



Goal: Facilitate Economic Opportunity and Reduce Congestion in Maryland Through Strategic System Expansion

Invest in and pursue opportunities to promote system improvements that support economic development, reduce congestion and improve the movement of people and goods

OBJECTIVES:

- Pursue capital improvements to the transportation system that will improve access to jobs and tourism and leverage economic growth opportunities
- Improve the movement of goods within and through Maryland by investing in intermodal connections and improvements to reduce freight bottlenecks
- Strategically invest in expansion and operational improvements to reduce congestion along the multimodal transportation system

Maryland's economic success is closely tied to its extensive transportation system. Highways, railways and buses transport residents and visitors to their jobs, homes and vacation destinations throughout the State. Airports and the Port of Baltimore connect businesses with external goods and talent, from domestic and international markets. Trucks carrying billions of dollars of product annually traverse the State's roadways, along with railcars, container ships and cargo planes that also contribute billions of dollars of revenue within Maryland. A strategic investment in the transportation system is, therefore, a strategic investment in continued economic success and expansion.

MDOT SHA is proactive in its facilitation of economic opportunity. There are approximately \$3.6 billion worth of Maryland transportation projects including 470 construction projects. A \$281 million project on I-695 between I-70 and MD 43 will convert the shoulder for peak period travel use and upgrade the I-695/I-70



interchange in Baltimore County. Additionally, MDOT SHA has entered a \$7.6 billion Public-Private Partnership (P3) focused on adding managed lanes to I-495 and I-270 in Montgomery, Prince George's and Frederick counties.

MDOT MPA also continues to contribute to the economic prosperity of Maryland, recording a 14% increase in its container business between 2016 and 2017. The Port remains one of the few East Coast ports capable of receiving fully-laden post-Panama Canal expansion container ships. The Port of Baltimore generates about 13,650 direct jobs and 20,270 induced and indirect jobs which are responsible for \$2.9 billion in personal wages and salary and \$310 million in State and local tax revenues. In total, approximately 127,600 jobs in Maryland are linked to port activities. In addition, the average salary of a port generated direct job is 16% higher than the average Maryland salary.

BWI Marshall Airport also continues expanding, remaining the busiest in the Washington, D.C. area. More than 26 million passengers passed through BWI Marshall Airport in 2017, while several new international and domestic routes were added. Air cargo in Maryland also increased 40% from 2016 to 2017, and continues to increase in 2018.

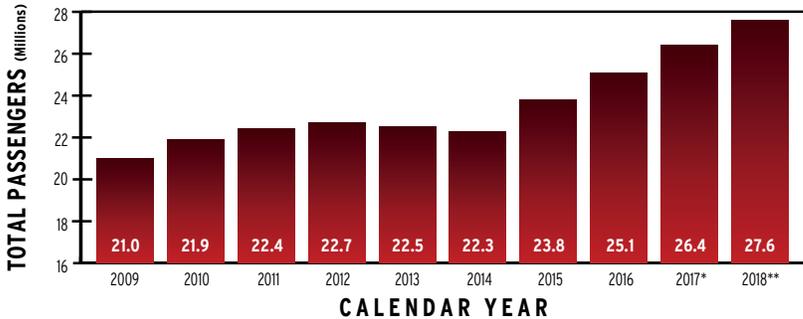
OBJECTIVE:

Pursue capital improvements to the transportation system that will improve access to jobs and tourism, and leverage economic growth opportunities.

BWI MARSHALL AIRPORT TOTAL ANNUAL PASSENGERS



Measures number of annual passengers using the BWI Marshall Airport.



* 2017 data revised from previous report.

** 2018 data is preliminary and subject to change.

Why Did Performance Change?

- BWI Marshall Airport has set three straight annual passenger records and strong growth continues in 2018; through May 2018, BWI Marshall Airport has set monthly passenger records in 34 of the past 35 months

What Are Future Performance Strategies?

- Continue to meet with both potential new entrant and current carriers to promote potential new air service opportunities to BWI Marshall Airport
- Focus BWI Marshall Airport advertising and awareness campaigns to passengers on the advantages and options the airport offers, such as air service parking and ground transportation options
- Continue to highlight BWI Marshall Airport as the "easy come, easy go" gateway to Baltimore and Washington D.C.

INTERNATIONAL CRUISES USING THE PORT OF BALTIMORE



Measures cruise business activity departing from the Port of Baltimore to foreign destinations.

FISCAL YEAR	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
Number of International Cruises using MDOT MPA's Terminal*	35	96	111	100	93	99	75	94	86	94

Target: Maintain two year-round cruise operations at the Port

* 2018 data is preliminary and subject to change.

Why Did Performance Change?

- Carnival Cruise Lines and Royal Caribbean International Cruise Lines offered year-round service from the Port of Baltimore; they report that ships are sailing at over 100% capacity with more than two people per cabin, which is good for revenue
- MDOT MPA made improvements to the Cruise Maryland terminal, including: new carpeting, new kiosks, Caribbean colors inside the terminal, a new VIP lounge, new bathrooms and wall dressings, electrical upgrades, an enclosed breeze way, a repaired gangway, a new public announcement system with visual monitors for the hearing impaired, and a new comfort trailer for waiting passengers during extreme weather conditions

What Are Future Performance Strategies?

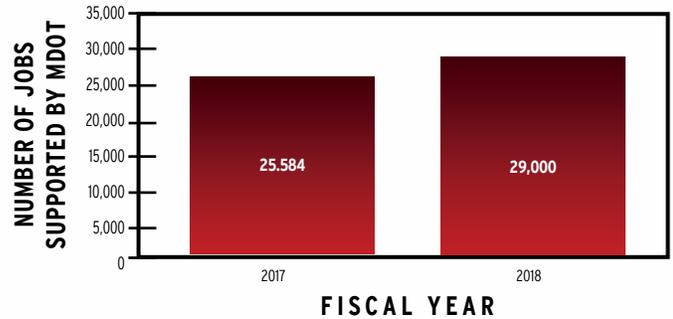
- Actively promote the Port as a convenient location for year-round cruising and expand consumer awareness of cruising from Baltimore
- Improve the terminal facility through enhancements to the exterior; exterior signage and vehicular entrance circulation
- Continue partnerships with existing cruise lines, while working with the Travel Industry to actively promote cruising from Baltimore
- Continue to pursue opportunities to bring additional cruise lines to sail regularly to/from the Port of Baltimore



JOBS SUPPORTED BY MDOT CAPITAL PROGRAM*

The annual CTP is used to identify planned investments by each TBU on major construction projects, which generate direct construction jobs, jobs supported by the business purchases necessary for the project's construction, and jobs supported by local purchases of goods and services by the direct employees. Capital investments in transportation infrastructure support economic activity across a wider region, beyond the specific project location.

Economic return from transportation investment is based on the estimated number of jobs created as a result of MDOT investments in capital projects. In FY 2018, approximately 29,000 jobs were supported in Maryland by MDOT, which is an increase of more than 3,400 jobs over FY 2017.



* This measure will be reported in the AR until the replacement measure, Change In Market Access and Productivity Due To Improvements In The Transportation Network, is ready for reporting.



OBJECTIVE:

Improve the movement of goods within and through Maryland by investing in intermodal connections and improvements to reduce freight bottlenecks

IMPROVING GOODS MOVEMENT: FREIGHT ORIGINATING AND TERMINATING IN MARYLAND

Maryland is a significant crossroad of goods and people movement as it is home to many freight-related industries. The State's key supply chains are comprised of mining, agriculture, pharmaceuticals, manufacturing and retail travel and rely on the safe and efficient mobility of the State's multimodal freight network. Through coordination, planning and strategic investments, Maryland and its freight partners aim to provide a world class multimodal transportation infrastructure that accommodates today's demand and identifies improvements to address future growth.

Freight Originating and Terminating In Maryland (2017)*

METHOD FOR MOVING FREIGHT	TOTAL VALUE (MILLIONS)	TOTAL TONNAGE (THOUSANDS) SATISFIED
Air	\$6,800	87
Other	\$1,143	62
Rail	\$13,231	29,046
Truck	\$303,855	204,476
Water	\$53,900	38.44
All Freight	\$391,380	263,132

* Source: U.S. Department of Transportation Freight Analysis Framework (FAF4) Version 4.4.1. that was refactored using 2016 data. To report 2018 data, a 3% annual growth rate was applied. FAF generates estimates based on a base year of data. Therefore, tonnage and values represented are estimates, not exact amounts. The water tonnage data based is for 2017, based on U.S. Army Corp of Engineers reporting.

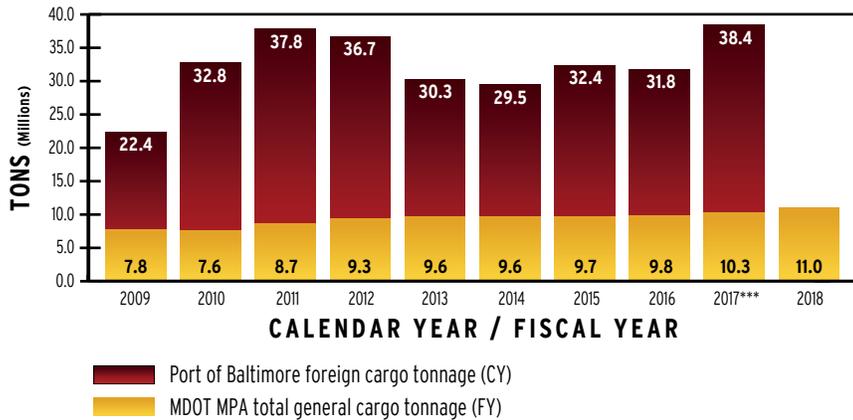
MDOT continues to invest in projects with the aim of facilitating freight movement throughout the State. After updating its Strategic Goods Movement Plan (SGMP) in 2017, MDOT is now in compliance with the requirements of the Fixing America's Surface Transportation (FAST) Act. As such, MDOT will seek every opportunity to apply for funding derived from the FAST Act, including Infrastructure for Rebuilding America (INFRA) and Better Utilizing Investments to Leverage Development (BUILD) grants. In December 2018, the MDOT MPA received a \$6.6 million BUILD grant for Seagirt Marine Terminal, to deepen a second container berth to allow the Port to handle two supersized container ships simultaneously.

Maryland's freight network is multimodal, spanning highways, railways, airports and waterways. Freight transportation traversing along Maryland's highways is the largest contributor to economic development in the State. In 2017, Maryland roadways and highways handled 83.5% of truck shipments in value or the equivalence of \$303.9 Billion of freight. By addressing bottlenecks and congestion-related issues, MDOT is ensuring that the State's largest contributor to freight movement continues to be competitive and viable for cargo shippers. The improvements underway will serve as long-term investments rather than short-term stopgaps in the interest of improving freight movement which also benefits the roadway experience for non-freight roadway users. MDOT will continue to collaborate with its freight industry partners to maintain and improve the State's capacity for freight across all modes.

PORT OF BALTIMORE FOREIGN CARGO AND MDOT MPA GENERAL CARGO TONNAGE*



Measures the amount of foreign and general cargo moving through the Port of Baltimore.*



* MDOT MPA cargo data is provided by fiscal year, but The Port information is reported using the latest full calendar year because The Port statistics combine data for public and private marine terminals that use different fiscal year reporting timeframes. Therefore, 2018 The Port data cannot be reported until early 2019.

** MDOT MPA general cargo includes both foreign and domestic waterborne cargo. The Port foreign cargo data for 2018 is an estimate.

*** 2017 data for The Port was revised from previous Attainment Report.

Why Did Performance Change?

- The Port of Baltimore's public and private marine terminals handled a total of 38.4 million tons of cargo worth \$53.9 billion in 2017; the Port also handled more containers and cars/light trucks in 2017 than any previous year in its history
- MDOT MPA's container tonnage increased 7.4%, automobile units were up 5.6% compared to the prior year, and roll on/roll off Roll on/Roll off (Ro/Ro); (farm, mining and construction equipment) increased 13%, POB remains the largest Ro/Ro port in the United States (U.S.)
- The Port of Baltimore ranked nationally as: #1 in Autos and Ro/Ro Heavy Equipment; #1 in imported Sugar and Gypsum; #2 in exported Coal; #9 in the U.S. in the value of foreign cargo (\$53.9 billion); and #12 in the U.S. in foreign cargo tonnage (38.4 million tons)
- MDOT MPA will make numerous terminal improvements such as increasing cargo space at Dundalk Marine Terminal and stabilizing and filling slips for increased cargo space
- In the first and second quarters of 2018, MDOT MPA's public marine terminals had back to back record quarters for general cargo
- Governor Hogan and the Board of Public Works approved a contract to fill in the wet basin at the Fairfield Marine Terminal, creating additional land for the Port's surging auto and Ro/Ro cargo
- A new Ro/Ro service to New Zealand and Australia via Hoegh Autolines began in March 2018 from the Port of Baltimore
- The MDOT MPA received \$1.1 million in federal port security grants to improve cybersecurity, upgrade technology and update the facility security program

What Are Future Performance Strategies?

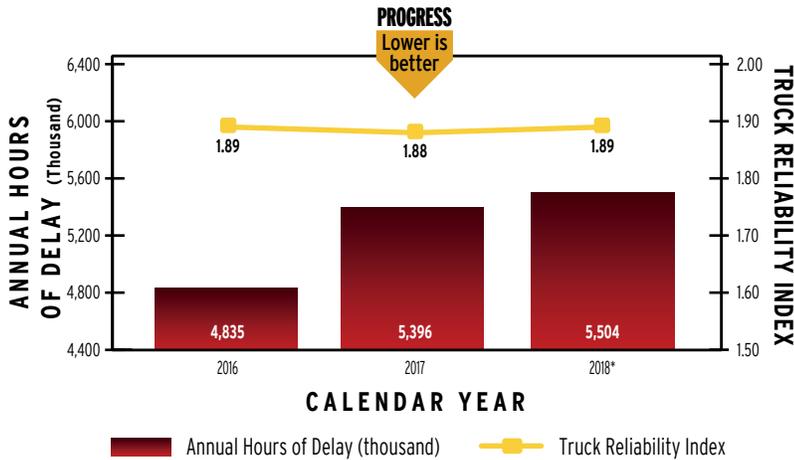
- MDOT MPA and its P3 partner, Ports America Chesapeake (PAC), will be renovating Seagirt Berth 3 to accommodate larger vessels coming through the expanded Panama Canal and MDOT MPA purchased the Point Breeze Business Center to accommodate future cargo growth
- Make rail and terminal improvements to facilitate heavy lift cargoes and growth in project cargo; work with CSX to obtain US Department of Transportation (USDOT) funding to expand the Howard Street Tunnel to allow double stacking of shipping containers to/from the Mid-west markets
- Target auto and machinery manufacturers to secure long-term contracts, and continue working to retain existing forest product customers
- Acquire and/or develop new land (i.e. Wet Basin, Mestek, Kurt Iron Slip and Fruit Slip, etc.) to allow for automobile cargo growth
- Offer exceptional services, world-class facilities and aggressive rates to keep and acquire customers
- MDOT MPA received a \$6.6 million BUILD grant for Seagirt Marine Terminal, to deepen a second container berth to allow the Port to handle two supersized container ships simultaneously
- Negotiate with goods manufacturers and international logistics providers to secure long-term contracts, construct new facilities that attract new cargo and retain existing customers



ANNUAL HOURS OF DELAY FOR TRUCKS, AND TRUCK RELIABILITY INDEX



Reliability and efficiency are critical for economic development and growth. Federal regulations mandate tracking Truck Reliability Index as a measure of the efficiency of truck freight movements on the MDOT highway network.



Target: 6,070 thousand hours of truck delay in 2021, Truck Reliability Index of 1.88 in 2021

* 2018 data is preliminary and subject to change.

Why Did Performance Change?

- A growing economy, historic low unemployment rates, and relatively low gas prices have resulted in higher usage of major corridors in peak hours
- Peak hours has a non-linear effect on congestion (i.e., even though peak hour demand grew by a smaller percentage, the congestion impacts were disproportionately higher)
- Demand is growing as urban truck delivery systems and ride-hailing and ride-sharing markets, like Uber and Lyft, experience record growth
- A whole host of system preservation projects and capital projects lead to additional delay in work zones and the surrounding network

What Are Future Performance Strategies?

- Major projects including the I-270 Innovative Congestion Management (ICM), Smart Signals and the I-95 Express Toll LanesSM (ETL), will significantly reduce congestion
- Partner with Metropolitan Planning Organizations (MPOs), other State and local agencies and the private sector to develop strategies to improve reliability on the State Highways and minimize delays
- Implement Intelligent Transportation System (ITS) infrastructure and advanced technological capabilities to manage non-recurring congestion like incidents, inclement weather, work zones, special events, etc., leveraging successful programs like the Coordinated Highways Action Response Team (CHART) Program
- Develop Transportation Systems Management and Operations (TSMO) solutions that provide active traffic management and integrated corridor management capabilities

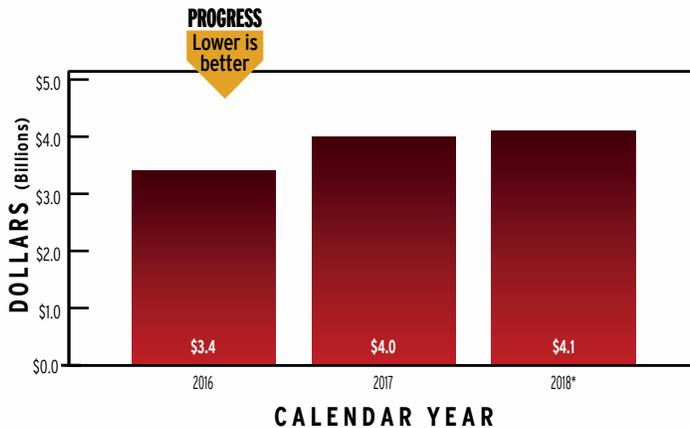
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ANNUAL COST OF CONGESTION (BILLIONS) ON THE MDOT HIGHWAY NETWORK



Reliability and efficiency are critical for quality of life, economic development and growth. The annual cost of congestion allows MDOT to measure the impact of congestion including travel time impacts as well as fuel and emissions impacts.



Target: \$4.6 billion in 2021

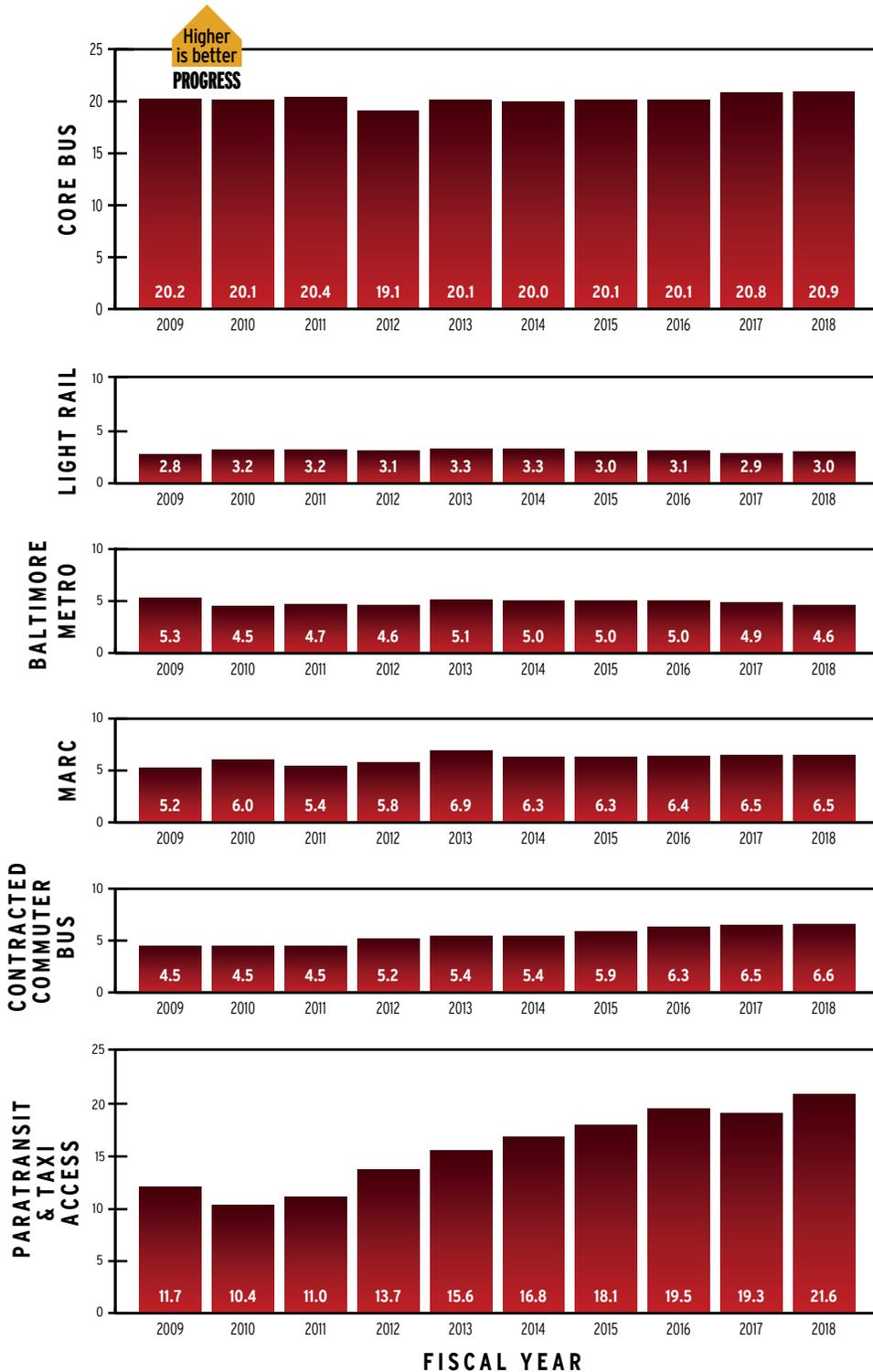
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ANNUAL REVENUE VEHICLE MILES OF TRANSIT SERVICE PROVIDED



Revenue vehicle miles, or each mile for which a transit vehicle is in service and accepting customers, indicates the level of transit service available to, and in use by, the general public.



Why Did Performance Change?

- MDOT MTA BaltimoreLink increased service thereby increasing the vehicle revenue miles
- New commuter bus routes were established, increasing service and vehicle revenue miles
- More people using MobilityLink (Paratransit) due to aging population means an increase in the total number of people that qualify for paratransit services
- Baltimore Metro SubwayLink continued to perform scheduled track repair and maintenance, having an impact on the revenue miles

What Are Future Performance Strategies?

- MDOT MTA is currently constructing the Purple Line, a 16-mile Light Rail line that will extend from Bethesda in Montgomery County to New Carrollton in Prince George's County; it will provide a direct connection to Metro SubwayLink, MARC, Amtrak and other local bus services, as well as several major economic centers, and will increase vehicle revenue miles through the increased service that will be provided
- MDOT MTA plans to increase MobilityLink (paratransit) service; more mobility service utilization will increase vehicle revenue miles

