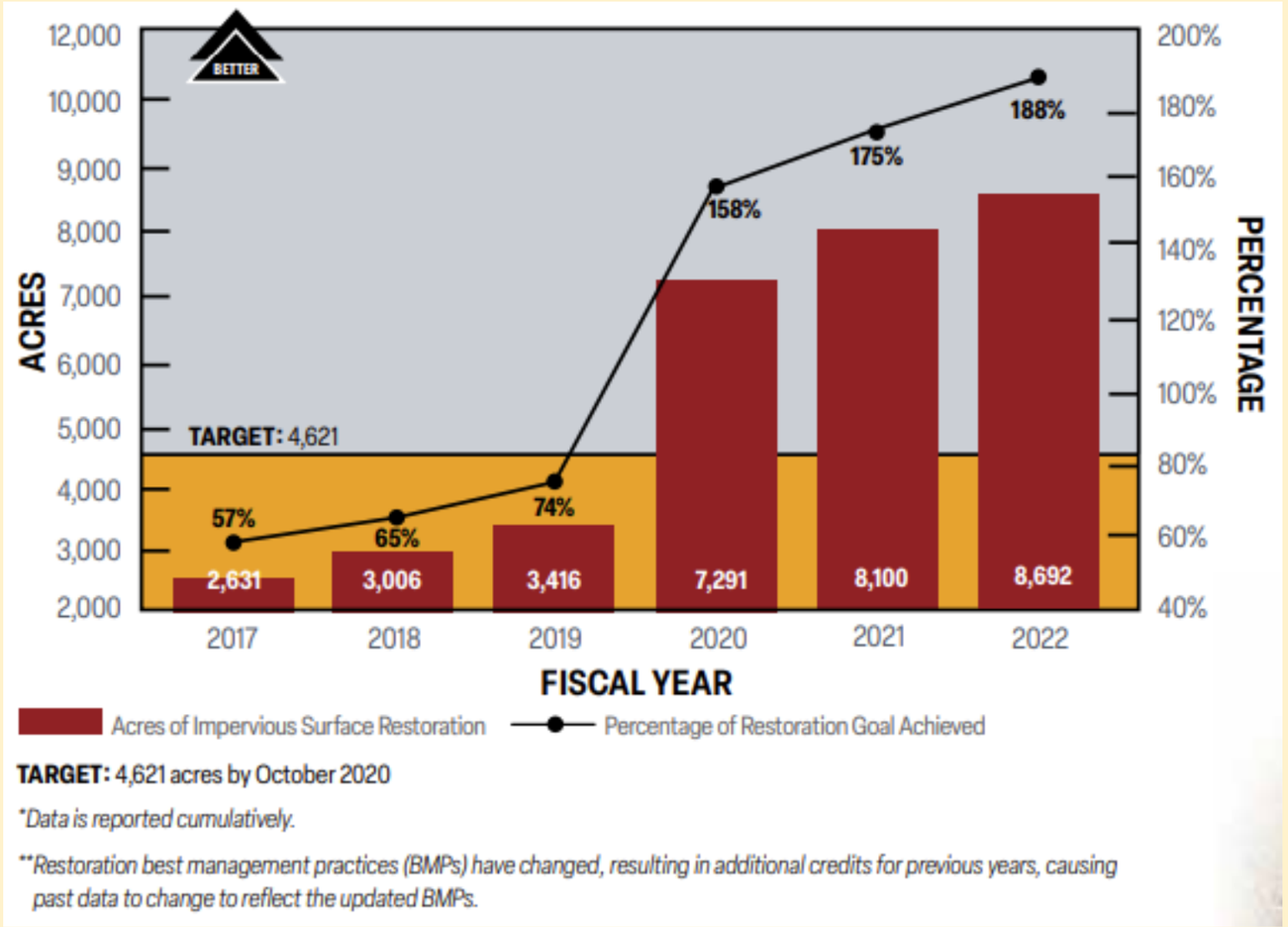
MARYLAND DEPARTMENT OF TRANSPORTATION

Promote Environmental Stewardship

Objective 1: Protect and enhance the natural environment through avoidance, minimization, and mitigation of adverse impacts related to transportation infrastructure.

Performance Measure:

a. *Water Quality Treatment to Protect and Restore the Chesapeake Bay*



MARYLAND DEPARTMENT OF TRANSPORTATION

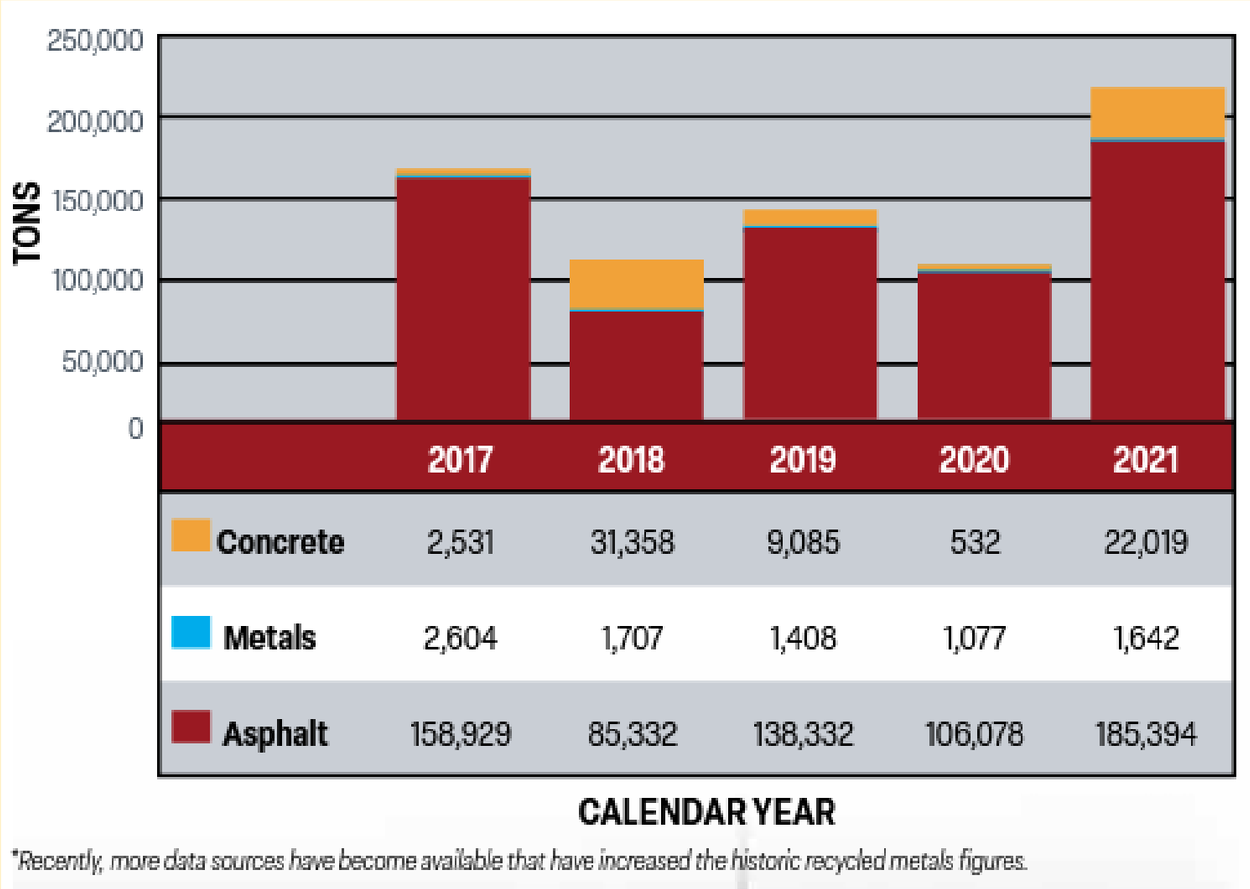
Source: 2023 Annual Attainment Report On Transportation System Performance

Promote Environmental Stewardship

Objective 2: Employ resource protection and conservation practices in project development, construction, operations, and maintenance of transportation assets.

Performance Measure:

a. *Diversion rate and cost of disposing construction, demolition, and maintenance materials in landfills and incinerators*



MARYLAND DEPARTMENT OF TRANSPORTATION

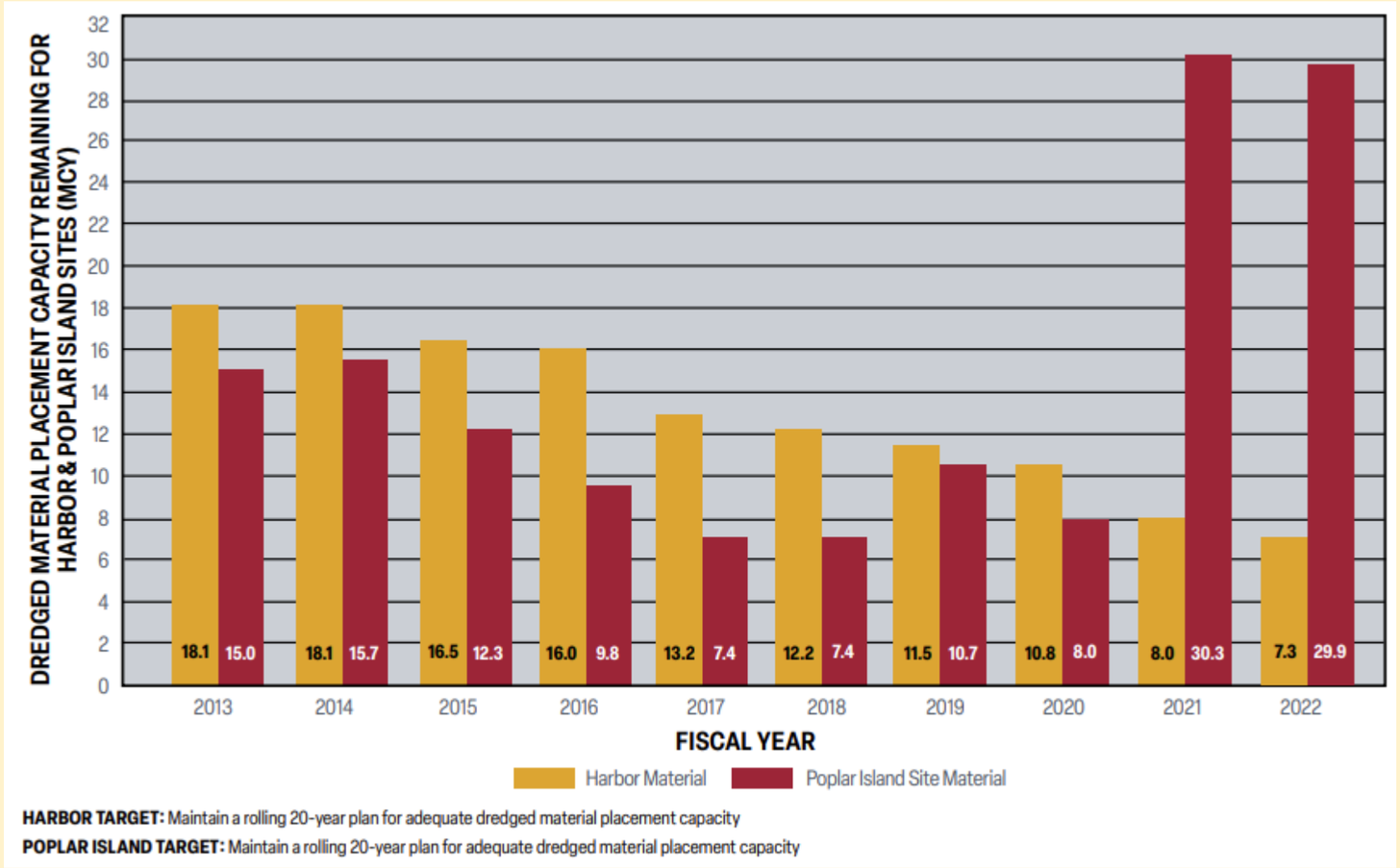
Source: 2023 Annual Attainment Report On Transportation System Performance

Promote Environmental Stewardship

Objective 2: Employ resource protection and conservation practices in project development, construction, operations, and maintenance of transportation assets.

Performance Measure:

b. Annual Dredged Material Capacity Remaining for Harbor and Poplar Island Material (cubic yards) (millions) (MFR)



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Promote Environmental Stewardship

Objective 3: Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.

MEGAWATT HOURS IN THOUSANDS (FY)	2017	2018	2019	2020	2021
Electricity Use	364	379	367	338	343
Renewable Energy Generation	1.629	1.431	1.275	1.127	1.155

Performance Measure:

a. *Utility Electricity Use & Renewable Energy Generation*

MARYLAND DEPARTMENT OF TRANSPORTATION

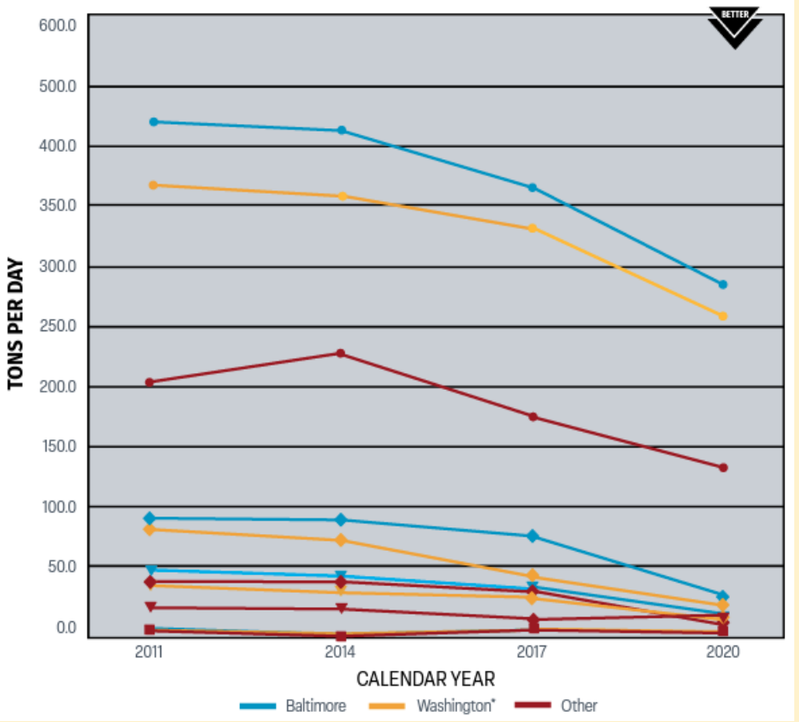
Source: 2023 Annual Attainment Report On Transportation System Performance

Promote Environmental Stewardship

Objective 3: Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.

Performance Measure:

b. Transportation-Related Air Pollution Reduction (TPM)



PERFORMANCE MEASURE	REGION	CALENDAR YEAR 2011	2014	2017	2020
▼ Volatile Organic Compound (VOC) Tons per Day	Baltimore	45.5	41.3	25.9	18.9
	Washington*	39.2	35.4	23.9	16.8
	Other	20.7	21.1	13.4	8.8
◆ Nitrogen Oxide (NOx) Tons per Day	Baltimore	89.5	79.5	53.7	33.4
	Washington*	74.4	63.3	45.3	27.7
	Other	44.4	44.2	32.8	20.1
● Carbon Monoxide (CO) Tons per Day	Baltimore	445.1	431.8	365	283.8
	Washington*	363.6	352.6	335.5	257.1
	Other	202.4	229.1	180.1	145.3
■ Particulate Matter (PM2.5) Tons per Day	Baltimore	3.5	3.4	2.2	1.3
	Washington*	2.9	2.7	1.9	1.1
	Other	1.4	1.5	1.1	0.6

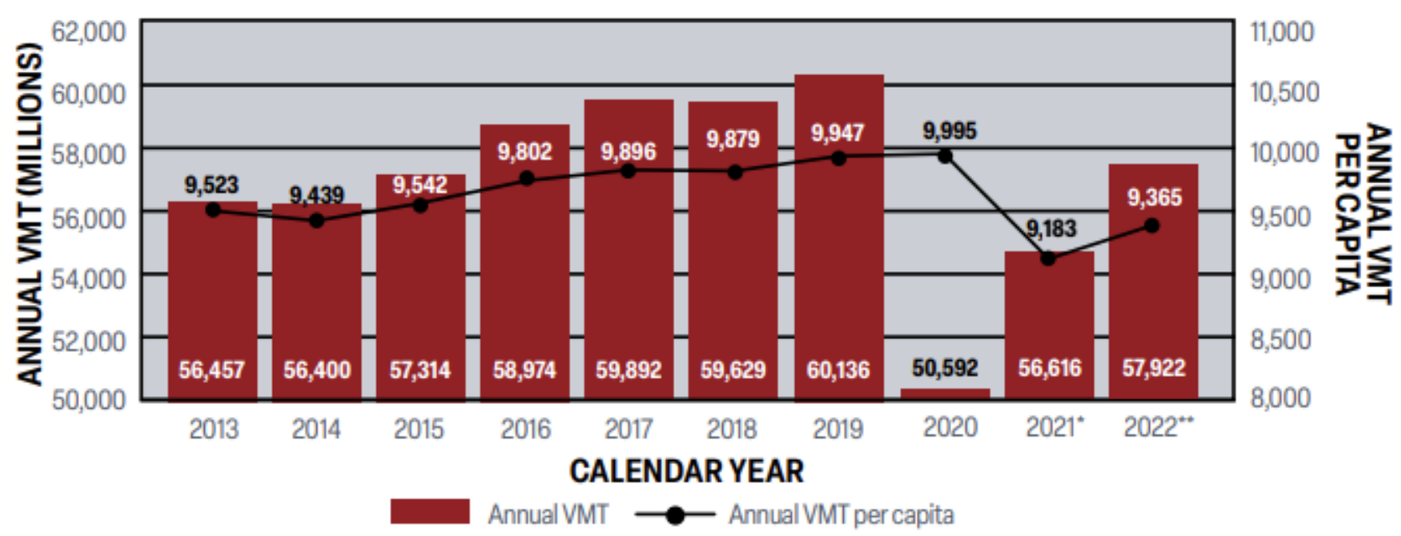
**Maryland portion of Washington region includes Montgomery, Prince George's, Frederick, and Charles counties.*

Source: 2023 Annual Attainment Report On Transportation System Performance

MARYLAND DEPARTMENT OF TRANSPORTATION

Promote Environmental Stewardship

Objective 3: Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.



Performance Measure:

c. VMT and VMT per capita

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

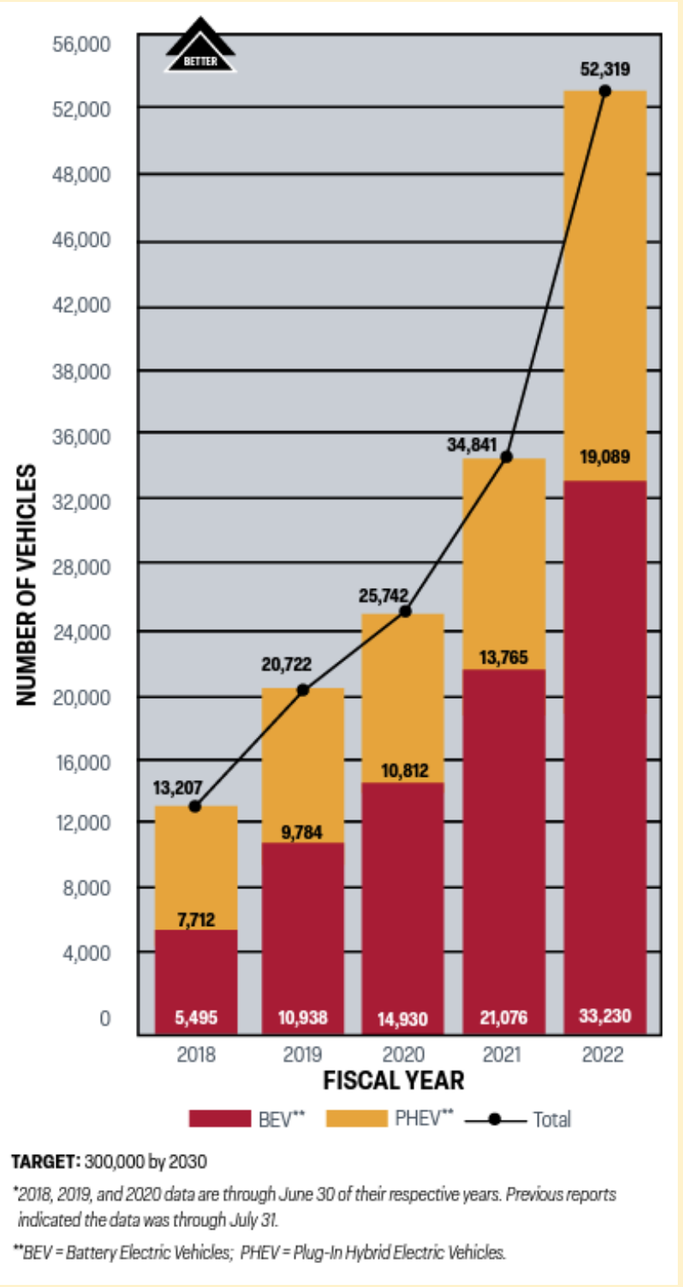
Deliver System Quality

Objective 3 : Modernize infrastructure most vital to maintaining system quality.

Performance Measure :

d. Percent of Electric Vehicles (EVs) registered from Total Registered Vehicles (MFR)

**Revising from Number to Percent*



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Promote Environmental Stewardship

Objective 3: Modernize infrastructure most vital to maintaining system quality.

Proposed Performance Measure:

e. Percentage of MDOT fleet comprised of EVs

Measure Details:

- *The purpose of this measure is to show the growth in EVs in the Department fleet.*
- *Climate Solutions Now Act (CSNA) contains language to advance this measure from FY23 going forward.*
- *A possible amendment may be: "Number of EVs for MDOT's Fleet approved for purchase in the prior fiscal year." This one is attainable from the approved budget annually and data is currently available.*
- *Is this all vehicles (including LDV and MHDVs?)*
- *Will need to work within MDOT to parse the data as data is not readily available at present.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Promote Environmental Stewardship

Objective 3: Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.

Proposed Performance Measure:

f. GHG emissions from LDV VMT (light duty) vehicles and MHDV VMT (medium heavy-duty) vehicles

Measure Details:

- *The purpose of this measure is to show the growth in Maryland light-duty and medium heavy-duty vehicles.*
- *Measures emissions annually from vehicle miles traveled.*
- *This metric has data already collected by MDOT.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Promote Environmental Stewardship

Objective 3: Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.

Proposed Performance Measure:

g. *Level 2 and DC Fast Charger charging ports per 1000 residents*

Measure Details:

- *The purpose of this measure is to show the growth in EV infrastructure across Maryland.*
- *The measure focuses on level 2 chargers and DC fact chargers.*
- *Metric provides information on the density of available electric vehicle charging.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Promote Environmental Stewardship

Objective 3: Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.

Proposed Performance Measure:

h. *Total number of EV AFCs/number that are certification-ready*

Measure Details:

- *This metric provides insight on the alignment with statewide EV and alternative fuel corridor (AFC) planning.*
- *This measure ties in with the federal formula program, National Electric Vehicle Infrastructure (NEVI) plan, which Maryland developed in 2022.*
- *Data provided by MDOT.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Promote Environmental Stewardship

Objective 3: Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.

Performance Measure:

i. *Number of employee partners in Statewide TDM programs*

Measure Details:

- *This metric provides information on partnerships with employers with transportation benefits to promote alternative transportation (to SOV) in order to minimize fossil fuel consumption.*
- *MDOT and TDM specialists across Maryland work with employers to develop TDM programs.*
- *Employers who fill out the survey and become partners provide information for this metric.*
- *MWCOG has a database of employers in the Washington region for additional data, and as a partner in this effort.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Deliver System Quality

Objective 3: Modernize infrastructure most vital to maintaining system quality.

Proposed Performance Measure:

j. Number of stations along EV Alternate Fuel Corridors (AFCs) that comply with federal minimum requirements/targets

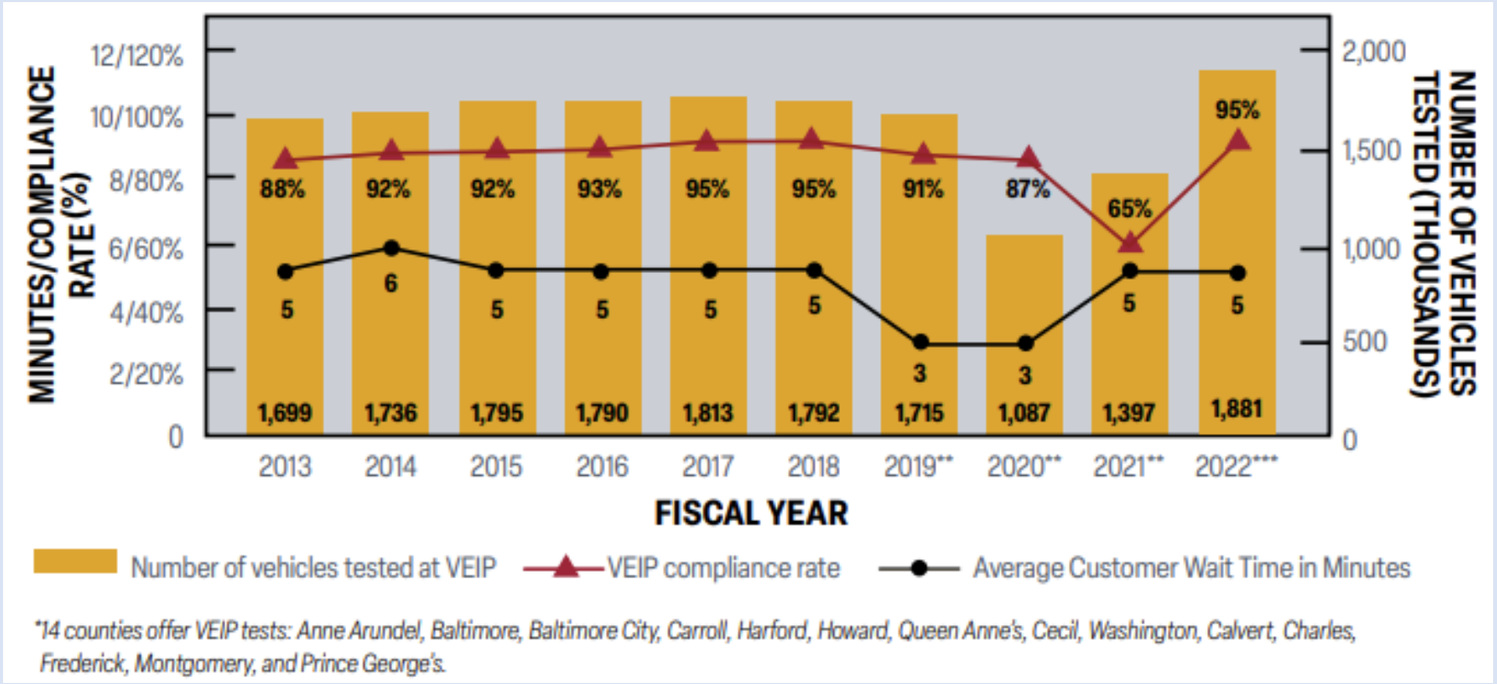
Measure Details:

- *This metric provides insight on alignment with statewide EV and alternate fuel corridor (AFC) planning.*
- *This measure ties in with the federal formula program, National Electric Vehicle Infrastructure (NEVI) plan, which Maryland developed in 2022.*
- *Data provided by the MDOT.*

MARYLAND DEPARTMENT OF TRANSPORTATION

Promote Environmental Stewardship

Objective 3: Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.



Performance Measure:

k. Number of Vehicles Tested at VEIP (MFR)

MARYLAND DEPARTMENT OF TRANSPORTATION

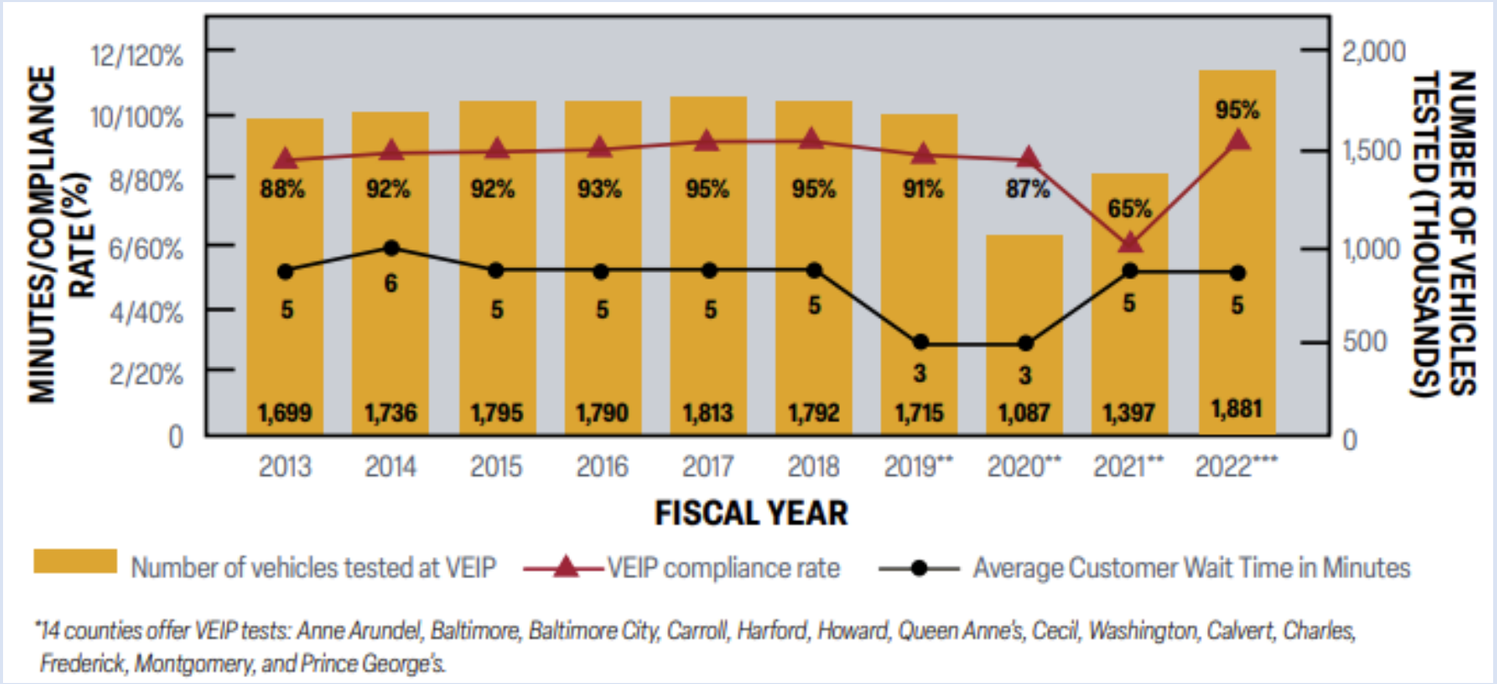
Source: 2023 Annual Attainment Report On Transportation System Performance

Promote Environmental Stewardship

Objective 3: Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.

Performance Measure:

l. Vehicle Emissions Inspection Program (VEIP) Testing Compliance Rate of Vehicles Registered in Non - Attainment Counties



MARYLAND DEPARTMENT OF TRANSPORTATION

Source: 2023 Annual Attainment Report On Transportation System Performance

Promote Environmental Stewardship

Objectives	Guiding Principles				
	Equity	Resilience	Preservation	Experience	Modernization
Protect and enhance the natural environment through avoidance, minimization, and mitigation of adverse impacts related to transportation infrastructure.		X	X		X
1. Water Quality Treatment to Protect and Restore the Chesapeake Bay					
Employ resource protection and conservation practices in project development, construction, operations, and maintenance of transportation assets.		X	X		X
1. Diversion rate and cost of disposing construction, demolition, and maintenance materials in landfills and incinerators 2. Annual Dredged Material Capacity Remaining for Harbor and Poplar Island Material (cubic yards) (millions) (MFR)					
Minimize fossil fuel consumption, reduce greenhouse gas emissions, improve air quality, and support the growth of alternative fuels.	X		X		X
1. Utility Electricity Use & Renewable Energy Generation 2. Transportation-Related Air Pollution Reduction (TPM) 3. VMT per capita 4. Percent of Electric Vehicles (EVs) registered from Total Registered Vehicles (MFR) 5. Percentage of MDOT fleet comprised of EVs (data not readily available) 6. GHG emissions from LDV VMT (light duty) vehicles and MHDV VMT (medium heavy duty) vehicles 7. Level 1 and level 2 charging ports per 1000 residents 8. Total number of EV AFCs/number that are certification-ready 9. Number of employee partners in Statewide TDM programs 10. Number of stations along EV Alternate Fuel Corridors (AFCs) that comply with federal minimum requirements/targets 11. Number of Vehicles Tested at VEIP (MFR) 12. VEIP Testing Compliance Rate of Vehicles Registered in Non - Attainment Counties					

MARYLAND DEPARTMENT OF TRANSPORTATION

05

Next Steps

Upcoming Meetings

- **ARAC Meeting #1 – May 23:** MDOT and CS team provide overview on the role of the ARAC, the State Report on Transportation, MTP, CTP, MDOT performance reporting, and performance measure selection criteria for the AR. The team will collect feedback on proposed goals and guiding principles and objectives and walk through the performance measures at a high level.

- **ARAC Meeting #2 – June 8:** Discuss performance measures and collect feedback on them (prioritizing 3-4 goals most relevant to MFR). Facilitated discussion will follow.

- **ARAC Meeting #3 – June 20:** Continue and complete discussion of performance measures.

- **ARAC Meeting #4 – July 11:** Review of proposed changes and measure alignment. Check requirements, data, and targets. Present the draft report. CS team to present on effective ways of presentation performance information. Discussion to include potential enhancements to AR format and online dashboard.

MARYLAND DEPARTMENT OF TRANSPORTATION

06

Public Comments

Thank you.
Questions?

MARYLAND DEPARTMENT OF TRANSPORTATION