

## APPENDIX K – Performance Management Measures / National Goals

### Performance Management Measures / National Goals

The FAST Act has continued the transition, started by MAP-21, of the nation's surface transportation program to a performance and outcome-based program, in which resources are invested in projects to achieve targets toward regional, state, and national goals. The bill established seven national goals described in 23 USC§150(b). The goals are:

1. Safety - Achieve a significant reduction in traffic fatalities and serious injuries on all public roads
2. Infrastructure Condition - Maintain the highway infrastructure asset system in a state of good repair
3. Congestion Reduction - Achieve a significant reduction in congestion on the National Highway System
4. System Reliability - Improve the efficiency of the surface transportation system
5. Freight Movement and Economic Vitality - Improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
6. Environmental Sustainability - Enhance the performance of the transportation system while protecting/enhancing the natural environment
7. Reduced Project Delivery Delays - Reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

The FHWA and FTA have published a series of rules that establish regulations to assess progress towards the seven national goals. The regulations direct states, MPOs and transit providers to establish targets and track specific measures related to the conditions and performance of their surface transportation systems in areas that include bridges, pavement, safety, congestion, freight, and transit asset management. States and MPOs are to incorporate the measures into their transportation improvement programs and long-range transportation plans, so that they can demonstrate how proposed transportation projects will help make progress towards the goals.

Based on federal guidance, MDOT is establishing statewide targets and measures, and it will be working closely with the MPOs throughout the process to coordinate the establishment of MPO performance targets. MDOT already tracks performance through its Annual Attainment Report, which provides information on measures of funding, investment, mobility, and safety, and the MPOs will produce similar reports after the State and MPO targets are set on a reoccurring schedule.

<http://arcg.is/1r04uH>

## System Performance Report

In addition to its long-standing efforts measuring progress through the annual AR, Managing for Results, and the MDOT Excellerator, MDOT established performance targets for safety, infrastructure condition, system performance, congestion mitigation, and air quality as per 23 U.S.C. 490. MDOT has a certified initial Transportation Asset Management Plan (TAMP) process. In addition, MDOT MTA has developed a TAMP as a Tier I transit agency and also coordinated with the local transit operators to develop a Group Transit Asset Management Plan for all of the State's Tier II transit systems as per 49 U.S.C 5326. MDOT will continue to coordinate these efforts with its other planning and programming processes as documented in State and regional long-range transportation plans and transportation improvement programs.

## Highway Safety

MDOT updates highway safety performance targets for the following safety measures through the annual HSIP. Development of annual targets is coordinated by MDOT with MPOs, FHWA, and National Highway Traffic Safety Administration.

Maryland maintains the TZD approach by developing interim targets to track progress to an aspirational goal to reduce overall fatalities and serious injuries by at least 50 percent by 2030, starting with a baseline in 2008. The annual targets are set using an exponential trend line connecting the historical data to the 2030 goals, as listed below. Five-year rolling averages of historical data are used to calculate annual targets, along with annual vehicle miles of travel, which reached 60 billion in calendar year 2017.

The MDOT MVA Maryland Highway Safety Office (MHSO) and MDOT SHA have adopted the Toward Zero Deaths (TZD) approach. TZD is a data-driven effort to reduce fatalities and serious injuries by developing strong leadership in organizations that directly impact highway safety. Maryland leaders continue to build partnerships with government agencies, private citizens, traditional safety advocates, and nontraditional partners to strengthen state and local efforts to improve the safety of our transportation system for all users.

Over the next 20 years...

MDOT will update the Maryland Strategic Highway Safety Plan (SHSP) (2016-2020) to guide a focused approach on specific emphasis areas and incorporate systemic safety implementation to complement the location focused approach to improve safety.

MDOT MHSO will support Maryland jurisdictions to develop a local SHSP, using the Maryland SHSP as a guide, and addressing local issues and strategies specific to each jurisdiction.

MDOT SHA will develop the annual Highway Safety Improvement Program (HSIP) to implement the SHSP, implement projects and strategies to reduce identified safety problems, and report annual highway safety performance targets.

MDOT will implement the strategies identified in this Plan and other Maryland safety plans to help Maryland achieve the safety goals and objectives of our community.

MDOT will strategically modernize infrastructure through new and innovative technology, enhanced partnerships, design standards, and practices to improve the safety of the movement of people and goods.

# Transit Asset Management

MDOT MTA has worked closely with the Tier II transit agencies across the State to develop a Group Transit Asset Management Plan (AMP) for its Locally Operated Transit Systems (LOTS). Maryland's 20 Tier II agencies participated in the MDOT MTA group plan. In addition, MDOT MTA has developed their own TAMP as have the other Tier I transit agencies that provide service in Maryland including Montgomery County and Prince George's County, and WMATA – an agency that provides service to the Washington Metro Region including parts of Maryland.

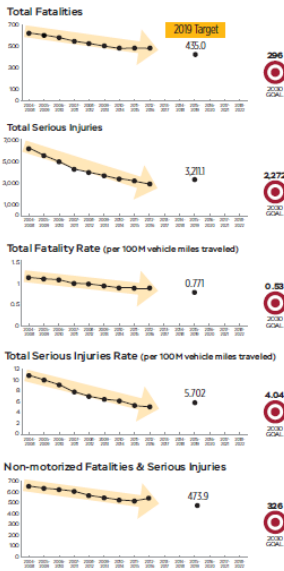
Investment prioritization occurs on an annual basis for Maryland's transit agencies. This investment prioritization incorporates the findings of each of the agencies' AMPs to work toward the annual targets. The AMPs will be updated on a regular basis to capture the improvements in the overall asset management process towards an increased state of good repair. MDOT will continue to coordinate with all of Maryland's transit providers to continue to work toward these asset targets.

## TRANSPORTATION PERFORMANCE MANAGEMENT (TPM) ESTABLISHED TARGETS FOR MARYLAND

The Maryland Department of Transportation (MDOT) established performance targets for Safety, Infrastructure Condition, System Performance, and Congestion Mitigation and Air Quality (CMAQ), as specified under 23 U.S.C. 490 - National Performance Management Measures.

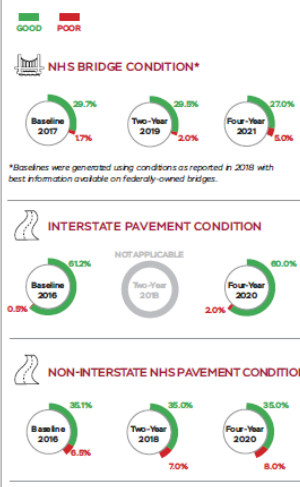
### TPM 1: SAFETY

Maryland has set highway safety performance targets, maintaining the Toward Zero Deaths (TZD) approach by developing interim targets to reduce overall fatalities and serious injuries by at least 50 percent in the next two decades, starting with a baseline of 2008 to an end goal in 2038. Five-year rolling averages are used to calculate five-year average targets for each of the safety measures.



### TPM 2: INFRASTRUCTURE CONDITION

Infrastructure condition targets for the National Highway System (NHS) in Maryland were developed through the Transportation Asset Management Plan (TAMP) process for the entire system, regardless of ownership. The NHS in Maryland is owned and maintained by federal, state, and local agencies.



The MDOT managed development of TPM 1: Safety targets through the MDOT Motor Vehicle Administration (MDOT MVA) Maryland Highway Safety Office and MDOT State Highway Administration (MDOT SHA) Office of Traffic and Safety. The MDOT SHA managed development of NHS Bridge condition targets through the Office of Structures and NHS Pavement condition targets through the Office of Materials Technology.

## TRANSPORTATION PERFORMANCE MANAGEMENT (TPM) ESTABLISHED TARGETS FOR MARYLAND

### TPM 3: SYSTEM PERFORMANCE, FREIGHT MOVEMENT, AND AIR QUALITY

The MDOT SHA Office of Planning and Preliminary Engineering led development of system performance/reliability targets for the NHS and Freight movement using national performance management research data set (NPMRDS) version 2.1 data accessed on May 7, 2018 through the University of Maryland Center for Advanced Transportation Technology MAP-21 Tool. Targets for applicable urbanized area were established by work groups with MDOT SHA and metropolitan planning organization representation. The on-road mobile source emissions targets were developed by the Office of Planning and Capital Programming at the MDOT Secretary's Office in March 2018.

#### CONGESTION MITIGATION

MEASURE AND TARGETS	2017	2019	2021
Percent of person-miles traveled on the Interstate System that are reliable	71.5%	72.1%	72.1%
Percent of person-miles traveled on the non-Interstate NHS that are reliable	82.0%	N/A	81.7%

#### TRAVEL TIME RELIABILITY

MEASURE AND TARGETS	2017	2019	2021
Truck travel time reliability index	1.87	1.87	1.88

#### AIR QUALITY (CMAQ)

MEASURE AND TARGETS for Urbanized Areas (as applicable)	2017	2019	2021
Annual hours of peak-hour excessive delay per capita - Baltimore, MD	20.2	N/A	22.6
Annual hours of peak-hour excessive delay per capita - Washington, DC/MD/VA	23.0	N/A	26.7
Annual hours of peak-hour excessive delay per capita - Philadelphia, PA/DE/MD/NJ	16.9	N/A	17.2

MEASURE AND TARGETS for Urbanized Areas (as applicable)	2016	2019	2021
Percent of non-single occupancy vehicle travel - Baltimore, MD	25.1%	24.8%	24.8%
Percent of non-single occupancy vehicle travel - Washington, DC/MD/VA	36.6%	36.9%	37.2%
Percent of non-single occupancy vehicle travel - Philadelphia, PA/DE/MD/NJ*	27.9%	28.0%	28.1%

MEASURE AND TARGETS	2017	2019	2021
On-road mobile source emissions reduction (volatile organic compounds)	4.91	6.73	8.14
On-road mobile source emissions reduction (nitrogen oxides)	53.24	88.91	124.00

Baseline performance is derived from the latest data available for each measure. Baseline data is from calendar year 2017 except for percent of non-single occupancy vehicle travel, which uses U.S. Census Bureau American Community Survey data from 2016. \*Two and four-year targets for the Philadelphia, PA/DE/MD/NJ urbanized area were established for 2018 and 2020, respectively.

For more information, please visit our MDOT SHA Transportation Performance Management website at <http://prop.is/MD4ult>  
October 2018

## MDOT MTA TIER 1 PERFORMANCE MEASURES & TARGETS

### Revenue Vehicle Performance Targets

% of assets at or past their useful life

Mode	Asset Class (NTD)	Initial Target	Year 2 Target	Year 3 Target
Bus	Bus (40')	4.7%	4.7%	0.00%
Metro	Heavy Rail	88.9%	88.9%	88.9%
Mobility	Automobile	4.4%	4.4%	4.4%

### Non-Facility Equipment (Non-Revenue Vehicles)

% of assets at or past their useful life

Asset Class (NTD)	Initial Target	Year 2 Target	Year 3 Target
Steel Wheel Vehicles	61.1%	61.1%	61.1%
Other Rubber Tire Vehicles (Service)	54.4%	54.4%	54.4%

### Facilities & Facilities-Based Equipment

% of assets rated below condition "3" on the TERM scale

Asset Class (NTD)	Initial Target	Year 2 Target	Year 3 Target
Administrative Facility	21%	21%	21%
Maintenance Facility	65%	65%	50%
Passenger Facility	17%	17%	17%
Parking Lot	58%	58%	50%

\* Estimates currently based on age of each facility's components. Per NTD requirements MDOT MTA is completing physical inspections at a rate of 25% of facilities over a four year period starting in 2018.

### Guideway Performance Targets

% of guideway under performance restriction

Mode	Initial Target	Year 2 Target	Year 3 Target
MARC	3.50%	3.50%	3.50%
Metro	3.50%	3.50%	3.50%
Light Rail	5.80%	5.80%	5.80%

## MDOT MTA TIER 2 PERFORMANCE MEASURES & TARGETS

### Tier 2 Targets

Statewide Local Operated Transit Systems Targets

Asset Class	Percent at or past FTA ULB (Current Performance)	FY19 Targets
Bus	17.3%	13.3%
Cutaway Bus	14.8%	10.8%
Automobile	42.9%	38.9%
Van	39.4%	35.4%
Trucks and Other Rubber Tire Vehicles	14.6%	14.6%
Administrative	10%	5.0%
Combined Administrative/Maintenance	30.8%	25.8%
Maintenance	40.0%	35.0%
Passenger/Parking	25.0%	25.0%