



2017
MARYLAND
State Highway Mobility Report





Executive Summary

MD 22 @ Old Post Road



Executive Summary

The Maryland Department of Transportation State Highway Administration (MDOT SHA) continues to implement the Administration's transportation agenda to deliver safe, sustainable, intelligent, and exceptional transportation solutions with a focus on customer service. In order to address mobility challenges, MDOT SHA focuses on policies, programs, and projects with a performance-based and practical transportation approach that systematically addresses recurring and non-recurring congestion. The 2017 Maryland Mobility Report provides a summary of performance along MDOT facilities and the agency's efforts to improve mobility in calendar year 2016.

CONGESTION AND RELIABILITY TRENDS

The following is a summary of congestion and reliability trends on the Maryland highway system in 2016:

VEHICLE MILES OF TRAVEL (VMT)

- Maryland experienced an all time record number of vehicle miles of travel (VMT) on its roadway systems. This amounted to 59.0 billion which is a 2.9% increase over 2015.
- 71% of the statewide VMT occurred on MDOT facilities. The largest volume increase in VMT was on state facilities with almost a billion mile increase, over 2015.
- The Baltimore - Washington region VMT increased by approximately 1.3 billion miles to 46.4 billion. The VMT on the Eastern Shore, southern and western Maryland facilities was 12.6 billion, an approximate 0.4 billion mile increase over 2015 levels.

AVERAGE DAILY TRAFFIC (ADT)

- The highest volume roadway locations include:

HIGHEST AVERAGE DAILY TRAFFIC (ADT) SECTIONS

Freeway Section		2016 ADT (Thousands)
I-270	I-270 Split to MD 28	242-261
I-495	I-270 East to I-95	202-248
I-95/I-495	MD 4 to I-95	206-226
I-95	MD 32 to I-895	201-212
I-695	I-95 S to MD 26	186-208
Arterial Section		2016 ADT (Thousands)
MD 5	US 301 to MD 223	64-97
MD 3	US 50 to I-97	66-80
MD 650	MD 212 to US 29	46-79
MD 210	Ft. Washington Rd to I-95	68-75
MD 4	MD 223 to Forestville Rd	58-74

CONGESTION & RELIABILITY

- Motorists on the Maryland freeway/expressway system experienced heavy to severe congested conditions on 148 miles (9%) of the network in the AM peak hour. 246 miles (15%) of the network experienced heavy to severe congested conditions in PM peak hour. There was no change in AM and PM peak hour operations over 2015 levels.
- On the freeway/expressway system, 17% of the AM peak hour and 26% of the PM peak hour VMT occurred in congested conditions. This was a 1% decrease in both peak hour operations versus 2015.
- The two worse performing roadways for their entire length were I-695 in the AM peak hour (13 miles) and I-495 in the PM peak hour (19 miles) that operate in severe congestion.
- The cost of congestion to travelers on Maryland freeway/expressway system amounted to more than \$2.11 billion dollars annually. This is an increase of approximately \$59 million over 2015 levels.
- Highly to extremely unreliable conditions occur on 7% of the freeway/expressway system in the AM peak hour and 12% in the PM peak hour. The 2016 conditions showed an improvement of 1% and 2% respectively.
- Congestion cost on major arterials is estimated to be \$1.2 billion in the State.
- A failing level of service (LOS F) occurred at fifty-seven (57) state highway intersections based on traffic count data from the last three years. This included ten intersections that failed in both the AM and PM peak hours.





Monkton Road (MD 138)

What is in the **MARYLAND** State Highway Mobility Report?



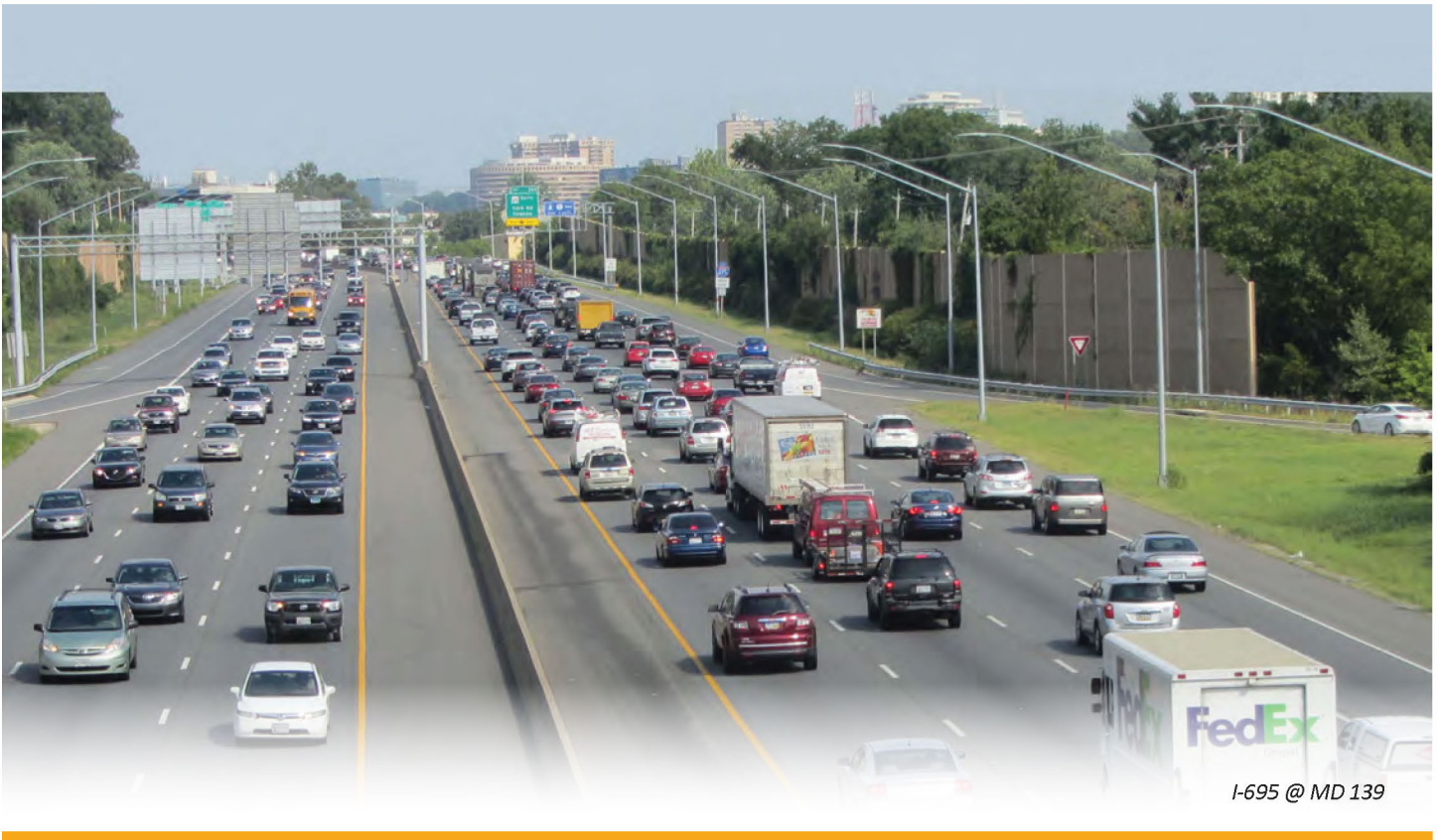
Introduction



The Maryland Department of Transportation (MDOT) aspires to support Maryland's economy and communities with the reliable movement of people and goods thru a well connected transportation system. MDOT State Highway Administration (MDOT SHA) is the transportation business unit (TBU) that owns, operates, and maintains the interstate, US and non-tolled MD routes in Maryland. In order to serve the citizens of Maryland and the travelling public, MDOT SHA has developed data driven methodologies to identify and address congestion issues. The Maryland State Highway Mobility Report showcases MDOT SHA's data driven transportation investments for safe, efficient, and reliable and movement of people and goods on our highway system. This includes monitoring existing travel trends, identifying successes, challenges, and strategies to improve the transportation services, that the MDOT SHA delivers to Marylanders and the traveling public. MDOT SHA continues to focus its efforts to systematically address both recurring (every day congestion) and non-recurring congestion (due to

weather, crashes, vehicle breakdowns, etc.) through practical transportation and innovation in technologies, solutions, and project delivery. While looking at the present investments, MDOT SHA also has an eye on the future with the advancement of connected vehicles and automated vehicles.

The 2017 Maryland Mobility Report describes performance and mobility trends in 2016 and compares the results to past years and identifies accomplishments. This follows a general theme of "What is Happening" and "What is MDOT SHA Doing and What are the Outcomes." Key elements reviewed include Transportation Systems Management and Operations (TSM&O), freight, multi-modalism, and major capital projects that were undertaken in the past year.



Maryland and MDOT Transportation Infrastructure

**MDOT SHA is responsible for
17,764 lane miles of roadway
and 2,567 bridges.**

**Interstate highways pass through
12 of Maryland 23 counties.**

Infrastructure

Today there are over 4.3 million licensed drivers in Maryland or about 71% of the population. The ability for them to move throughout the State is based on having a strong roadway infrastructure.

Roadways throughout the State are owned and maintained by various agencies. This includes cities and towns, private entities, counties, State, and federal agencies. MDOT SHA operates the numbered, non-toll routes in Maryland's 23 counties, a total of 17,764 lane-miles which includes all ramps, spurs, and service roads. These roadways are the highest type facilities and form the majority of the National Highway System (NHS) which includes interstate highways, freeways and major arterial roadways.



Chesapeake Bay Bridge

These roadways provide for both long distance travel and for access to major commercial, office and residential centers.

The State transportation network not only provides roadway connections but also multi-modal connectivity to airports, railroads, mass transit, and the Port of Baltimore. Figure I-1 identifies Maryland's transportation infrastructures.

Maryland's roadway network commenced in 1908 under the direction of the Maryland Roads Commission. Some of the earliest constructed roads include MD 2, MD 3, MD 4, MD 313, MD 404 and US 1 and US 40. The National Highway which later became US 40 was the first federally funded road between Cumberland, Maryland and Wheeling, West Virginia. The interstate system has a long history in Maryland ranging from President John F Kennedys dedication of the opening of I-95 in 1963 through the completion of I-97 which uniquely traverses through only one county and I-68 in western Maryland. Among the last segments of the initial interstate system to be completed include the I-95 Ft. McHenry Tunnel and I-70 through Frederick.

The quality of Maryland's roadway network is shown through various measures from a consumer and maintenance standpoint. Consumer surveys showed that Maryland roadways were rated the equivalent of 4 out of 5 stars. A measure of roadway quality based on the International Roughness Index identified that 87% of Maryland state roads were acceptable. Also, 79% of the roads were identified to be in preferred maintenance condition.

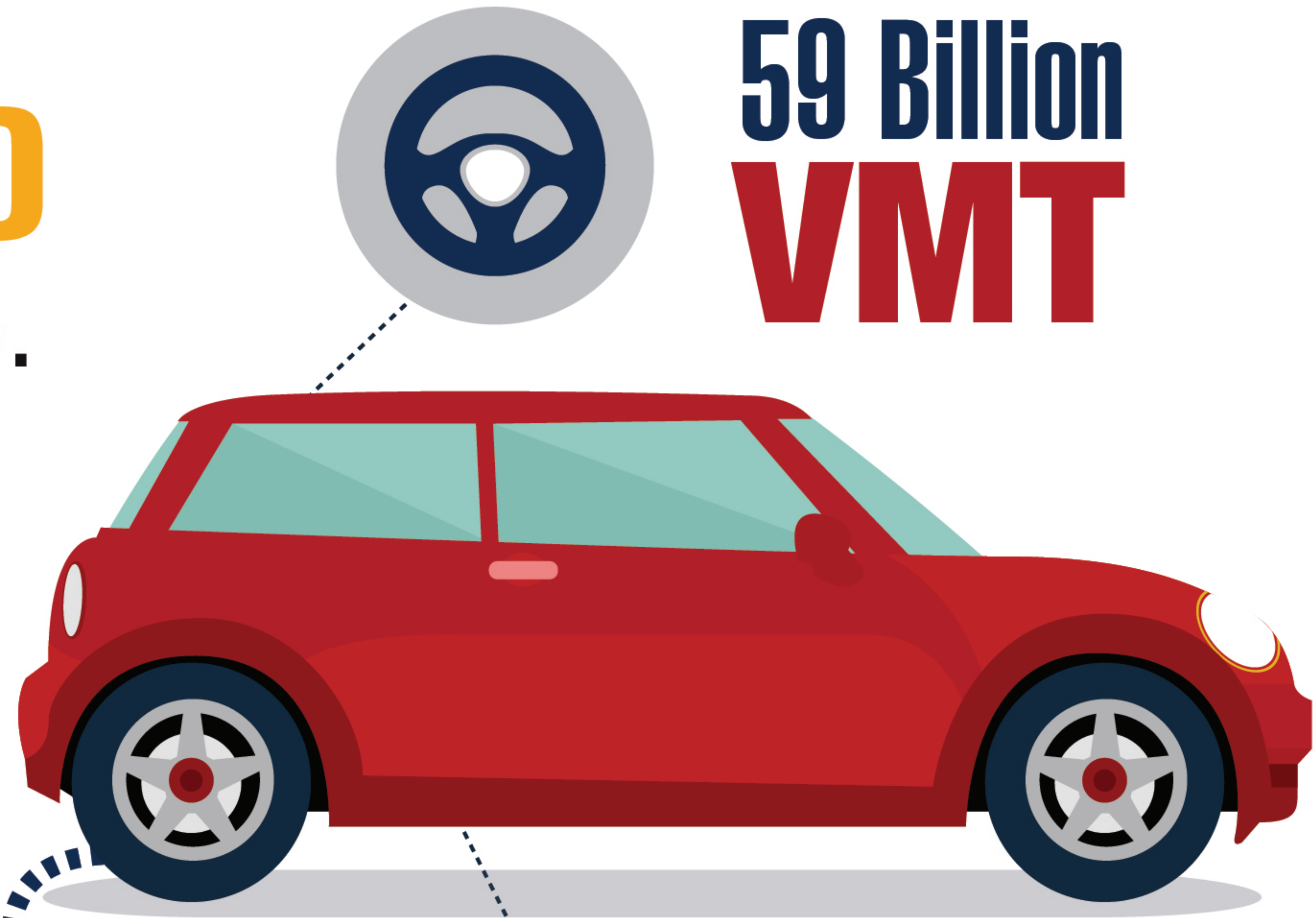
The MDOT SHA roadway network includes 2,567 bridges. These include some of the most distinctive structures such as the Chesapeake Bay Bridge which opened the ability to access points on the Atlantic Ocean and is recognizable worldwide. Bridges require constant maintenance and inspection. When bridges become structurally deficient, they need to be programmed for repairs. Less than 3% of the bridges in Maryland are considered structurally deficient. There has been a reduction of 56 deficient bridges between MDOT SHA and MDOT MDTA in the last eight years. In 2016, contracts were let or construction was taking place on 20 bridges with 14 more planned for repairs starting in 2017.

The MDTA owns and operates all toll roads in the state

including I-95 from the Baltimore City line (south side) to the Delaware State Line, I-895 including spurs to I-97 and MD 2, MD 695 from east of MD 10 to MD 151, the Hatem Bridge (US 40), the Chesapeake Bay Bridge (US 50/301), the Nice Bridge (US 301) and MD 200 (Intercounty Connector). The Key Bridge, Fort McHenry Tunnel, Harbor Tunnel, and Tydings Memorial Bridge are part of the MDOT MDTA system.

Maryland experienced an
ALL-TIME RECORD
number of VMT in 2016.

59 Billion
VMT



2.9% Increase
FROM 2015





MARYLAND TRANSPORTATION SYSTEMS MANAGEMENT & OPERATIONS