



# **EXCELLERATOR**

**Performance Management System**

Quarterly Report  
October 2017





# A Message From the Governor



“Our administration is committed to developing innovative solutions that deliver what Marylanders want – an affordable and reliable transportation system. By implementing a comprehensive program of accountability and continual improvements, we will deliver a better transportation system for the citizens of Maryland.”

“This is another step our administration is taking to Change Maryland for the Better!”

– **Larry Hogan**, *Governor*



The Maryland Department of Transportation and its Transportation Business Units proudly present the official mission statement.



## MISSION STATEMENT

**“The Maryland Department of Transportation is a customer-driven leader that delivers safe, sustainable, intelligent, and exceptional transportation solutions in order to connect our customers to life’s opportunities.”**

# A Message From the Secretary

My Fellow Marylanders,

I am proud that the Maryland Department of Transportation Excellerator Performance Management System is in its second year. We have made great strides in developing and implementing performance measures, refining strategies and focusing on delivering results for our customers.

Over the past year, we have created more than 150 individual performance measures that touch every aspect of our business throughout the organization. Whether we are building and maintaining our roads and bridges, running safe and efficient bus and rail systems, operating an international port and airport or improving the vehicle and driver registration process for Marylanders, we stand strong in our commitment and responsibility to deliver the best transportation products and services for our customers.

Every quarter we review our progress and share our results online for public inspection and within the organization through a live stream of our quarterly review meeting.

This allows all 11,000 MDOT employees the opportunity to see the impact of the work they do each day and how they contribute to running a safe and secure transportation system.

Most importantly, we are delivering results. As we respond faster to customer inquiries, become increasingly efficient in using our resources wisely and provide a stronger foundation for economic development for the State, we will continue to deliver exceptional customer service and create more value for those who live and travel throughout Maryland.

I invite you to continue to review our MDOT Excellerator program as we continue down the path of constant progress towards outstanding results.



**Pete K. Rahn**  
*Secretary*

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# Performance Measures Index

## Tangible Results

## Frequency Driver

Tangible Result # 1: Provide Exceptional Customer Service			Leslie Dews, MVA
1.1	Percent of Overall Customer Satisfaction	Annually (Oct.)	Sean Adgerson, MTA
1.2	Responsiveness to MDOT Customer Correspondence:		
	1.2a - Average Number of Days for Correspondence in the MDOT IQ System	Quarterly	Trey Hanna, MAA
	1.2b - Percent of Customer Contact Responded to within 24 hours (One Business Day)	Quarterly	Rick Powers, MPA
1.3	Customer Satisfaction with Receiving Goods and Services		
	1.3a - Percent of Abandoned Calls at Call Centers	Quarterly	Darol Smith, MDTA
	1.3b - Average Call Wait Times at Call Centers	Quarterly	Darol Smith, MDTA
	1.3c - Level of Satisfaction with Resolving Call Inquiries at Call Centers	Quarterly	Darol Smith, MDTA
1.4	Customer Satisfaction with Interactions with MDOT Representatives	Annually (Oct.)	Sabrina Bass, TSO
1.5	Customer Satisfaction with Website Information and Navigation of the MDOT Websites		
	1.5a - Percent of Customers Who Felt MDOT Websites Met Their Needs	Annually (April)	Lindsey Franey, SHA
	1.5b - Percent of Customers Who Felt that it was Easy to Find Desired Information on MDOT Websites	Annually (April)	Lindsey Franey, SHA
Tangible Result # 2: Use Resources Wisely			Corey Stottlemeyer, TSO
2.1	Percent Capital Dollars Spent as Programmed	Quarterly	Dan Favarulo, TSO
2.2	Percent of Projects Leveraging Other Funding Sources	Annually (April)	Tony Moore, MPA
2.3	Employee Engagement	Annually	Amber Harvey, MDTA
2.4	Employee Turnover Rate	Quarterly	Bret A. Dousharm, MDTA,
2.5	Time to Fill Vacancies	Quarterly	Debbie Hammel, SHA
2.6	Percentage of Fixed Asset Units Identified or Accounted for During the Annual Physical Inventory of Fixed Assets	Annually (Oct.)	Bill Bertrand, SHA
2.7	Managing Capital Assets		
	2.7a - Number of MDOT Structurally Deficient Bridges	Annually (Jan.)	Dan Favarulo, TSO
	2.7b - Percent of SHA and MDTA Roadway Miles with Acceptable (Smooth) Rides	Annually (April)	Sejal Barot, SHA
	2.7c - Rating of Rail in "Good" Condition	Annually (April)	Dan Favarulo, TSO
	2.7d - Percent of Channel Segments with U.S. Army Corps of Engineers Inspection Surveys Less Than or Equal to 1 Year Old	Annually (April)	Dan Favarulo, TSO
	2.7e - Percent of Interstate Pavement in "Acceptable" Condition	Annually (July)	Sejal Barot, SHA
	2.7f - Percent of Non-Interstate NHS Pavement in "Acceptable" Condition	Annually (July)	Sejal Barot, SHA

# Performance Measures Index

2.8	Percent of Procurements on Time and on Budget	Annually (Oct.)	Pretam Harry, MVA
2.9	Percent and Value of Unanticipated Contract Modifications	Annually (Oct.)	Pretam Harry, MVA
2.10	Relationship Between Procurement Competition and Cost	Quarterly	Scott Schell, MTA
2.11	Number of Internal Audit Findings and Number of Repeat Internal Audit Findings	Annually (Oct.)	Patrick Bradley, MAA
2.12	Number of Legislative Repeat Audit Findings	Annually (Jan.)	Patrick Bradley, MAA
2.13	Rate of Return on Real Property	Annually	David Maier, TSO
2.14	MDOT Fleet Vehicle On-Time Preventive Maintenance - <b>UNDER DEVELOPMENT</b>	Quarterly	Larry Kimble, MDTA
<b>Tangible Result # 3: Provide a Safe and Secure Transportation Infrastructure</b>			<b>Sarah Clifford, MDTA</b>
3.1	Number of Crimes Against Persons and Property Committed at MDOT Facilities	Quarterly	Bud Frank, TSO
3.2	Number of Traffic-Related Fatalities on All Roads	Quarterly	Thomas Gianni, MVA
3.3	Maryland Traffic-Related Fatality Rate (Highways)	Annually (Jan.)	Thomas Gianni, MVA
3.4	Number of Traffic-Related Serious Injuries on all Roads	Quarterly	Thomas Gianni, MVA
3.5	Maryland Traffic-Related Serious Injury Rate (Highways)	Annually (Jan.)	Thomas Gianni, MVA
3.6	Maryland Seat Belt Usage Rate	Annually (Jan.)	Gina Watson, MPA
3.7	Disabled Motorist Assisted by MDOT	Quarterly	Cedric Ward, SHA
3.8	Number of Employee Injuries Reported (First Report of Injury)	Quarterly	Cedric Johnson, MAA
3.9	Number of Employee Lost Work Days Due to Injuries	Quarterly	Cedric Johnson, MAA
3.10	Number of Customer Incidents at MDOT Facilities	Quarterly	Phil Thomas, MTA
3.11	Number of Employees Trained Under National Incident Management System (NIMS)	Annually	Bud Frank, TSO
<b>Tangible Result # 4: Deliver Transportation Solutions and Services of Great Value</b>			<b>Jason Ridgway, SHA</b>
4.1	Percent of Estimated Project Budget as Compared to Final Project Award	Annually (Oct.)	Terri Lins, MVA
4.2	Percent of Change for Finalized Contracts	Annually (Oct.)	Brian Miller, MPA
4.3	On-time Services and Solutions: Percent of Projects Completed by Original Contract Date	Annually (Oct.)	Bill Appold, TSO
4.4	Average Cost of Common Transportation Solutions and Services		
	4.4a - Minor Road Resurfacing	Annually (July)	Jim Harkness, MDTA
	4.4b - Major Road Resurfacing	Annually (July)	Jim Harkness, MDTA
	4.4c - Interstate Resurfacing	Annually (July)	Jim Harkness, MDTA
	4.4d - Average Bridge Replacement Cost	Annually (July)	Jim Harkness, MDTA
	4.4e - Average Bridge Redecking Cost	Annually (July)	Jim Harkness, MDTA

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	4.4f - Operating Cost Per Passenger Trip	Annually (Jan.)	Pat Keller, MTA
	4.4g - Operating Cost Per Revenue Vehicle Mile	Annually (Jan.)	Pat Keller, MTA
	4.4h - Passenger Trip Per Revenue Vehicle Mile	Annually (Jan.)	Pat Keller, MTA
	4.4i - Farebox Recovery Ratio	Annually (Jan.)	Shawn Ames, MAA
	4.4j - Cost Per Transaction (MVA)	Annually (Jan.)	Shawn Ames, MAA
<b>Tangible Result # 5: Provide An Efficient, Well Connected Transportation Experience</b>			<b>Phil Sullivan, MTA</b>
5.1	Reliability of the Transportation Experience		
	5.1a - Percentage of Tolls Collected as Cash	Quarterly	Scott Jacobs, MDTA
	5.1b - Average Truck Turn Time per Container Transaction	Annually (Jan.)	Jeffrey Gutowski, MPA
	5.1c - Average Wait Time (MVA)	Quarterly	Jeffrey Gutowski, MPA
	5.1d - On-Time Performance (MTA & MAA)	Quarterly	Robert Pond, MTA
	5.1e - Planning Time Index for Highway Travel	Annually (Jan.)	Roxane Mukai, MDTA
5.2	Restoring Transportation Services		
	5.2a - Average Time to Restore Normal Operations After Disruptions	Annually (April)	Joseph Sagal, SHA
	5.2b - Average Time to Restore Normal Operations After a Weather Event	Annually (April)	Joseph Sagal, SHA
5.3	Percent of Transportation Services and Products Provided Through Alternative Service Delivery (ASD) Methods	Semi-Annually (April & Oct.)	Negash Assefa, MVA
5.4	Functionality of Real-Time Information Systems (RTIS)		
	5.4a - Percent of Functional Real-Time Information Systems Provided	Quarterly	Ralign Wells, MAA
	5.4b - Customer Satisfaction with the Usefulness & Accuracy of Real-Time Information	Annually (July)	Ralign Wells, MAA
<b>Tangible Result # 6: Communicate Effectively With Our Customers</b>			<b>Diane Langhorne, TSO</b>
6.1	Communicate Effectively Utilizing Social Media		
	6.1a - Social Reach	Quarterly	Katie Bennett, MDTA
	6.1b - Social Engagement	Quarterly	Richard Scher, MPA
6.2	Satisfaction with Communication at Public Meetings	Quarterly	Sharon Rutzebeck, MVA
6.3	Communicate Effectively through News Releases		
	6.3a - Number of News Stories Generated from Major Releases	Quarterly	Jonathan Dean, MAA
	6.3b - Earned Media Value of Print and Broadcast Coverage Generated by News Releases	Quarterly	Valerie Burnette Edgar, SHA
	6.3c - Evaluate Tone of News Stories by Publications Generated from MDOT Releases	Quarterly	Valerie Burnette Edgar, SHA
6.4	Communicate Effectively to Customers with English Language Barriers	Quarterly	Lisa Dickerson, TSO
6.5	News Customers Can Use - Proactive Media Stories	Quarterly	Jonathan Dean, MAA

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<b>Tangible Result # 7: Be Fair and Reasonable To Our Partners</b>			<b>Wanda Dade, SHA</b>
7.1	Percentage of Minority Business Enterprise (MBE) Participation Achieved by Each TBU	Quarterly	Angela Martin, MAA
7.2	Number and Percent of Contracts Awarded to MBE Firms as the Prime Contractor	Quarterly	Angela Martin, MAA
7.3	Percent of Payments Awarded to Small Business Reserve (SBR) Contracts	Quarterly	Wonza Spann-Nicholas, MPA
7.4	Percent of Veteran Owned Small Business Enterprise (VSBE) Participation	Annually (Jan.)	Natalie Grasso, MVA
7.5	Level of Satisfaction of Our Business Partners	Quarterly	Luther Dolcar, MDTA
7.6	Number and Percent of Invoices Properly Paid to Partners in Compliance with State Requirements	Quarterly	David Lynch, MTA
7.7	Number of MDOT Procurement Protests Filed and Percent of Protests Upheld by the Board of Contract Appeals	Quarterly	Mike Zimmerman, TSO
7.8	Economic Impact of Supplier Diversity Program - <b>UNDER DEVELOPMENT</b>	Annually	Tracie Watkins-Rhodes, TSO
<b>Tangible Result # 8: Be a Good Neighbor</b>			<b>Simon Taylor, MAA</b>
8.1	Percent of MDOT Facilities that Meet or Exceed Our Neighbor's Expectations	Annually (April)	Anthony Crawford, SHA
8.2	Percent of MDOT Facilities that are ADA Compliant		Priya Iyer, MTA Terri Whitehead, MVA
8.3	Property Damage Claims		
	8.3a - Number of Property Damage Claims	Quarterly	Jill Lemke, MPA
	8.3b - Percent of Customers Satisfied with How Their Property Claim was Handled	Quarterly	Jill Lemke, MPA
8.4	Number of Traffic Violations While Driving a State Vehicle	Quarterly	Dave Seman, TSO
<b>Tangible Result # 9: Be a Good Steward of Our Environment</b>			<b>Dorothy Morrison, TSO</b>
9.1	Water Quality Treatment to Protect and Restore the Chesapeake Bay	Annually (Oct.)	Sonal Ram, SHA
9.2	Fuel Efficiency		
	9.2a - Miles Per Gallon	Annually (April)	Paul Truntich Jr., MDTA
	9.2b - Total Gallons Consumed	Annually (Oct.)	Paul Truntich Jr., MDTA
9.3	Percent of Maryland Recycling Act Materials Recycled	Annually (April)	Hargurpreet Singh, MVA
9.4	Recycled/Reused Materials from Maintenance Activities and Construction/Demolition Projects	Annually (April)	Barbara McMahon, MPA
9.5	Energy Consumption	Quarterly	Laura Rogers, TSO

# Performance Measures Index

Tangible Result # 10: Facilitate Economic Opportunity in Maryland			Jim Dwyer, MPA
10.1	Economic Return from Transportation Investment	Annually (Jan.)	Eric Beckett, SHA
10.2	Maryland's Ranking in National Transportation Infrastructure Assessment	Annually (Oct.)	Nicole Katsikides, SHA
10.3	Freight Mobility		
	10.3a - Freight Analysis Framework (FAF) Tonnage and Value of Freight	Annually (April)	Juan Torrico, MTA
	10.3b - Port of Baltimore International Cargo Market Share and Rankings	Quarterly	Juan Torrico, MTA
	10.3c - MPA Total General Cargo Tonnage including the following strategic commodities: Containers, Autos, Ro/Ro and Imported Forest Products	Monthly	Deborah Rogers, MVA
10.4	Number and Percentage of Bridges on the State-Owned System that are Weight-Posted	Annually (July)	Rafael Espinoza, MDTA
10.5	Change in Market Access due to Improvements in the Transportation Network	Annually	Corey Stottlemeyer, TSO
10.6	Change in Productivity due to Improvements in the Transportation Network	Annually	Corey Stottlemeyer, TSO
10.7	Total User Cost Savings for the Traveling Public due to Congestion Management	Annually (Jan.)	Eric Beckett, SHA
10.8	Percent of VMT in Congested Conditions on Maryland Freeways and Arterials in the AM/PM Peak Hours	Annually (Jan.)	Eric Beckett, SHA
10.9	Market Share		
	10.9a - Martin State Airport's Regional Market Share	Quarterly	Jack Cahalan, MAA
	10.9b - Percent of Nonstop Markets Served Relative to Benchmark Airports	Quarterly	Jack Cahalan, MAA
	10.9c - Percent of Passengers and Departing Flights Relative to Benchmark Airports	Quarterly	Jack Cahalan, MAA
10.10	Percent of Roadway Access Permits Issued within 21 Days or Less	Quarterly	Glen Carter, TSO

## TANGIBLE RESULT #1

# Provide Exceptional Customer Service



Every MDOT employee is responsible for delivering exceptional customer service by providing customers with respectful, timely and knowledgeable responses to all inquiries and interactions.

### RESULT DRIVER:

Leslie Dews

*Motor Vehicle Administration (MVA)*

# Provide Exceptional Customer Service

## TANGIBLE RESULT DRIVER:

Leslie Dews  
*Motor Vehicle Administration (MVA)*

## PERFORMANCE MEASURE DRIVER:

Sean Adgerson  
*Maryland Transit Administration (MTA)*

## PURPOSE OF MEASURE:

To track MDOT's progress towards its mission of providing exceptional customer service.

## FREQUENCY:

Annually (in October)

## DATA COLLECTION METHODOLOGY:

Data is collected through a standardized survey of randomly selected Marylanders.

## NATIONAL BENCHMARK:

American Customer Service Index.

## PERFORMANCE MEASURE 1.1

### Percent of Overall Customer Satisfaction

Marylanders expect that MDOT delivers exceptional services and products. Measuring our percent of overall customer satisfaction is the best way to determine how we are doing in our effort to deliver exceptional customer service. It also identifies areas of strength and areas of opportunities or weaknesses that we need to address.

From June 10-July 31, 2017, a survey was conducted by the Schaefer Center for Public Policy at the University of Baltimore for the purpose of gauging the satisfaction with and opinions of MDOT services across the State. Almost 900 Marylanders over the age of 18 participated in the telephone survey.

The results of the survey revealed that 87 percent of Marylanders are satisfied with the services received from MDOT. As compared to the American Customer Service Index (ACSI), MDOT's rating is equal to the highest ranked company of Chick-fil-a. This reflects MDOT's commitment to improving the products and services it offers.

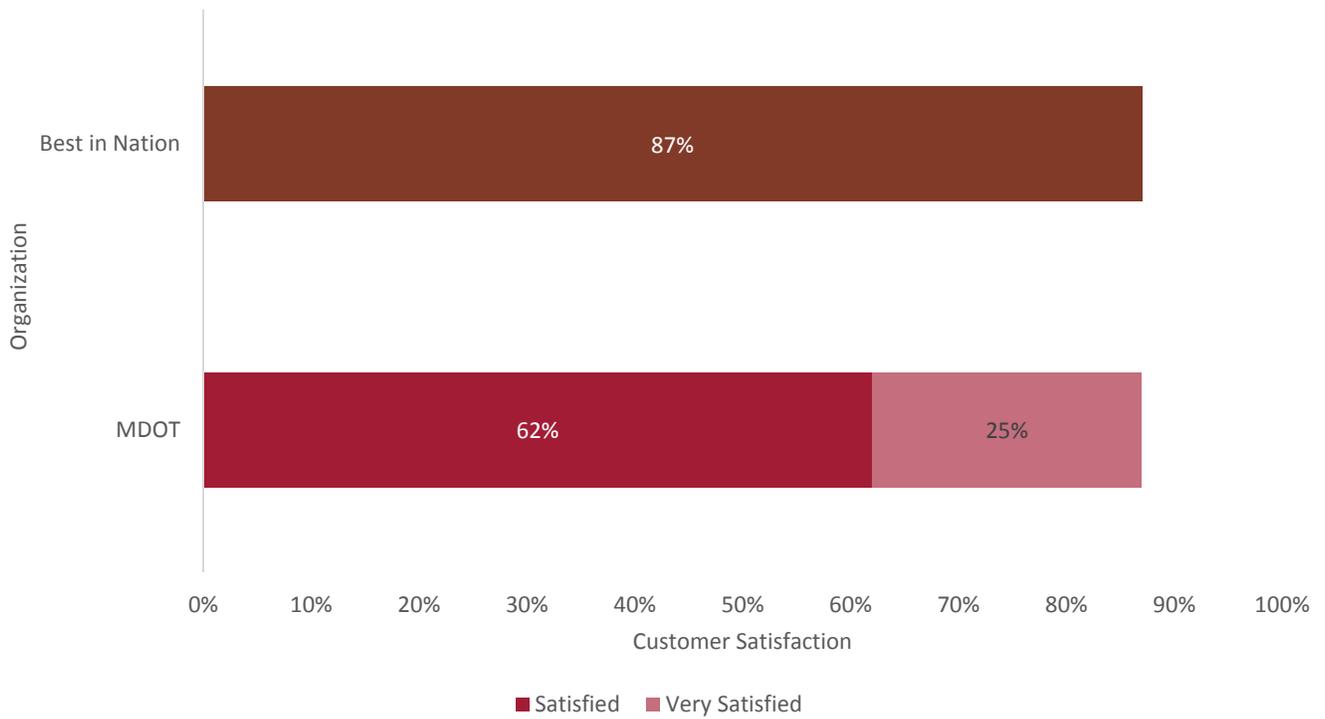
In addition to the overall customer satisfaction results, we were able to obtain more information on the MDOT services that matter the most to Marylanders. Services such as providing a safe highway system and clearing of roadways during snow storms are key to MDOT's customer satisfaction rating.

# Provide Exceptional Customer Service

## PERFORMANCE MEASURE 1.1

### Percent of Overall Customer Satisfaction

Chart 1.1.1: Overall MDOT Customer Satisfaction Rating CY2017



# Provide Exceptional Customer Service

## TANGIBLE RESULT DRIVER:

Leslie Dews  
*Motor Vehicle Administration (MVA)*

## PERFORMANCE MEASURE DRIVER:

Trey Hanna  
*Maryland Aviation Administration (MAA)*

## PURPOSE OF MEASURE:

To track responsiveness to customer inquiries.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

MDOT IQ system.

## NATIONAL BENCHMARK:

30 days (MDOT established benchmark).

## PERFORMANCE MEASURE 1.2A

### Responsiveness to MDOT Customer Correspondence: Average Number of Days for Correspondence in the MDOT IQ System

Timely response to customer correspondence communicates the importance MDOT places on addressing customer needs and demonstrates the organization's commitment to exceptional customer service. Inquiries, service requests, ideas, and concerns conveyed in customer correspondence often identify opportunities to improve the overall customer experience and satisfaction with MDOT.

For the period of April 1, 2017 through June 30, 2017, MDOT crafted 567 responses to customer correspondence assigned by the Governor's Office. The average number of days for MDOT response was 14 days. The total volume of responses increased from the previous quarter by 63 letters and the average number of days for MDOT response decreased by 8 days.

Several variables have a role in determining MDOT response time to customer correspondence. Factors such as legislative initiatives and other complexities can affect MDOT's ability to respond in a timely manner. These variables tend to lengthen response times.

MDOT continues to explore ways to improve responsiveness to customer correspondence. In June 2017, MDOT held its second mandatory training workshop with the Secretary and Governor's representative where updated guidelines and processes were presented. Additionally, MDOT continues to enhance management standards as well as improve coordination with the Governor's Office.

# Provide Exceptional Customer Service

## PERFORMANCE MEASURE 1.2A

Responsiveness to MDOT Customer Correspondence: Average Number of Days for Correspondence in the MDOT IQ System

Chart 1.2A.1: Average Number of Days to Respond to Correspondence in MDOT IQ System by TBU FY2017

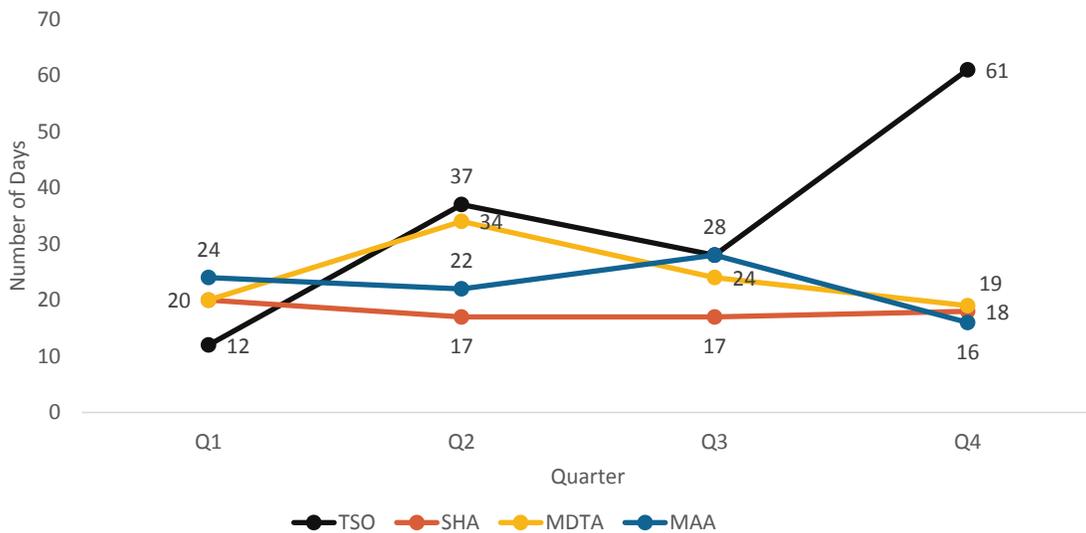
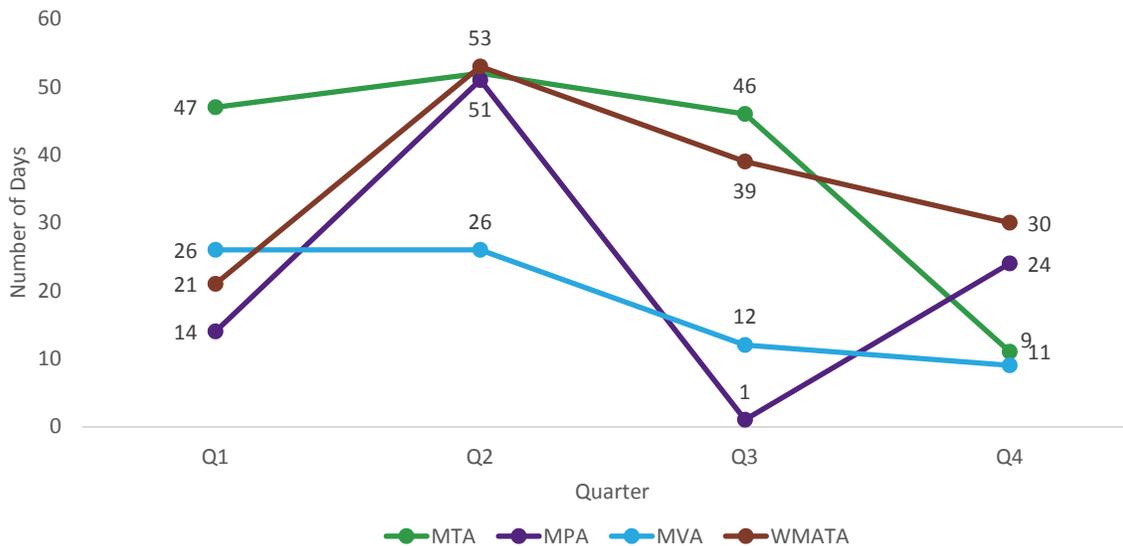


Chart 1.2A.2: Average Number of Days to Respond to Correspondence in MDOT IQ System by TBU FY2017

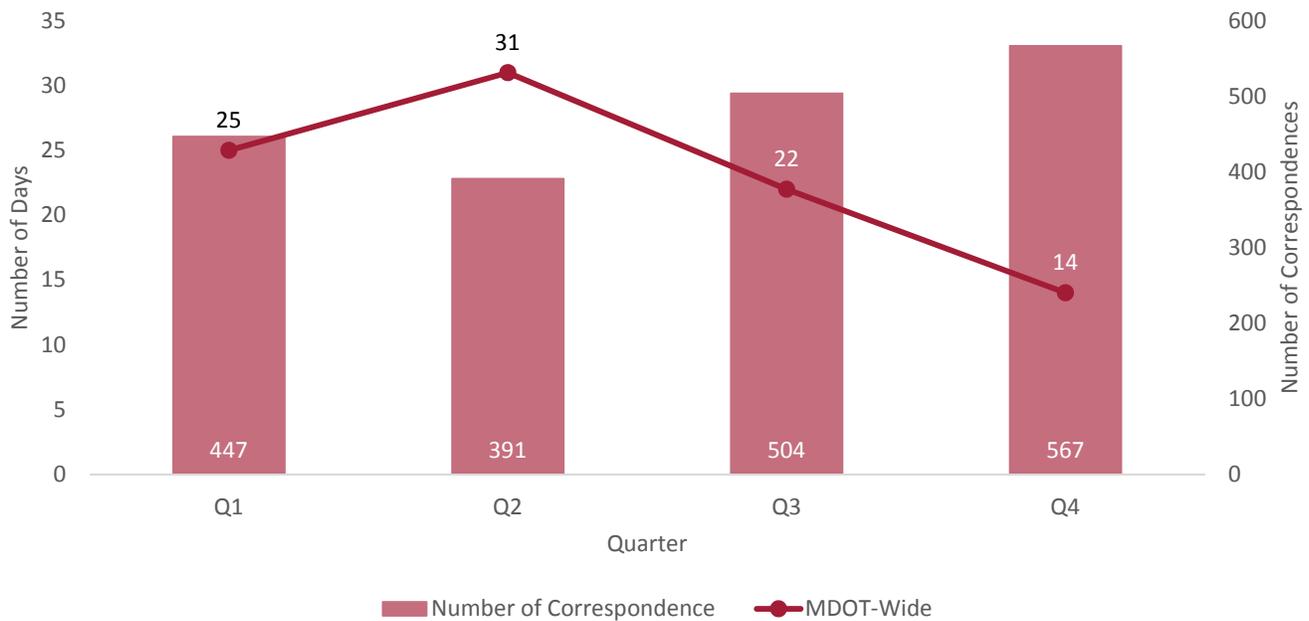


# Provide Exceptional Customer Service

## PERFORMANCE MEASURE 1.2A

Responsiveness to MDOT Customer Correspondence: Average Number of Days for Correspondence in the MDOT IQ System

Chart 1.2A.3: Average Number of Days to Respond to Correspondence in MDOT IQ System MDOT-Wide FY2017



# Provide Exceptional Customer Service

## TANGIBLE RESULT DRIVER:

Leslie Dews  
*Motor Vehicle Administration (MVA)*

## PERFORMANCE MEASURE DRIVER:

Richard Powers  
*Maryland Port Administration (MPA)*

## PURPOSE OF MEASURE:

To track the rate of the responsiveness to direct customer contact.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Database Metrics Provided by TBUs.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 1.2B

### Responsiveness to MDOT Customer Correspondence: Percent of Customer Contact Responded to within 24 hours (One Business Day)

MDOT customers interact directly with TBUs in many ways (e.g., phone, email, letters, social media, etc.) each with an accompanying set of expectations for response time. Regardless of the contact method, MDOT is committed to ensuring a rapid and accurate response to customer inquiries, requests and issues. As such, MDOT intends to respond to customers within one business day regardless of their method of communication.

The establishment of a standard of 24 hours/one business day for response to all customer contact and the achievement thereof demonstrates to customers the organization's commitment to exceptional customer service and ultimately ensure a workforce that is highly proficient in and knowledgeable of our business and truly focused on the needs of our customers.

The realization of this standard, while challenging given that TBUs currently use different systems for collection and reporting and have varying standards for response to customer contact, will truly set the organization on a sustainable path of exceptional customer service.

MDOT continues to work on both short term and long-term solutions to develop a comprehensive approach for managing customer contact across all TBUs. Ultimately this solution will ensure that the organization provides consistent, exceptional service to our customers in a manner that is responsive and timely. This work entails analysis of existing systems, policies and procedures and other barriers to the achievement of this measure. Based on the outcome of this analysis, MDOT will have reportable data regarding our performance in responding to customer contact.

# Provide Exceptional Customer Service

## TANGIBLE RESULT DRIVER:

Leslie Dews  
*Motor Vehicle Administration (MVA)*

## PERFORMANCE MEASURE DRIVER:

Darol Smith  
*Maryland Transportation Authority (MDTA)*

## PURPOSE OF MEASURE:

To identify the percentage of customers not connecting or speaking with call centers resulting from not receiving goods or services from MDOT.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Database metrics provided by TBUs. Calculated formula abandoned calls divided by total inbound calls – in percent.

## NATIONAL BENCHMARK:

Seven percent average sampled industry leader (no national industry standard available).

## PERFORMANCE MEASURE 1.3A

### Customer Satisfaction with Receiving Goods and Services: Percent of Abandoned Calls at Call Centers

Reducing the rate of abandoned calls to MDOT call centers will ensure that more customers reach MDOT call centers to address their needs. The longer the time customers must wait before being connected to a call center agent, the higher the abandon rate. The inability of customers to connect with MDOT representatives negatively impacts their level of satisfaction with the goods and services received from the organization.

As shown in Chart 1.3.A.1, the abandonment rate for the period April 1 – June 30, 2017 was 6 percent. MDOT continues to maintain a positive trend in the call abandonment rate. Current performance at 6 percent is lower than the benchmark of 7 percent. Moreover, in comparison to previous years, MDOT maintains a trend in Q2 of CY 2017 with a 6 percent abandonment rate compared to 15 percent during the same period in CY 2016, 11 percent in CY 2015 and 12 percent in CY 2014.

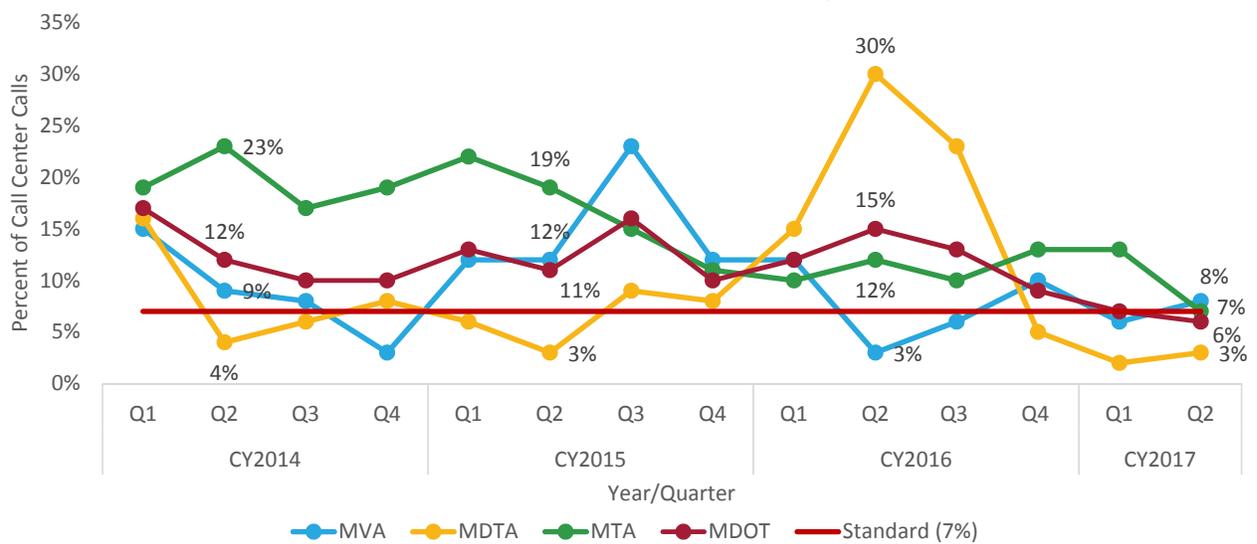
Targeted process improvements and other changes are influencing the positive results at individual TBU call center operations. Changes implemented to enhance the performance of MDOT call center operations include:

- Conducting biweekly meetings with call center representatives across MDOT TBUs to share operational and customer service best practices and call center needs
- Augmenting staffing resources to address customer demand
- Implementing call triage process to reduce call wait times
- Revamping IVRs so that customers can reach agents or conduct phone transactions more rapidly
- Expanded hours

## PERFORMANCE MEASURE 1.3A

Customer Satisfaction with Receiving Goods and Services: Percent of Abandoned Calls at Call Centers

Chart 1.3A.1: Percent of Abandoned Calls at MDOT Call Centers by TBU CY2014-CY2017

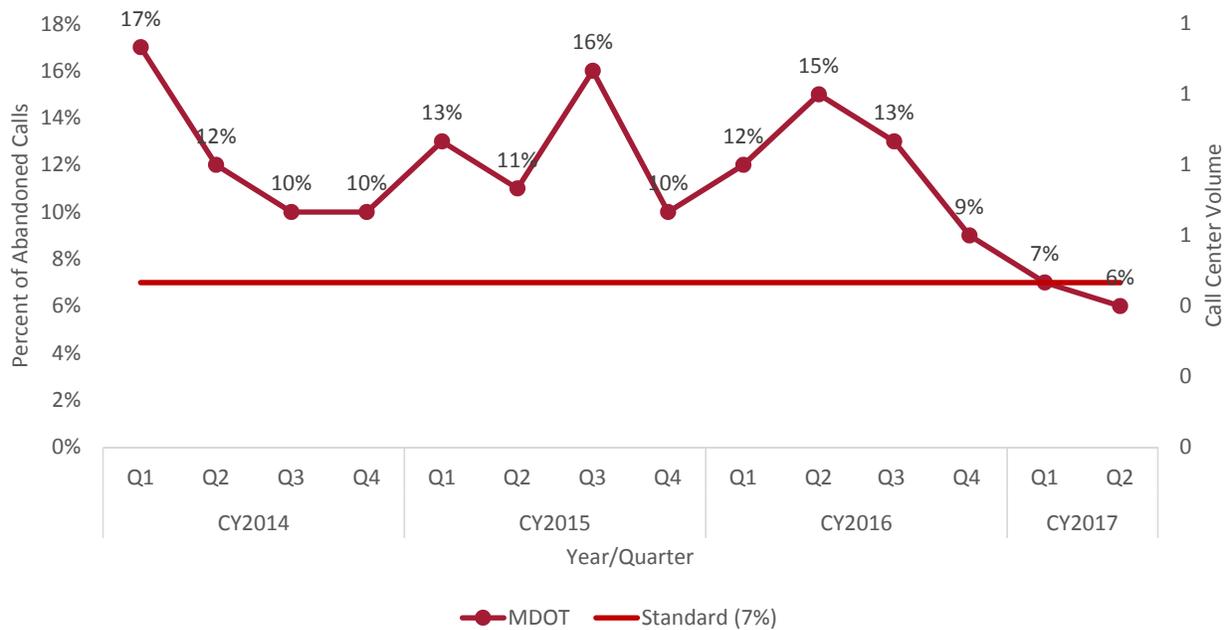


# Provide Exceptional Customer Service

## PERFORMANCE MEASURE 1.3A

Customer Satisfaction with Receiving Goods and Services: Percent of Abandoned Calls at Call Centers

Chart 1.3A.2: MDOT Percent of Abandoned Calls at Call Centers vs. Call Center Volume CY2014-CY2017



# Provide Exceptional Customer Service

## TANGIBLE RESULT DRIVER:

Leslie Dews  
*Motor Vehicle Administration (MVA)*

## PERFORMANCE MEASURE DRIVER:

Darol Smith  
*Maryland Transportation Authority (MDTA)*

## PURPOSE OF MEASURE:

To collect and evaluate the time it takes the average customer to wait before speaking with the call center to answer phone inquiries.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Database metrics provided by TBUs. Average amount of time caller waits.

## NATIONAL BENCHMARK:

60 seconds average sampled industry leaders (no national industry standards available).

## PERFORMANCE MEASURE 1.3B

### Customer Satisfaction with Receiving Goods and Services: Average Call Wait Times at Call Centers

Providing consistent and responsive service to our customers is a top priority for the organization. Reducing the time it takes for customers to reach MDOT call center representatives ensures customer needs are addressed more rapidly and increases their satisfaction with the support and overall customer service provided by MDOT and identify areas of opportunity for improvement in call center operations.

For the period April 1 – June 30 2017, Chart 1.3B.1 shows that the average call wait time was 1:34, compared to 1:46 in the previous quarter. The current performance level remains significantly higher than the benchmark of 60 seconds, however, MDOT collectively continues a positive performance trend in this critical measure of customer service. In comparing the 1:34 call wait time for Q2 of CY 2017 to 3:00 during the same period in CY 2014, 2:00 in CY 15 and 4:35 in CY 2016, MDOT has clearly demonstrated progress.

As previously mentioned, targeted process improvements such as collaboration across TBU call centers, staff augmentation, adoption of best practices and other operational and technology changes are influencing the positive direction for MDOT call center operations.

# Provide Exceptional Customer Service

## PERFORMANCE MEASURE 1.3B

Customer Satisfaction with Receiving Goods and Services: Average Call Wait Times at Call Centers

Chart 1.3B.1: Average Call Wait Times at MDOT Call Centers CY2014-CY2017

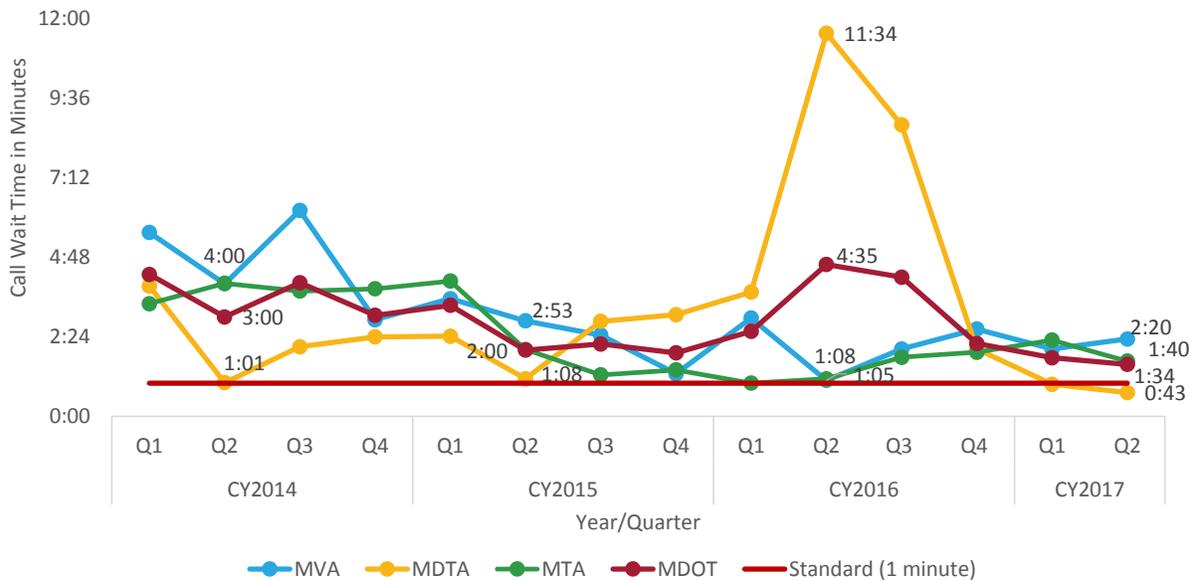
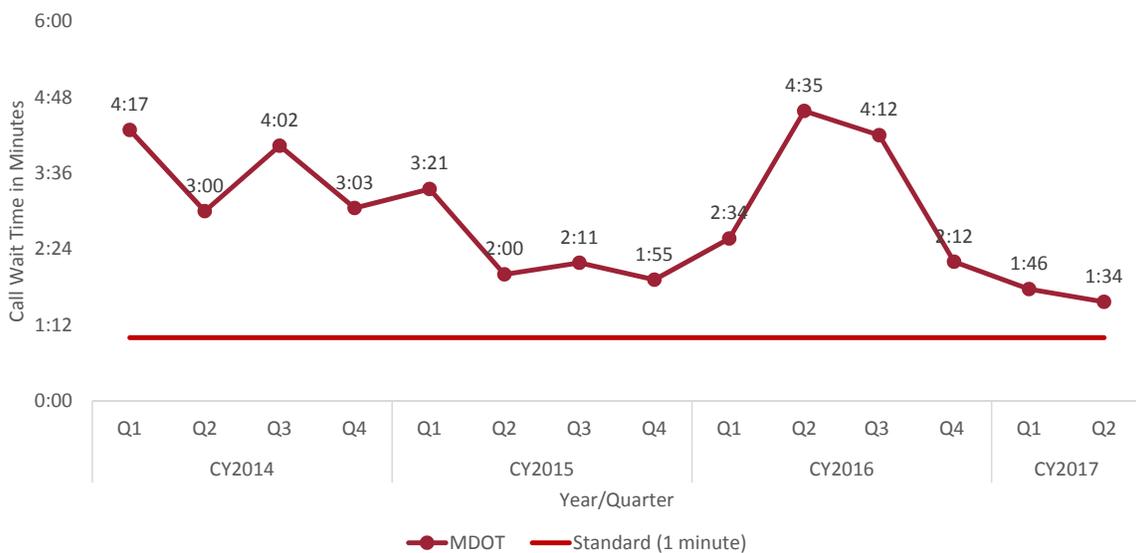


Chart 1.3B.2: Average Call Wait Times at MDOT Call Centers MDOT-Wide CY2014-CY2017



# Provide Exceptional Customer Service

## TANGIBLE RESULT DRIVER:

Leslie Dews  
*Motor Vehicle Administration (MVA)*

## PERFORMANCE MEASURE DRIVER:

Darol Smith  
*Maryland Transportation Authority (MDTA)*

## PURPOSE OF MEASURE:

To assess customer satisfaction with call centers in resolving call inquiries.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Phone survey of call center customers.

## NATIONAL BENCHMARK:

82 percent average sampled industry leaders (no national industry standard available).

## PERFORMANCE MEASURE 1.3C

### Customer Satisfaction with Receiving Goods and Services: Level of Satisfaction with Resolving Call Inquiries at Call Centers

The level of satisfaction with resolving call inquiries is an indicator of whether MDOT is meeting customers' expectations. MVA is currently the only call center that has a data collection mechanism in place for this performance measure.

As shown in Chart 1.3C.1, for the period April 1 – June 30, 2017, MVA achieved 89 percent average level of satisfaction with resolving call inquiries which is favorable to the benchmark of 82 percent. This data continues to illustrate a trend back to prior TBU achievement levels that are better than the benchmark in place today.

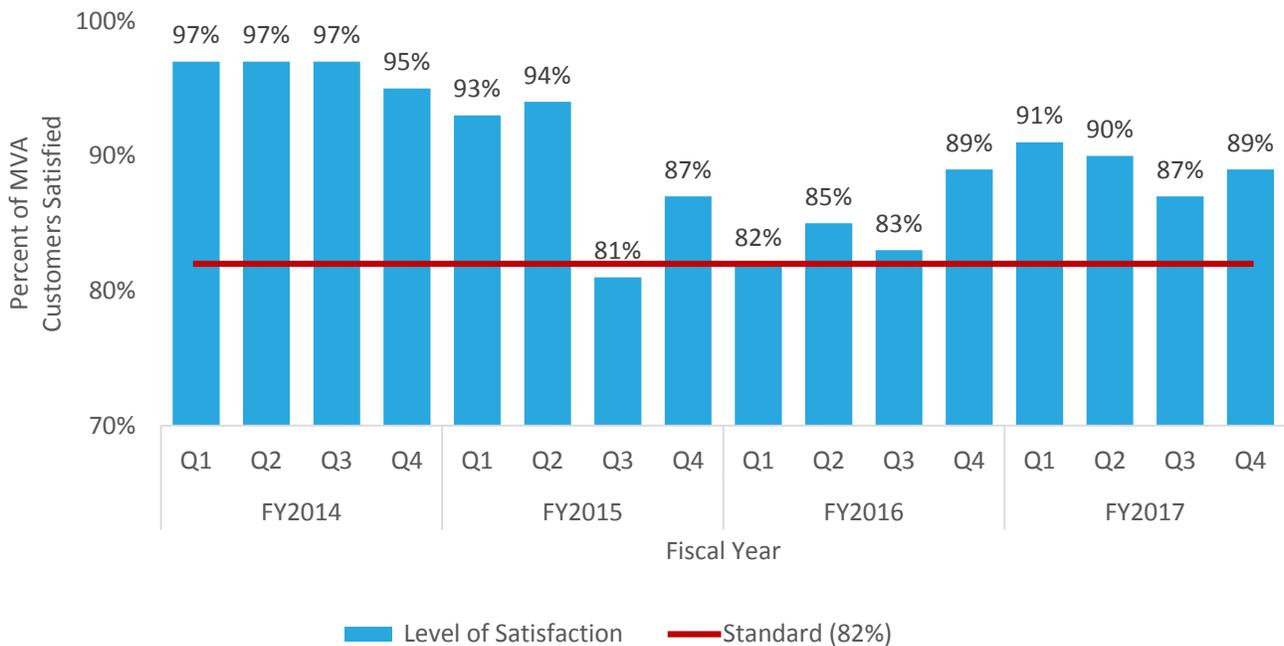
As mentioned previously, focus on process improvement and other changes are influencing the positive results at MDOT call centers. We continue to work on a mechanism to capture customer satisfaction for all TBU call centers. Changes to the MVA call center to enhance customer service and performance include consolidating call center operations, expanding hours and implementing a call triage process to reduce call wait times.

# Provide Exceptional Customer Service

## PERFORMANCE MEASURE 1.3C

Customer Satisfaction with Receiving Goods and Services: Level of Satisfaction with Resolving Call Inquiries at Call Centers

Chart 1.3C.1: Level of Satisfaction with Resolving MVA Call Inquiries FY2014-FY2017



# Provide Exceptional Customer Service

## TANGIBLE RESULT DRIVER:

Leslie Dews  
*Motor Vehicle Administration (MVA)*

## PERFORMANCE MEASURE DRIVER:

Sabrina Bass  
*The Secretary's Office (TSO)*

## PURPOSE OF MEASURE:

To better determine how satisfied MDOT customers are when interacting with MDOT representatives.

## FREQUENCY:

Annually (in October)

## DATA COLLECTION METHODOLOGY:

Data was collected through a survey conducted by the University of Baltimore utilizing a telephone survey.

## NATIONAL BENCHMARK:

Best in Nation -87 percent.

## PERFORMANCE MEASURE 1.4

### Customer Satisfaction with Interactions with MDOT Representatives

Ensuring that every customer contacting MDOT has access to knowledgeable, professional and courteous MDOT representatives improves overall customer experience and builds trust in the organization and its products and services.

As reported, the Schaefer Center for Public Policy at the University of Baltimore conducted a survey to gauge the satisfaction with and opinions of MDOT services across the State. Chart 1.4.1 shows that 80 percent of respondents believed MDOT personnel provided friendly and courteous service, 85 percent rated the thoroughness and accuracy of information provided by MDOT representatives as good or excellent and 74 percent of respondents who contacted MDOT by phone were satisfied or very satisfied with their experience. The survey, however, revealed the need for improvement in the timeliness in our services with 67 percent of respondents rating the speed of service provided as good or excellent. Best in Nation benchmark is 87 percent.

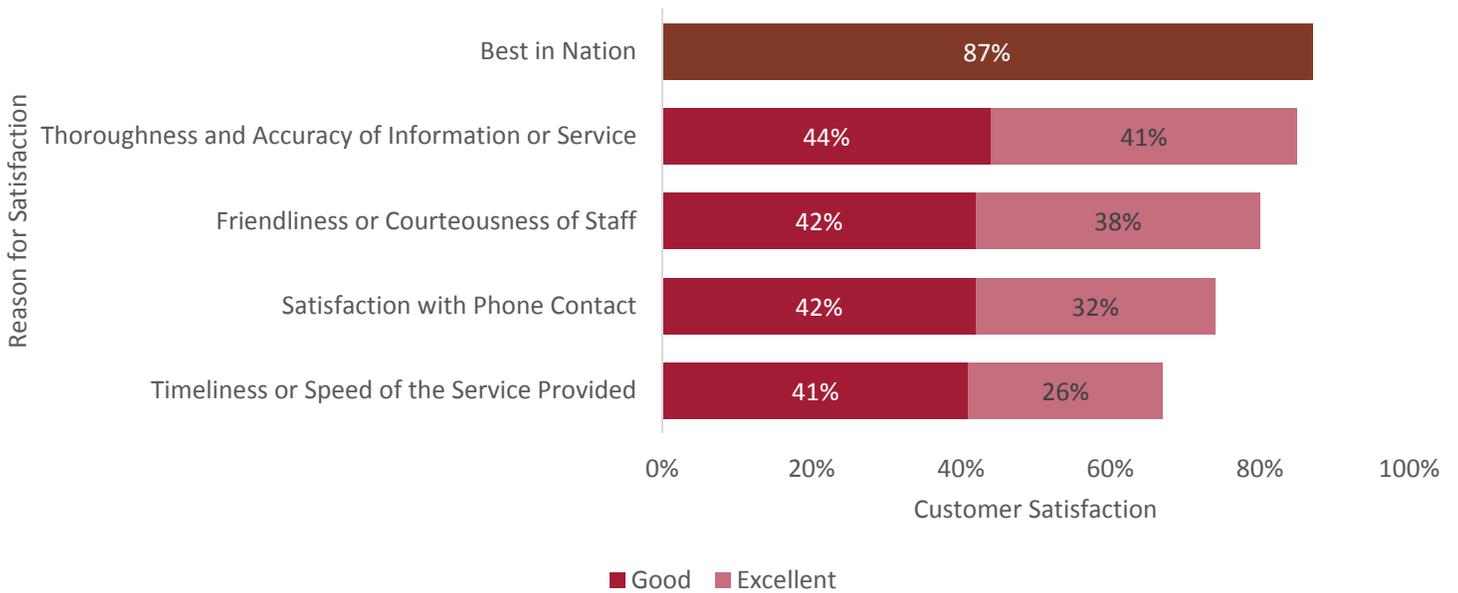
MDOT continues to implement strategies to improve customer service. Each TBU has a customer service plan that includes mandatory customer service training for all employees, which aligns with the Governor's statewide customer service initiative. The results will be used to enhance training and improve customer service provided by MDOT representatives.

# Provide Exceptional Customer Service

## PERFORMANCE MEASURE 1.4

### Customer Satisfaction with Interactions with MDOT Representatives

Chart 1.4.1: Customer Satisfaction with MDOT Representatives CY2017



# Provide Exceptional Customer Service

## TANGIBLE RESULT DRIVER:

Leslie Dews  
*Motor Vehicle Administration (MVA)*

## PERFORMANCE MEASURE DRIVER:

Lindsey Franey  
*State Highway Administration (SHA)*

## PURPOSE OF MEASURE:

To show how satisfied MDOT customers are when interacting with the website and usefulness of the information.

## FREQUENCY:

Annually (in April)

## DATA COLLECTION METHODOLOGY:

On-line Survey

## NATIONAL BENCHMARK:

ACSI e business report average of highest annual scores for social media, portal/ search engine and news/ opinion websites.

## PERFORMANCE MEASURE 1.5A

### Percent of Customers Who Felt MDOT Websites Met Their Needs

Customers expect 21st century interactions with MDOT. Improving the quality of MDOT websites ensures customers have access to information, can request services and process transactions at their convenience. This further enhances the level of customer service provided by the organization.

For 2016, Chart 1.5A.1 shows that 56.5 percent of SHA customers found SHA's website to be helpful while 88 percent of eMVA customers would recommend MVA's website. The ACSI benchmark for 2016 was 74.67 percent favorability.

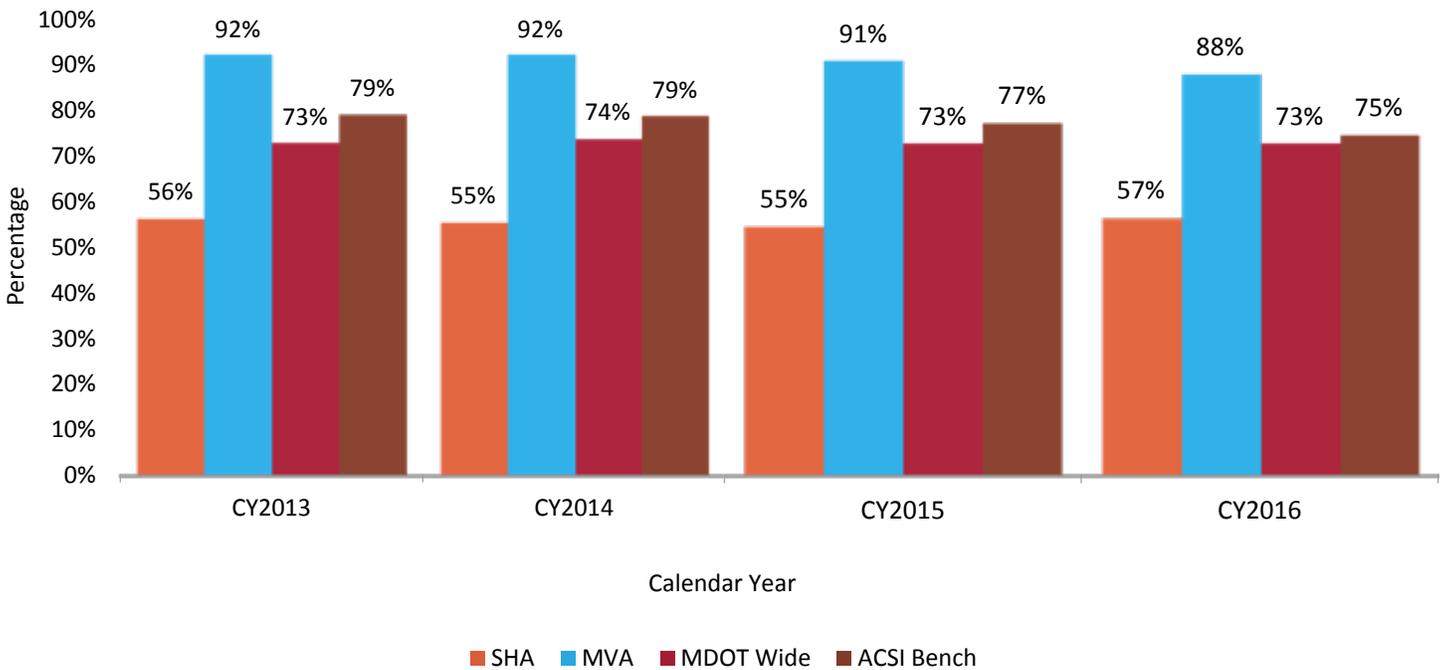
To ensure continuous improvement with customer satisfaction with MDOT websites, an online survey which better mirrors the ACSI benchmarks has been developed and is now live on all TBU homepages. Information derived from the surveys will allow the identification of opportunities for improvement for all MDOT websites to better meet the needs of customers.

# Provide Exceptional Customer Service

## PERFORMANCE MEASURE 1.5A

### Percent of Customers Who Felt MDOT Websites Met Their Needs

Chart 1.5A.1: Percent of Customers Who Felt MDOT Websites Met Their Needs CY2013-CY2016



# Provide Exceptional Customer Service

## TANGIBLE RESULT DRIVER:

Leslie Dews  
*Motor Vehicle Administration (MVA)*

## PERFORMANCE MEASURE DRIVER:

Lindsey Franey  
*State Highway Administration (SHA)*

## PURPOSE OF MEASURE:

To show how satisfied MDOT customers are when interacting with the website and usefulness of the information.

## FREQUENCY:

Annually (in April)

## DATA COLLECTION METHODOLOGY:

On-line Survey

## NATIONAL BENCHMARK:

ACSI e business report average of highest annual scores for social media, portal/search engine and news/opinion websites with specifics on ease of use, ease of navigation and site performance.

## PERFORMANCE MEASURE 1.5B

### Percent of Customers Who Felt that it was Easy to Find Desired Information on MDOT Websites

MDOT's considerable online presence enables customers to report and obtain information on our goods and services as well as process transactions. The quality of our websites is a key component in providing exceptional customer service. To improve customer satisfaction, websites must be structured, and information presented, in a way to ensure the ease of navigation for customers to find what they want quickly.

Existing survey results for 2016 indicated that 56.5 percent of SHA customers found SHA's website to be helpful while 88 percent of eMVA customers would recommend MVA's website. The ACSI benchmark for 2016 was 77 percent favorability.

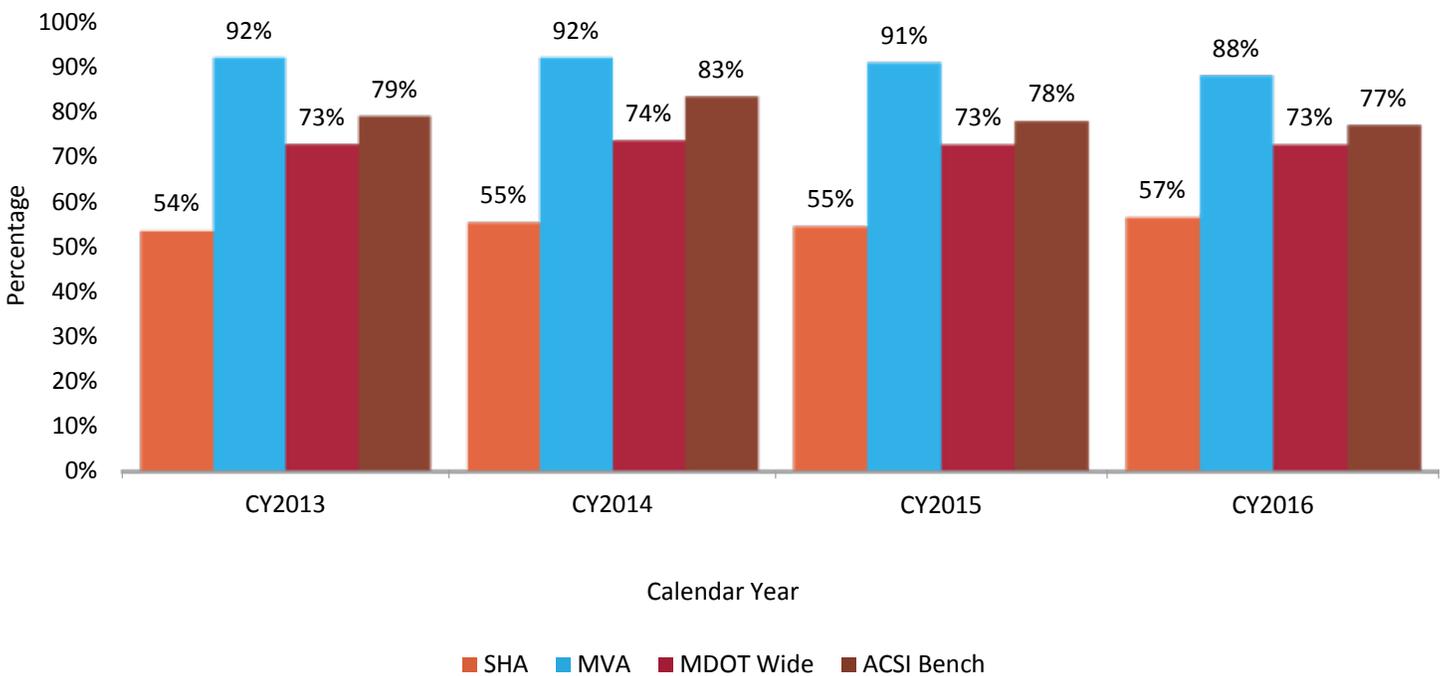
In 2016 not all TBUs were capturing data to determine if customers felt that their attempts to find desired information on MDOT websites was effortless. All TBUs now have links to take a survey which went live in mid-February 2017 that better tracks the ACSI benchmarks. Data derived from the surveys will be used to identify improvements in MDOT websites to enhance ability of customers to find information on the website.

# Provide Exceptional Customer Service

## PERFORMANCE MEASURE 1.5B

Percent of Customers Who Felt that it was Easy to Find Desired Information on MDOT Websites

Chart 1.5B.1: Percent of Customers Who Felt that it was Easy to Find Desired Information on MDOT Websites CY2013-CY2016



## TANGIBLE RESULT #2

# Use Resources Wisely



MDOT receives resources from our customers and they expect products and services in return. To better serve our customers, MDOT must maximize the value of every dollar we spend.

### RESULT DRIVER:

Corey Stottlemeyer

*The Secretary's Office (TSO)*

**TANGIBLE RESULT DRIVER:**

Corey Stottlemeyer  
The Secretary's Office (TSO)

**PERFORMANCE MEASURE DRIVER:**

Dan Favarulo  
The Secretary's Office (TSO)

**PURPOSE OF MEASURE:**

To track the efficiency of capital spending.

**FREQUENCY:**

Quarterly

**DATA COLLECTION METHODOLOGY:**

Track capital project spending versus the Consolidated Transportation Plan programmed funds.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 2.1

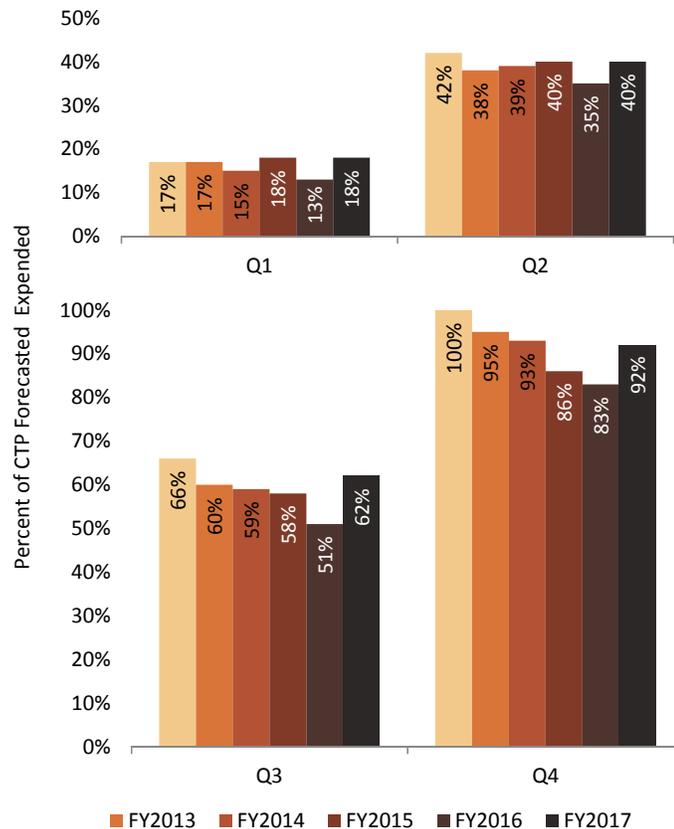
### Percent Capital Dollars Spent as Programmed

*“What we need to do is paint a vision for customers, promise them deliverables, and go hit at it.” — Sanjay Kumar*

The purpose of this measure is to show MDOT’s customers that MDOT is delivering on the capital projects and funding programmed in the annual Consolidated Transportation Program (CTP). MDOT evaluates this measure by tracking capital funding expenditure rates and monitoring the reasons why expenditure levels are falling short or exceeding CTP programmed amounts.

At the close of FY 2017, MDOT’s capital program spending rate was at 91 percent of CTP forecasted funds expended, which is 8 percent higher than last year’s 83 percent expenditure rate.

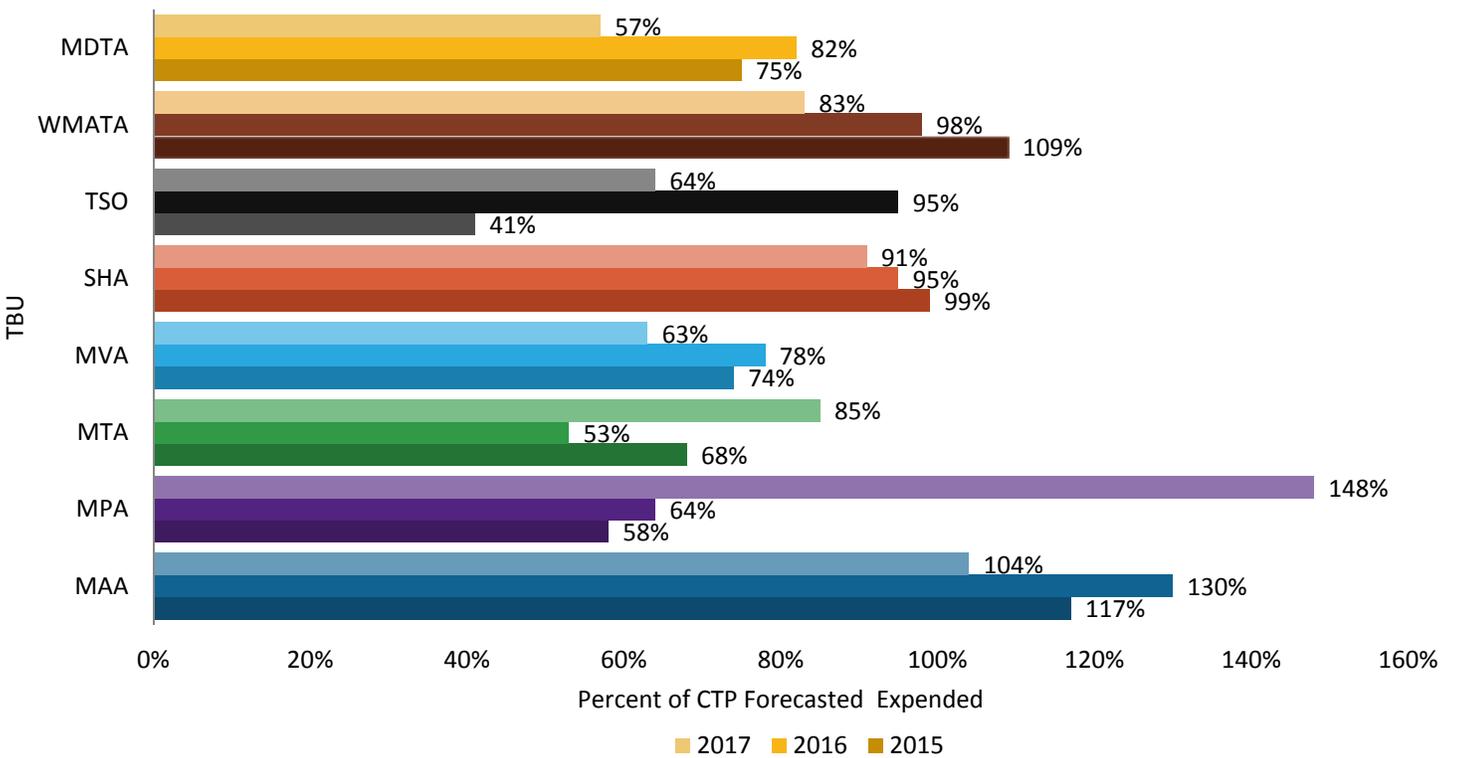
**Chart 2.1.1: 6-Year Expenditure Rate Analysis, Federal and State FY2012-FY2017**



## PERFORMANCE MEASURE 2.1

### Percent Capital Dollars Spent as Programmed

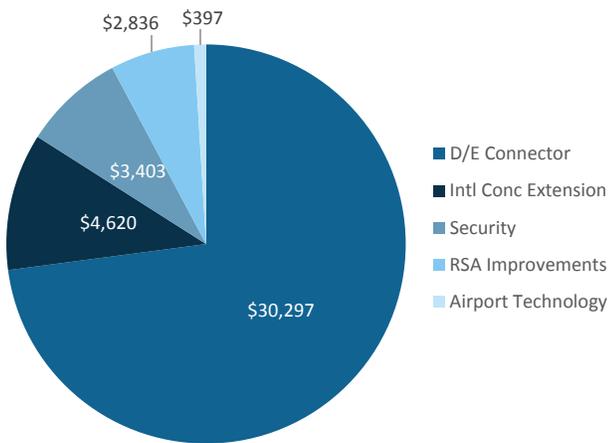
Chart 2.1.2: 3-Year Expenditure Rate by TBU at Q3 Mark, State/Federal/Toll CY2015-CY2017



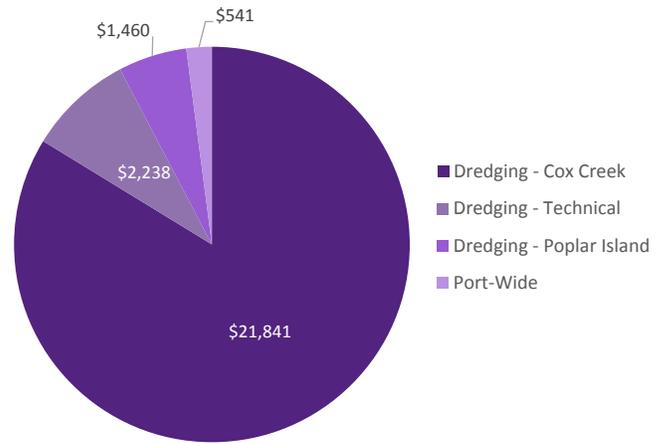
## PERFORMANCE MEASURE 2.1

### Percent Capital Dollars Spent as Programmed

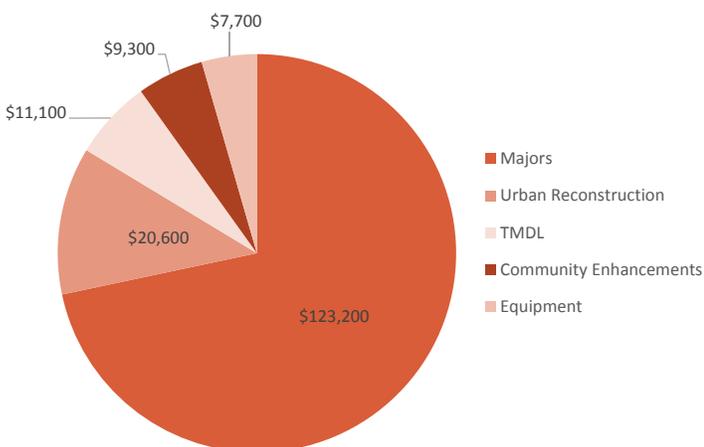
**Chart 2.1.3: MAA Underspending By Program (in Thousands) FY2017**



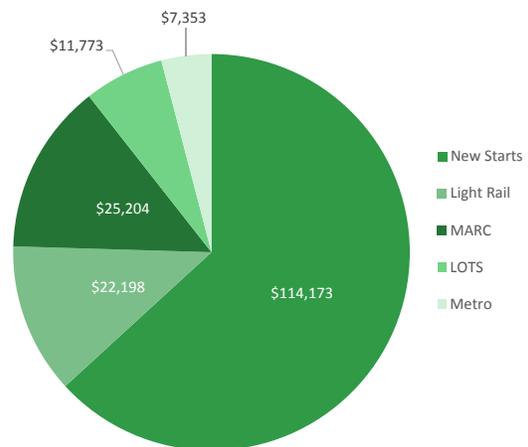
**Chart 2.1.4: MPA Underspending By Program (in Thousands) FY2017**



**Chart 2.1.5: SHA Underspending By Program (in Thousands) FY2017**



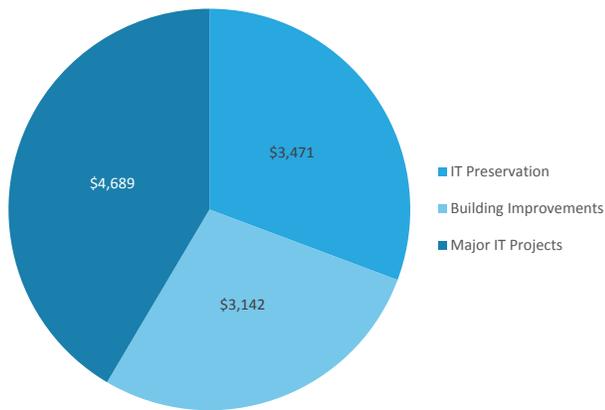
**Chart 2.1.6: MTA Underspending By Program (in Thousands) FY2017**



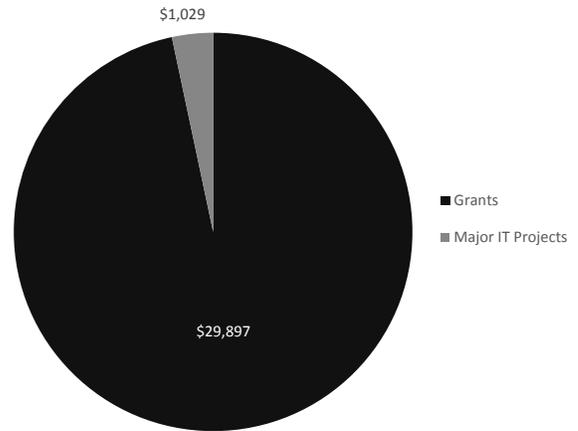
## PERFORMANCE MEASURE 2.1

### Percent Capital Dollars Spent as Programmed

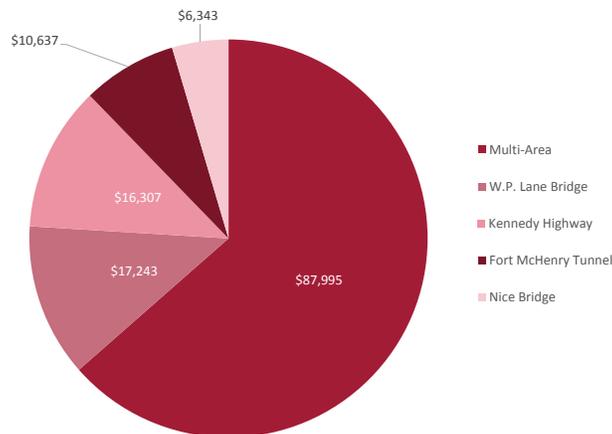
**Chart 2.1.7: MVA Underspending By Program (in Thousands) FY2017**



**Chart 2.1.8: TSO Underspending By Program (in Thousands) FY2017**



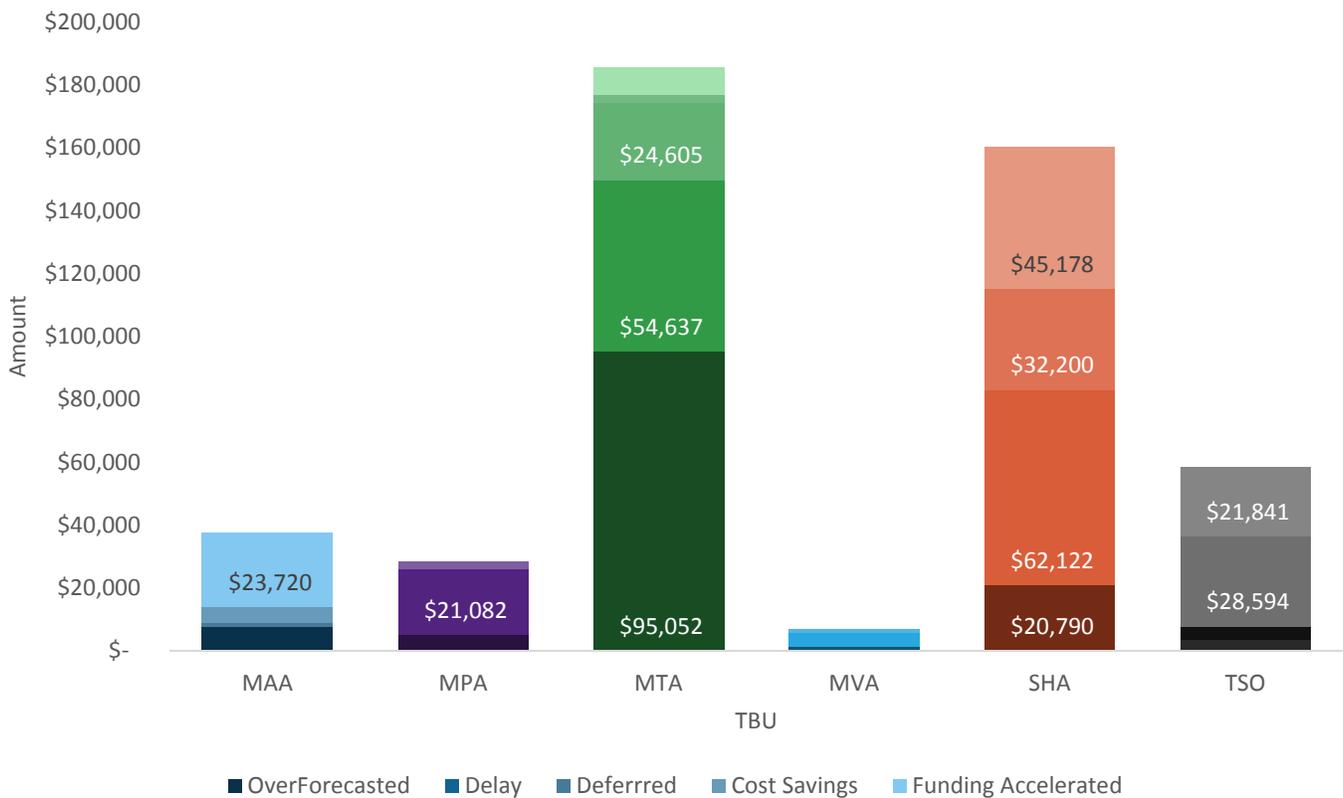
**Chart 2.1.9: MDTA Underspending By Program (in Thousands) FY2017**



**PERFORMANCE MEASURE 2.1**

Percent Capital Dollars Spent as Programmed

**Chart 2.1.10: FY2017 TBU Over-Programmed by TBU**



**TANGIBLE RESULT DRIVER:**

Corey Stottleyer  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Tony Moore  
*Maryland Port Administration (MPA)*

**PURPOSE OF MEASURE:**

To track other sources of dollars utilized to fund capital projects as an indicator of MDOT's success at leveraging its finite resources.

**FREQUENCY:**

Annually (in April)

**DATA COLLECTION METHODOLOGY:**

This measure tracks county/local contributions, private contributions, and federal discretionary funding received each year towards projects.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 2.2

### Percent of Projects Leveraging Other Funding Sources

*"When we leverage, we aggregate and organize existing resources to achieve success." — Richie Norton*

The purpose of this measure is to track and highlight successes at leveraging Transportation Trust Fund (TTF) dollars with federal, local, and private dollars.

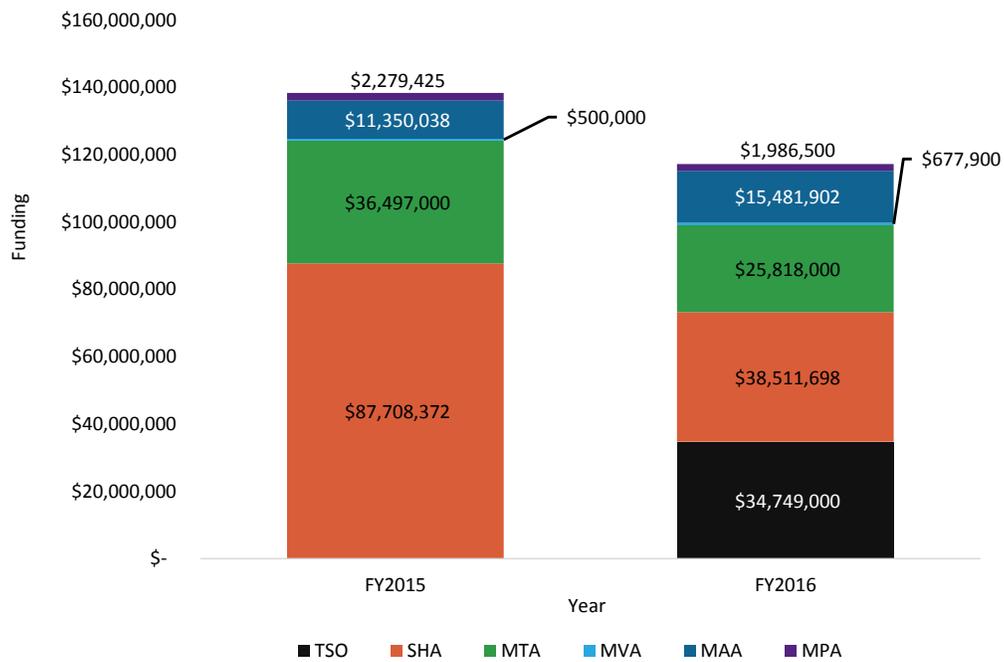
MDOT leveraged \$117M in other funding in FY 16. This represents roughly 5 percent of the total FY17 capital program expended. Most of this funding was leveraged by SHA through private contributions, MTA through Purple Line enabling projects, as well as TSO through the award of discretionary funding for the Maglev project.

Of the \$117M in other funding leveraged in FY16, \$51M was received from successfully competing for discretionary federal funding. Another \$34M was leveraged from private contributions towards roadway improvements on SHA right-of-way. This is down from \$74M in FY15. In addition, there was another \$32M in local/county contributions in the form of funding or enabling projects.

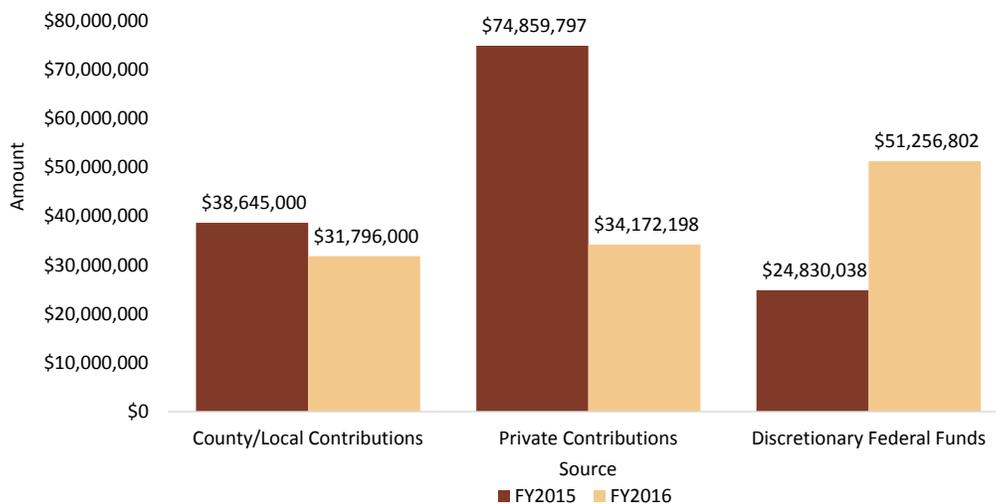
**PERFORMANCE MEASURE 2.2**

Percent of Projects Leveraging Other Funding Sources

**Chart 2.2.1: Other Funding Leveraged by TBU FY2015-FY2016**



**Chart 2.2.2: Amount of Other Funding Leveraged By Source FY2015-FY2016**



**TANGIBLE RESULT DRIVER:**

Corey Stottlemyer  
The Secretary's Office (TSO)

**PERFORMANCE MEASURE DRIVER:**

Amber Harvey  
Maryland Transportation Authority  
(MDTA)

**PURPOSE OF MEASURE:**

To track the commitment of our employees in furthering MDOT's reputation, mission and interests by identifying key motivators and obstacles in the workplace.

**FREQUENCY:**

Annually

**DATA COLLECTION METHODOLOGY:**

Develop and implement one MDOT employee feedback survey administered to all employees.

**NATIONAL BENCHMARK:**

Gallup 2015 national engagement percentages:

32 percent engaged employees

50.8 percent not engaged

17.2 percent actively disengaged

## PERFORMANCE MEASURE 2.3

### Employee Engagement

*There are only three measurements that tell you nearly everything you need to know about your organization's overall performance: employee engagement, customer satisfaction, and cash flow." — Jack Welch*

Engagement accounts for the emotional commitment an employee has for MDOT and the amount of discretionary effort the employee expends on behalf of MDOT. Engaged employees go beyond what they "have to do" to what they "want to do" for MDOT and its customers.

MDOT completed its first ever department-wide Employee Feedback Survey that eliminated redundant efforts and minimized expense by combining talent and resources, ensured a systematic and consistent approach to employee engagement across all TBUs, and accurately gauged the workforce climate to develop and prioritize new business strategies. The results of the survey were positive, but also pointed to areas of improvement on which to focus strategies.

**PERFORMANCE MEASURE 2.3**  
Employee Engagement

Chart 2.3.1: Responses to “Would You Consider MDOT to Have a Positive Workplace Environment?” CY2017

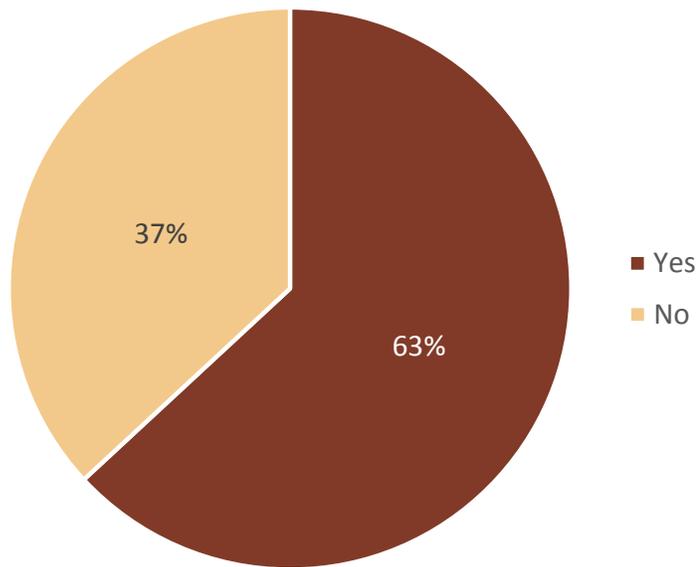
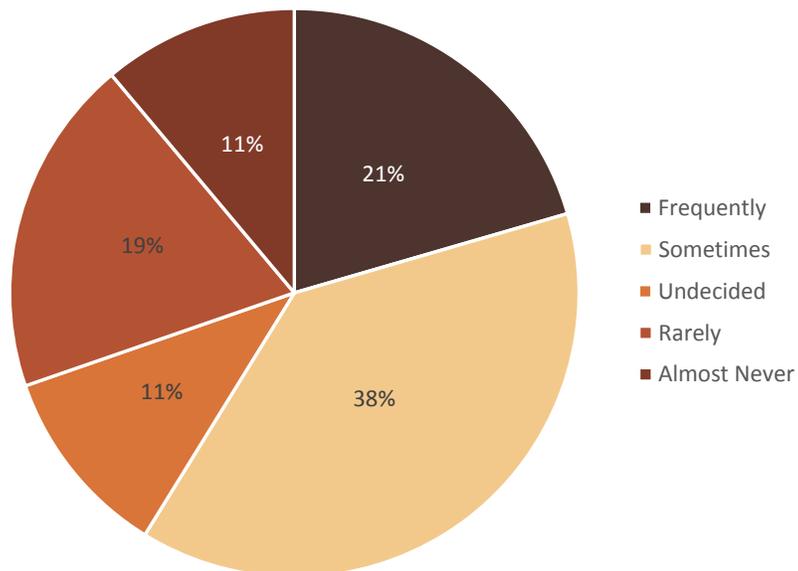


Chart 2.3.2: Responses to “How Often Do You Feel Valued at Work?” CY2017



**TANGIBLE RESULT DRIVER:**

Corey Stottlemeyer  
The Secretary's Office (TSO)

**PERFORMANCE MEASURE DRIVER:**

Bret A. Dousharm  
Maryland Transportation Authority  
(MDTA)

**PURPOSE OF MEASURE:**

To identify the percentage of employees who leave MDOT and analyze trends in voluntary and involuntary separations.

**FREQUENCY:**

Quarterly

**DATA COLLECTION METHODOLOGY:**

Quarterly reports of employee separations are provided by TSO HRIS Unit. These reports show the number of separations during a given period of time for each TBU broken down by all available separation codes (i.e. reasons).

**NATIONAL BENCHMARK:**

U.S. Department of Labor (DOL) Bureau of Labor Statistics for U.S. State and Local Governments.

## PERFORMANCE MEASURE 2.4

### Employee Turnover Rate

*“Having to re-recruit, rehire, and retrain, and wait for a new employee to get up to speed is devastating in terms of cost.” — Patrick Lencioni*

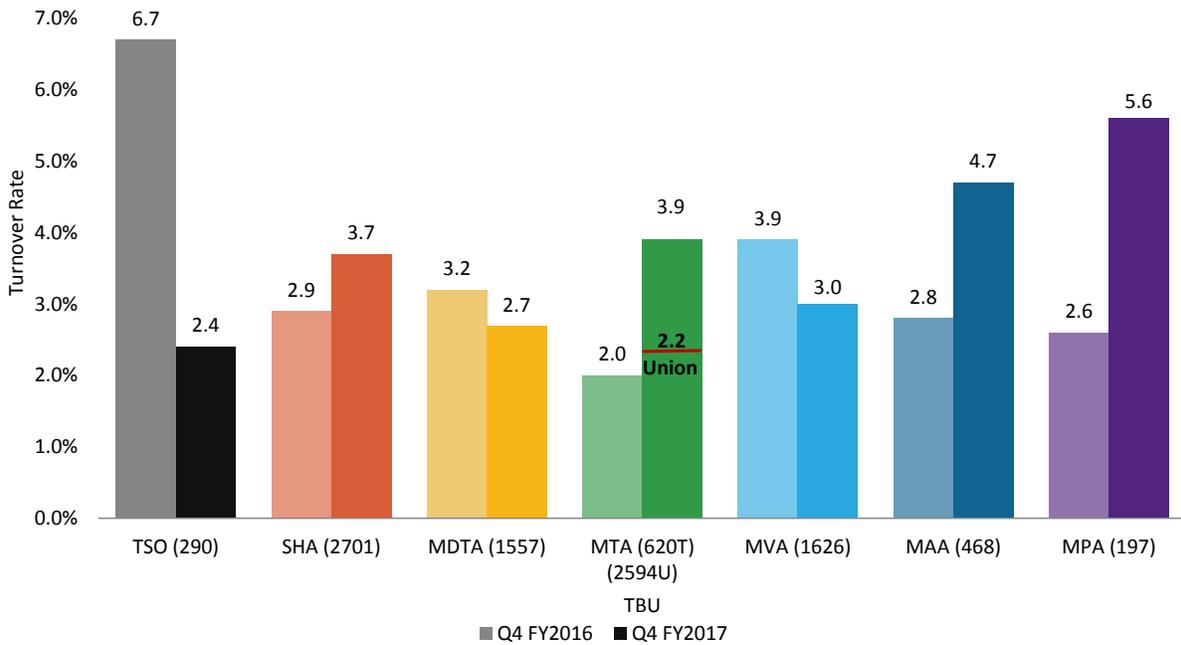
Annual employee turnover rate is the ratio of total separations, both voluntary and involuntary, compared to the average number of employees during the given timeframe, expressed as a percentage. The Human Resource Information System (HRIS) Unit in the Human Resources Division of the TSO provided the total number of employees and total number of separations for each TBU on a quarterly basis. The national benchmark was determined by utilizing the U.S. Bureau of Labor Statistics' Job Opening and Labor Turnover Survey (JOLTS) data for U.S. state and local governments (excluding education, seasonally adjusted) total employee separations.

Chart 2.4.1 compares the turnover rate of each TBU for the 4th quarter (Q4) of FY 2016 and FY 2017. Chart 2.4.2 compares the MDOT total turnover rate to the national average for state and local governments. MDOT remains slightly above the national average.

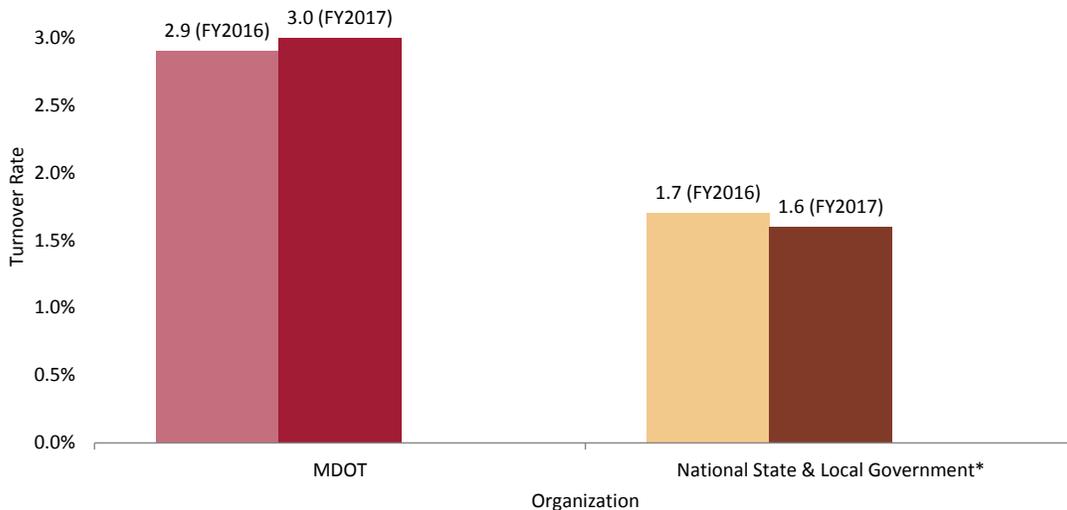
One notable element that continues to be important in analyzing MDOT turnover is the employee separations that occur within one year from the date of hire. The following chart illustrates the number of newly hired employees that have separated from MDOT in comparison to all other separations occurring in Q4 of FY 2017. This data reflects that approximately 19 percent of all employee separations during this timeframe occurred within the first year of hire. This is a 0.1 percent decrease from Q3 of FY 2017.

**PERFORMANCE MEASURE 2.4**  
Employee Turnover Rate

**Chart 2.4.1: Employee Turnover Rate by TBU, Seasonal Comparison of Q4 FY2016 vs. FY2017**

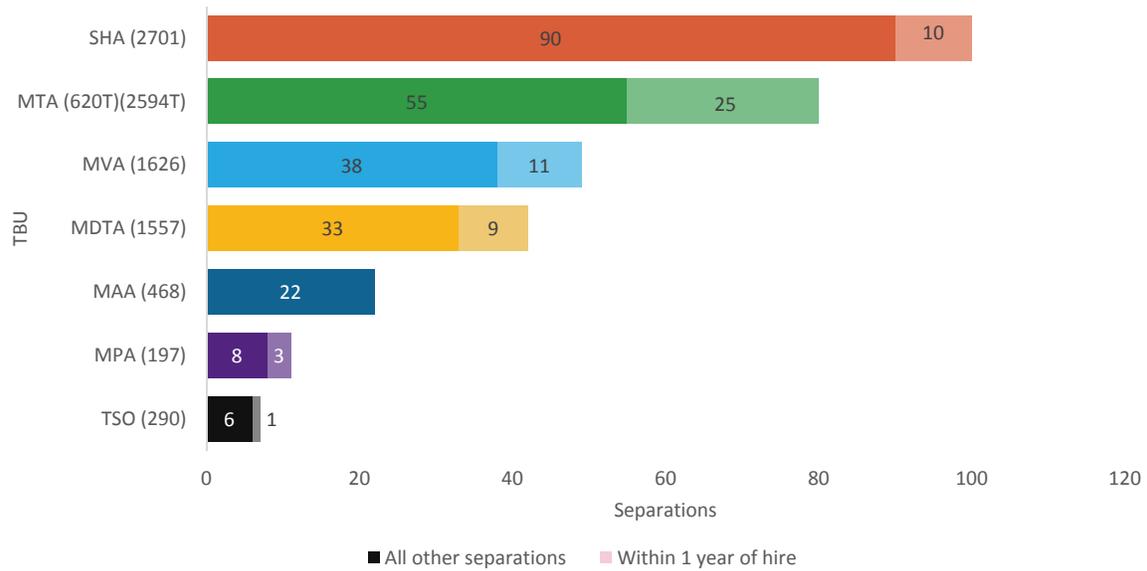


**Chart 2.4.2: Employee Turnover Rate, Seasonal Comparison of Q4 FY2016 vs. FY2017**

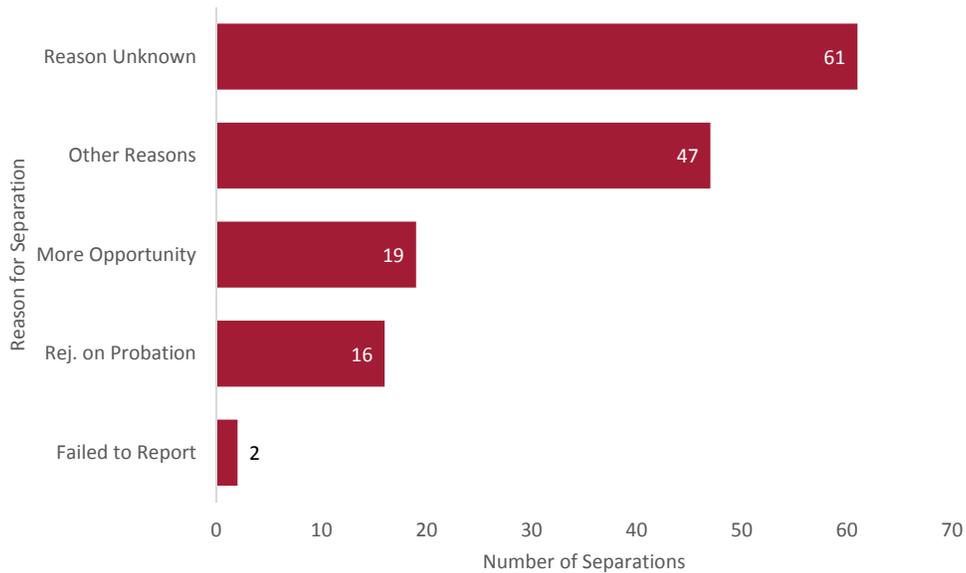


## PERFORMANCE MEASURE 2.4 Employee Turnover Rate

**Chart 2.4.3: Employee Separations Q4 FY2017**



**Chart 2.4.4: Separations Q4 FY2017**



**TANGIBLE RESULT DRIVER:**

Corey Stottleyer  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Deborah Hammel  
*State Highway Administration (SHA)*

**PURPOSE OF MEASURE:**

To demonstrate efficient use of available positions and identify opportunities for improvement in our recruitment and selection processes.

**FREQUENCY:**

Quarterly

**DATA COLLECTION METHODOLOGY:**

Quarterly report for MDOT and each TBU from HRIS housed at TSO and spreadsheets completed by TBU Human Resource Offices.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 2.5

### Time to Fill Vacancies

Reducing the time it takes to fill our vacant positions will increase MDOT's staffing levels, improving the ability to deliver projects on time and rapidly address emergencies affecting the transportation system.

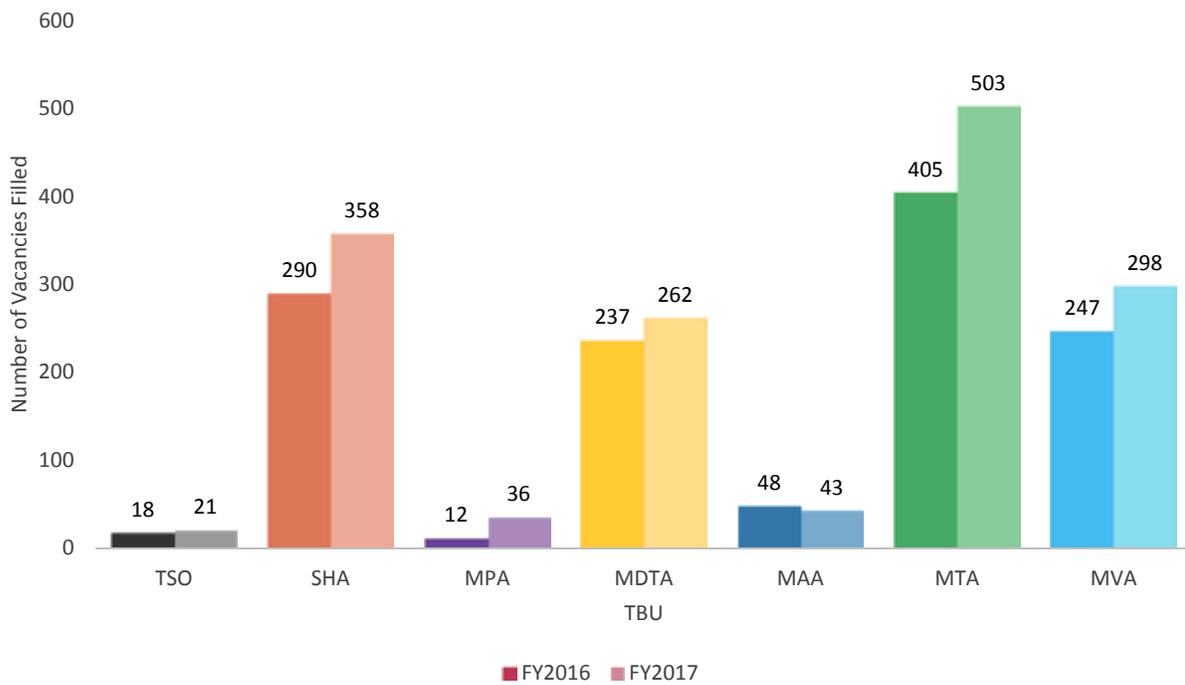
All TBUs submitted data on the amount of time involved with each stage of the recruiting process for the period July 1 – September 30, 2016, including Hiring Freeze Exemptions, Selection Plans, Classification reviews, Selection Plans, Job Posting, distribution of Eligible Lists, scheduling interviews and filling the vacancies. Average time to fill ranged from a low of 45 days for MTA Union to a high of 223 days for SHA. The overall MDOT average for this quarter is 149.6 days, trending down. The elimination of the Hiring Freeze Exemption Request process recently announced should result in further efficiencies in our process.

TBUs have implemented a number of strategies to improve time to fill:

- Biweekly reports or meetings to review vacancies and recruiting activity
- Posting job announcements pending submission of Selection Plan questions and interview panel members
- Developing and distributing recruiting timelines to Senior Managers and Hiring Managers for increased accountability
- Reallocating vacant PINs over 6 months old

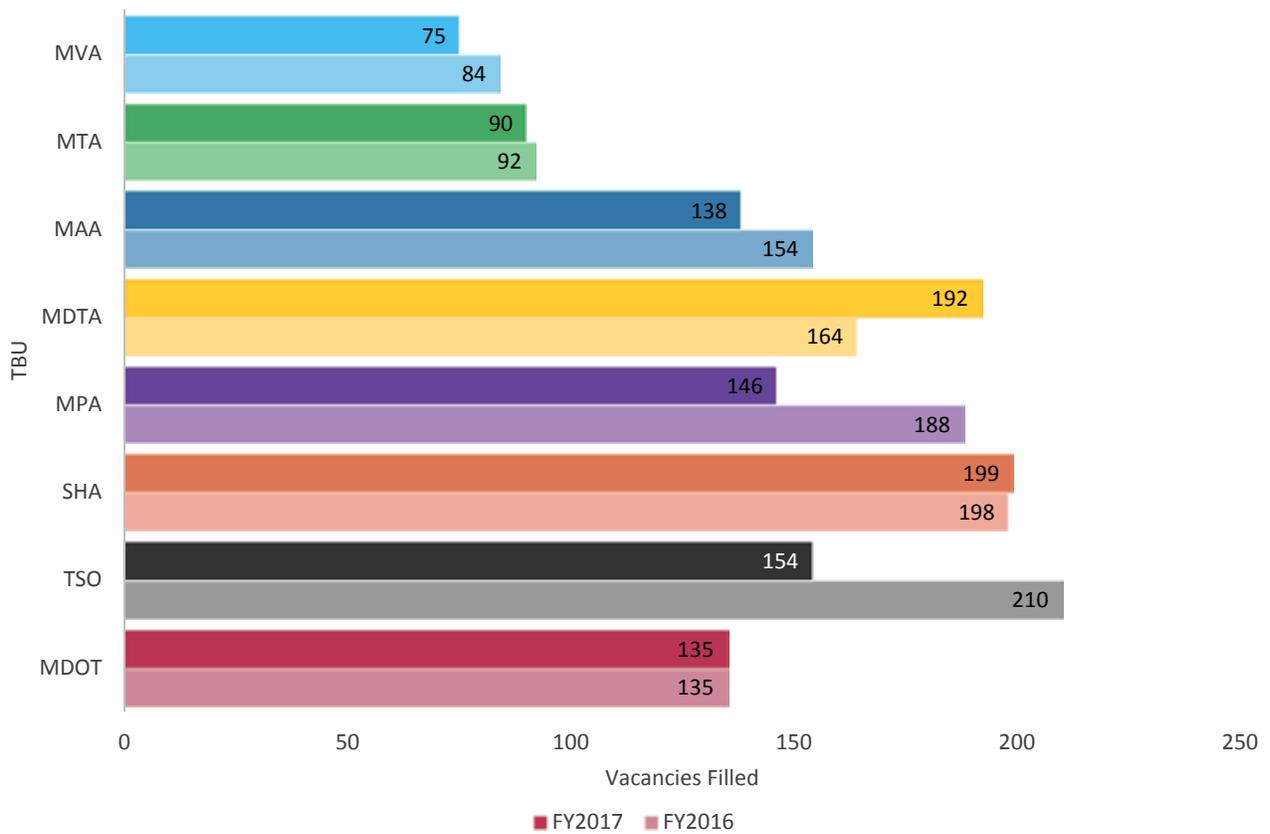
## PERFORMANCE MEASURE 2.5 Time to Fill Vacancies

Chart 2.5.1: Number of Vacancies Filled MDOT-Wide FY2016 vs FY2017



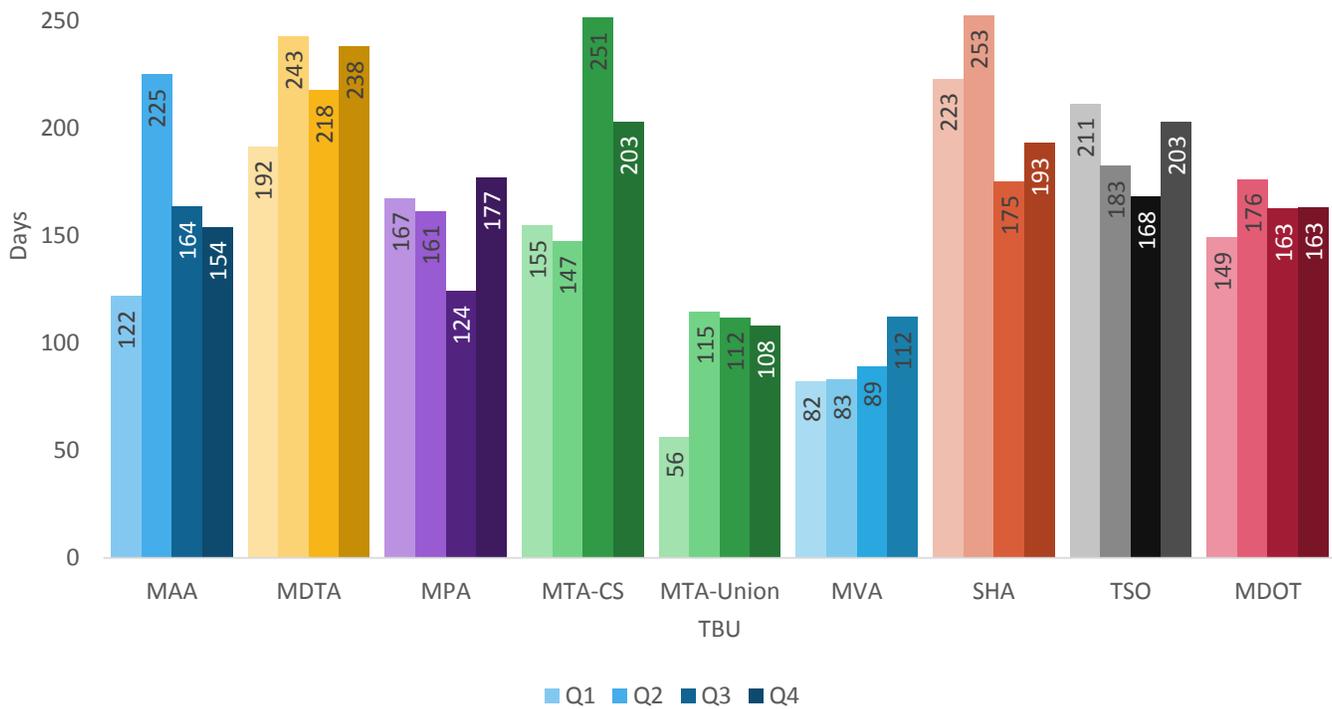
**PERFORMANCE MEASURE 2.5**  
Time to Fill Vacancies

**Chart 2.5.2: True Vacancy Fill Average MDOT-Wide FY2016 vs FY2017**



## PERFORMANCE MEASURE 2.5 Time to Fill Vacancies

Chart 2.5.3: Average Time to Fill Vacancies by TBU FY2017



**TANGIBLE RESULT DRIVER:**

Corey Stottlemyer  
The Secretary's Office (TSO)

**PERFORMANCE MEASURE DRIVER:**

Bill Bertrand  
State Highway Administration (SHA)

**PURPOSE OF MEASURE:**

To measure how well MDOT records, safeguards, and efficiently controls fixed assets.

**FREQUENCY:**

Annually (in October)

**DATA COLLECTION METHODOLOGY:**

Data will be collected when the business units conduct annual fixed asset physical inventories.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 2.6

### Percentage of Fixed Asset Units Identified or Accounted for During the Annual Physical Inventory of Fixed Assets

*"You can't control what you can't measure." — Tom Demarco*

This measure emphasizes the importance of stewardship and internal controls with respect to fixed assets owned by each of the TBUs. This performance measure reports the percentage of fixed assets counted by each business unit during its annual fixed asset physical inventory versus the number of fixed assets recorded in each business unit's official inventory records. A regularly-conducted physical inventory of fixed assets ensures accurate information for the management of assets and discourages fraud.

Currently, five of seven business units conduct a full inventory of non-sensitive Items once every three years and a full inventory of Sensitive Items annually. The remaining business units, MAA and SHA, conduct a full inventory of both sensitive and non-sensitive items annually.

**Table 2.6.1: Physical Inventory by TBU - 2015- 2016**

	Sensitive Assets		Non-Sensitive Assets		Total Assets	
	2015	2016	2015	2016	2015	2016
MAA	98.6%	98.9%	99.0%	96.2%	98.8%	98.8%
MDTA	82.8%	100.0%	-	100.0%	82.8%	100.0%
MPA	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
MTA	77.7%	94.8%	76.7%	94.0%	77.3%	94.4%
MVA*	95.7%	86.9%	93.2%	87.1%	95.6%	86.9%
SHA	-	97.7%	91.4%	98.8%	91.4%	98.5%
TSO	94.9%	94.4%	94.9%	-	94.9%	94.4%
<b>MDOT</b>	<b>89.9%</b>	<b>93.3%</b>	<b>87.6%</b>	<b>97.2%</b>	<b>89.3%</b>	<b>94.8%</b>

\*Note: MVA Non-Sensitive Asset percentage for 2015 restated from prior year.

**TANGIBLE RESULT DRIVER:**

Corey Stottlemeyer

*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Sejal Barot

*State Highway Administration (SHA)*

Dan Favarulo

*The Secretary's Office (TSO)*

**PURPOSE OF MEASURE:**

Provide an overview which shows how TBUs monitor asset management activities.

**FREQUENCY:**

Annually (in January)

**DATA COLLECTION METHODOLOGY:**

Asset inspection condition and asset life-cycle cost analyses are compiled at the TBU level.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 2.7

### Managing Capital Assets

*"One of the great responsibilities that I have is to manage my assets wisely, so that they create value." — Alice Walton*

Customers deserve to know that MDOT is strategically managing its diverse capital assets. Each TBU maintains its physical assets according to policies that minimize asset life-cycle cost while avoiding negative impacts on the delivery of transportation services.

As part of this measure, MDOT has embarked on an inventory of capital assets across all TBUs. This survey was the first of its kind done at MDOT and includes pavement, bridges, tunnels, rail, vehicles and equipment, facilities, and IT systems.

MTA, SHA, MAA, MDTA and MPA perform annual bridge inspections per federal guidelines to assess a rating, which is used to determine if any remedy is required to keep bridges structurally sound.

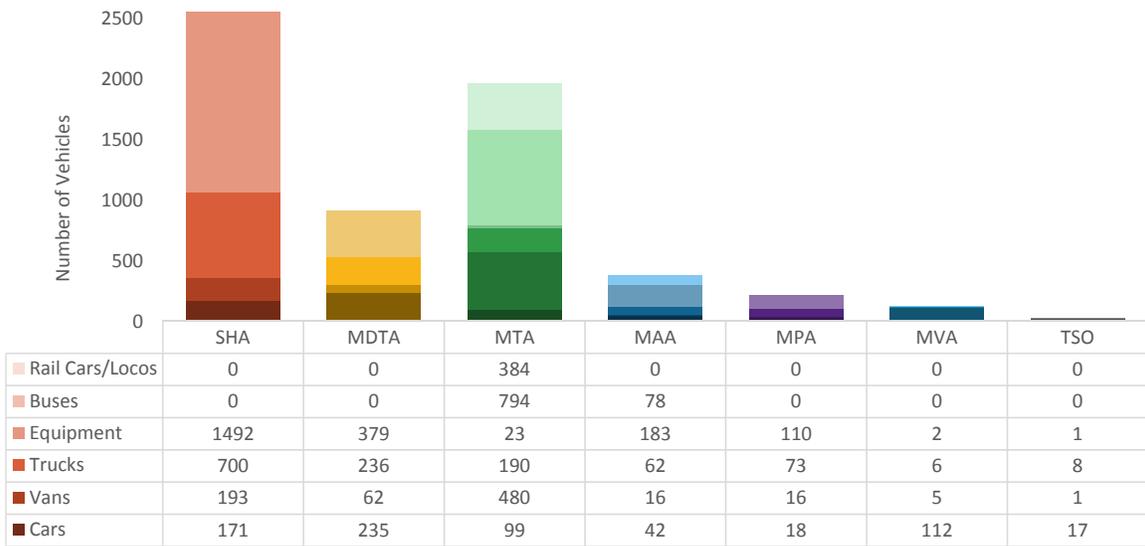
To assess the pavement, SHA and MDTA monitor the condition of pavement based upon the overall pavement condition. It is based upon the International Roughness Index (IRI) Pavement Criteria, which is the most commonly used measure worldwide for evaluating and managing road systems. Monitoring is performed using annual road inspections. In MDOT's recent Customer Satisfaction Survey, 76 percent of respondents were either very satisfied or satisfied with the smoothness of state-owned roads.

MTA monitors rail conditions for MTA Metro and Light Rail systems using TERM Lite evaluation software to evaluate guideway, track work and special structures. Evaluation occurs during an annual asset inventory.

MPA utilizes U.S. Army Corps of Engineers bay channel annual inspection surveys to monitor the dredging depth for shipping access channels to the Port of Baltimore.

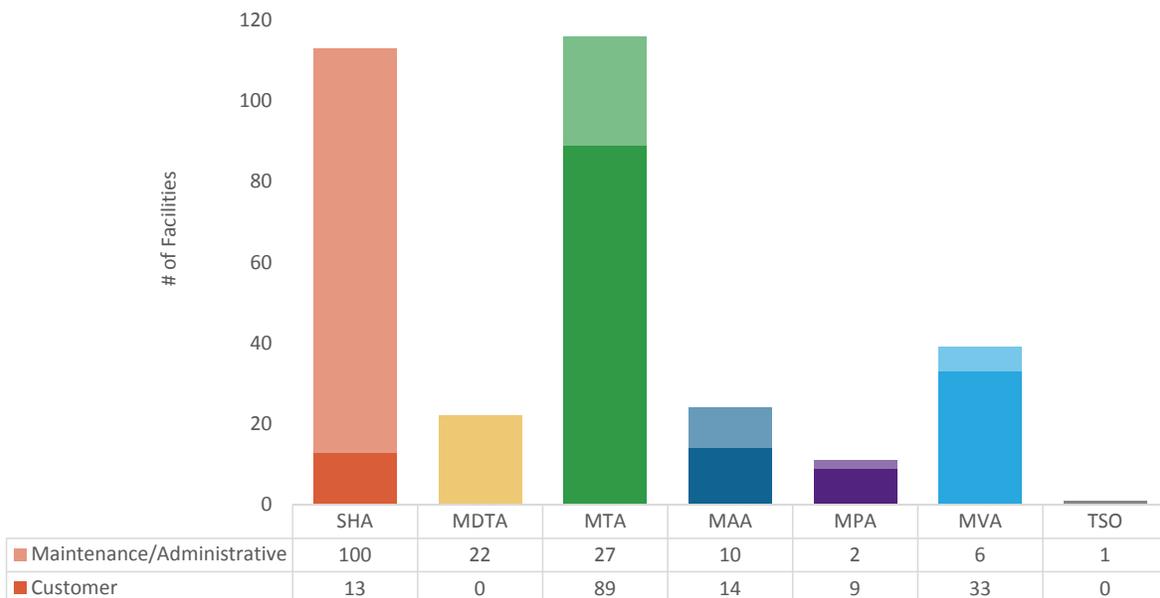
**PERFORMANCE MEASURE 2.7**  
Managing Capital Assets

**Chart 2.7A.1: Vehicles/Equipment by TBU CY2017**



■ Cars ■ Vans ■ Trucks ■ Equipment ■ Buses ■ Rail Cars/Locos

**Chart 2.7A.2: Number of Facilities by TBU CY2017**



## PERFORMANCE MEASURE 2.7 Managing Capital Assets

Chart 2.7B.1: Percent (and Number) of Structurally Deficient Bridges CY2017

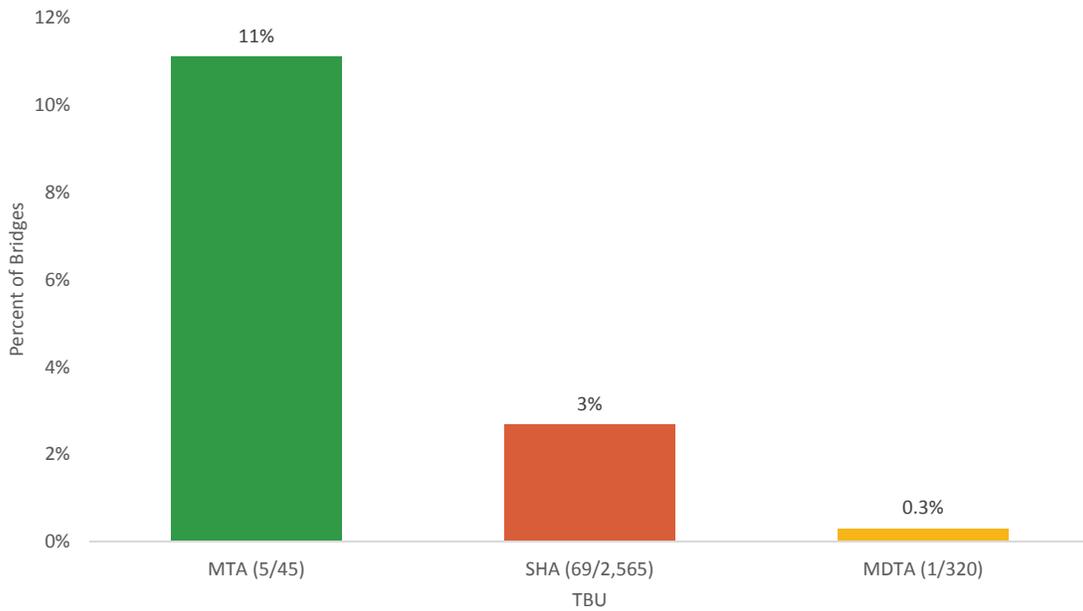
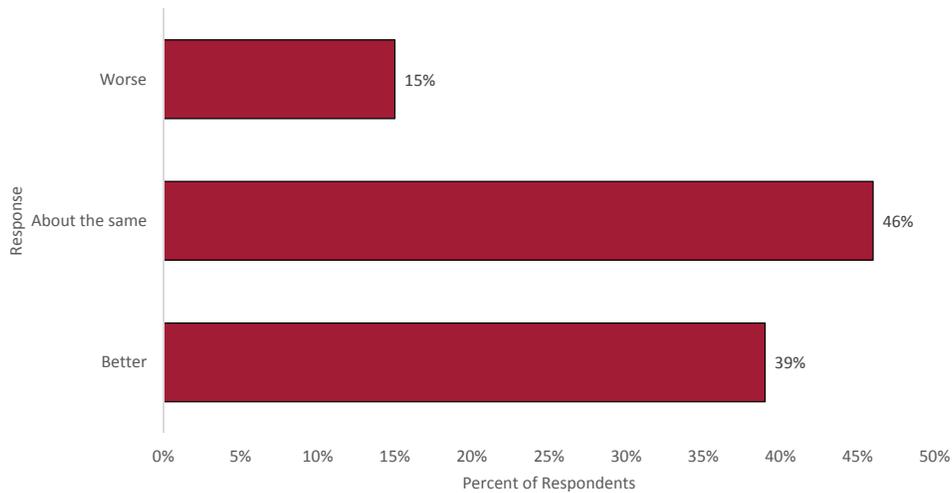
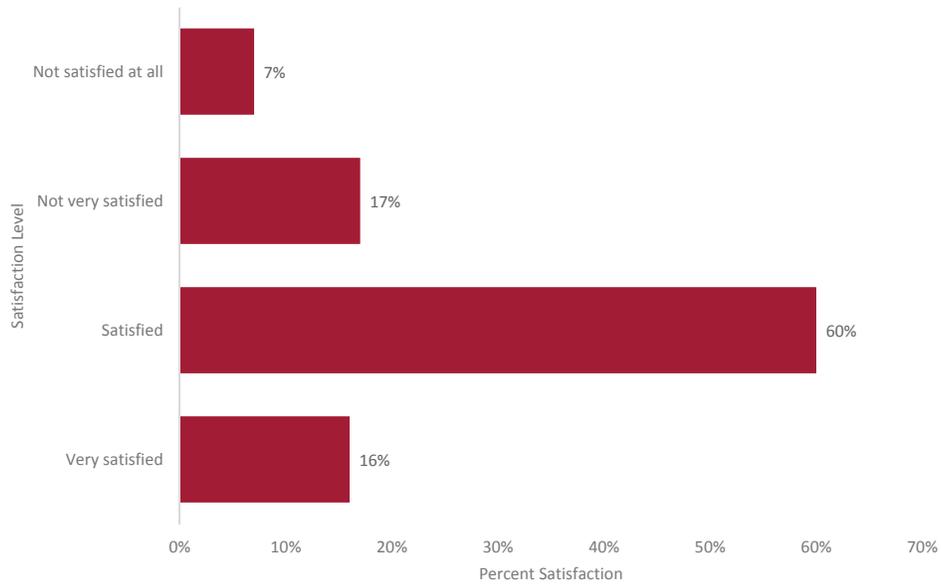


Chart 2.7C.1: Perception of Maryland's Roads Compared to Other States CY2017

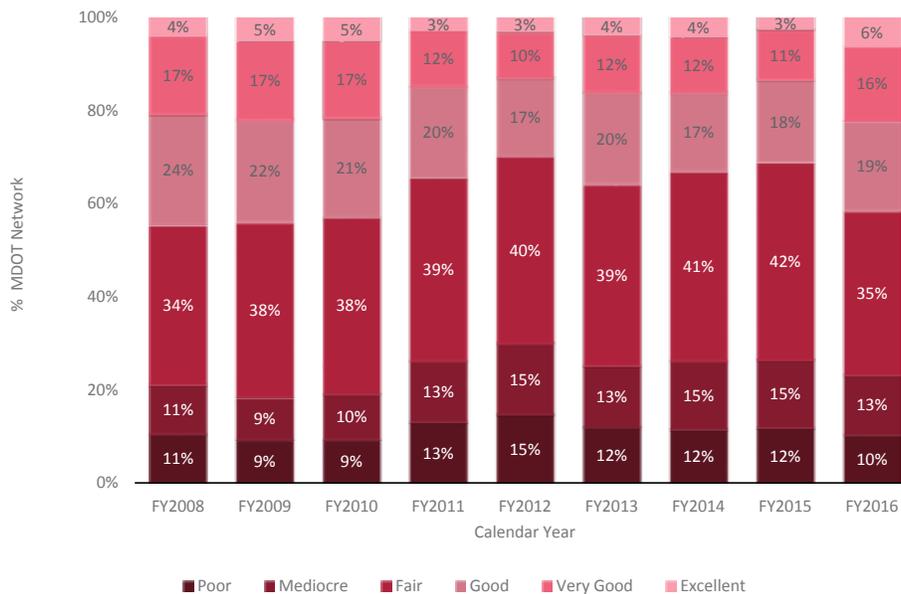


## PERFORMANCE MEASURE 2.7 Managing Capital Assets

**Chart 2.7C.2: Satisfaction with Smoothness of State Roads CY2017**



**Chart 2.7C.3: Condition of MDOT Road Network CY2008-CY2016**



## PERFORMANCE MEASURE 2.7 Managing Capital Assets

Chart 2.7D.1: Rating of Baltimore Metro Rail in "Good" Condition (>2.5) FY2015-FY2016

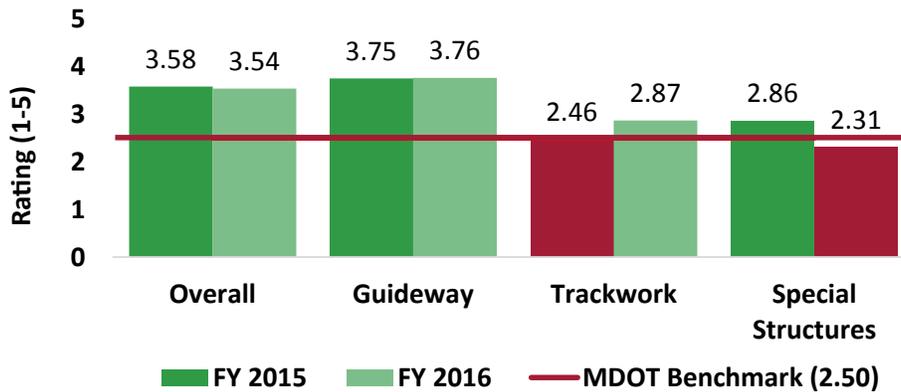
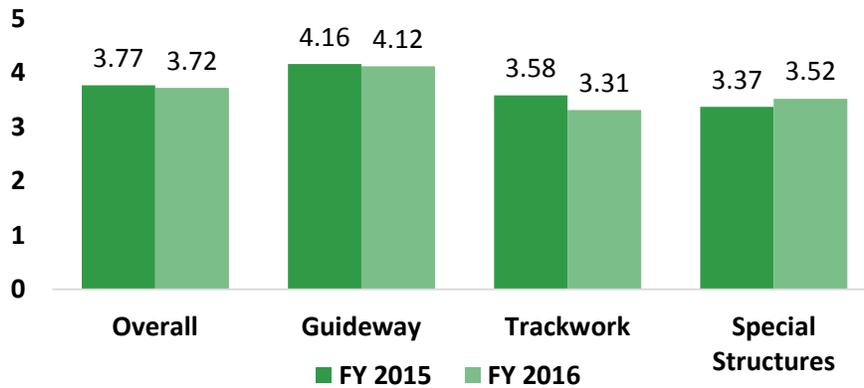
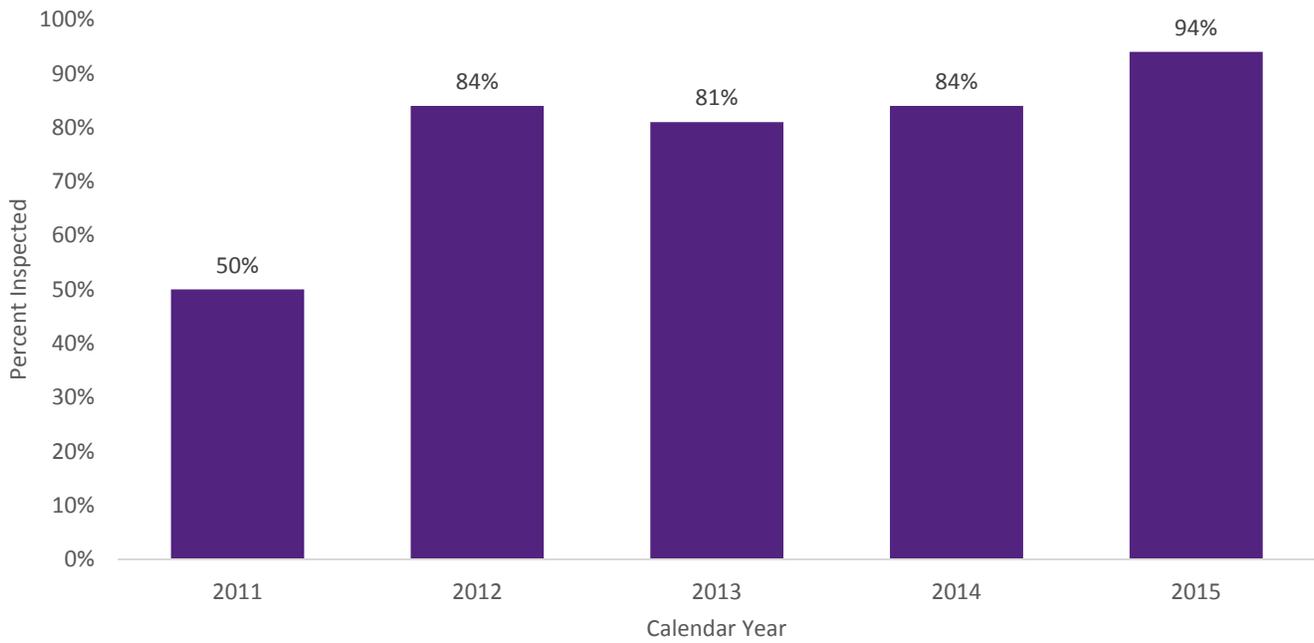


Chart 2.7D.2: Rating of Light Rail in "Good" Condition (>2.5) FY2015-FY2016



**PERFORMANCE MEASURE 2.7**  
Managing Capital Assets

**Chart 2.7E.1: Percent of Bay Channel Inspected CY2011-CY2015**



**TANGIBLE RESULT DRIVER:**

Corey Stottlemyer  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Pretam Harry  
*Motor Vehicle Administration (MVA)*

**PURPOSE OF MEASURE:**

To track the timeliness and ability to match the budgets of the procurement process to be more efficient in our contracts.

**FREQUENCY:**

Annually (in October)

**DATA COLLECTION METHODOLOGY:**

Focus reports MDOT wide showing all active BPO for the fiscal year.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 2.8

### Percent of Procurement on Time and on Budget

***"Price is what you pay. Value is what you get."— Warren Buffett***

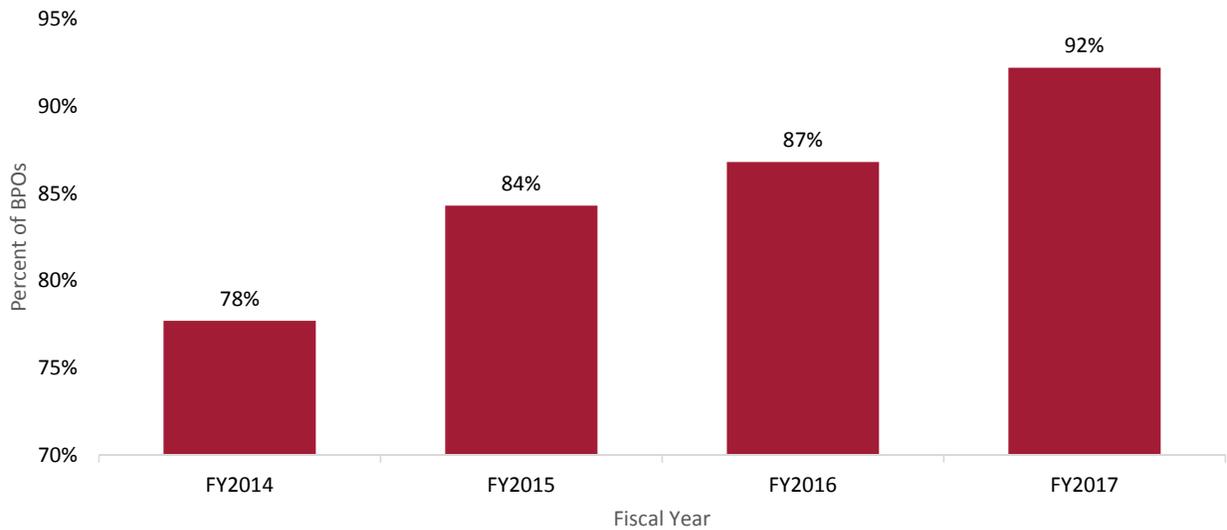
The purpose of this measure is to encourage all managers to proactively monitor and manage each of their procurements to make sure that they are in line with the project and budget in an effort to improve overall contracting efficiencies. Over time, managers will do a better job at setting timelines and budgets for projects. Managers will report the project status accurately and in a timely manner so that problems are identified early and corrective action taken swiftly.

While the trend is improving, we have not addressed underlying issues. The focus must remain on identifying those contracts with issues. The process improvement team is working to understand the systemic problems that prevent contracts that should have been closed in FY2017 from being closed.

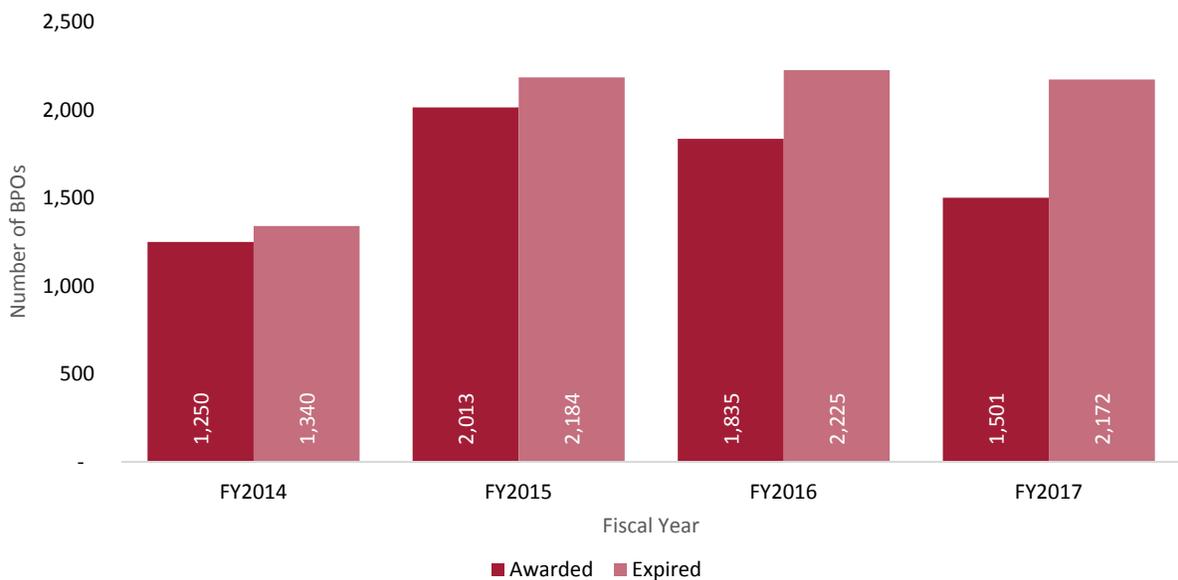
**PERFORMANCE MEASURE 2.8**

Percent of Procurement on Time and on Budget

**Chart 2.8.1: Percent of Blanket Purchase Orders (BPO) Expired FY2014-FY2017**



**Chart 2.8.2: Number of Blanket Purchase Orders (BPOs) Awarded and Expired MDOT-Wide FY2014-FY2017**



**TANGIBLE RESULT DRIVER:**

Corey Stottleyer  
The Secretary's Office (TSO)

**PERFORMANCE MEASURE DRIVER:**

Pretam Harry  
Motor Vehicle Administration (MVA)

**PURPOSE OF MEASURE:**

To measure (a) the percent of occurrences and (b) the dollar value of unanticipated contract modifications on procurement contracts.

**FREQUENCY:**

Annually (in October)

**DATA COLLECTION METHODOLOGY:**

MDOT wide showing active unanticipated contract modifications equal to or greater than \$1 million.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 2.9

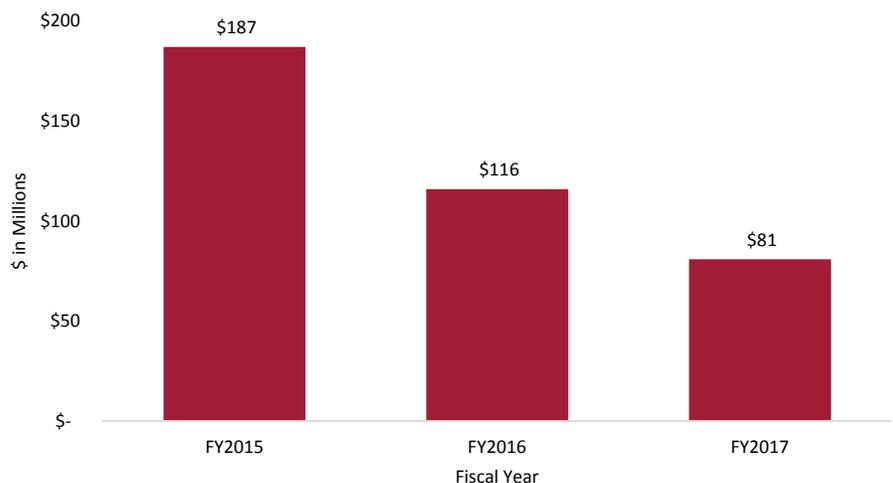
### Percent and Value of Unanticipated Contract Modifications

***"The comptroller and I — it's no secret — complain every single meeting about retroactive contracts and extension requests in order to complete new procurements." — Governor Larry Hogan***

The purpose of this measure is to encourage all managers to proactively monitor and manage each of their procurements to make sure that they are minimizing the value and amount of unanticipated contract modifications. In addition, it will encourage project staff to use timely and accurate reports that managers can analyze to examine trends in unanticipated contract modifications.

The amount and value of contract modifications will vary from one transportation business unit to another depending on the type of project. For example, construction contracts, because of the uncertainties due to weather conditions or soil conditions, may require more contract modifications than building maintenance contracts. Similarly, an IT development contract may require more contract modifications than an IT maintenance contract.

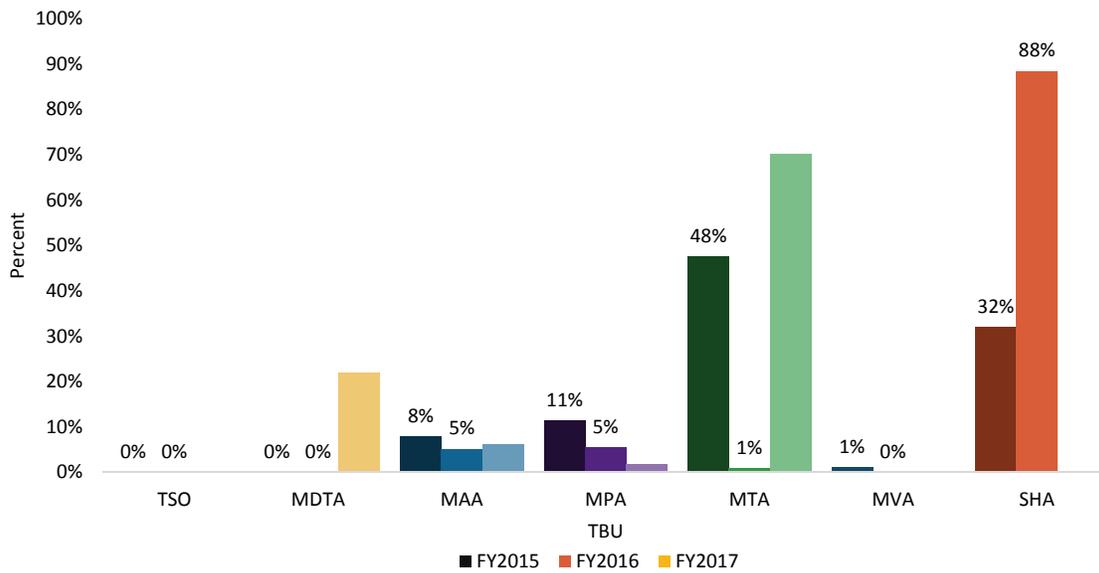
**Chart 2.9.1: Value of Unanticipated Contract Modifications in Millions of Dollars MDOTWide FY2015-FY2017**



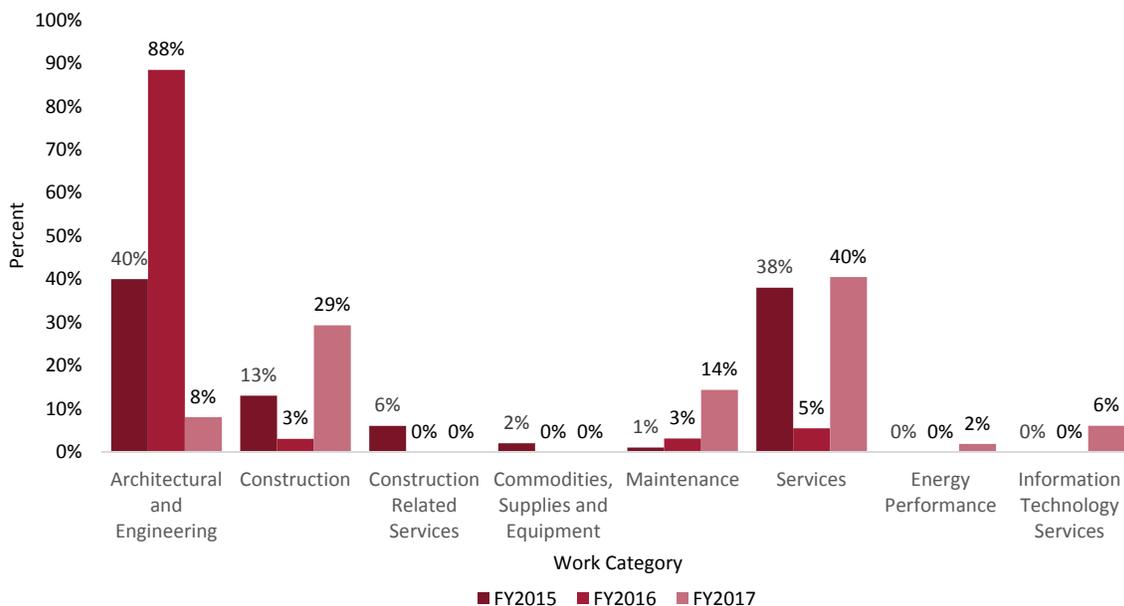
## PERFORMANCE MEASURE 2.9

### Percent and Value of Unanticipated Contract Modifications

**Chart 2.9.2: Percent of Unanticipated Contract Modification Dollars Spent by TBU FY2015 - FY2017**



**Chart 2.9.3: Percent of Unanticipated Contract Modification Dollars Spent by Category of Work FY2015 - FY2017**



**TANGIBLE RESULT DRIVER:**

Corey Stottleyer  
The Secretary's Office (TSO)

**PERFORMANCE MEASURE DRIVER:**

Scott Schell  
Maryland Transit Administration (MTA)

**PURPOSE OF MEASURE:**

To understand how procurement competition impacts MDOT resources.

**FREQUENCY:**

Quarterly

**DATA COLLECTION METHODOLOGY:**

Data was collected on each TBU procurement contract over \$200,000 during the first quarter of FY 2017. Sole source, emergency, and intergovernmental purchasing procurements were not included, as they have their own processes for determination. Procurement contract ID, number of bids, estimated cost and final contract amount were the used data points.

**NATIONAL BENCHMARK:**

N/A

**PERFORMANCE MEASURE 2.10**

**Relationship Between Procurement Competition and Cost**

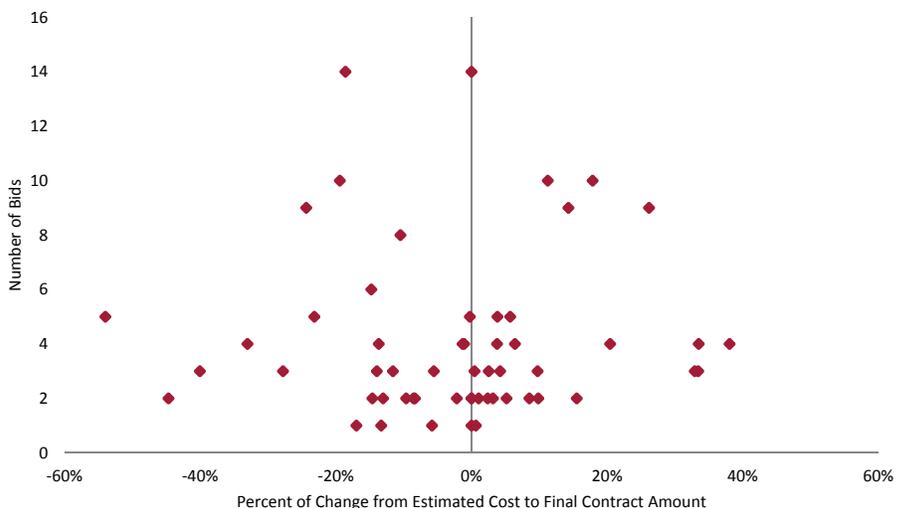
*“Competition is the keen cutting edge of business, always shaving away at costs.” — Henry Ford*

Assessing the impact of procurement competitiveness on contract costs tests the hypothesis that increased competition leads to a better price. It also tests MDOT’s ability to accurately estimate and plan for costs. The data trend presents an opportunity to develop an MDOT-wide initiative to track cost estimates on procurement contracts and to evaluate the process for determining estimates.

The data continues to suggest that, as the number of bids increases, procurement contracts come in at or below cost estimate (-100 percent -0 percent). The procurements that increased in cost had a low number of bids. 17 percent of procurements this quarter were greater than 10 percent over their estimated cost. 21 percent of procurements this quarter were greater than 15 percent under their estimated cost. Procurements greater than 10 percent over and 15 percent under both had an average number of four bids.

With over a year of data now, the process improvement team is examining outliers by TBU and type of contract. The sample size is too small to do reliable statistical analysis on types of contract.

**Chart 2.10.1: Percent Change from Estimated Cost to Final Contract Amount Q4 FY2017**



**TANGIBLE RESULT DRIVER:**

Corey Stottlemeyer  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Patrick Bradley  
*Maryland Aviation Administration (MAA)*

**PURPOSE OF MEASURE:**

To monitor compliance with state and organizational operating processes and procedures each year by tracking the number of Internal Audit Findings and Repeat Internal Audit Findings.

**FREQUENCY:**

Annually (in October)

**DATA COLLECTION METHODOLOGY:**

Information collected from TBU audit databases.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 2.11

### Number of Internal Audit Findings and Number of Repeat Internal Audit Findings

*"Internal audit . . . the coolest profession in the world." — Tom Peters*

Transparent, informative, and accurate financial reporting is essential for our customers to have confidence in MDOT's ability to manage resources. Audits provide a window into current systems and areas for improvement.

Data will be presented by TBU in the number of audit findings and repeat audit findings on an annual basis. This will encourage MDOT and each TBU to avoid audit and repeat audit findings.

From FY2013-2017, there were 844 Internal Audit Findings. The number of Repeat Internal Audit Findings totaled 44 from FY2013-FY2017, dealing with materials and supplies management (22 findings), promotional expense documentation and authorization (9 findings), fixed asset inventories (6 findings), MBE subcontractors reporting and compliance reviews (2 findings), overtime approvals not being documented (2 findings) and one finding each on the COMAR competitive bid process, quality assurance reviews not signed and improper auto title lien documentation.

The repeat audit findings of materials and supplies management include such items as segregation of duties, access to storeroom, non-signed receipts, perpetual inventory records not being accurate, documentation issues and inventory turning over less than three times per year.

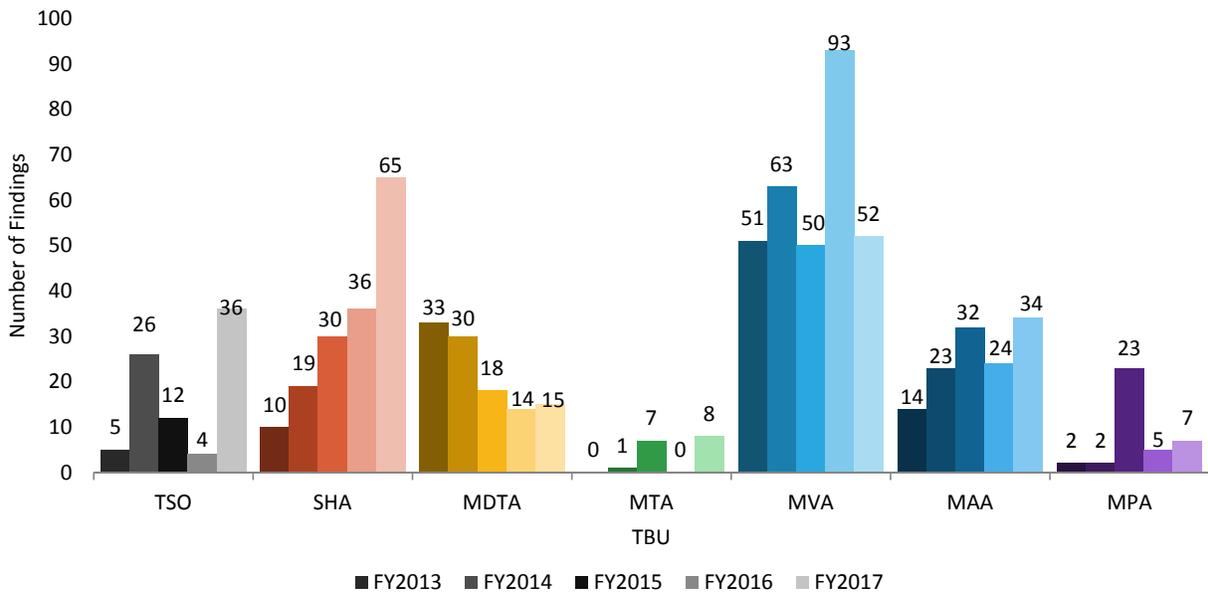
From FY2013-2016, of 627 total Internal Audit Findings, 32 were Repeat Internal Audit Findings or 5.1 percent.

From FY2013-2016, of 844 total Internal Audit Findings, 44 were Repeat Internal Audit Findings or 5.2 percent.

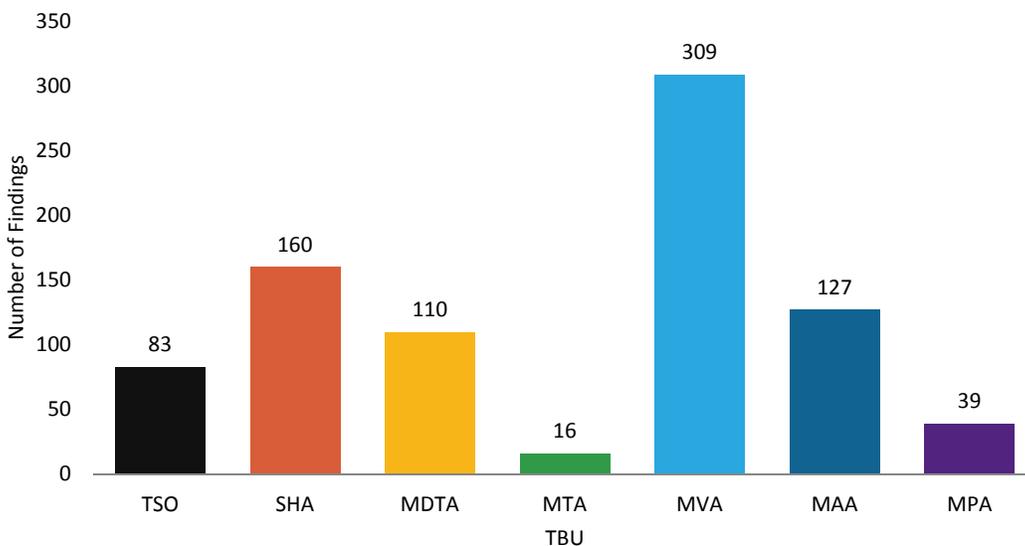
## PERFORMANCE MEASURE 2.11

### Number of Internal Audit Findings and Number of Repeat Internal Audit Findings

**Chart 2.11.1: Number of Internal Audit Findings by TBU FY2013-FY2017**



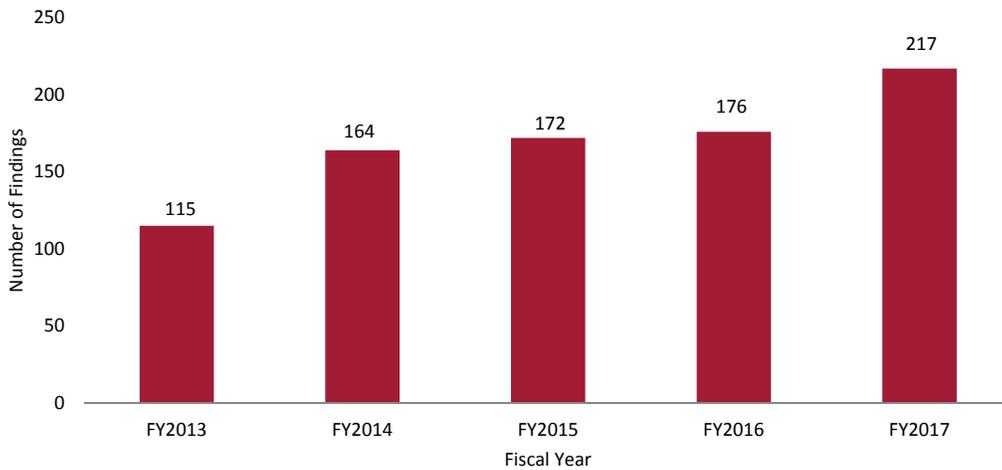
**Chart 2.11.2: Number of Total Internal Audit Findings by TBU FY2013-FY2017**



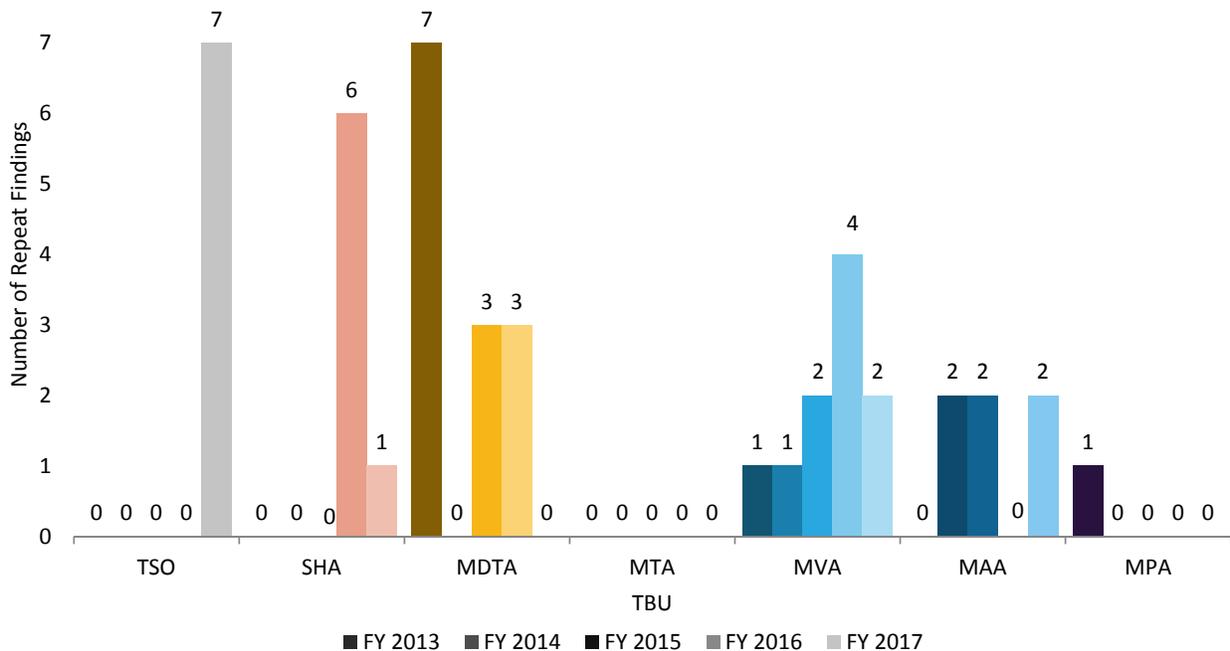
**PERFORMANCE MEASURE 2.11**

Number of Internal Audit Findings and Number of Repeat Internal Audit Findings

**Chart 2.11.3: Total Internal Audit Findings MDOT-Wide FY2013-FY2017**



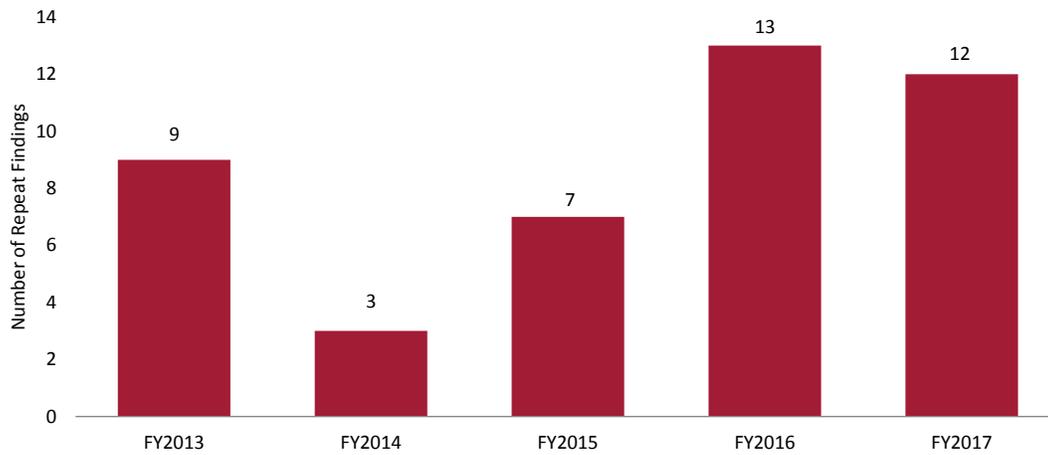
**Chart 2.11.4: Number of Internal Audit Repeat Findings FY2013-FY2017**



**PERFORMANCE MEASURE 2.11**

Number of Internal Audit Findings and Number of Repeat Internal Audit Findings

**Chart 2.11.5: Trend in Total Internal Audit Repeat Findings MDOT-Wide FY2013-FY2017**



**TANGIBLE RESULT DRIVER:**

Corey Stottlemeyer  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Patrick Bradley  
*Maryland Aviation Administration (MAA)*

**PURPOSE OF MEASURE:**

To monitor compliance with state and organizational operating processes and procedures each year by tracking the number of Legislative Repeat Audit Findings.

**FREQUENCY:**

Annually (in January)

**DATA COLLECTION METHODOLOGY:**

Information collected from TBU audit databases.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 2.12

### Number of Legislative Repeat Audit Findings

*"Fraud is a binary issue where the only good number is zero."*

— Rob Norman

Transparent, informative, and accurate financial reporting is essential for our customers to have confidence in MDOT's ability to manage resources. Legislative audits provide an external view of our current systems and areas for improvement.

The purpose of this performance measure is to track the number of Legislative Repeat Audit Findings. Data will be presented MDOT-wide in the number of legislative repeat audit findings on an annual basis. This will encourage MDOT and each TBU to avoid legislative repeat audit findings.

In FY2013-FY2017 there were six total Office of Legislative Audit (OLA) Repeat Audit Findings dealing with proper internal controls over items purchased not being maintained, access to fare collection equipment and money rooms not being controlled, access controls to critical database security logs, files and transactions lacking, a lack of controls over critical virtual servers, the process for determining the propriety of architectural and engineering contract billings not being comprehensive and a lack of internal controls to ensure independent approvals for purchasing and disbursement transactions.

Five Legislative Repeat Audit Findings occurred in FY2013-FY2017 and have been resolved.

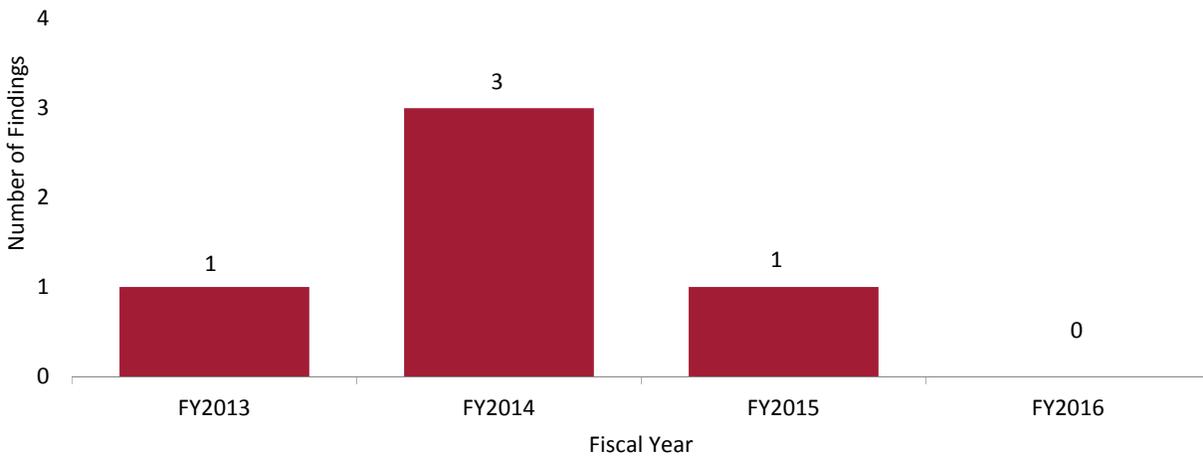
There were zero Legislative Repeat Audit Findings in FY2016.

There was one Legislative Repeat Audit Finding in FY2017 which has been resolved.

**PERFORMANCE MEASURE 2.12**

**Number of Legislative Repeat Audit Findings**

**2.12.1 Number of Legislative Repeat Audit Findings**



**TANGIBLE RESULT DRIVER:**

Corey Stottlemeyer  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

David Maier  
*The Secretary's Office (TSO)*

**PURPOSE OF MEASURE:**

To ensure that when MDOT acquires properties that it takes steps to maintain value of the remaining portions.

**FREQUENCY:**

Annually

**DATA COLLECTION METHODOLOGY:**

A central MDOT database of properties will be tracked with attention to properties with buildings or other structures.

**NATIONAL BENCHMARK:**

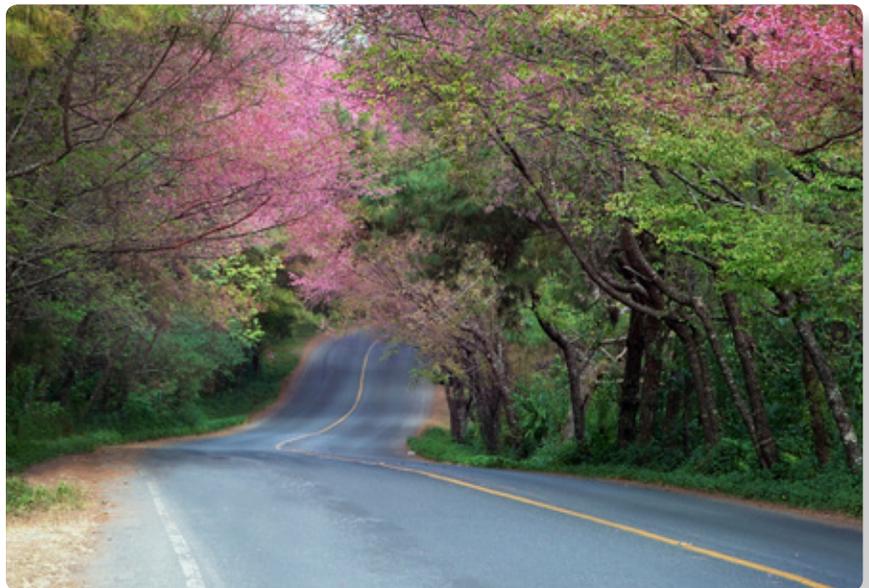
N/A

## PERFORMANCE MEASURE 2.13

### Rate of Return on Real Property

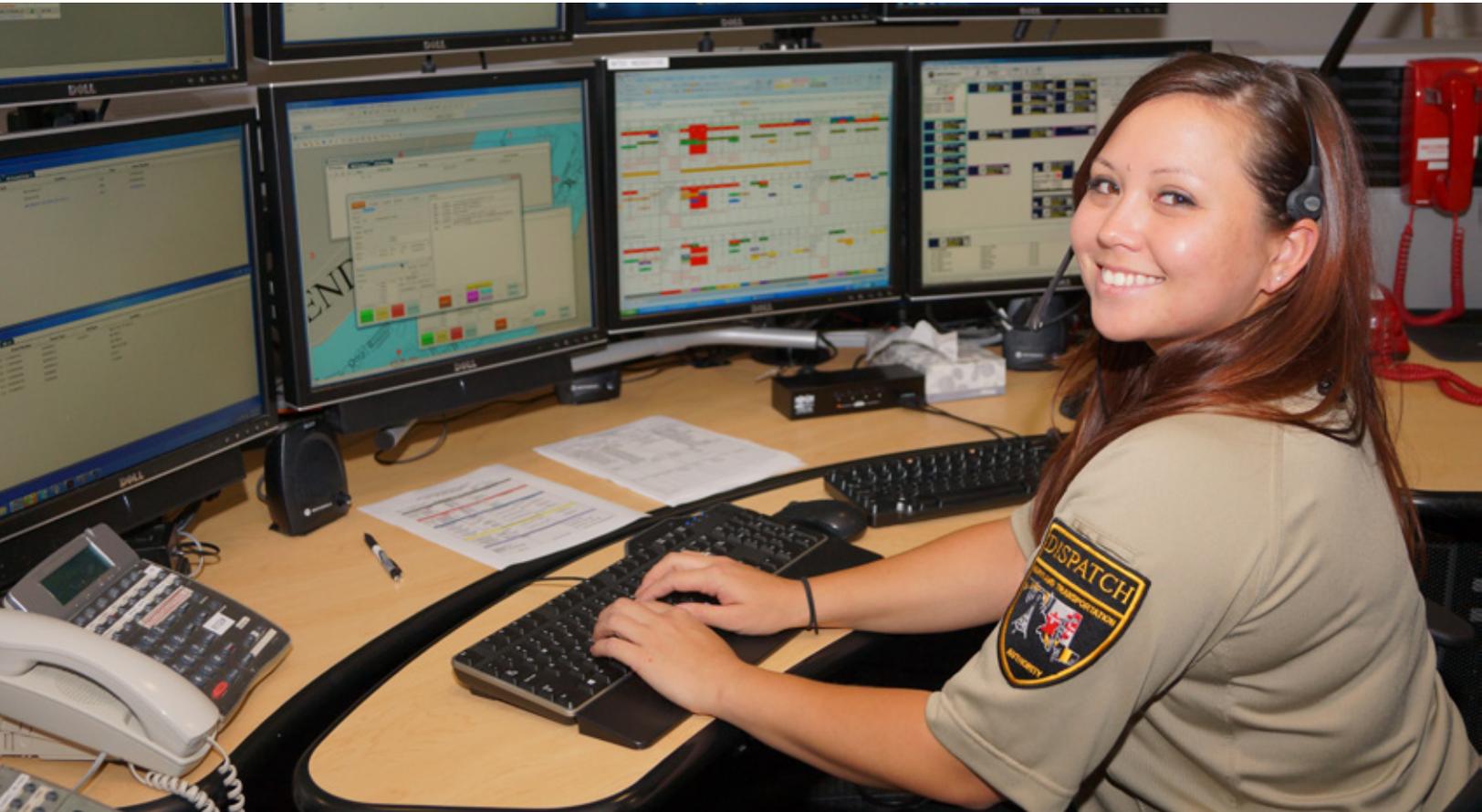
As MDOT acquires real property for a state transportation purpose, portions of those properties are deemed excess and can be sold. To maximize the return on investment, MDOT needs to ensure that when it acquires properties that it takes steps to maintain the value of the remaining unused portion.

A combined inventory and review of all MDOT properties is underway at TSO. Priority is being given to improved properties with buildings and other structures since these properties are most at risk if not maintained properly.



### TANGIBLE RESULT #3

## Provide a Safe and Secure Transportation Infrastructure



MDOT will not compromise on our commitment to continually improve the safety and security of our customers and partners in everything we do.

#### RESULT DRIVER:

Sarah Clifford

*Maryland Transportation Authority (MDTA)*

# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Bud Frank  
The Secretary's Office (TSO)

## PURPOSE OF MEASURE:

To track crime trends and adjust strategies/staffing/response to protect customers, employees, and state property.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

MTA Police and MDTA Police will report directly to Measure Driver. SHA and MVA will compile information and also report directly to Measure Driver. Measure Driver will report to Project Management Team.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 3.1

### Number of Crimes Against Persons and Property Committed at MDOT Facilities

This measure includes all Part I offenses and select Part II offenses as defined in the FBI Uniform Crime Report (UCR). The UCR is a national standard used by law enforcement for the collection and comparison of crime data nationwide. Part I offenses include homicide, forcible rape, robbery, aggravated assault, burglary, larceny, motor vehicle theft and arson. Part II offenses are less serious and include other assaults, vandalism, disorderly conduct, and other sex offenses.

The following charts show a comparison first and second quarter calendar year 2016 versus First and Second Quarter Calendar Year 2017, for Part I and Part II crimes. The charts are listed in three categories: MTA, MAA, and the remaining TBUs.

Law enforcement reviews this data on a weekly and bi-weekly basis for resource allocation and targeted enforcement activities. The data is also used to determine areas of security concern.

# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.1

Number of Crimes Against Persons and Property Committed at MDOT Facilities

Chart 3.1.1: Part I Crimes CY2017

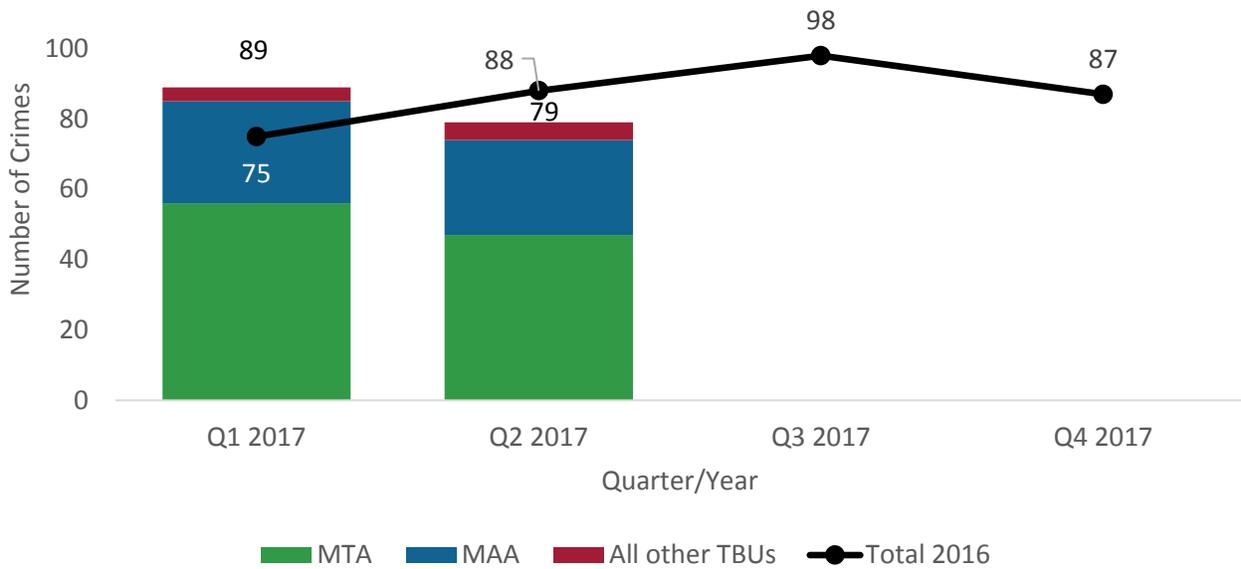
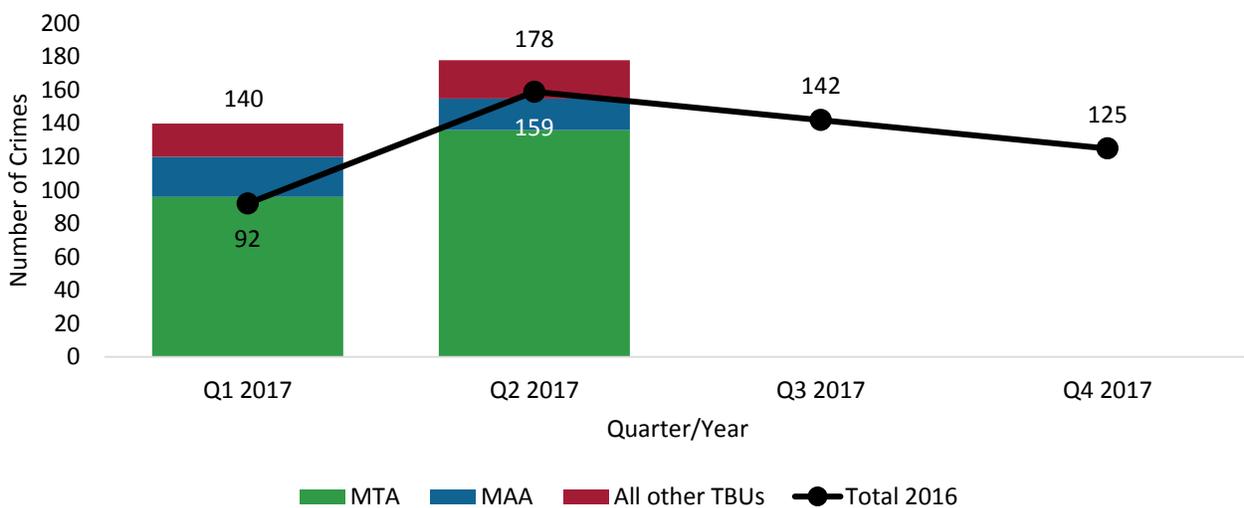


Chart 3.1.2: Part II Crimes CY2017



# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Thomas Gianni  
Motor Vehicle Administration (MVA)

## PURPOSE OF MEASURE:

To track quarterly and annual trends in the number of persons killed in motor vehicle crashes.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Based on collected police data submitted to Maryland State Police (MSP) through Automated Crash Reporting System (ACRS).

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 3.2

### Number of Traffic-Related Fatalities on All Roads

MDOT strives to implement programs that will increase motorist safety by reducing traffic-related crashes that result in serious injuries and deaths. One key measure is tracking the number of fatalities on all roads and analyzing specific causes and related trends. Maryland's Strategic Highway Safety Plan (SHSP) is a comprehensive set of emphasis areas and strategies designed to reduce highway fatalities and serious injuries by implementing behavioral and engineering safety countermeasures. It is based on the Toward Zero Deaths approach to reduce traffic fatalities 50 percent by 2030 from the 2008 baseline of 592 fatalities. The interim fatality reduction target is 394 in 2020.

Following a decade-long period of significant decreases in traffic-related fatalities, this trend unfortunately began to reverse. In 2014, the number of fatalities (443) was the lowest since 1948; but in 2015, the State experienced a 17.6 percent increase in highway fatalities (521), the largest single-year increase in 30 years. Although the number of highway deaths remained steady in 2016 (522), these numbers still are far greater than those in previous years, as well as greater than established reduction targets.

These increased numbers of highway deaths over the past two years also has been experienced nationally as the total number of deaths on our nation's highways increased by 7.2 percent to 35,092 fatalities in 2015 and is projected to rise another six percent for 2016. The National Highway Traffic Safety Administration (NHTSA) attributes some of the cause of these fatality increases to relatively inexpensive gasoline, a sharp increase in vehicle miles traveled (VMT) and an improved economy.

Preliminary analysis of 2017 data through the second quarter indicates that fatalities on all roadways across the State are up slightly from the previous year. Likewise, VMT in Maryland has increased by more than two percent during this same period - an increase of almost one billion miles driven. This increased exposure, coupled with risky driving behaviors and a failure to use seat belts, is believed to be a significant reason for the increase in highway fatalities in Maryland. Drivers remain the single most important safety feature inside a vehicle.

# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.2

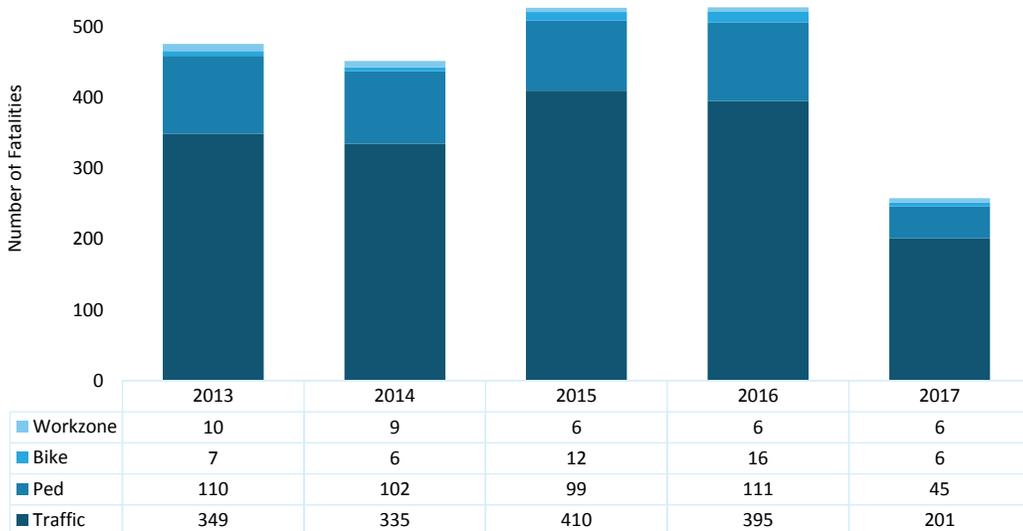
### Number of Traffic-Related Fatalities on All Roads

While there was a slight decrease in the number of bicycle fatalities in the first half of 2017, these numbers still represent a significant increase from what was about one percent of total fatalities only a few years ago. At the current pace, the State will likely experience a similar number of bicycle fatalities in 2017 as in the previous two years.

Pedestrian deaths typically account for approximately 20 percent of all traffic-related fatalities. Pedestrian fatalities consistently measure approximately 100 per year. During the first half of 2017, pedestrian deaths decreased slightly from the first half of 2016, but are likely to exceed 100 deaths by the end of the year.

Maryland’s SHSP (2016-2020) establishes six specific emphasis areas along with long-term goals and mid-range reduction targets to help save lives on Maryland roads. The five-year plan was developed by a diverse group of partners and stakeholders representing all 4-Es of highway safety (Engineering, Enforcement, Education and Emergency Medical Services). Emphasis Area Teams (Aggressive Driving, Distracted Driving, Impaired Driving, Occupant Protection, Highway Infrastructure Safety, and Pedestrian and Bicycle Safety) are comprised of a broad range of safety officials and stakeholders who design action plans for implementing the SHSP’s strategies. These teams meet regularly to gauge progress and determine what changes need to be made to better implement the safety strategies. The SHSP is managed by an Executive Council of high-ranking officials responsible for public and highway safety. This group meets semi-annually to review overall progress and to discuss possible amendments to the plan as necessitated by changing dynamics. The SHSP is administered by the MDOT MVA’s Maryland Highway Safety Office.

**Chart 3.2.1: Annual Comparison of All Fatalities CY2013-CY2017 (YTD)**



# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.2

### Number of Traffic-Related Fatalities on All Roads

Chart 3.2.2: Comparison of Fatalities Q2 CY2014-CY2017 (YTD)

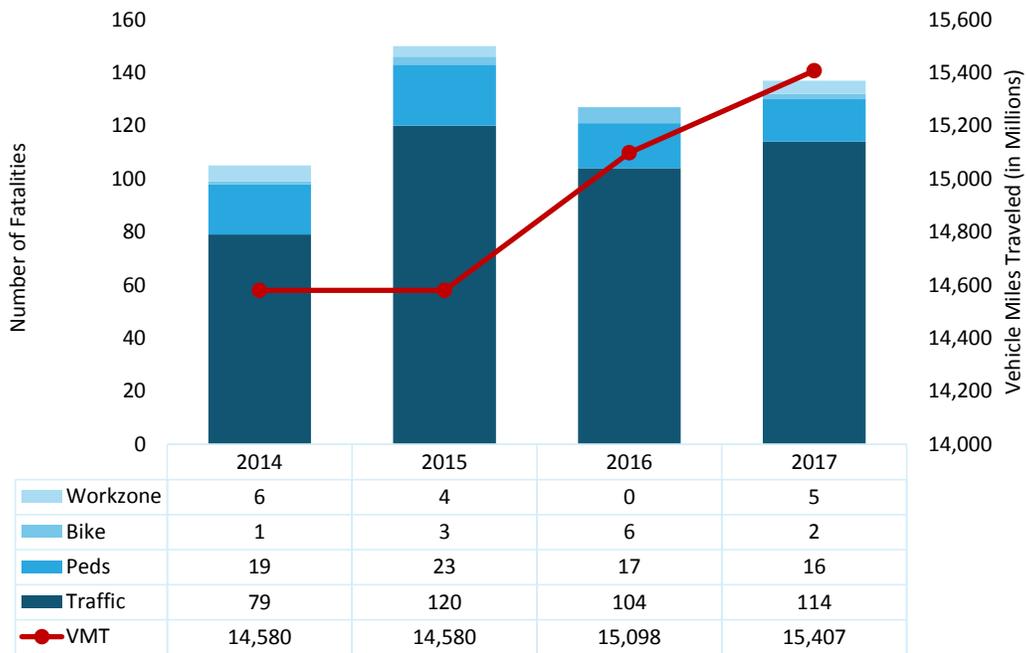
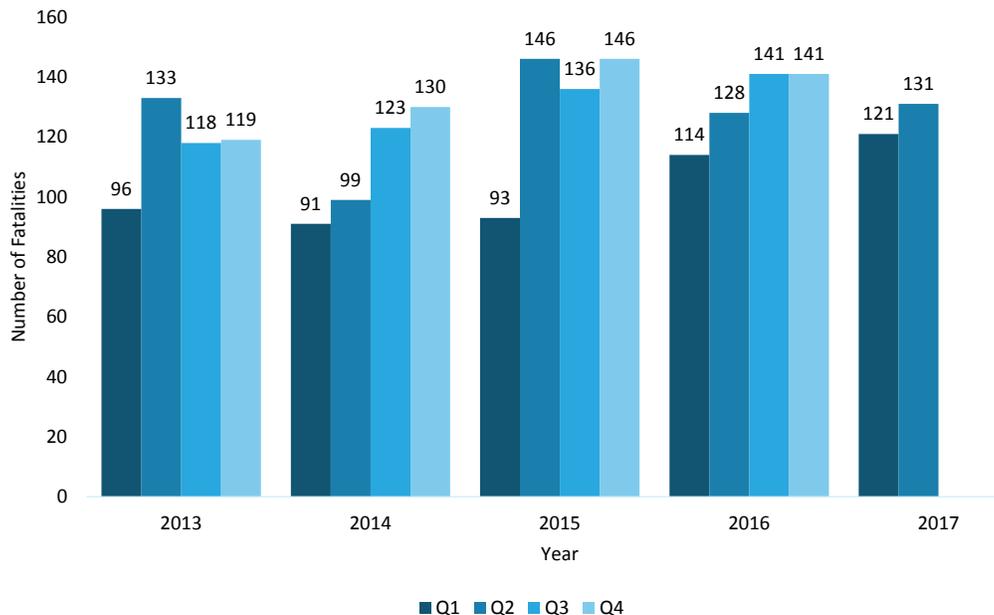


Chart 3.2.3: Annual Comparison of All Fatalities CY2013-CY2017



# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Thomas Gianni  
Motor Vehicle Administration (MVA)

## PURPOSE OF MEASURE:

To track trends in the number of persons killed in motor vehicle crashes per vehicle miles traveled (VMT).

## FREQUENCY:

Annually (in January)

## DATA COLLECTION METHODOLOGY:

Traveled (VMT) data based on highway counts on roadways across the State. Fatality data is collected by the MSP through its Automated Crash Reporting System (ACRS). The Maryland Highway Safety Office (MHSO) collects the data.

## NATIONAL BENCHMARK:

National Highway Fatality Rate of 1.12 in 2015.

## PERFORMANCE MEASURE 3.3

### Maryland Traffic-Related Fatality Rate (Highways)

The fatality rate is a measure of the number of persons killed in a traffic-related crash for every 100 million VMT on all roads in the State. Through the use of automated highway counters, the VMT is determined monthly by SHA and is compared annually to the number of traffic-related fatalities to determine the rate.

Maryland's traffic-fatality rate compares favorably to the national fatality rate. While the U.S. fatality rate never has dipped below one death per 100 million VMT, Maryland's rate has remained below one for the past seven years. Although this rate had been trending downward, it increased in 2015 to .91 fatalities per 100 million VMT.

This increase corresponds with the significant increase in traffic-related fatalities in Maryland in 2015. Preliminary analysis of 2016 data in Maryland indicates VMT increased by nearly 2 percent - an increase of more than one billion miles driven. Despite these increases, Maryland's 2015 rate remained below the national rate of 1.12.

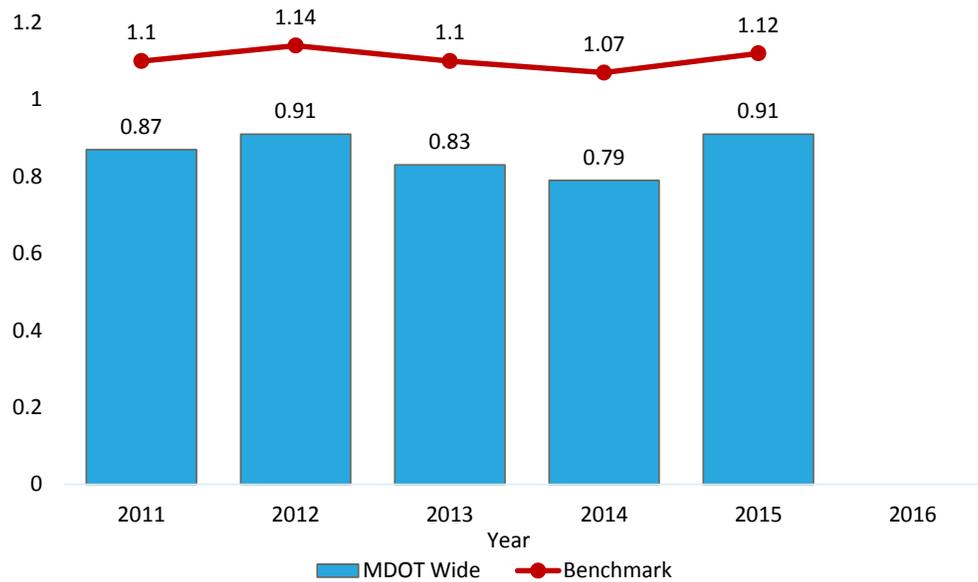
Historically, as the nation's and/or state's economy grows, people tend to drive more, increasing both the state's VMT and a person's risk for being in a crash. Opportunities to lower the fatality rate are best achieved by decreasing the number of traffic-related fatalities, as VMT is more difficult to influence.

# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.3

### Maryland Traffic-Related Fatality Rate (Highways)

Chart 3.3.1: Traffic-Related Fatality Rate, Maryland vs. National Benchmark CY2011-CY2016



# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Thomas Gianni  
Motor Vehicle Administration (MVA)

## PURPOSE OF MEASURE:

To track quarterly and annual trends in the number of persons seriously injured in motor vehicle crashes.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Based on collected police data submitted to MSP through Automated Crash Reporting System (ACRS).

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 3.4

### Number of Traffic-Related Serious Injuries on all Roads

The number of traffic-related serious injuries is a count of persons sustaining an incapacitating injury in a crash. It is determined by a responding police officer investigating the crash and gathered from the injury severity code entered on the crash report. Maryland's SHSP is based on the Toward Zero Deaths approach to reduce fatalities and serious injuries from traffic-related crashes by 50 percent by 2030 from the 2008 baseline. Serious injury goals have been set with a similar methodology, with an interim goal of 2,939 by 2020. Strategies for reducing the crashes that cause both fatal and serious injuries are contained within the six emphasis areas of the SHSP.

Following a significant 10-year decline, the number of serious injuries on Maryland roadways in 2016 increased by 16 percent. This upward trend has continued into 2017 as traffic-related serious injuries during the first six months of the year increased by 33 percent – or 385 more persons seriously injured in crashes – compared to the same period last year. While this increase aligns with increases in highway fatalities and in VMT across the State, the upward trend in serious injuries is significantly greater.

Since fatality data is only a small portion of the entire crash picture in Maryland, serious injuries, and their frequency, help to provide more robust data in determining crash trends across the State. Additionally, striving to minimize crashes that result in serious injuries serves to reduce a motorist's risk for suffering such life-altering consequences.

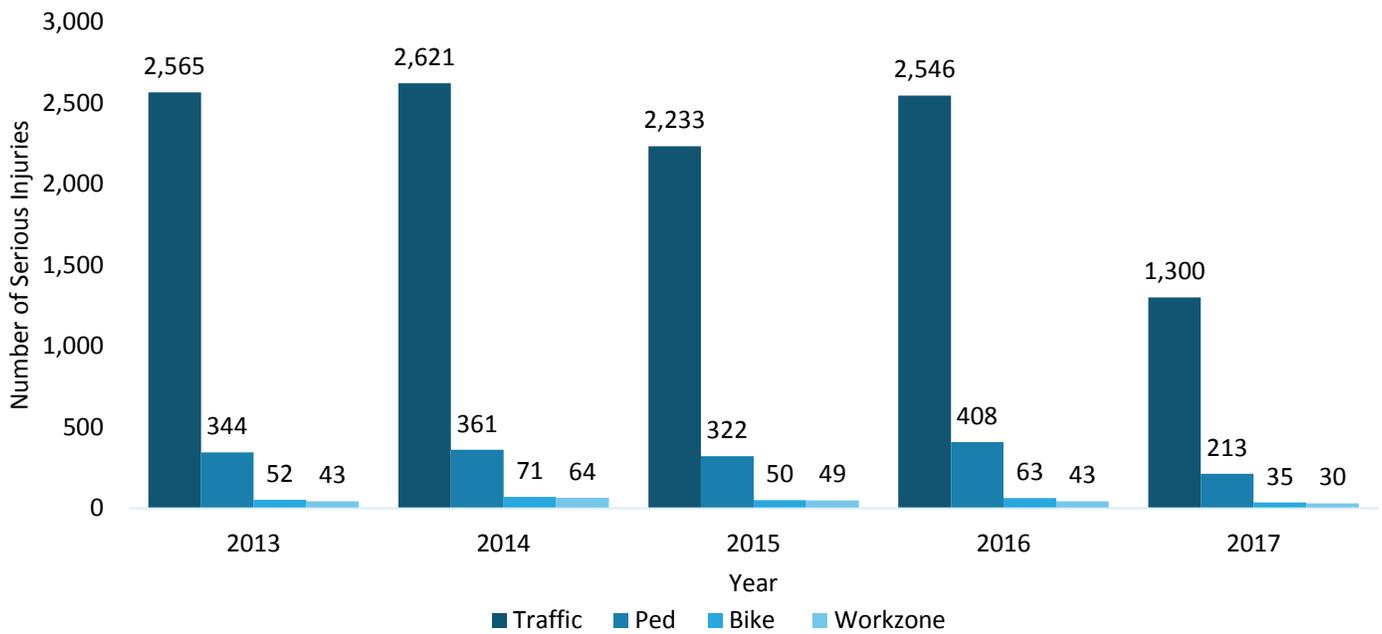
Since serious injuries are defined differently from state to state, there is no national or common benchmark.

# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.4

### Number of Traffic-Related Serious Injuries on all Roads

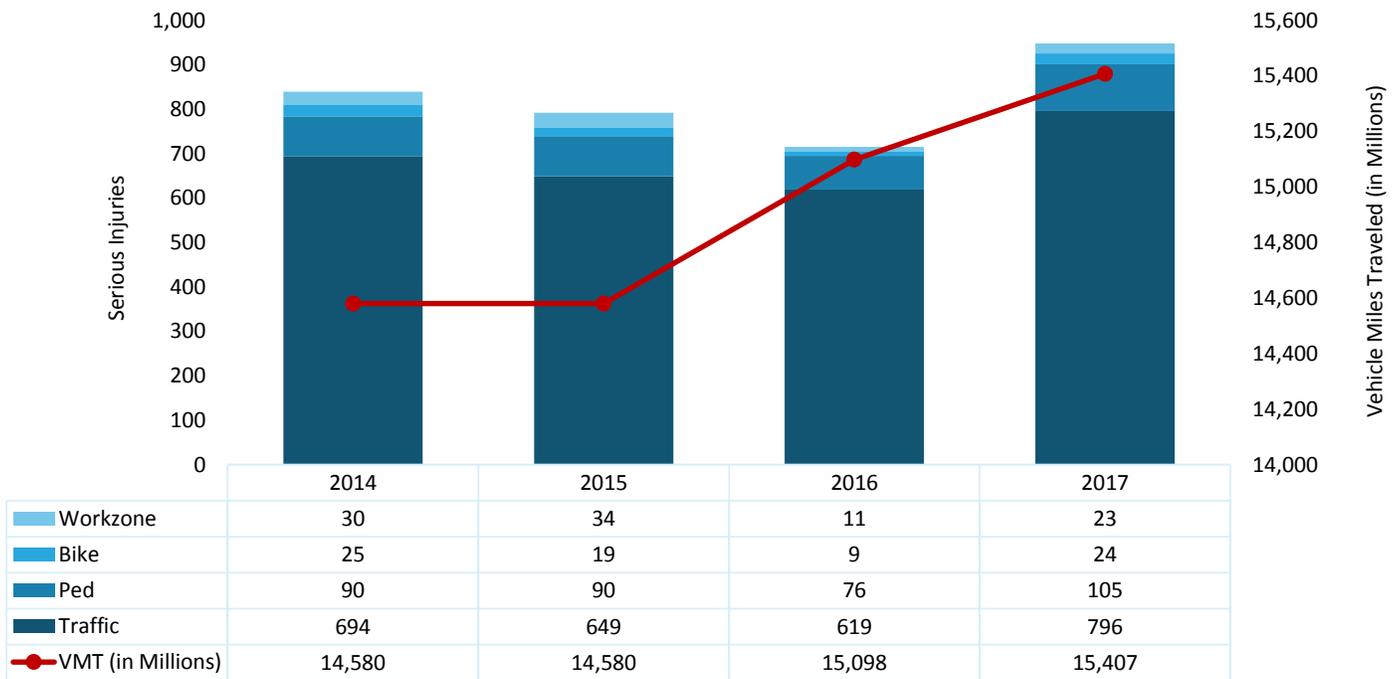
Chart 3.4.1: Annual Comparison of All Serious Injuries CY2013-CY2017



## PERFORMANCE MEASURE 3.4

### Number of Traffic-Related Serious Injuries on all Roads

Chart 3.4.2: Q2 Comparison of Serious Injuries CY2013-CY2017

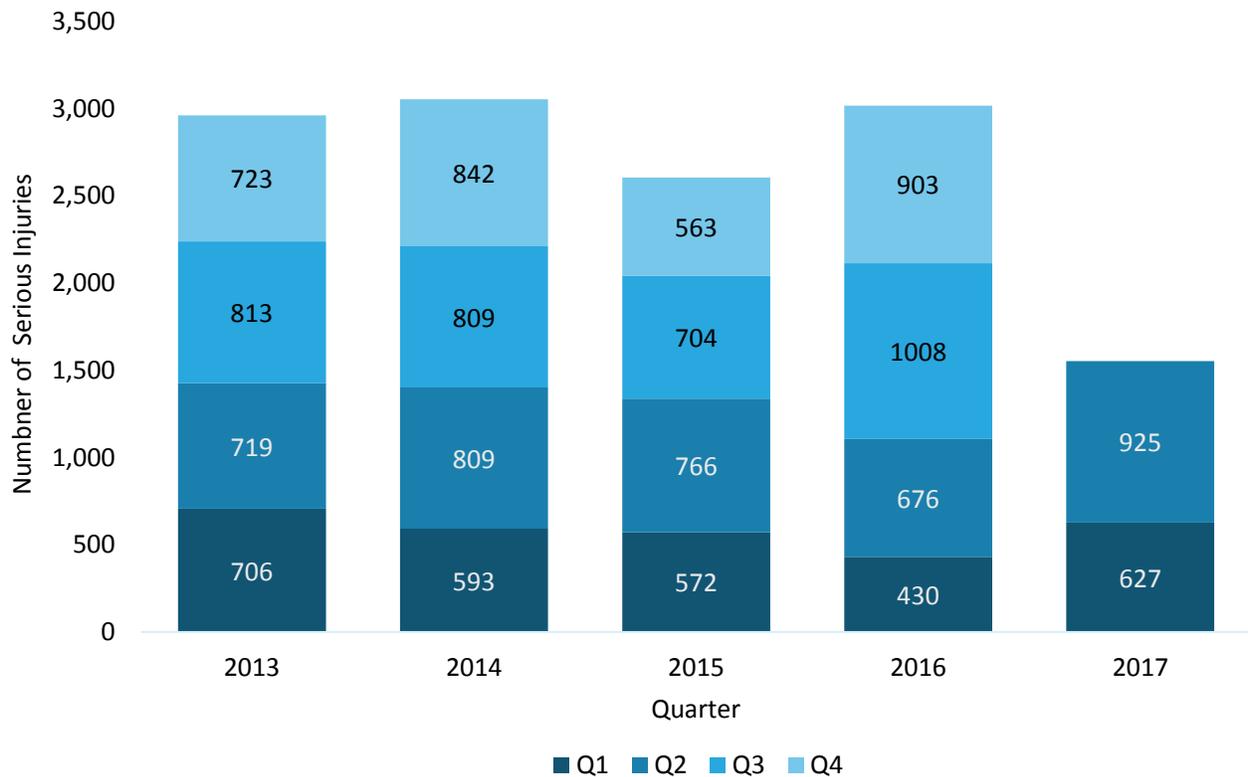


# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.4

### Number of Traffic-Related Serious Injuries on all Roads

Chart 3.4.3: Q2 Comparison of Serious Injuries CY2013-CY2017



# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Thomas Gianni  
Motor Vehicle Administration (MVA)

## PURPOSE OF MEASURE:

To track trends in the number of persons seriously injured in motor vehicle crashes per VMT.

## FREQUENCY:

Annually (in January)

## DATA COLLECTION METHODOLOGY:

SHA collects VMT data based on highway counts on roadways across the State. The serious injury data is collected by the MSP through its ACRS. The MHSO collects the data from these two agencies. The rate is based on persons seriously injured in crashes per 100 million VMT.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 3.5

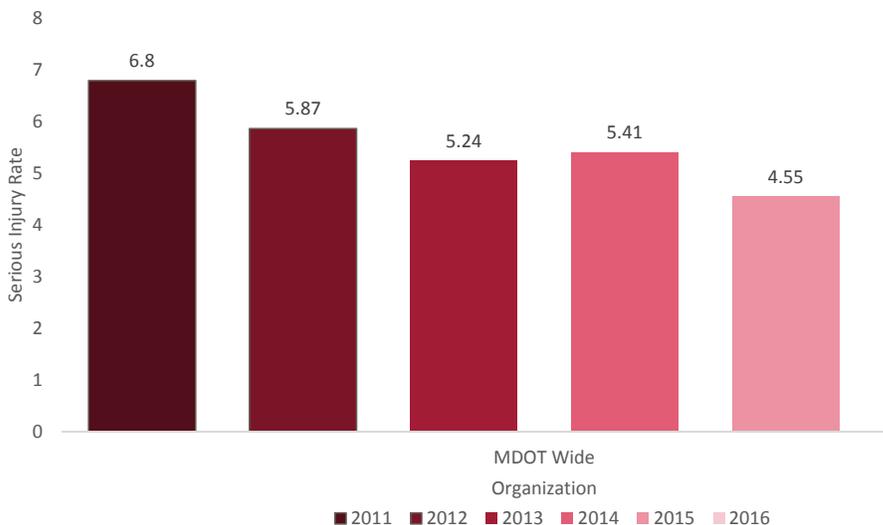
### Maryland Traffic-Related Serious Injury Rate (Highways)

Maryland's serious injury rate is based on a measure similar to the fatality rate (number of persons seriously injured in a traffic-related crash per 100 million VMT). Over the past eight years, both the number of serious injuries and the corresponding rate have dropped dramatically by more than 33 percent. The SHSP is based on the Toward Zero Deaths approach, and serious injury rate targets have been set using a similar methodology.

The SHSP contains strategies intended to reduce risky driving behaviors that result in the types of crashes leading to death or serious injury. By addressing and ultimately eliminating these severe crashes, all motorists can enjoy traveling Maryland's roadways without the fear of being killed or seriously injured. Death or serious injury is not an acceptable consequence of driving.

As engineering advances have resulted in safer vehicles and highways, and as emergency medical services continue to provide immediate critical care, the numbers of traffic-related serious injuries (and their corresponding rates) have declined significantly in the last several years. Even in 2015, when traffic-related fatalities increased significantly, the number of traffic-related serious injuries and its corresponding rate continued to decline.

Chart 3.5.1: Maryland Traffic-Related Serious Injury Rate CY2011-CY2016



# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Gina Watson  
Maryland Port Administration (MPA)

## PURPOSE OF MEASURE:

To track trends in seat belt use in Maryland and assess how Maryland ranks against the national rate as an indicator of how well seatbelt use is encouraged.

## FREQUENCY:

Annually (in January)

## DATA COLLECTION METHODOLOGY:

Observational Survey conducted by MHSO.

## NATIONAL BENCHMARK:

Nationwide usage rate provided by NHTSA reached 90.1 percent in 2016.

## PERFORMANCE MEASURE 3.6

### Maryland Seat Belt Usage Rate

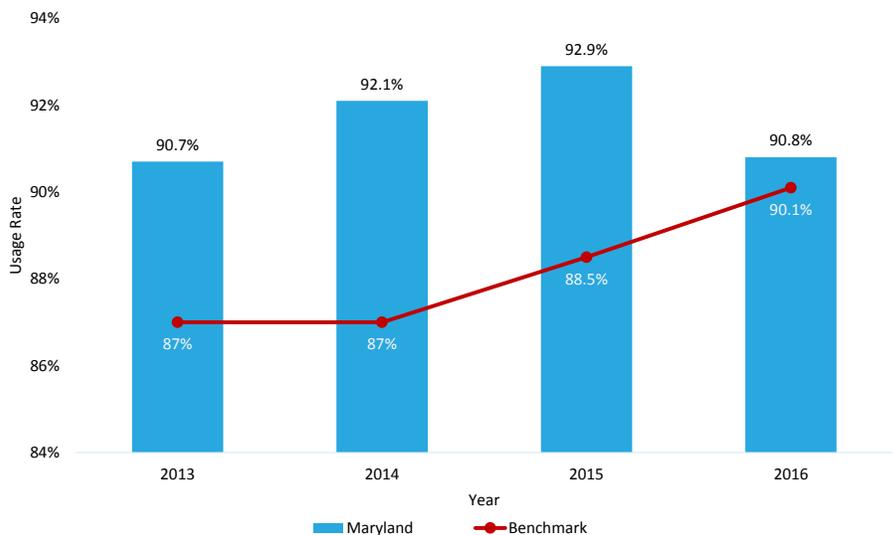
The use of seat belts by Maryland drivers greatly reduces the severity of personal injury and occupant fatalities in crashes. States such as Maryland with primary and secondary seat belt enforcement laws exhibit higher seat belt usage rates.

Maryland's seat belt usage rate is collected by an observational survey methodology approved by the NHTSA. The MHSO goal for seat belt usage for 2017 is 94.1 percent.

Maryland will continue to be a strong supporter of the Click-It or Ticket campaign with incorporation of dynamic public awareness programs. In addition, law enforcement agencies will continue to be educated on the importance of seat belt enforcement.



Chart 3.6.1: Maryland Seatbelt Usage Rate vs. National Benchmark Rate CY2013-CY2016



# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Cedric Ward  
State Highway Administration (SHA)

## PURPOSE OF MEASURE:

To track and assess the performance of MDOT's incident management programs to respond to customer needs while traveling.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Data is collected from centralized reporting to CHART for roadway data. MPA and MAA data are collected individually.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 3.7

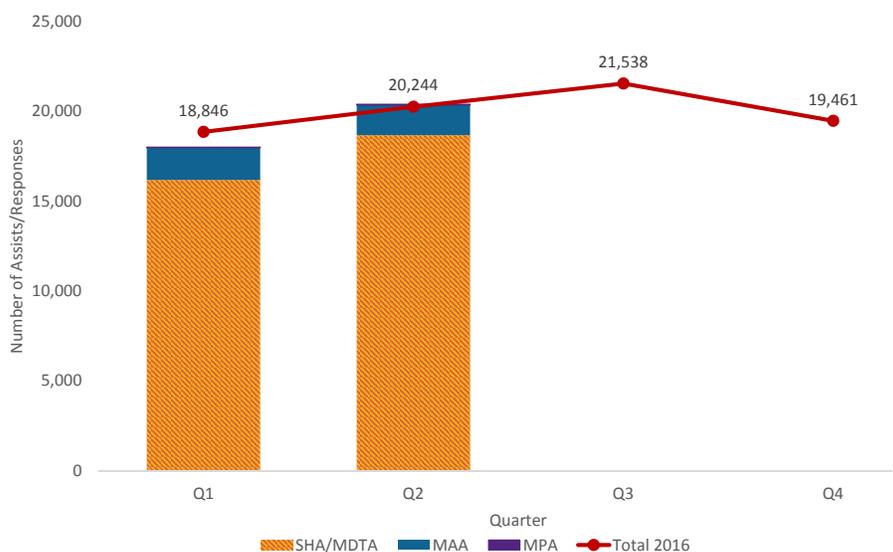
### Disabled Motorists Assisted by MDOT

The Coordinated Highways Action Response Team (CHART) is a joint effort of MDOT, MSP, and numerous other federal, state and local agencies. CHART provides assistance to disabled motorists and responds to traffic incidents throughout Maryland. In the Baltimore and Washington metropolitan areas, patrols are operated 24 hours per day, seven days per week. In addition to services on highways, the MPA and MAA provide assistance to their customers who experience vehicle issues. These services provide an added value to MDOT customers who might otherwise need to rely on paid service providers. Customers can access this service by dialing \*77 or through the normal 911 emergency dispatch.

For the 2017 calendar year, MDOT has helped 36,657 disabled motorists. Additionally, CHART provides real-time traffic conditions through its website: <http://www.chart.state.md.us/>.

Efforts are underway to advertise and award the next phase of Closed Circuit Television Cameras (CCTV) and Dynamic Message Boards (DMS) to further assist with traffic monitoring, incident detection, and providing motorists with information to avoid delays and congestion.

Chart 3.7.1: Number of Assists and Responses CY2016-CY2017



# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.7

### Disabled Motorists Assisted by MDOT

3.7.2: MAA Customer Assists by Type  
Q2 CY2017

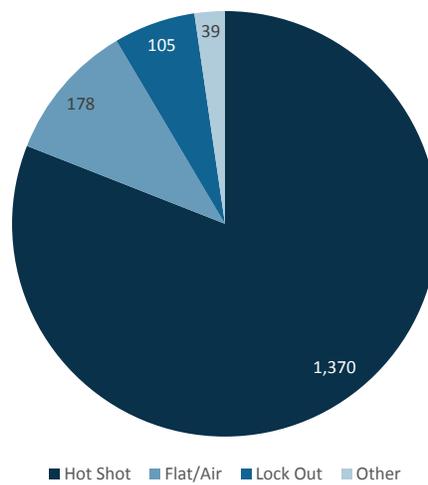
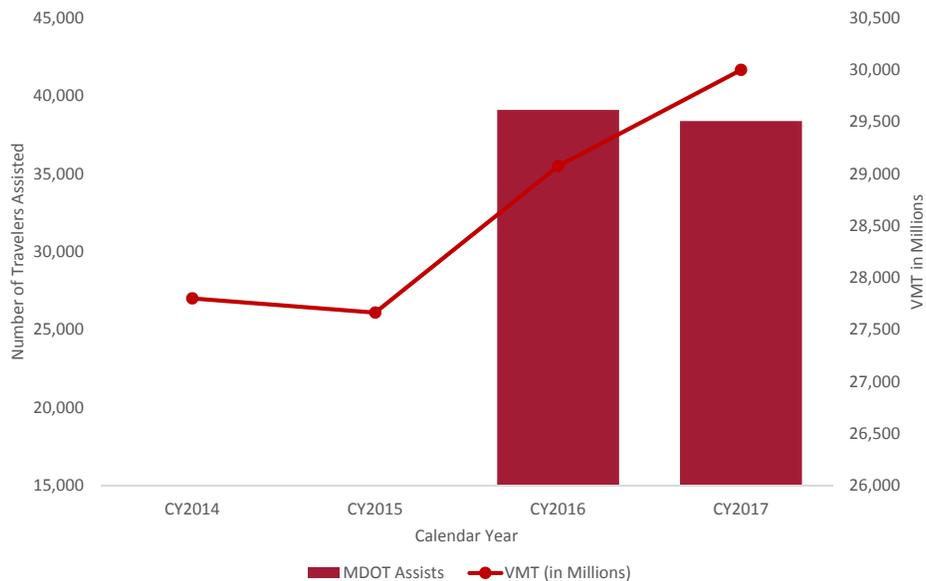


Chart 3.7.4: MDOT Travelers Assisted Compared to VMT CY2014-CY2017 (YTD)



# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Cedric Johnson  
Maryland Aviation Administration  
(MAA)

## PURPOSE OF MEASURE:

To track injury reporting trends at MDOT TBUs.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Collected by Injured Workers Insurance Fund (Chesapeake Employers' Insurance is for private companies) and sent to agencies as a report.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 3.8

### Number of Employee Injuries Reported (First Report of Injury)

This measure is used for analysis and the development and implementation of risk mitigation strategies. This is the starting point data source for maintaining a safe work environment.

This measure includes all First Reports of Injury (FROI) to the Injured Workers Insurance Fund (Chesapeake Employers' Insurance is for private companies). This is an annual comparison of FY 2016 versus FY 2017. Data indicates a decrease during FY 2017 in the number of employee injuries reported.

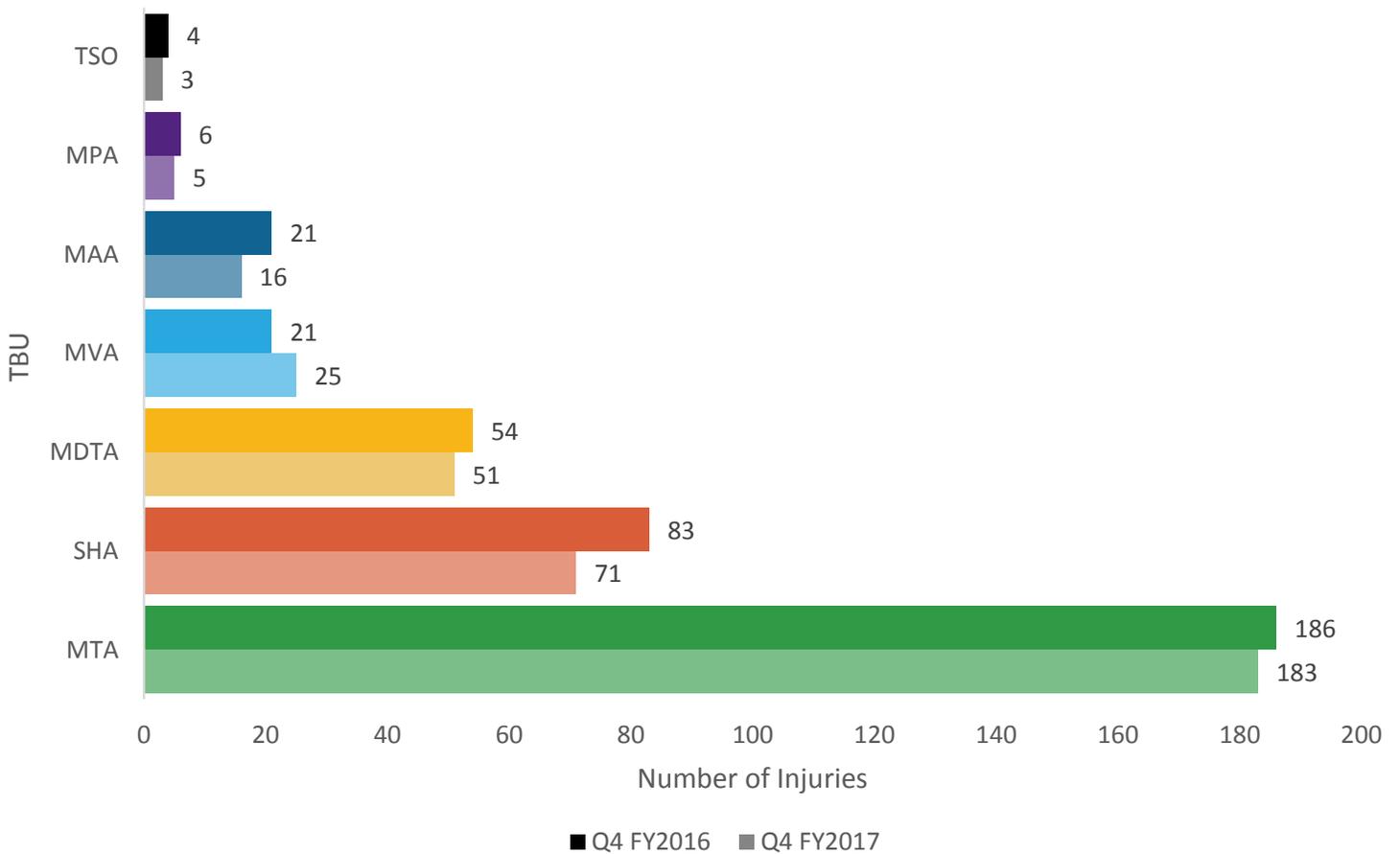
Strategies for reducing employee injuries include the creation of a MDOT TBU Process Improvement Team, the formulation of MDOT-wide recommendations on processes/ practices to improve documenting and coding work injury leave; creation of a list of risk mitigation strategies based on types of injuries; identification of strategies for mitigating potential work injury leave abuse and creation of a strategy to capture value of lost work days. TBU Risk Managers meet quarterly to review data, evaluate progress, and develop strategies for emerging risks.

# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.8

### Number of Employee Injuries Reported (First Report of Injury)

Chart 3.8.1: Number of Injuries (FROI) Reported Q3 FY2016 & FY2017

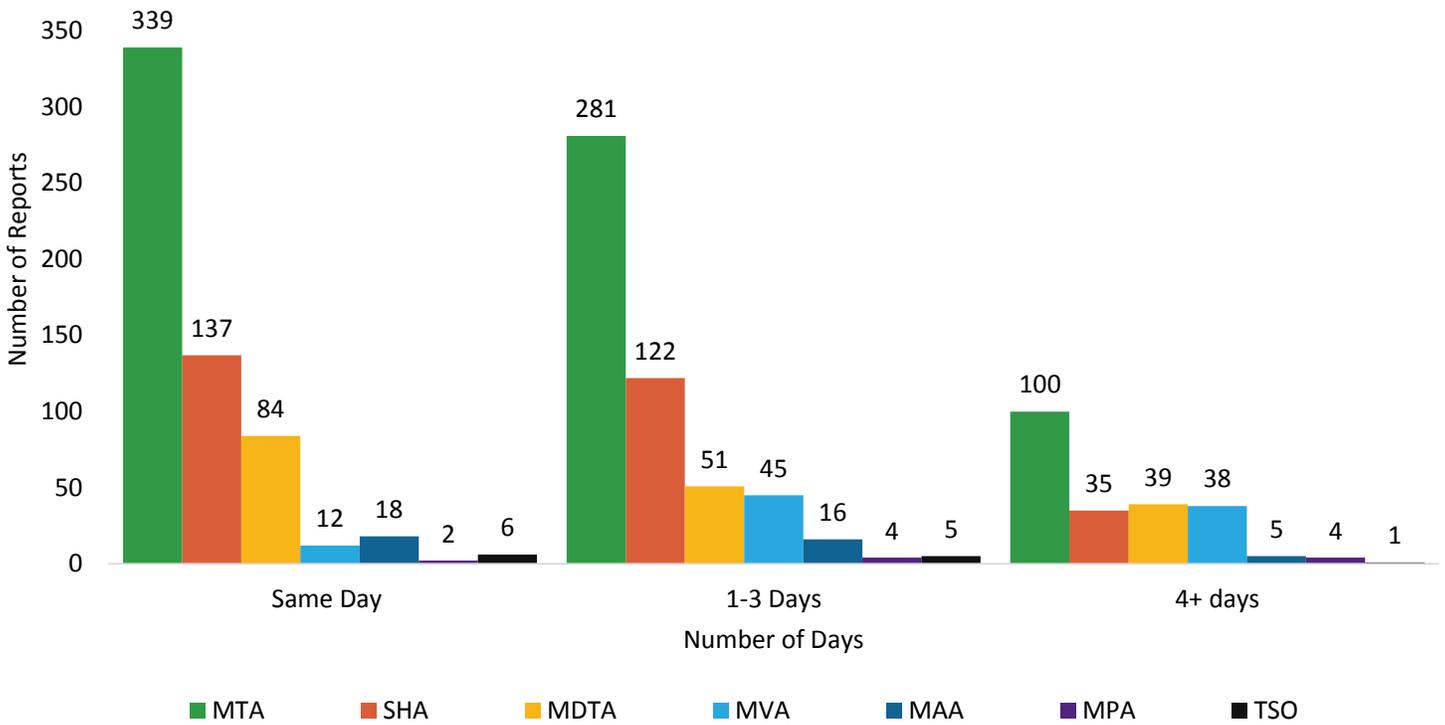


# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.8

### Number of Employee Injuries Reported (First Report of Injury)

Chart 3.8.2: Reporting Speed April-June FY2017



# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Cedric Johnson  
Maryland Aviation Administration  
(MAA)

## PURPOSE OF MEASURE:

To track, trend, and mitigate lost work days.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Data is collected through multiple MDOT timekeeping systems.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 3.9

### Number of Employee Lost Work Days Due to Injuries

Employee safety is a top priority to MDOT. Injuries do occur on the job and work days are sometimes lost as a result. Lost work days reduce the effectiveness of TBUs and are an indirect measure of employee health and welfare.

This measure only includes lost work days due to on the job, work-related injuries. Note that lost work days are associated with the number of injuries reported in Performance Measure 3.8. Factors affecting this measure include varying work conditions and environments, and differing risk profiles among employees across TBUs, as well as inconsistent leave coding policies and practices across MDOT's payroll systems.

This is an annual comparison of FY2016 versus FY2017. Data indicates a FY2017 decrease in the number of lost work days due to injuries.

Strategies for reducing employee injuries are the same as PM 3.8 and include creation of MDOT TBU Process Improvement Team, formulation of MDOT-wide recommendations on processes/practices to improve documenting and coding work injury leave; creation of a list of risk mitigation strategies based on types of injuries; identification of strategies for mitigating potential work injury leave abuse and creation of strategy to capture value of lost work days. TBU Risk Managers meet quarterly to review data, evaluate progress, and develop strategies for emerging risks.

# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.9

### Number of Employee Lost Work Days Due to Injuries

Chart 3.9.1: Number of Employees Coding LY (Work Injury Leave) Q4 FY2017

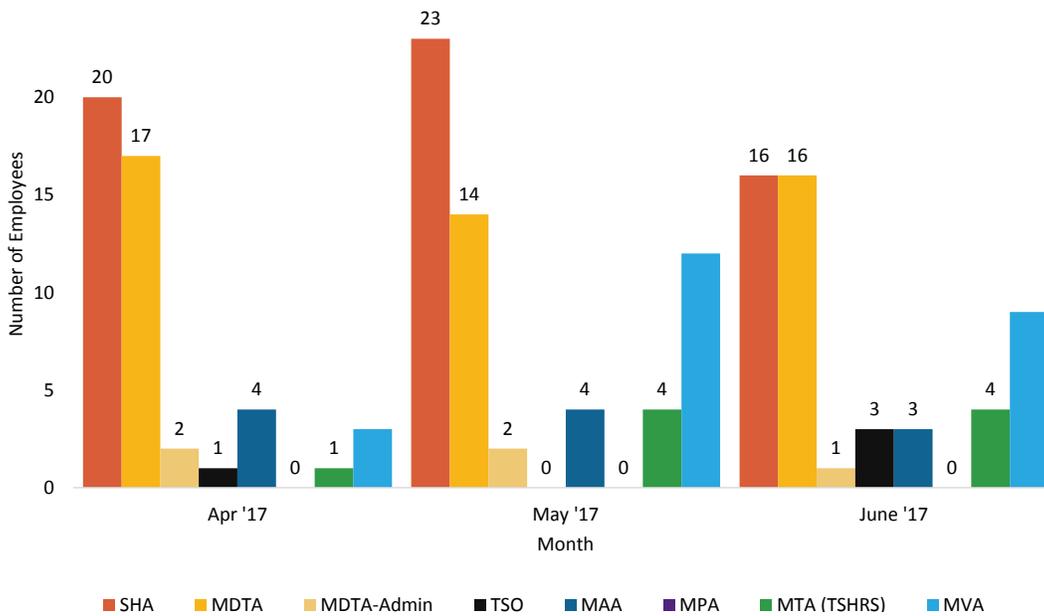
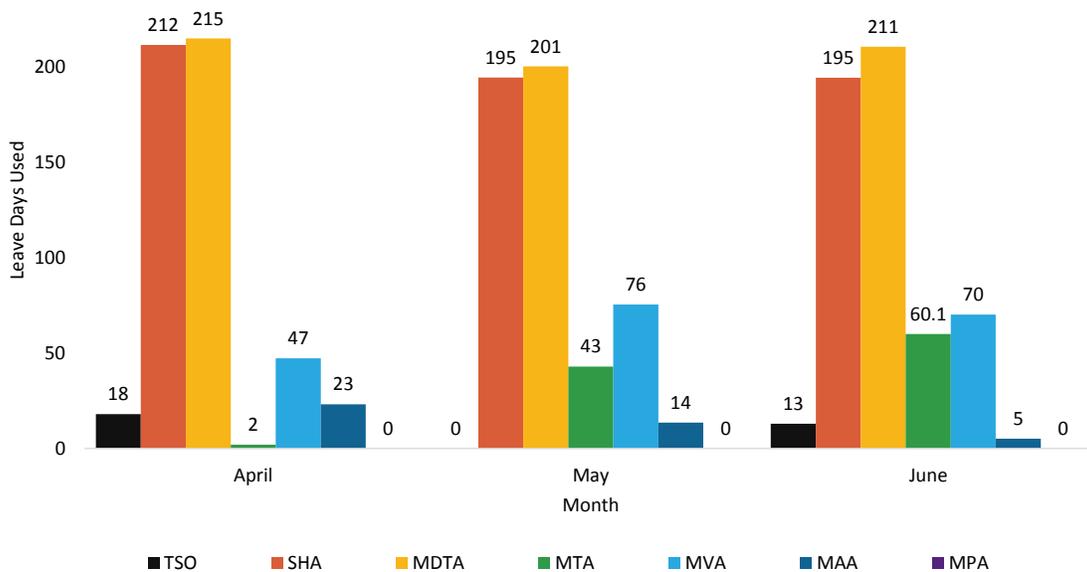


Chart 3.9.2: Number of Work Injury Leave (LY) Days Used Q4 FY2017



## PERFORMANCE MEASURE 3.9

### Number of Employee Lost Work Days Due to Injuries

Chart 3.9.3: MTA Union Lost Work Days Due to Injuries FY2013-FY2017 July-June

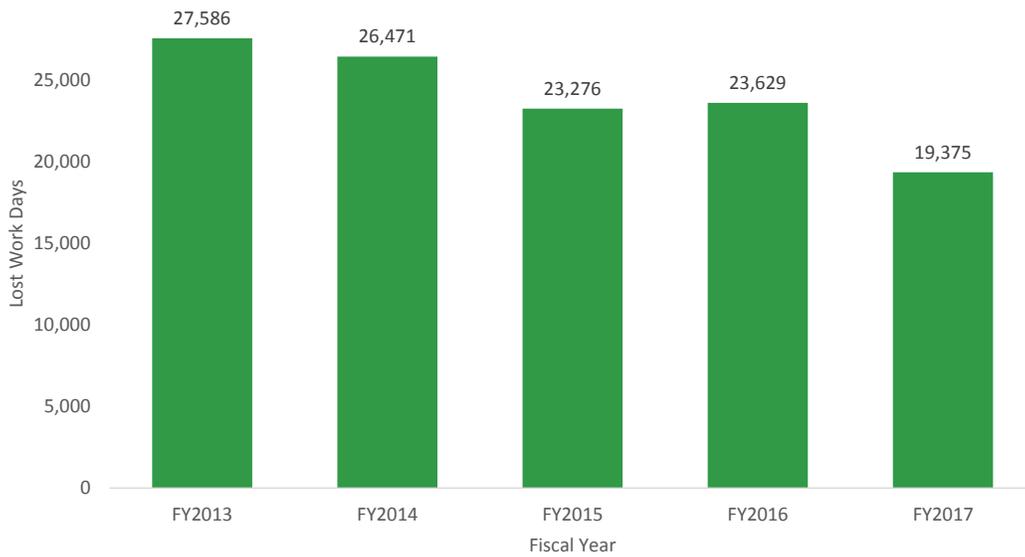
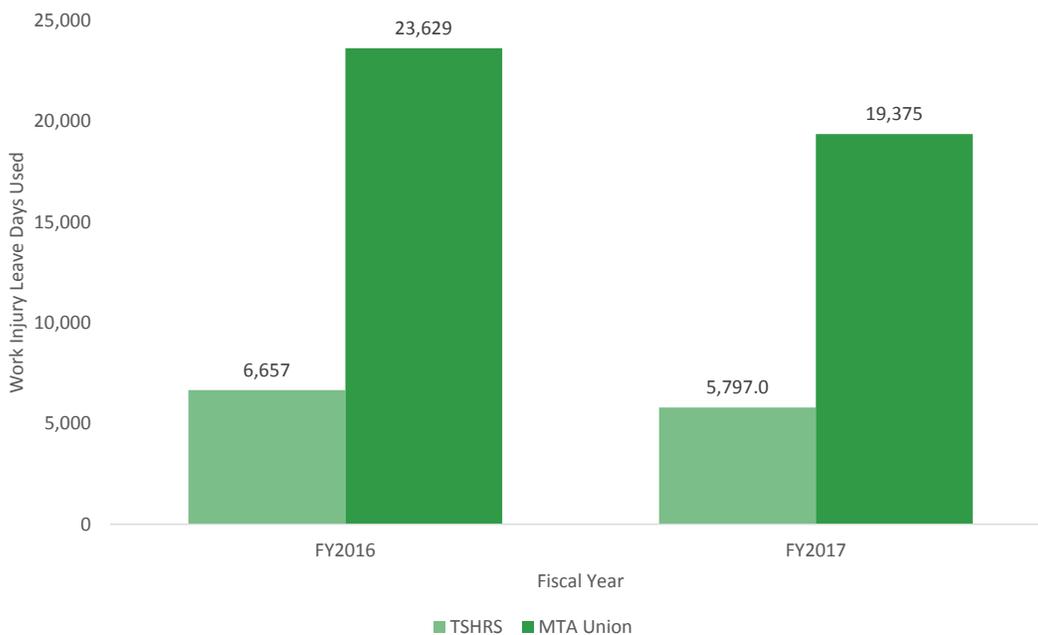


Chart 3.9.4: Number of Work Injury Days Used (TSHRS and MTA Union) FY2016-FY2017 July -June

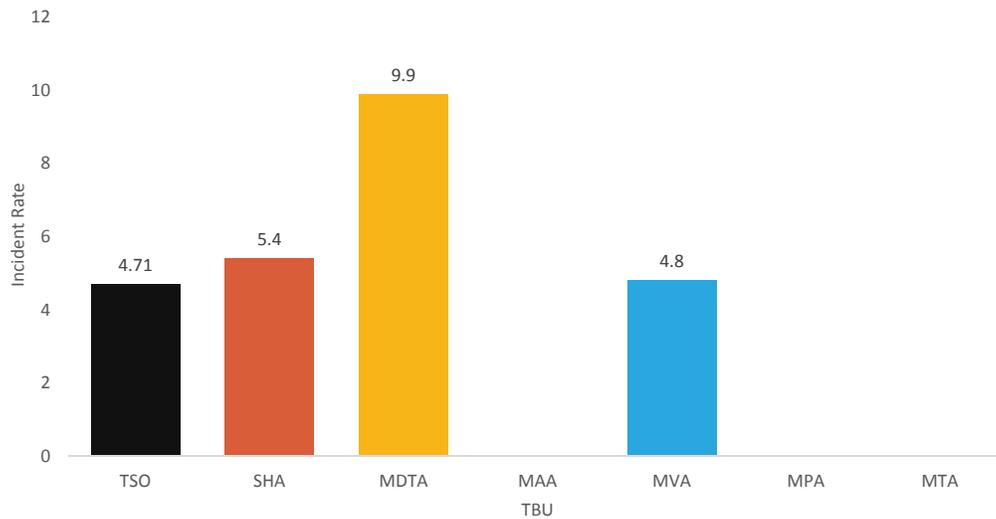


# Provide a Safe and Secure Transportation Infrastructure

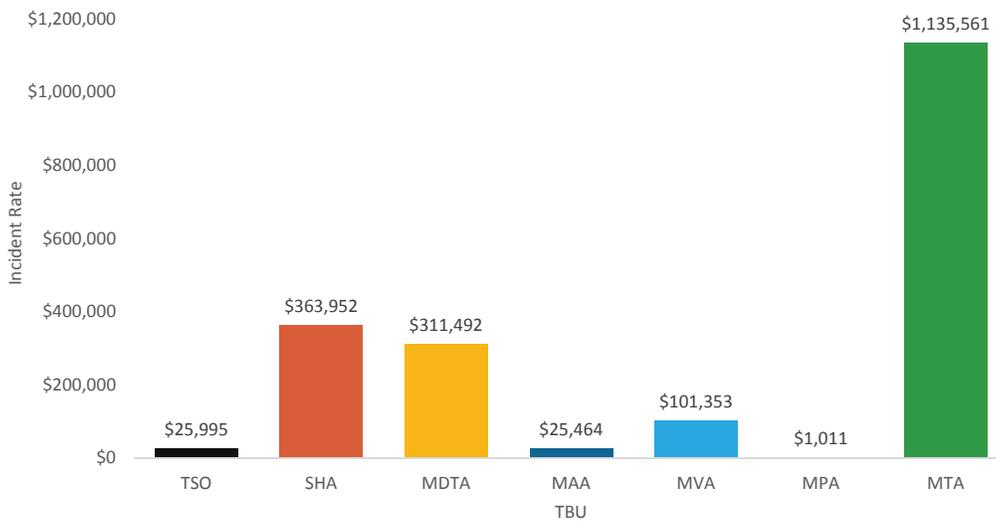
## PERFORMANCE MEASURE 3.9

### Number of Employee Lost Work Days Due to Injuries

Chart 3.9.5: Incident Rate for CY2017 (January-June)



PM 3.9.6: Medical Cost on Injuries Reported in FY2017



# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.9

### Number of Employee Lost Work Days Due to Injuries

PM 3.9.7: MDOT Top Five Injuries by Type FY2017



# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Phil Thomas  
Maryland Transit Administration (MTA)

## PURPOSE OF MEASURE:

To track customer incidents within MDOT facilities where customers are rendered a service to ensure our customers that MDOT facilities are safe.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

TBUs track using their existing processes and report to the driver via phone or email.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 3.10

### Number of Customer Incidents at MDOT Facilities

MDOT has programs in place to ensure the safety and security of its facilities and its customers. TBUs provide many services to the public. MDOT is committed to providing a safe and secure environment to customers which is why measuring unplanned events that may or may not result in injury within enclosed buildings that provide a service to customers (i.e MVA centers, Stop in Centers) is important.

This is still a new measure and MDOT is working with each TBU to ensure that customer incidents are tracked. This measure has allowed for some TBUs to implement new programs and processes to ensure customer incident tracking is occurring. An example is identifying and tracking the number of incidents at MDOT facilities. Identifying and tracking incidents and associated trends offers data for the basis of implementing corrective actions; thereby reducing hazards and minimizing risk for MDOT employees and customers.

# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.10

### Number of Customer Incidents at MDOT Facilities

Chart 3.10.1: Number of Customer Incidents at MDOT Buildings CY2017

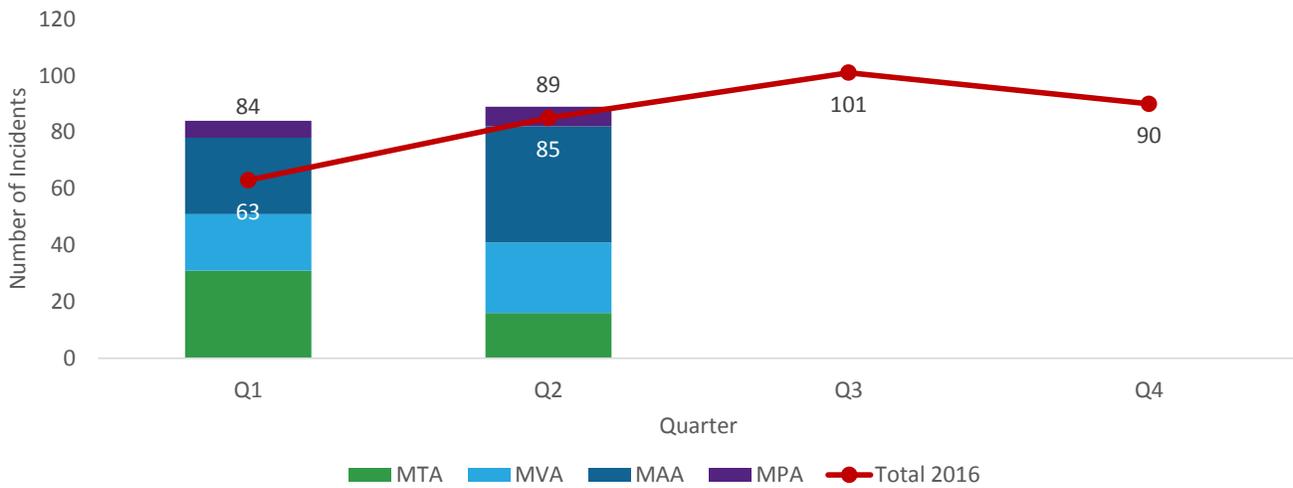
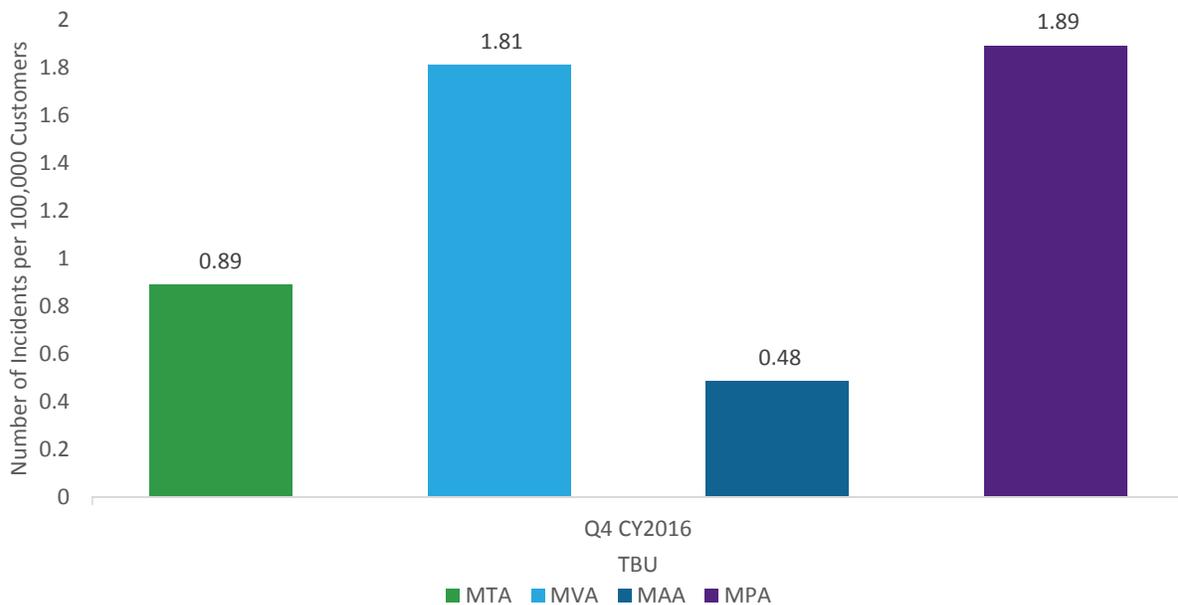


Chart 3.10.2: Number of Customer Incidents per 100,000 Customers Visited Q4 CY2016



# Provide a Safe and Secure Transportation Infrastructure

## TANGIBLE RESULT DRIVER:

Sarah Clifford  
Maryland Transportation Authority  
(MDTA)

## PERFORMANCE MEASURE DRIVER:

Bud Frank  
The Secretary's Office (TSO)

## PURPOSE OF MEASURE:

To track identified MDOT employees required to complete NIMS/ICS training to better manage incidents in an all-hazards approach.

## FREQUENCY:

Annually

## DATA COLLECTION METHODOLOGY:

TBUs collect data for completion of training and report to Office of Homeland Security/Emergency Management/Rail Safety, who compiles and tracks data.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 3.11

### Number of Employees Trained Under National Incident Management System (NIMS)

In 2003, Homeland Security Presidential Directive #5 (HSPD-5) was issued that discussed the management of domestic incidents. Part of Directive #5 was the issuance of the National Incident Management System (NIMS) and the Tasking of training individuals in the use of the Incident Command System (ICS). This was the creation of a single comprehensive approach to domestic incident management; crisis management and consequence management became a single-integrated approach. NIMS is a consistent nationwide approach for government agencies from all levels, along with non-government agencies, to work effectively and efficiently in all incidents (All-Hazards approach). In HSPD-5 all states were required to adopt and implement the NIMS/ICS protocol.

The Maryland NIMS/ICS Strategic Plan was developed in 2004 and identified the need for MD State agencies to adopt the National Incident Management System, and train identified employees in the Incident Command System. This plan determined that NIMS/ICS was the best tool to use for coordination and control of domestic (MD) incident management activities regardless of the cause, size, or complexity of the incident. It uses a "common operation platform" for all agencies, organizations, or entities – public or private, to operate on.

The Transportation Business Units of MDOT have historically trained their personnel in NIMS/ICS, mainly because most TBUs are operationally oriented and incidents occur in their respective areas of responsibility. Many times they must work with other emergency responders (fire/police/ems) and private stakeholders or partners that operate on their property or as part of their business model. For many years, the training of MDOT personnel in NIMS/ICS was a reportable item to FEMA on an annual basis. Several years ago, this required annual reporting was discontinued by FEMA, and thus no longer tracked by MDOT.

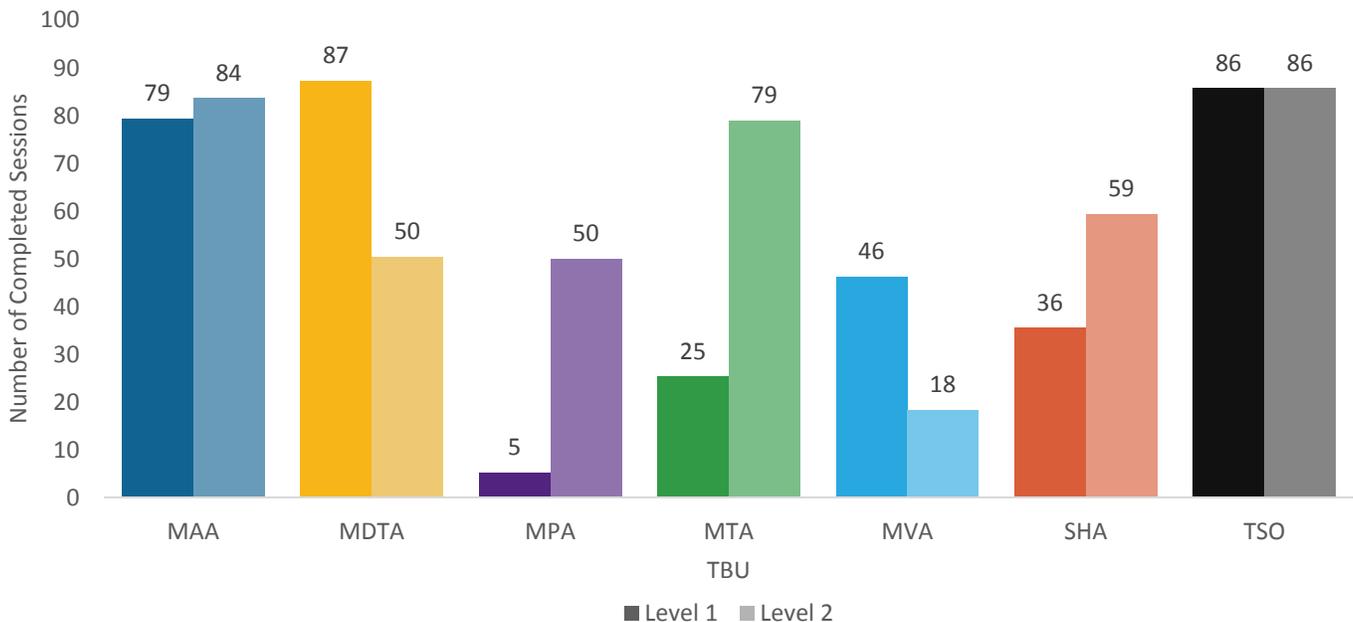
# Provide a Safe and Secure Transportation Infrastructure

## PERFORMANCE MEASURE 3.11

### Number of Employees Trained Under National Incident Management System (NIMS)

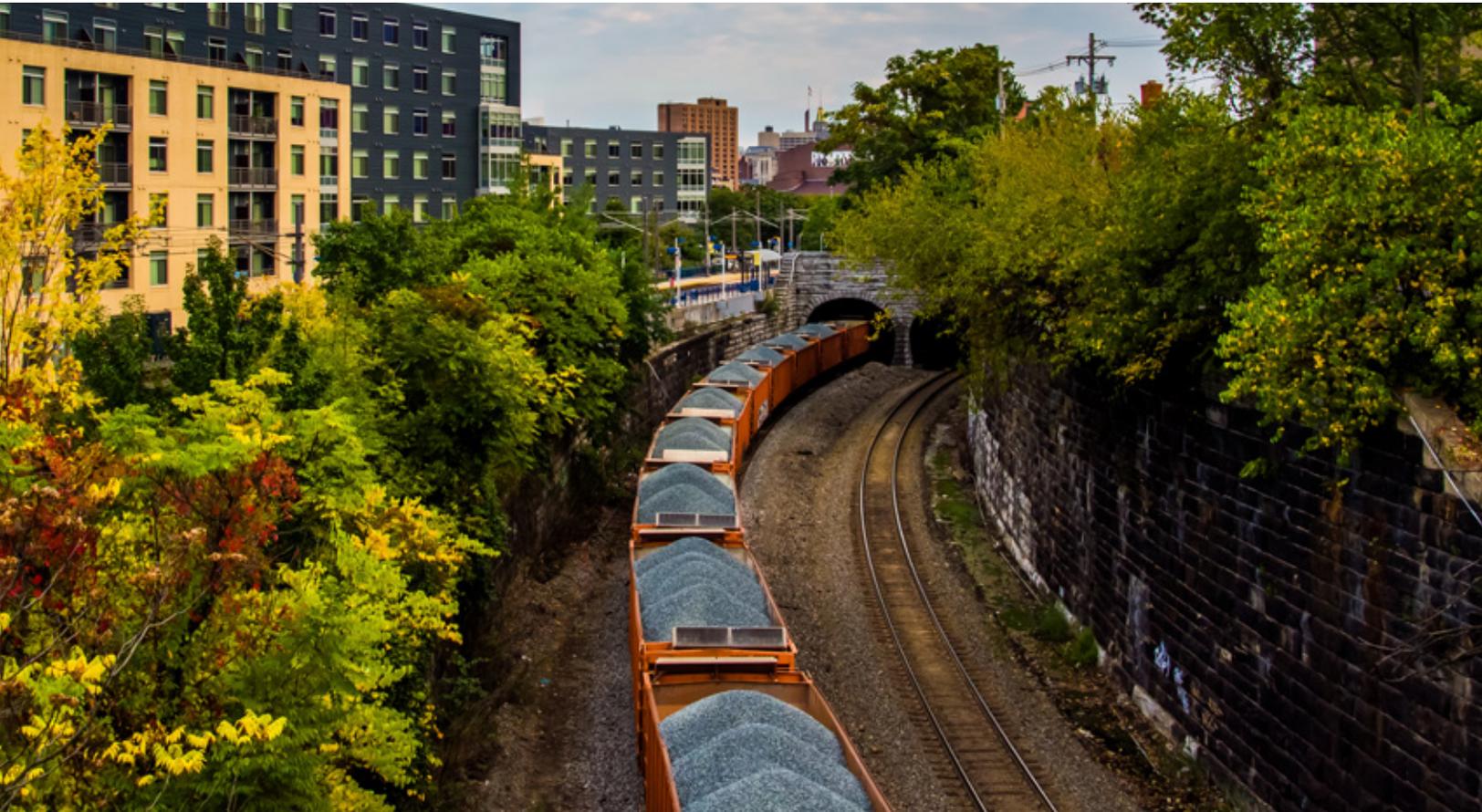
To determine which employees are required to have NIMS/ICS training, each TBU identifies which employment positions would most likely need to use this in the course of their duties and responsibilities. Secondly, each TBU determines what Level of training should be required for each of those positions. Due to the changing workforce of MDOT in recent years (e.g. retirements), identified positions needing NIMS/ICS have been filled by individuals who have not completed some or all the training. When this information was identified to be tracked once again, a discrepancy was noted. The required training of ICS-800 came after 2008, when the National Response Framework was created. Many of the current employees deficient with Level I, and some of those deficient with Level 2, need only complete that on-line course to be compliant. We anticipate this deficiency to be resolved over the short term, as this is an on-line course that can be completed while working.

Chart 3.11.1: NIMS/ICS Training Completed, Level 1 and Level 2 FY2017



## TANGIBLE RESULT #4

# Deliver Transportation Solutions and Services of Great Value



MDOT will deliver transportation solutions on time and within budget. The Department will use strategies to ensure that the transportation solution meets the needs of customers and eliminates unnecessary costs.

### RESULT DRIVER:

Jason Ridgway  
*State Highway Administration (SHA)*

# Deliver Transportation Solutions and Services of Great Value

## TANGIBLE RESULT DRIVER:

Jason Ridgway  
*State Highway Administration (SHA)*

## PERFORMANCE MEASURE DRIVER:

Terri Lins  
*Motor Vehicle Administration (MVA)*

## PURPOSE OF MEASURE:

To gauge the accuracy of capital project estimates to manage the Department's capital program more efficiently.

## FREQUENCY:

Annually (In October)

## DATA COLLECTION METHODOLOGY:

Through the Capital Program Management System (CPMS); the CTP; TSO & TBU's Procurement Offices.

## NATIONAL BENCHMARK:

+/- 5 percent, this mirrors the benchmark as reported by Nebraska's Dept. of Roads, Fiscal Responsibility for the Accuracy of Project Estimates. Further, while MDOT has not specified a benchmark per se, they use Nebraska's 5 percent as the bench for the best.

Note: this benchmark applies to capital construction projects. Thus far, and with extensive research, we have been unable to find a benchmark for IT projects.

## PERFORMANCE MEASURE 4.1

### Percent of Estimated Project Budget as Compared to Final Project Award

This performance measure fosters more accuracy and better budget management of the State's limited transportation funding. Accurate estimating enables MDOT to provide better services to its customers, whether it is infrastructure improvements to state roadways and bridges; increasing and retaining the commerce going in and out of the Port of Baltimore; attracting and retaining airlines and travelers at BWI Marshall; providing more alternative service options to Maryland citizens to conduct their MVA transaction remotely; or improving transit services throughout the State.

Given the diverse differences between construction and IT projects, we have separated into two categories with specific budget parameters:

- \$ 1M+ construction type projects: SHA, MDTA MPA, MAA and MTA
- \$400K+ IT projects: TSO and MVA

For FYs 2014, 2015 and 2016, the range in variance between estimated project budgets and final project awards was from 4.7 percent to 7.6 percent. While the range is within the +/- 5 percent and the estimates vs award are very good, the goal is to continue working on strategies to obtain the +/- 5 percent consistently.

To improve the outcomes of this measure, MDOT is engaged in the following activities:

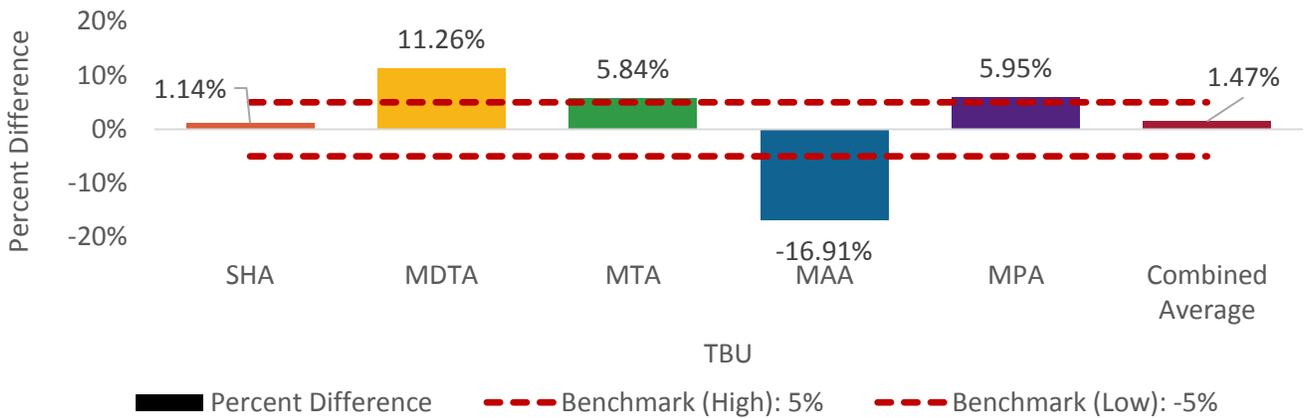
- Team expansion with subject matter experts (SMEs) from each TBU
- Usage of estimating manual
- Creation of excel spreadsheet to ensure consistency in gathering data for PM 4.1 - PM 4.3
- Clarifying definitions with TBUs
- Modified dataset for construction contracts to \$1M (MAA, SHA, MDTA, MPA and MTA)

# Deliver Transportation Solutions and Services of Great Value

## PERFORMANCE MEASURE 4.1

### Percent of Estimated Project Budget as Compared to Final Project Award

Chart 4.1.1: Percent of Estimated Project Budget as Compared to Final Project Award FY2017



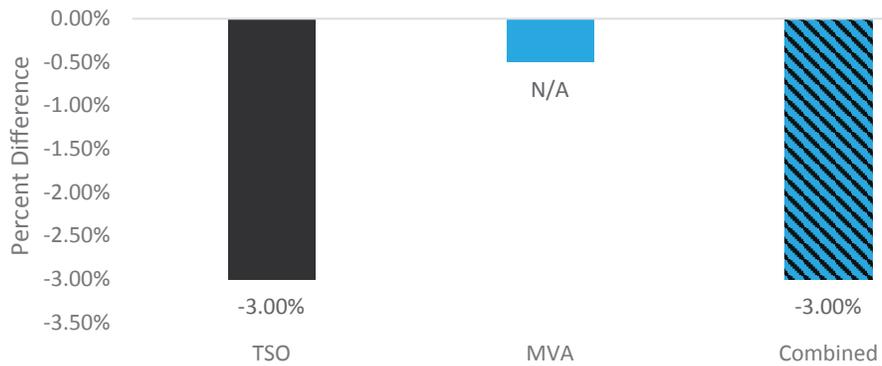
Award	1,029,051,170	177,924,428	29,519,407	88,001,987	17,724,902	1,342,221,894
Estimate	1,040,811,704	197,953,784	31,242,017	73,116,662	18,778,936	1,361,903,103
TBU	SHA	MdTA	MTA	MAA	MPA	MDOT-Wide

# Deliver Transportation Solutions and Services of Great Value

## PERFORMANCE MEASURE 4.1

### Percent of Estimated Project Budget as Compared to Final Project Award

Chart 4.1.2: Percent of Estimated Project Budget as Compared to Final Project Award TSO and MVA FY2017



	TSO	MVA	Combined
Award	515,852	N/A	515,852
Estimate	500,000	N/A	500,000

# Deliver Transportation Solutions and Services of Great Value

## TANGIBLE RESULT DRIVER:

Jason Ridgway  
*State Highway Administration (SHA)*

## PERFORMANCE MEASURE DRIVER:

Brian Miller  
*Maryland Port Administration (MPA)*

## PURPOSE OF MEASURE:

To measure the difference in the contract amount from NTP to final contractor payout.

## FREQUENCY:

Annually (In October)

## DATA COLLECTION METHODOLOGY:

Collect data from MDOT TBU's for Fiscal Years 2014 to 2017. Data will reflect contracts that closed out in each respective Fiscal Year. Data will be reflected in a bar graph for each Fiscal Year.

## NATIONAL BENCHMARK:

2 percent

## PERFORMANCE MEASURE 4.2

### Percent of Change for Finalized Contracts

It is important to assess how well we manage the budgeted and awarded amount during the duration of Department contracts. This is done to ensure we are getting what we paid for and not adding unnecessary or unbudgeted costs to our transportation projects. This will facilitate better contract performance and better management of contracts which will add overall value to the project and ensure worthwhile expenditures of taxpayer dollars.

Strategy development meetings have been held with TBU representatives throughout the reporting year to review data and address any issues that exist in order to meet the 2% benchmark for compliance. Data for FY 2017 illustrates a collective effort for benchmark compliance by TBU. This is reflected for FY 2017 by TBU compliance across the board.

Issue that could arise as this TR moves forward would be contracts that exceed the award amount by 2% at final payout.

TBU's will have to monitor contracts and justify overages through contract changes and justifications for those changes.

Individual TBU's may not have data from a fiscal year if no contract(s) closed during the respective fiscal year.

# Deliver Transportation Solutions and Services of Great Value

## PERFORMANCE MEASURE 4.2

### Percent of Change for Finalized Contracts

Chart 4.2.1: Percent of Change for Finalized Contracts FY2014

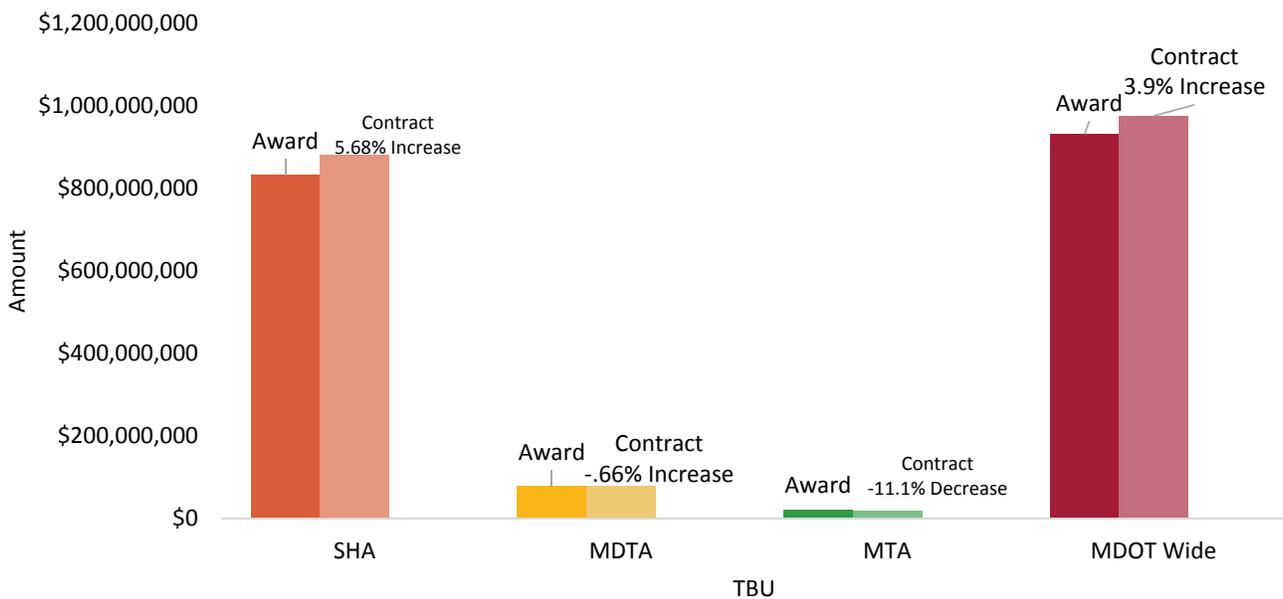
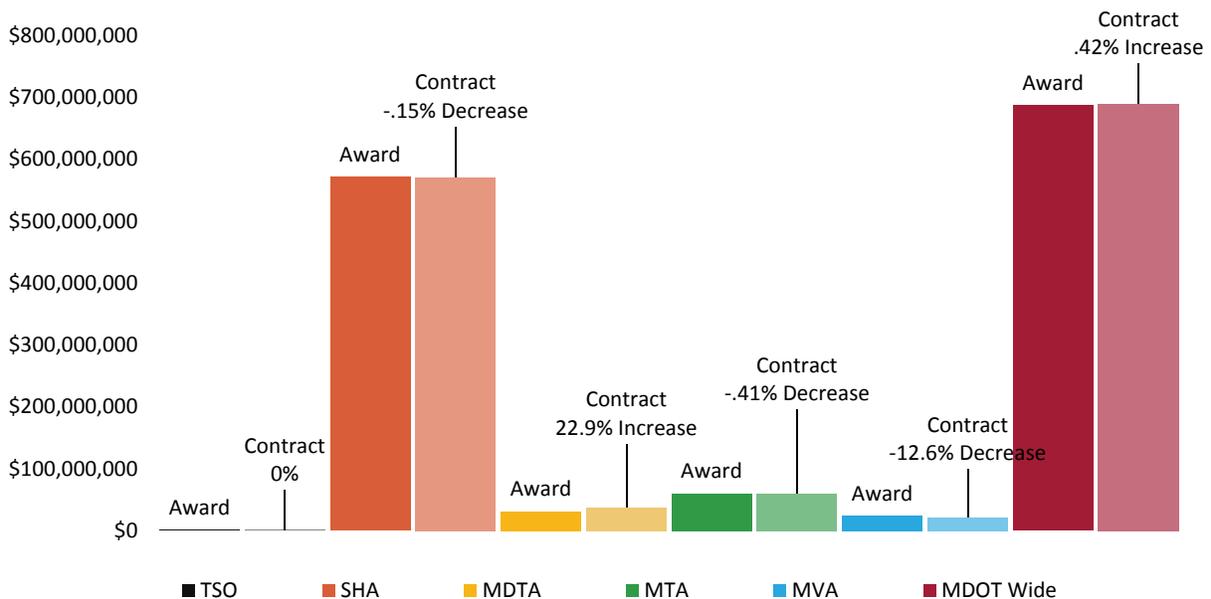


Chart 4.2.2: Percent of Change for Finalized Contracts FY2015



## PERFORMANCE MEASURE 4.2

### Percent of Change for Finalized Contracts

Chart 4.2.3: Percent of Change for Finalized Contracts FY2016

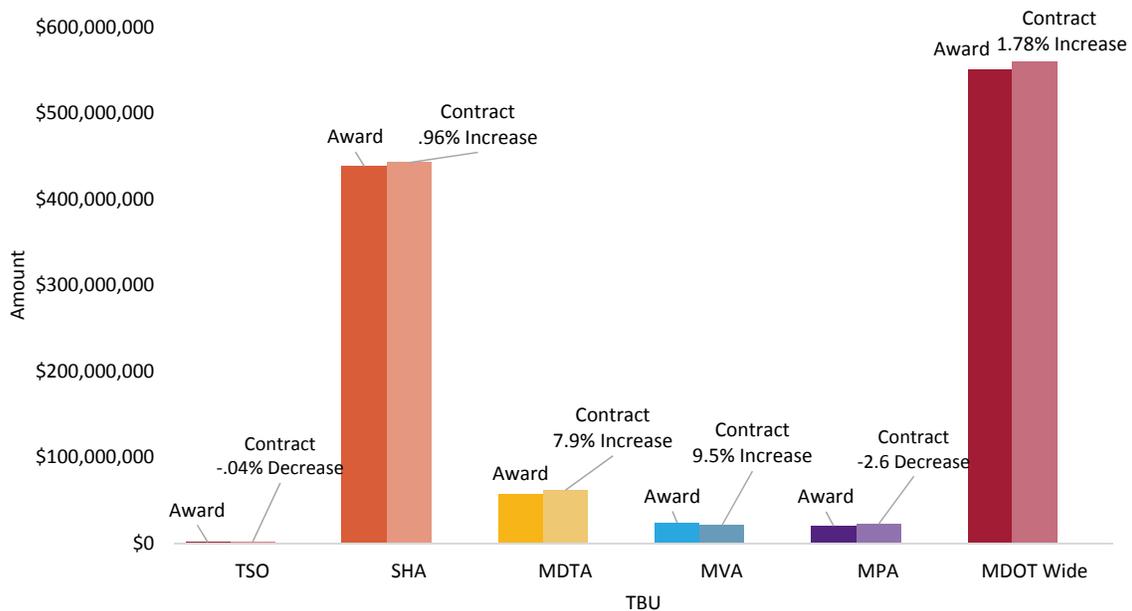
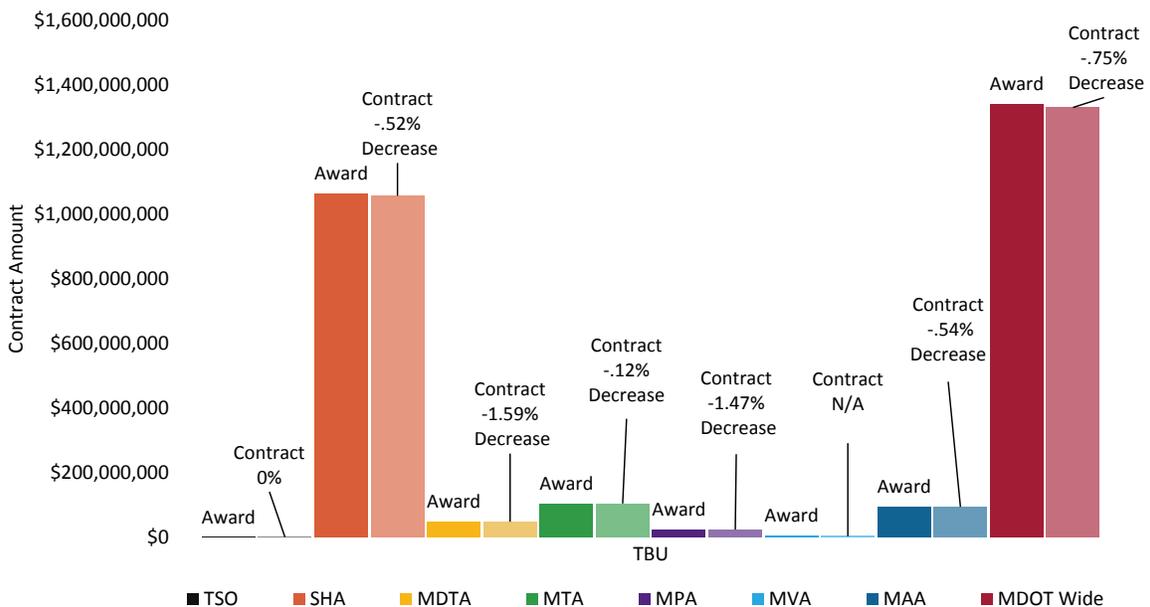


Chart 4.2.4: Percent Change for Finalized Contracts by TBU FY2017



# Deliver Transportation Solutions and Services of Great Value

## TANGIBLE RESULT DRIVER:

Jason Ridgway  
*State Highway Administration (SHA)*

## PERFORMANCE MEASURE DRIVER:

Bill Appold  
*The Secretary's Office (TSO)*

## PURPOSE OF MEASURE:

To determine if MDOT is efficiently managing and delivering contracts and services.

## FREQUENCY:

Annually (In October)

## DATA COLLECTION METHODOLOGY:

Information will be provided by the MDOT Offices of Construction, Planning and Finance.

## NATIONAL BENCHMARK:

87 percent

## PERFORMANCE MEASURE 4.3

### On-time Services and Solutions: Percent of Projects Completed by Original Contract Date

When MDOT awards a contract or agrees to provide a service, it establishes a commitment date which is the date the contract or service begins providing benefits to MDOT's stakeholders.

The purpose of this performance measure is to track MDOT'S accuracy in estimating if contracts and services committed to are completed and open to service by the commitment date specified in the contract. The performance measure will also determine if there are common factors that make contracts go over their budgeted time and whether these factors can be mitigated.

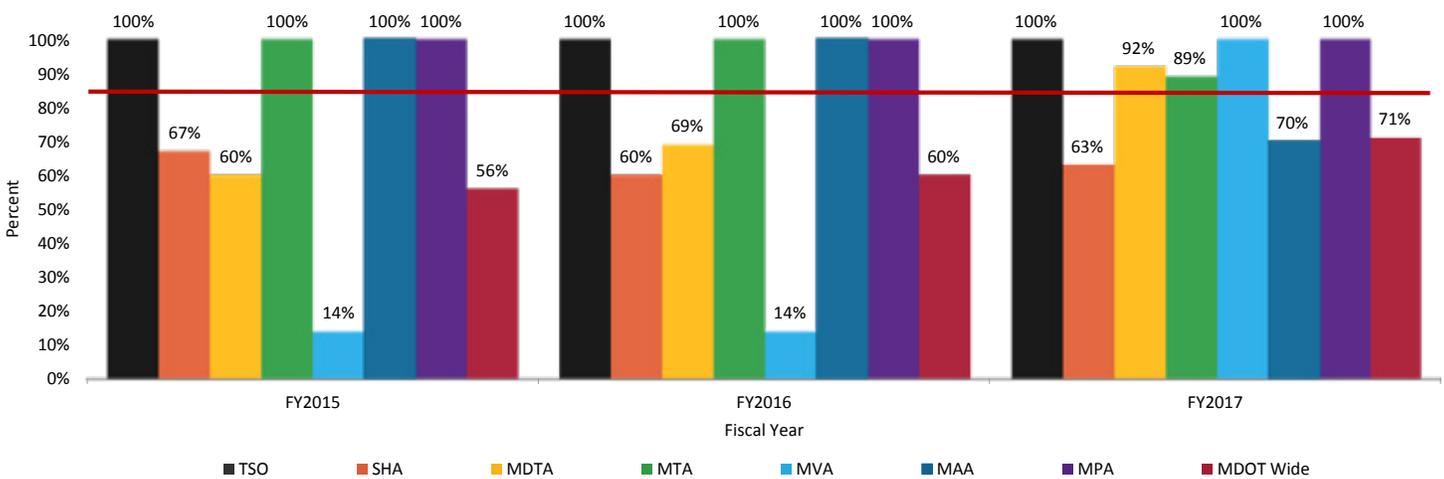
Overall MDOT increased the percentage of contracts completed in a timely basis from 56 percent in FY2015 and 60 percent in FY2016 to a FY2017 total of 71 percent. This is largely due to a new standard that measures project completion based on when our stakeholders start receiving "Beneficial Use" from the project. This aligns with MDOT's focus on its customers.

Another reason for the improved performance is the adoption of strategies designed to limit delays in the completion of contracts. These strategies include the implementation of A + B Bidding and Time of Year Letting Strategies as well as a lessons learned process post-completion and a having design changes undergo administrator review and approval.

## PERFORMANCE MEASURE 4.3

On-time Services and Solutions: Percent of Projects Completed by Original Contract Date

Chart 4.3.1: On-Time Services and Solutions, Percent of Projects Completed by Original Contract Date FY2015-FY2017



# Deliver Transportation Solutions and Services of Great Value

## TANGIBLE RESULT DRIVER:

Jason Ridgway  
*State Highway Administration (SHA)*

## PERFORMANCE MEASURE DRIVER:

Pat Keller  
*Maryland Transit Administration (MTA)*

Jim Harkness  
*Maryland Transportation Authority (MDTA)*

Wayne Schuster  
*Maryland Aviation Administration (MAA)*

## PURPOSE OF MEASURE:

To track the average cost of common transportation services and solutions to make decisions as to where to reduce costs, as appropriate.

## FREQUENCY:

Annually (in January and July)

## DATA COLLECTION METHODOLOGY:

Through the Capital Program Management System (CPMS); The Consolidated Transportation Plan (CTP); and MDOT Capital Budget, Finance and Procurement Offices.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 4.4

### Average Cost of Common Transportation Solutions and Services

It is MDOT's responsibility to provide transportation solutions and services to the public that are of great value.

The purpose of these measures is to track, access, and analyze data that will help reveal solutions for reducing the cost of transportation services. Tracking data that is grouped by shared services across business units will allow comparison across TBUs, and also insight into ways to reduce the cost of services to the public.

Performance measure 4.4 has 10 separate measurements. These measurements include minor and major road resurfacing cost, interstate road resurfacing cost, bridge replacement cost and major bridge redecking cost. Other measurements include operating cost per passenger trip, operating cost per revenue vehicle mile, passenger trips per revenue vehicle mile, farebox recovery and cost per transaction.

Tracking of these measures is based upon actual costs associated with contracts issued for various road and bridge projects. Because data for these projects is tracked annually, in any given year there may not be an award for this type of project as can be seen from some of the MDTA data. Regardless, the data will provide our customers with insights into how Maryland transportation projects compare to national averages.

Benchmarks are sought to gauge how Maryland solutions and services compare with national averages as well as who is considered the best in this category. Based on year to year data comparisons, the goal is to identify ways to reduce costs to the citizens of Maryland.

## PERFORMANCE MEASURE 4.4A

### Average Cost of Common Transportation Solutions and Services

Chart 4.4A.1: Minor Road Preservation Cost FY2014-FY2016

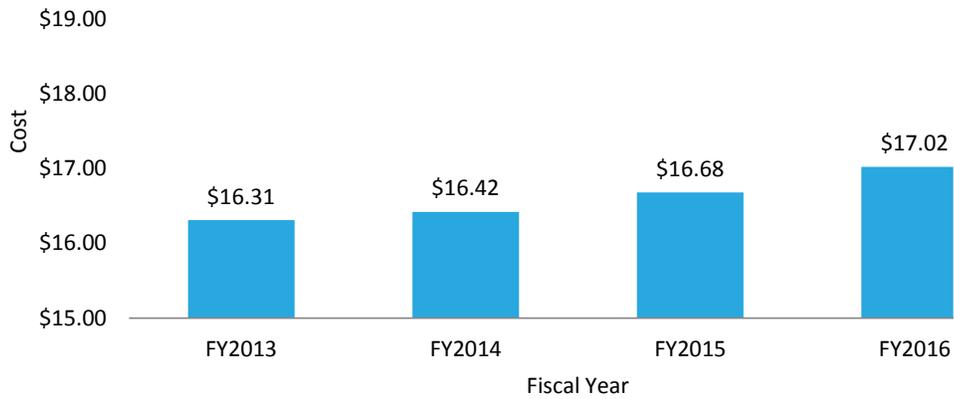
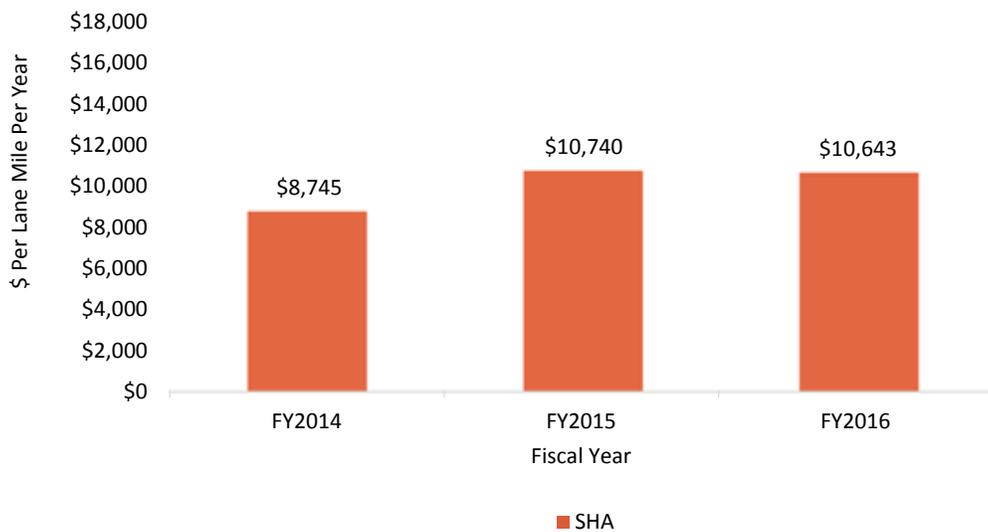


Chart 4.4A.2: Minor Road Preservation Life Cycle Cost FY2014-FY2016



# Deliver Transportation Solutions and Services of Great Value

## PERFORMANCE MEASURE 4.4B

### Average Cost of Common Transportation Solutions and Services

Chart 4.4B.1: Major Road Preservation Cost FY2014-FY2016

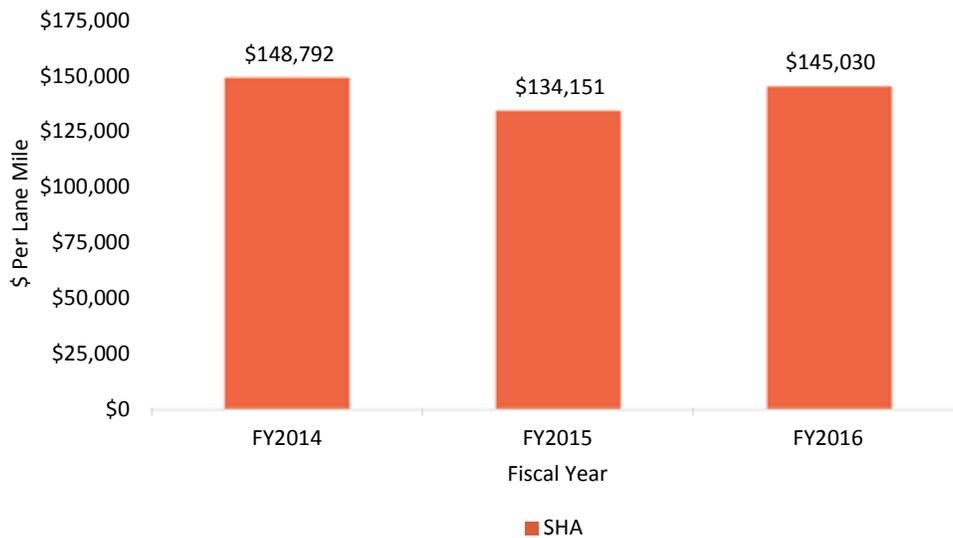
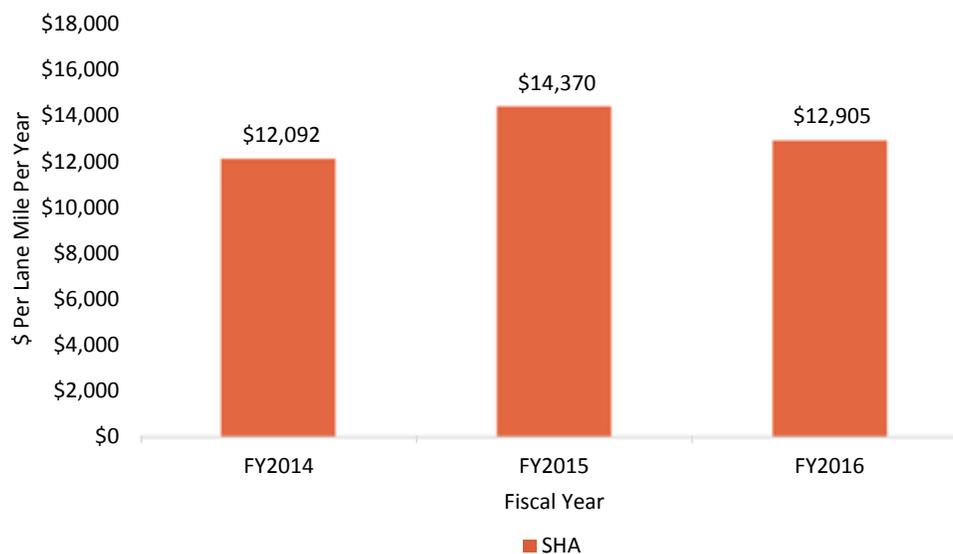


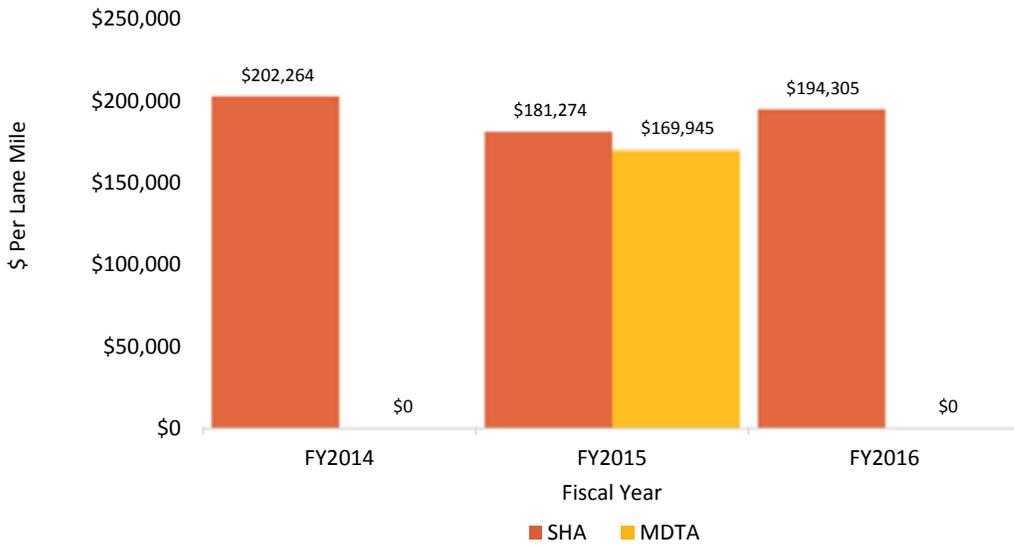
Chart 4.4B.2: Major Road Preservation Life Cycle Cost FY2014-FY2016



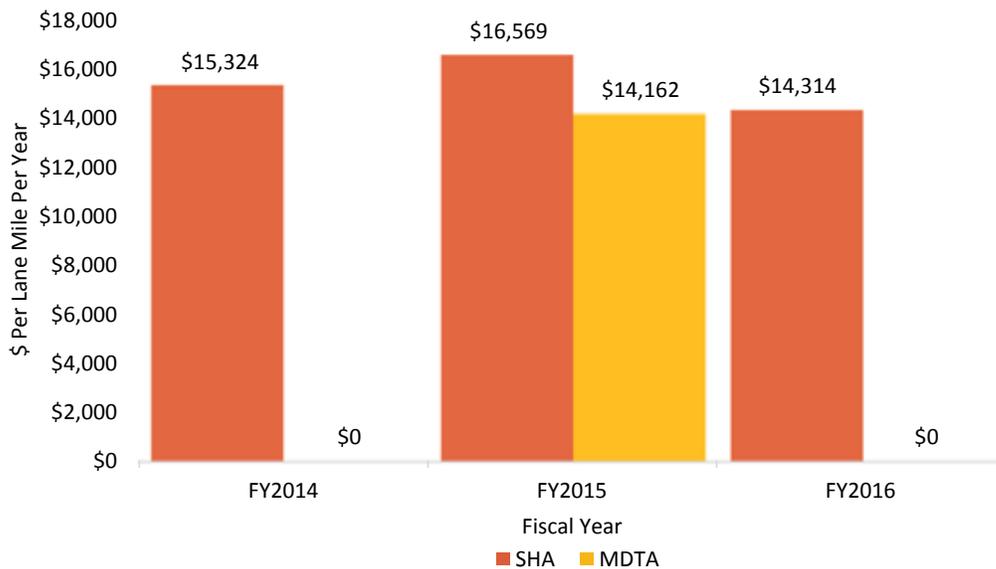
## PERFORMANCE MEASURE 4.4C

### Average Cost of Common Transportation Solutions and Services

**Chart 4.4C.1: Interstate Preservation Cost FY2014-FY2016**



**Chart 4.4C.2: Minor Road Preservation Life Cycle Cost FY2014-FY2016**



# Deliver Transportation Solutions and Services of Great Value

## PERFORMANCE MEASURE 4.4D AND E

### Average Cost of Common Transportation Solutions and Services

Chart 4.4D.1: Average Bridge Replacement Cost FY2015-FY2017

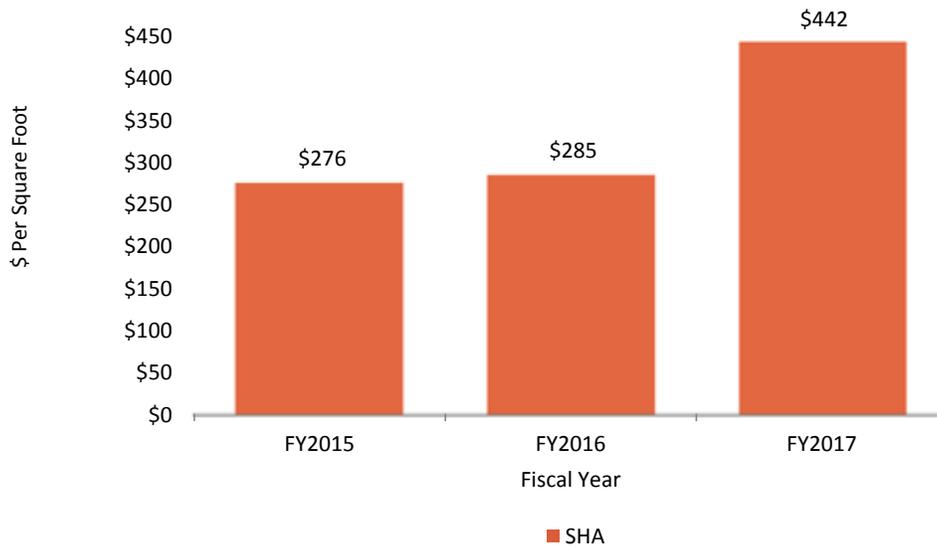
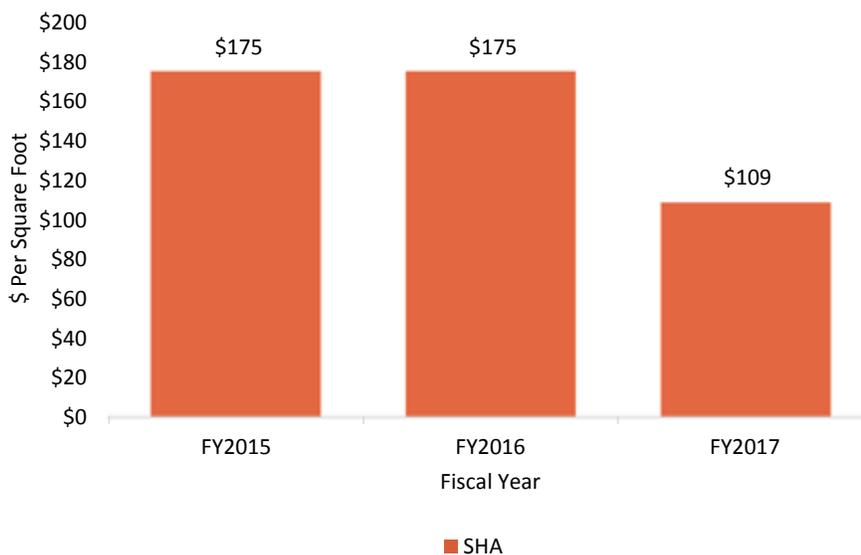


Chart 4.4E.1: Average Bridge Redecking Cost FY2015-FY2017



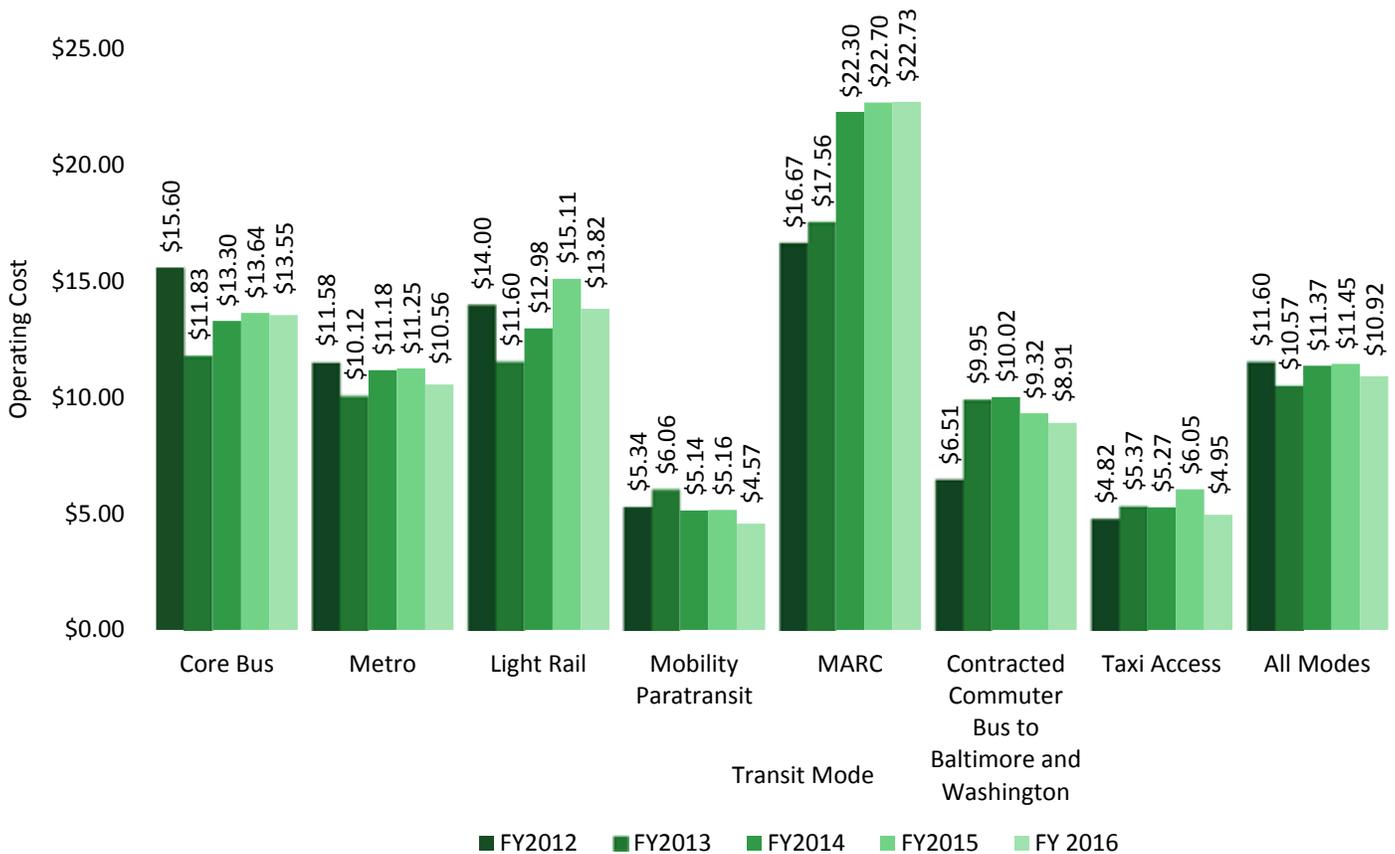
# Deliver Transportation Solutions and Services of Great Value

## PERFORMANCE MEASURE 4.4F

### Average Cost of Common Transportation Solutions: Operating Cost per Passenger Trip (MTA)

Operating cost per passenger trip is an indication of how effectively and efficiently the MTA is producing service given the operating costs. Ideally, a lower operating cost per passenger trip demonstrates the ability to move passengers in an efficient and effective manner.

Chart 4.4F.1: Operating Cost Per Revenue Vehicle Mile FY2012-FY2016



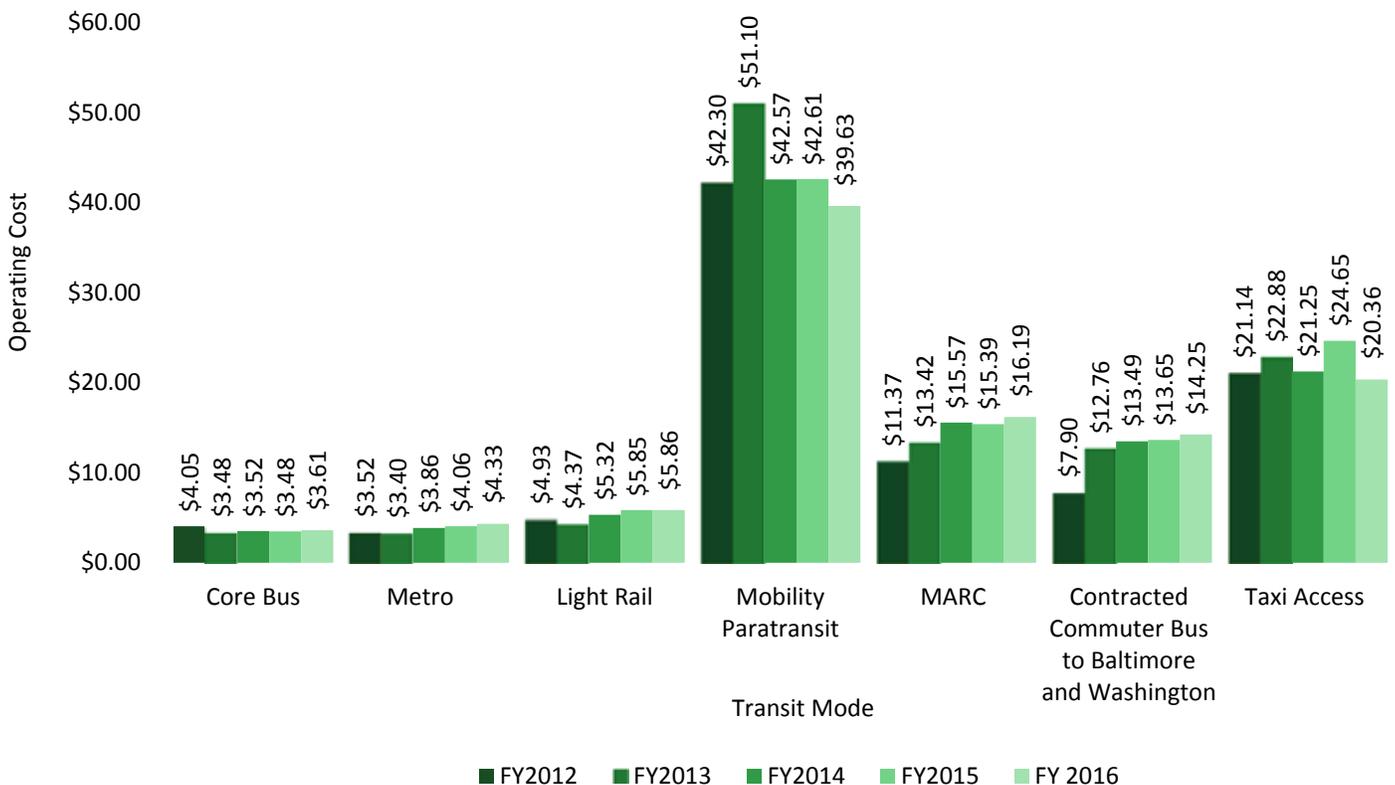
# Deliver Transportation Solutions and Services of Great Value

## PERFORMANCE MEASURE 4.4G

### Average Cost of Common Transportation Solutions: Operating Cost per Revenue Vehicle Mile (MTA)

Operating cost per revenue vehicle mile is an indication of the cost efficiency of the MTA in producing service given operating costs and scheduling of service. Ideally, when a transit vehicle is in operation, the goal is to be in revenue service vs. deadhead or repair. A lower operating cost per revenue vehicle mile demonstrates an efficient, well scheduled service and maintained fleet.

Chart 4.4G.1: Operating Cost Per Passenger Trip FY2012-FY2016



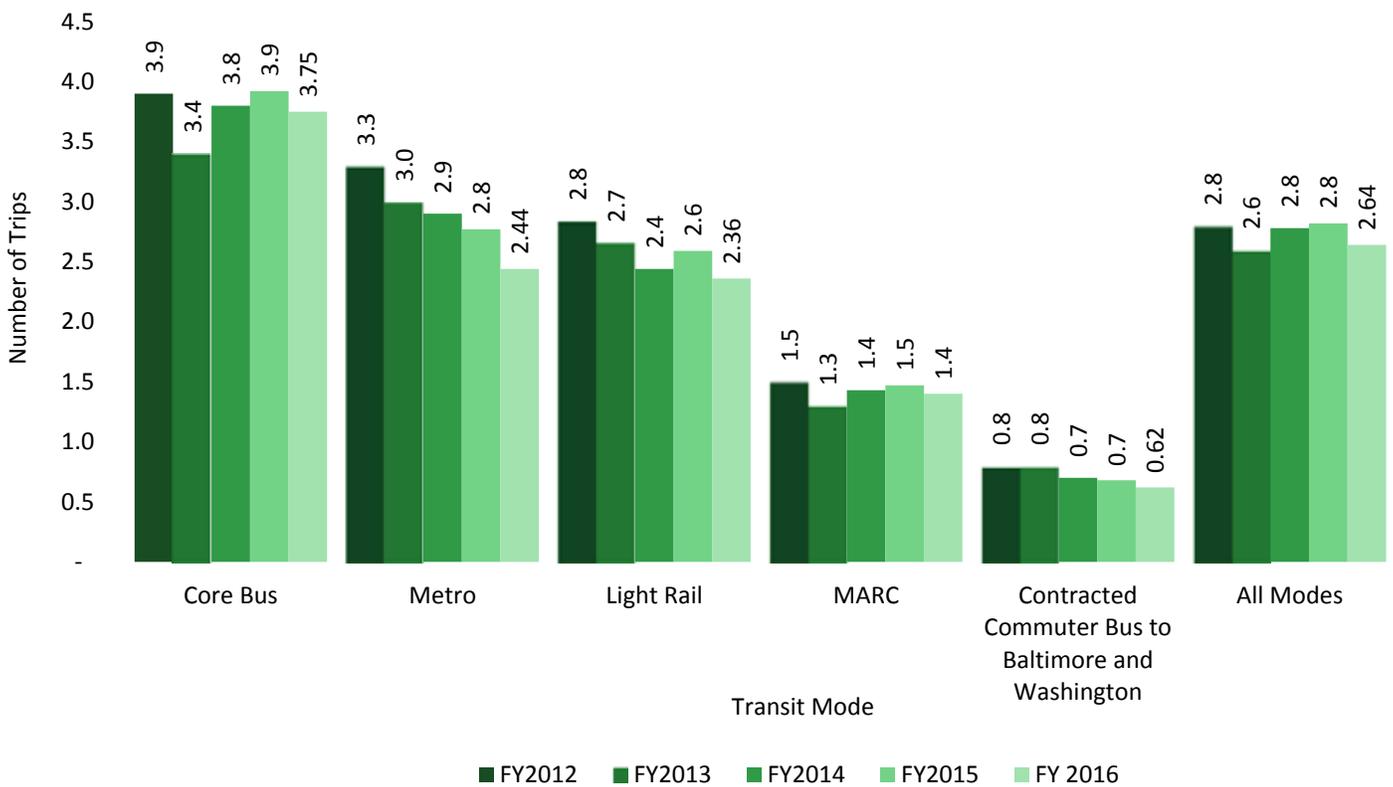
# Deliver Transportation Solutions and Services of Great Value

## PERFORMANCE MEASURE 4.4H

### Average Cost of Common Transportation Solutions: Passenger Trips per Revenue Vehicle Mile (MTA)

Passenger trips per revenue vehicle mile demonstrate the effectiveness of the transit’s operating schedule showing scheduled service in such a way as to carry as many passengers as practicable without overcrowding the service.

**Chart 4.4H.1: Passenger Trips Per Revenue Vehicle Mile FY2012-FY2016**



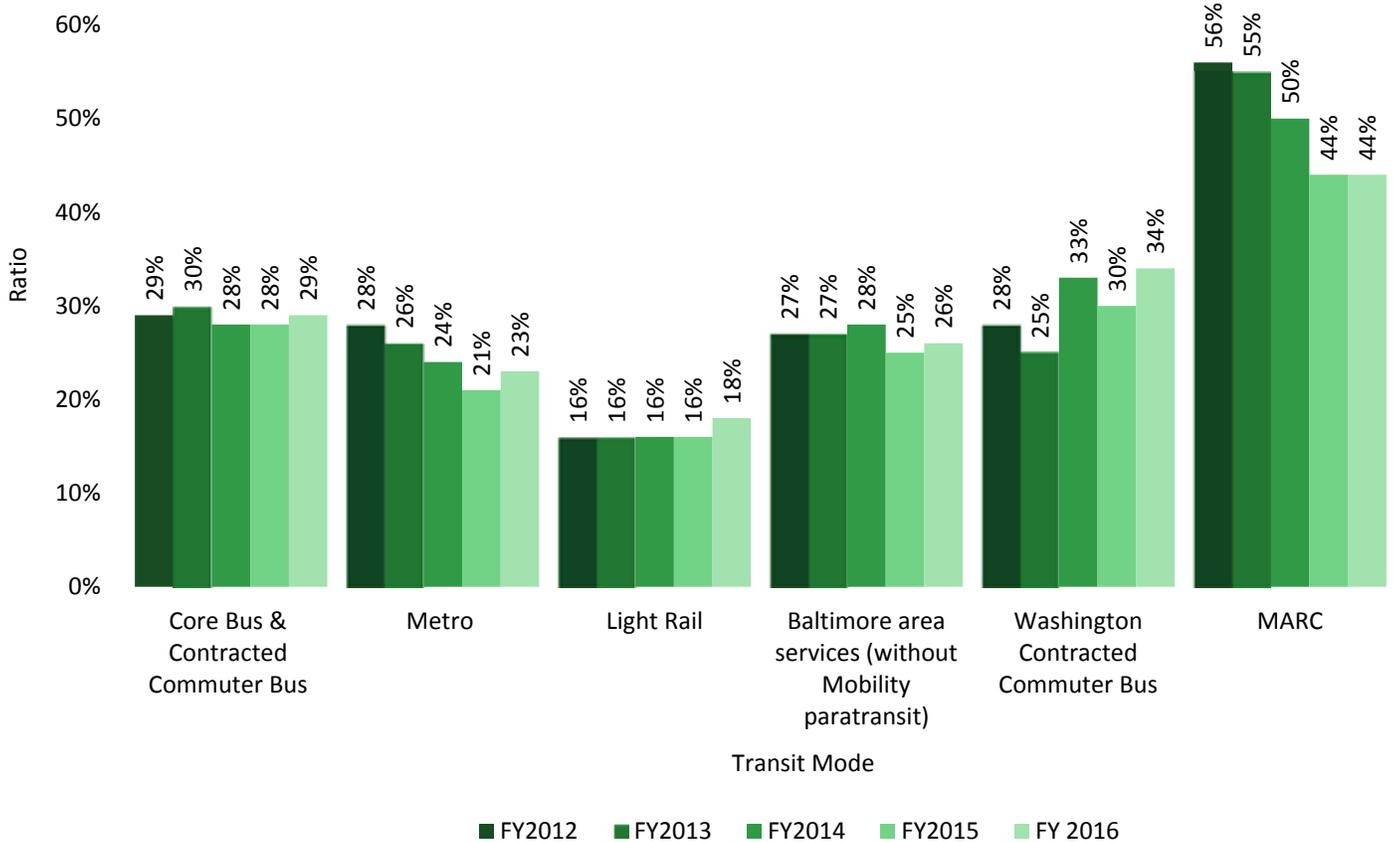
# Deliver Transportation Solutions and Services of Great Value

## PERFORMANCE MEASURE 4.4I

### Average Cost of Common Transportation Solutions: Farebox Recovery Ratio (MTA)

Farebox recovery ratio measures the percent of operating costs recovered through fares. Various factors affect the recovered operating costs such as fare price, ridership levels, and operating costs such as labor, fuel, and repair. State law mandates that MTA achieve a 35 percent Farebox Recovery Ratio.

Chart 4.4I.1: Farebox Recovery Ratio FY2012-FY2016



## PERFORMANCE MEASURE 4.4J

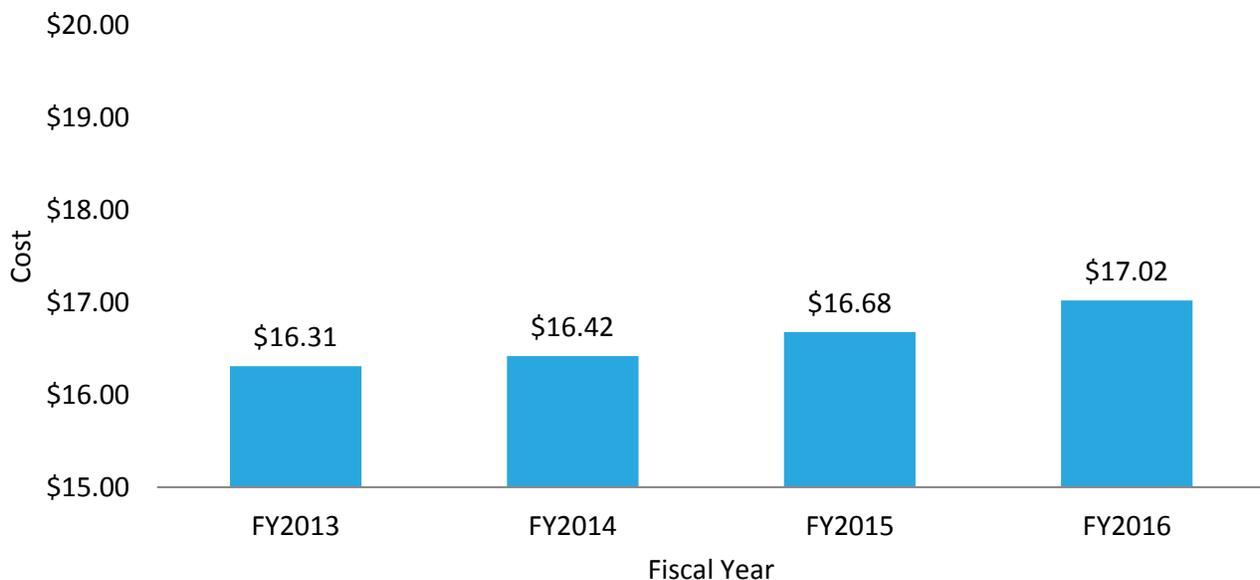
### Average Cost of Common Transportation Solutions: Cost per Transaction (MVA)

Cost per transaction is based on the total operating expense compared to the total number of customer transactions. The operating expense is inclusive of salaries and wages, including overtime. Operating expenses also include MVA costs to provide driver's licensing, vehicle registration and titling customer services.

The ways in which MVA provides its services to its customers is a factor in the costs per transaction. For example, IT system enhancements (introducing alternative service delivery options to customers) offer higher levels of convenience and customer satisfaction. Recent service improvements include the ability for a customer's vision provider to submit vision exam results electronically to MVA for licensing purposes, thus allowing some customers to renew their license via the web in lieu of standing in a license renewal line. Other innovative service delivery methods that use computer-based methods are included in the costs per transaction.

Trends in cost per transaction can vary when new technologies are implemented. Initial technology rollout costs tend to create a spike in costs, but after implementation, cost per transaction usually stabilizes and then declines. Other factors included in cost per transaction include the number of transactions required to complete customer service or product requests; increases in vehicle sales, which can be more costly to process (full titling transactions); and changes in driver's licensing laws requiring more time-consuming customer identification screening.

**Chart 4.4J.1: Average MVA Cost Per Transaction FY2013-FY2016**

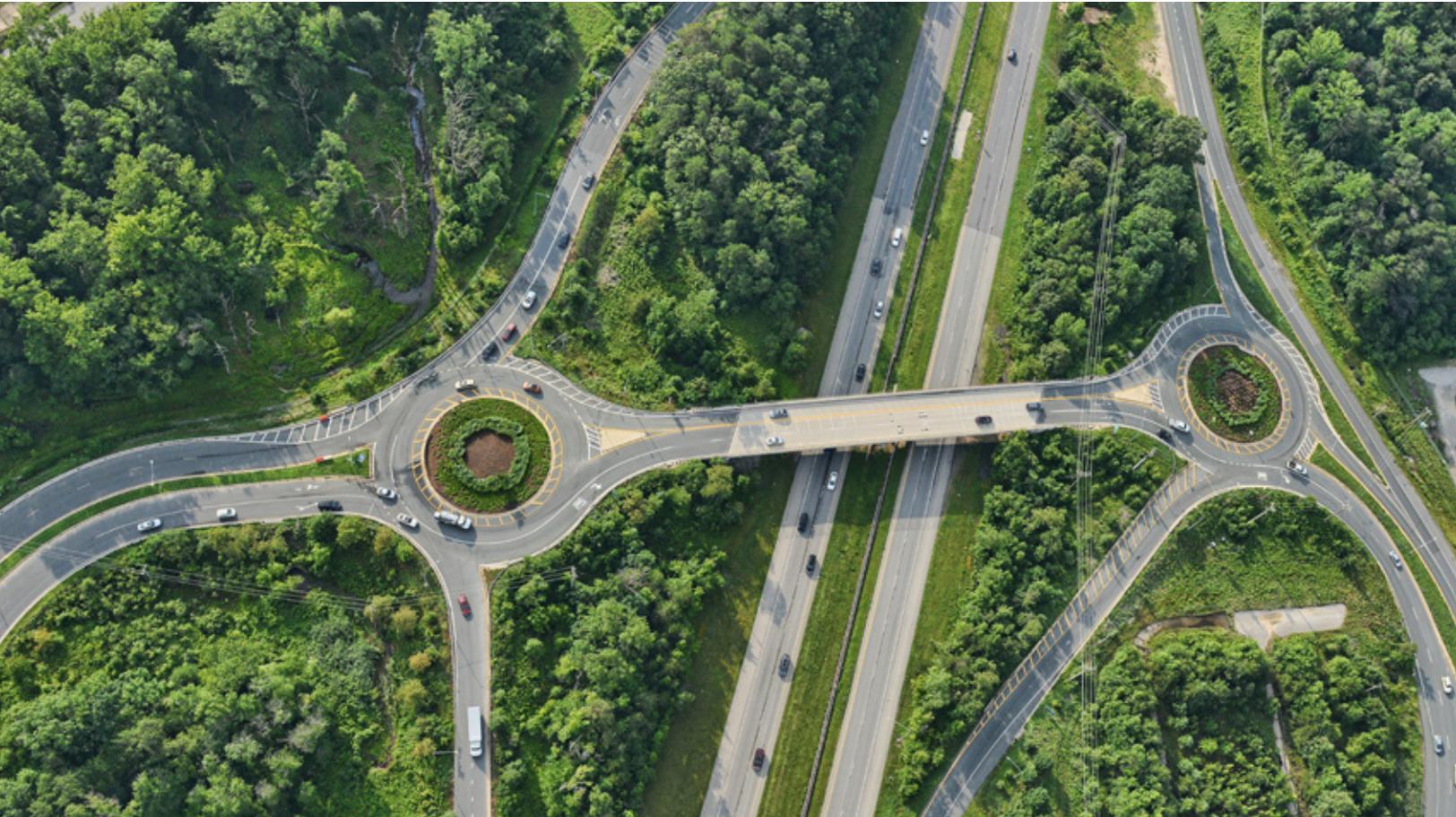


# Deliver Transportation Solutions and Services of Great Value



## TANGIBLE RESULT #5

# Provide an Efficient, Well-Connected Transportation Experience



MDOT will provide an easy, reliable transportation experience throughout the system. This includes good connections and world class transportation facilities and services.

### RESULT DRIVER:

Phil Sullivan

*Maryland Transit Administration (MTA)*

# Provide an Efficient, Well-Connected Transportation Experience

## TANGIBLE RESULT DRIVER:

Phil Sullivan

Maryland Transit Administration (MTA)

## PERFORMANCE MEASURE DRIVER:

Scott Jacobs

Maryland Transportation Authority (MDTA)

## PURPOSE OF MEASURE:

To assess average wait time at facilities.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Verification of average wait times at facilities for services based on MDTA reporting the percentage of tolls collected via cash payment at toll facilities.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 5.1A

### Reliability of the Transportation Experience: Percentage of Tolls Collected as Cash

Cash tolls cause more congestion and longer wait times at toll facilities.

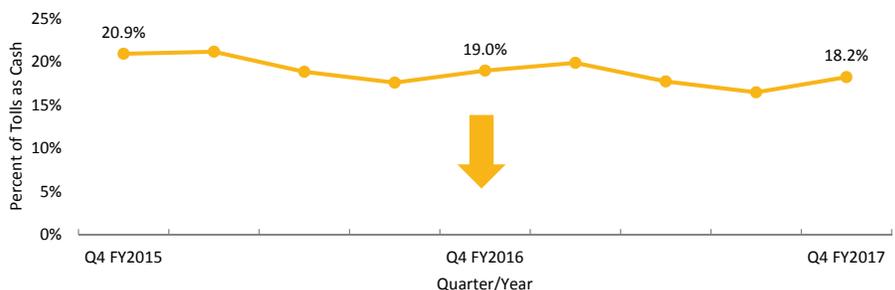
Customers expect limited congestion and minimal wait times, particularly at paid toll facilities. A decrease in this measure indicates more free flow traffic using electronic means of payment.

Currently we are trending positively, as our measure has been decreasing over the past year.

As of Q4 FY2017 we are at 18.22 percent of Tolls Collected as Cash. This is a decrease of 0.75 percent from Q4 FY2016.

MDOT continues to market Electronic Toll Collection and the lanes and signage reconfiguration in the current tri-message sign project is now in procurement.

**Chart 5.1A.1: Percent of Tolls Collected as Cash for All Mixed Facilities  
Q4 FY2015-Q4 FY2017**



# Provide an Efficient, Well-Connected Transportation Experience

## TANGIBLE RESULT DRIVER:

Phil Sullivan

*Maryland Transit Administration (MTA)*

## PERFORMANCE MEASURE DRIVER:

Jeffrey Gutowski

*Maryland Port Administration (MPA)*

## PURPOSE OF MEASURE:

To assess average turn time at facilities to ensure an efficient transportation experience for our customers.

## FREQUENCY:

Annually (in January)

## DATA COLLECTION METHODOLOGY:

Verification of average turn times at port facilities for services.

## NATIONAL BENCHMARK:

There is not a National Benchmark. However, in researching through Trade and Industry Publications and Trucking Associations, 45 minutes can be established as an efficient turn time.

## PERFORMANCE MEASURE 5.1B

### Reliability of the Transportation Experience: Average Truck Turn Time per Container Transaction

This performance measure is important because customers of MDOT Port facilities expect reasonable turn times to obtain needed services. The reliability of the transportation experience is assessed through average truck transaction turn times at facilities to ensure that customers have an efficient transportation experience. This measure will allow MDOT to monitor the service provider and improve turn times at our container facility. The data will be reported and reviewed annually.

The MPA is reporting on container transaction turn time handled by trucks at Seagirt Marine Terminal by fiscal year. The gate turnaround time is determined by the accumulated time that each truck remains on the terminal to complete its transaction (gate-in and gate-out). The primary objective of the Port is to maintain industry leading turn times of 45 minutes or less. Turn times have increased slightly in FY2017 from 30.7 minutes to 31.5 minutes per transaction. This turn time remains well below industry standards. The increase is directly attributed to elevated container volumes being handled at the terminal due to the Panama Canal expansion allowing for larger vessels to call at the facility.

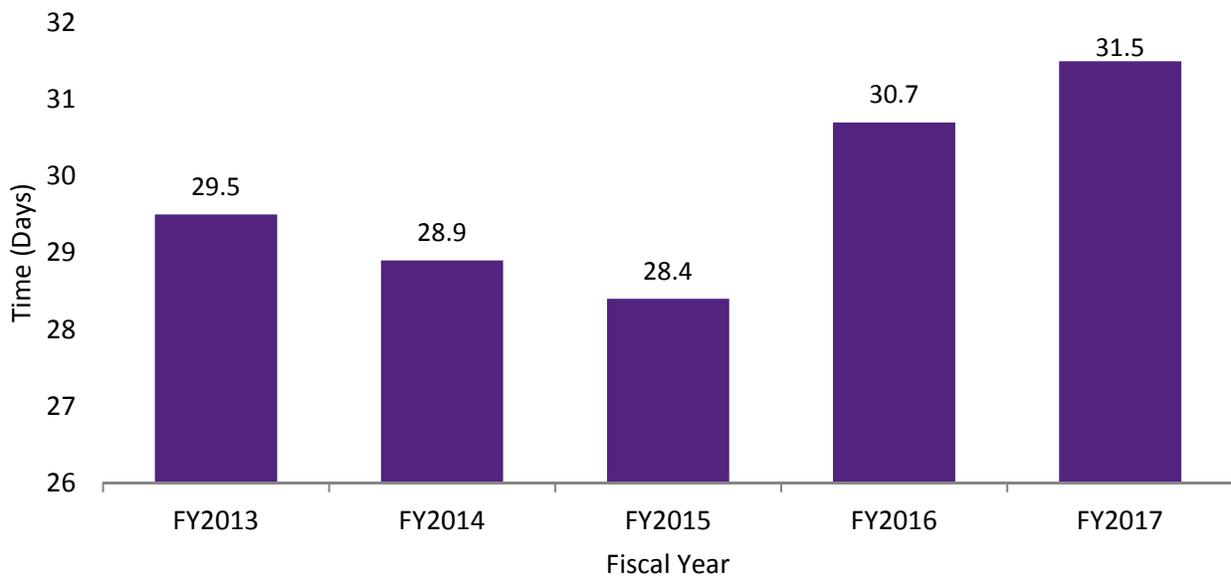
Continual improvement of the trucker experience is important to MDOT Port Administration as well as the terminal operator. The MPA and terminal operator are committed to improving the truck turnaround times through streamlined gate processes, terminal infrastructure investments, extended gate operating hours, deploying new technologies and investing in new container handling equipment. In addition, maintaining active lines of communication with the Maryland Motor Truck Association, Longshoreman's Association, Customs and Border Protection and United States Coast Guard all are very effective ways to eliminate unnecessary and unwarranted delays in the processing of trucks.

# Provide an Efficient, Well-Connected Transportation Experience

## PERFORMANCE MEASURE 5.1B

Reliability of the Transportation Experience: Average Truck Turn Time per Container Transaction

Chart 5.1B.1: Average Annual Truck Turnaround Time per Unit (Box) at Seagirt Marine Terminal FY2013-FY2017



# Provide an Efficient, Well-Connected Transportation Experience

## TANGIBLE RESULT DRIVER:

Phil Sullivan

*Maryland Transit Administration (MTA)*

## PERFORMANCE MEASURE DRIVER:

Jeffrey Gutowski

*Maryland Port Administration (MPA)*

## PURPOSE OF MEASURE:

To assess average wait time at MVA facilities.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Verification of average wait times at MVA facilities for services.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 5.1C

### Reliability of the Transportation Experience: Average Wait Time (MVA)

This performance measure is important as customers of MDOT expect reasonable wait times to obtain needed services and products. For performance measure 5.1C, the reliability of customer transportation experiences was assessed through monitoring of average wait times at MDOT MVA facilities. The data will be reported and reviewed quarterly.

Currently, the MVA reports the average wait time for customers to obtain services and products at all branch offices. The statewide average wait time goal for CY2017 is 21.7 minutes. In the Q2 reporting period, the MDOT MVA average statewide wait time was 20.5. The average total wait time for the calendar to date is 20.5 minutes, which is below the stated goal for the year.

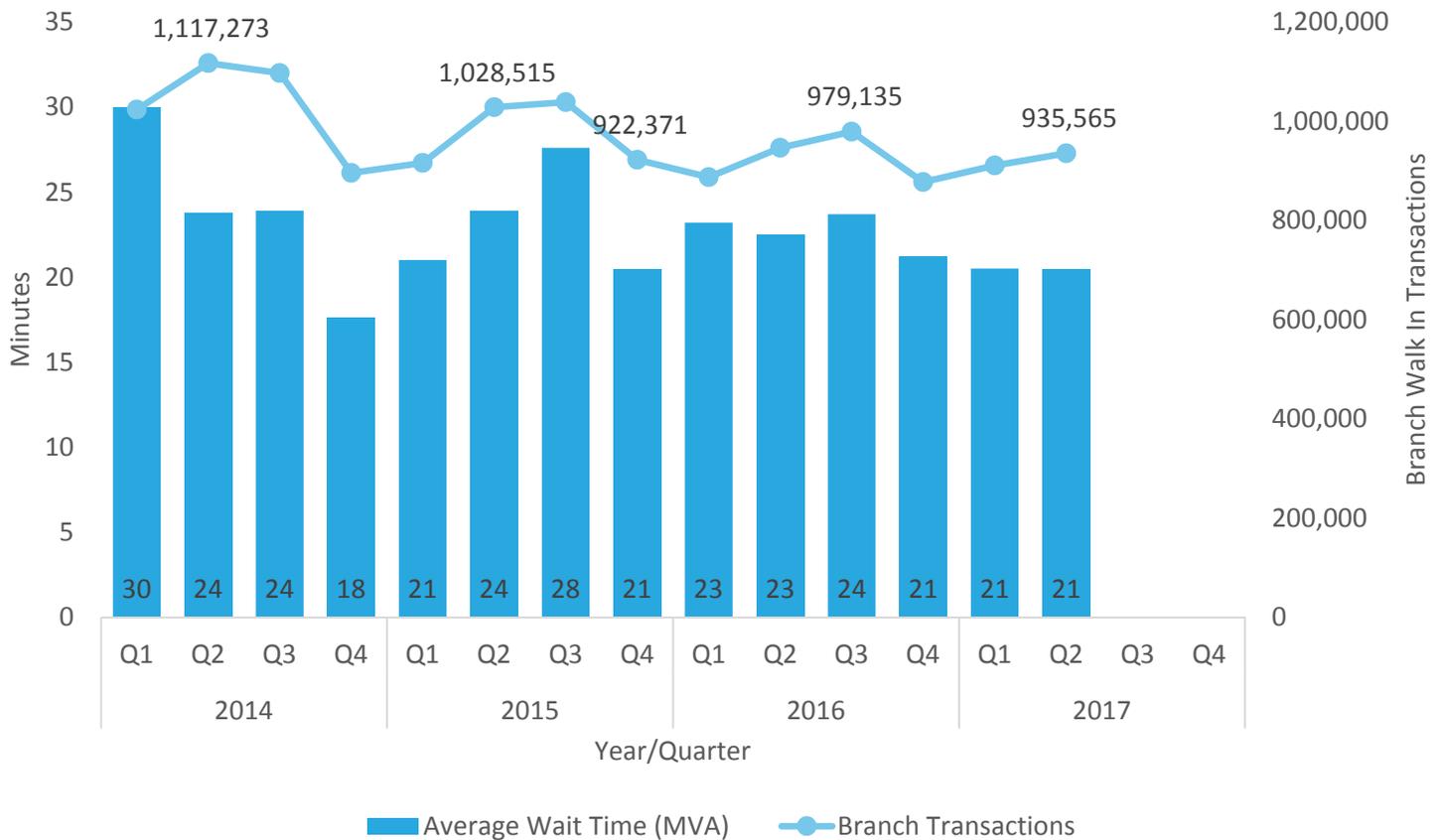
Recently implemented strategies to reduce customer wait times include pre-screening customers at the Customer Information Counter to identify those who would be eligible to use the kiosk for service, tablets at each MVA branch office for customers to use for immediate service, and redesigned email renewal notices for customers.

# Provide an Efficient, Well-Connected Transportation Experience

## PERFORMANCE MEASURE 5.1C

### Reliability of the Transportation Experience: Average Wait Time (MVA)

Chart 5.1C.1: Average Wait Time (MVA) CY2014-CY2017



# Provide an Efficient, Well-Connected Transportation Experience

## TANGIBLE RESULT DRIVER:

Phil Sullivan

Maryland Transit Administration (MTA)

## PERFORMANCE MEASURE DRIVER:

Robert Pond

Maryland Transit Administration (MTA)

## PURPOSE OF MEASURE:

To assess the percent of on-time performance of our transportation service by mode to ensure a more reliable transportation experience for customers.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Varies by Mode:

- Bus Data is collected by the CAD/AVL System.
- Rail Mode data is collected by the modal control rooms.
- Paratransit data is transmitted by on-board MDT to the Scheduling System or validated by a call from vehicle to a manager upon rider pick up.

## NATIONAL BENCHMARK:

Per APTA Standards Modal OTP Benchmarks are as follows:

Bus – 78 percent

Rail – 90 percent

Para-Transit – 92 percent

## PERFORMANCE MEASURE 5.1D

### Reliability of the Transportation Experience: On-Time Performance (MTA & MAA)

Reliability of transportation services is important to MDOT customers. Many rely on posted arrival and departure times to make needed connections and for critical appointments. This measure will allow the TBUs to focus resources where needed to improve on-time performance.

The public timetable has been referred to as “our contract with our riders.” On-Time Performance (OTP) is the measurement of our adherence to that contract. Maintaining a high level of OTP is of critical importance when providing ground transportation.

Whether a customer has a one-seat ride or needs to make a complex intermodal connection, the rider has an expectation that services will be provided reliably and as scheduled. MTA and MAA schedule adherence drives not only customer perception of the service we provide directly, but our efficient use of taxpayer dollars, management processes, and the efficiency and reliability of State government.

As an organization, MTA continues to strive to meet or exceed APTA benchmarks for OTP across Bus (78 percent), Rail (90 percent), and Paratransit (92 percent) modes. Our commitment to continual improvement of OTP is evident in our efforts to provide a transit network that allows passengers to travel more efficiently throughout our service area utilizing schedules that accurately reflect passenger travel times, driving down service related complaints and resulting in a better passenger experience.

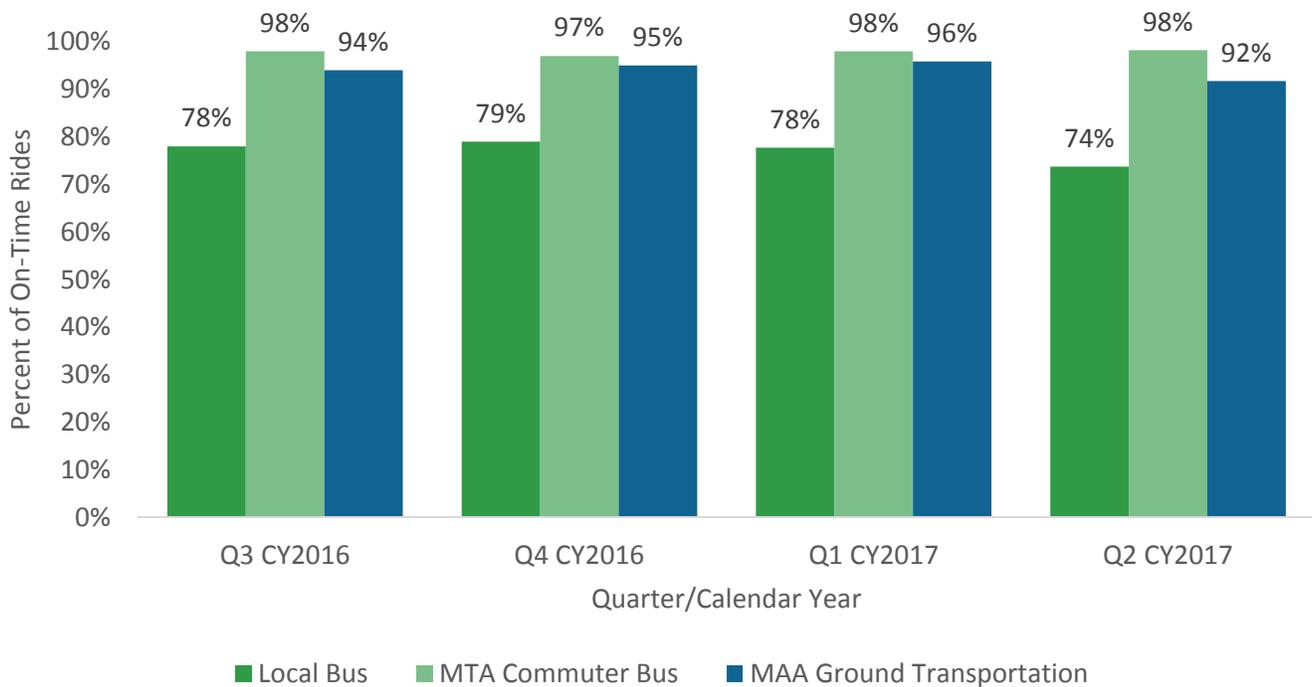
The current Local Bus OTP (74 percent) is the final quarter that OTP will be reflected in this way. This measure shows Local Bus OTP up through Saturday June 17, 2017. The BaltimoreLink system implementation was effective Sunday, June 18, 2017. The 3rd Quarter of CY 2017 (July 1 – September 30) will be the first reporting of BaltimoreLink system results. The system design is easier to manage when faced with the challenges of delivering urban mass transit while simultaneously being more user friendly, enhancing the profile of public transit by providing safe, efficient, reliable transit throughout the region while delivering world class customer service.

# Provide an Efficient, Well-Connected Transportation Experience

## PERFORMANCE MEASURE 5.1D

### Reliability of the Transportation Experience: On-Time Performance (MTA & MAA)

Chart 5.1D.1: On-Time Performance of MTA Local Bus, MTA Commuter Bus, & MAA Ground Transport CY2016-CY2017

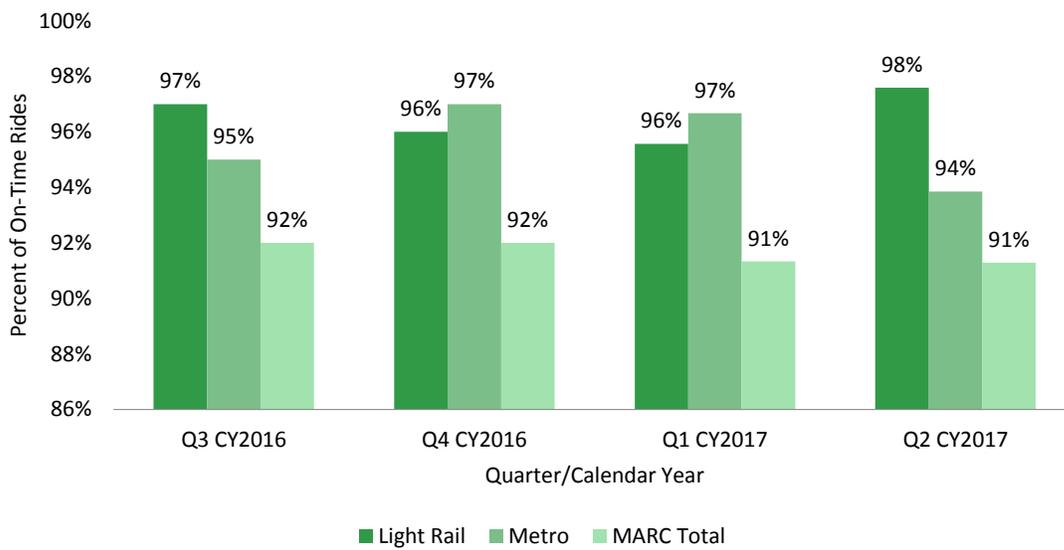


# Provide an Efficient, Well-Connected Transportation Experience

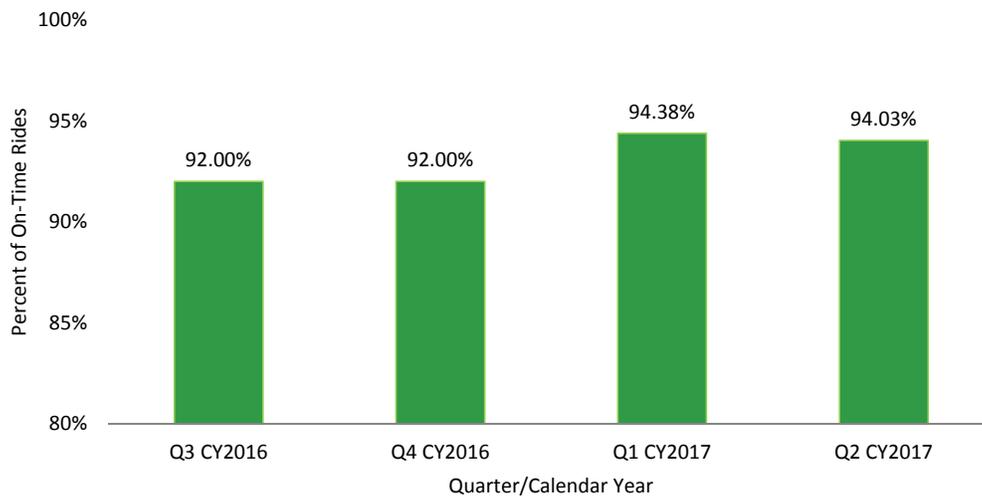
## PERFORMANCE MEASURE 5.1D

### Reliability of the Transportation Experience: On-Time Performance (MTA & MAA)

**Chart 5.1D.2: On-Time Performance of MTA Light Rail, Metro Subway, & MARC Train CY2016-CY2017**



**Chart 5.1D.3: On-Time Performance of MTA Paratransit CY2016-CY2017**



# Provide an Efficient, Well-Connected Transportation Experience

## TANGIBLE RESULT DRIVER:

Phil Sullivan  
Maryland Transit Administration (MTA)

## PERFORMANCE MEASURE DRIVER:

Roxane Y. Mukai  
Maryland Transportation Authority (MDTA)

## PURPOSE OF MEASURE:

To provide customers with a gauge by which to assess travel time reliability on the State's highway system.

## FREQUENCY:

Annually (in January)

## DATA COLLECTION METHODOLOGY:

Formula based.

## NATIONAL BENCHMARK:

A Planning Time Index (PTI) which is  $\leq 1.5$ .

## PERFORMANCE MEASURE 5.1E

### Reliability of the Transportation Experience: Planning Time Index for Highway Travel

Customers want reliable travel times when traveling on Maryland's highway system. The planning time index (PTI) is a metric that gauges the reliability of travel times on heavily used freeways and expressways during peak congestion.

For example, if a trip during uncongested, free-flowing traffic conditions takes a traveler 15 minutes; a PTI of 2.0 would indicate that the same trip during a heavily congested period could be expected to take up to 30 minutes. MDOT uses the following PTI ranges to describe the varying degrees of travel time reliability:

PTI  $< 1.5$  = Reliable  
 $1.5 < \text{PTI} < 2.5$  = Moderately Unreliable  
PTI  $> 2.5$  = Extremely Unreliable

In 2015, travel time on 8 percent (AM Peak) to 14 percent (PM Peak) of the freeways and expressways was assessed as "extremely unreliable" during congested periods on an average weekday. Almost all of the freeway and expressway segments that are "extremely unreliable" during congested periods are in the Baltimore-Washington region.

When compared to 2014, the 2015 travel reliability results were mixed. Continued economic recovery led to an increase of 1.6 percent in VMT above 2014, with a slight decrease (two miles) in roadway miles that experienced "extremely unreliable" conditions during the AM Peak and an additional 21 miles of freeway/expressway that experienced "extremely unreliable" travel conditions during the PM Peak.

Changes to the PTI that result from completed highway projects are reflected in the PTI analysis over time. As an example, the I-95 Express Toll Lane project in Baltimore opened in December 2014. The 2015 PTI analysis found that the I-95 SB PTI in the AM peak was reduced from 2.60 to 1.44 and the I-95 NB PTI in the PM peak was reduced from 2.79 to 1.18. The I-95 Express Toll lane project area is now assessed as a "reliable" freeway segment.

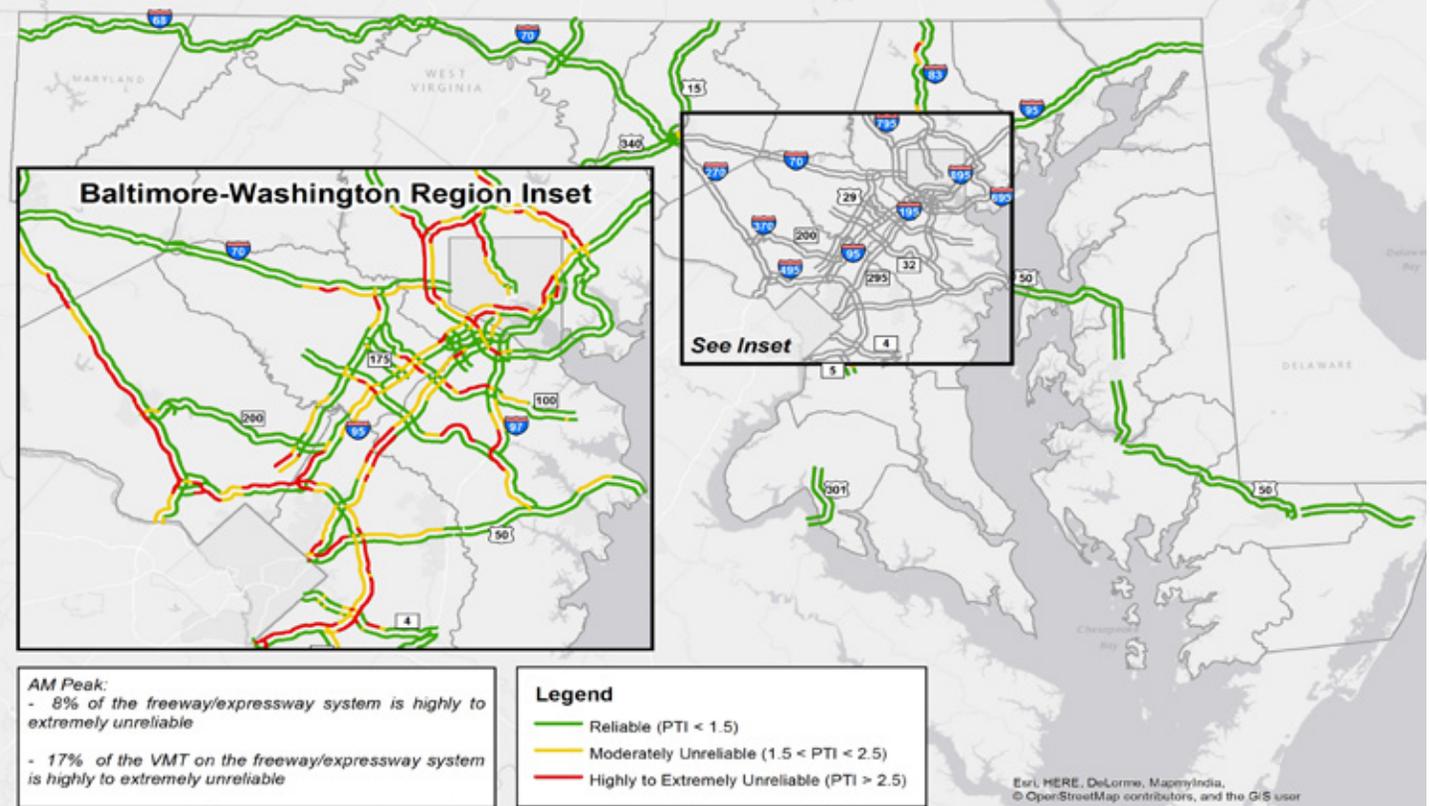
# Provide an Efficient, Well-Connected Transportation Experience

## PERFORMANCE MEASURE 5.1E

### Planning Time Index for Highway Travel

When compared to 2014, the AM Peak reflects a 1 percent increase in VMT and a 1 percent decrease in the number of freeway and expressway miles with a PTI > 2.5.

**Maryland Freeway/Expressway Reliability Map  
2015 AM Peak Hour (8AM-9AM)**



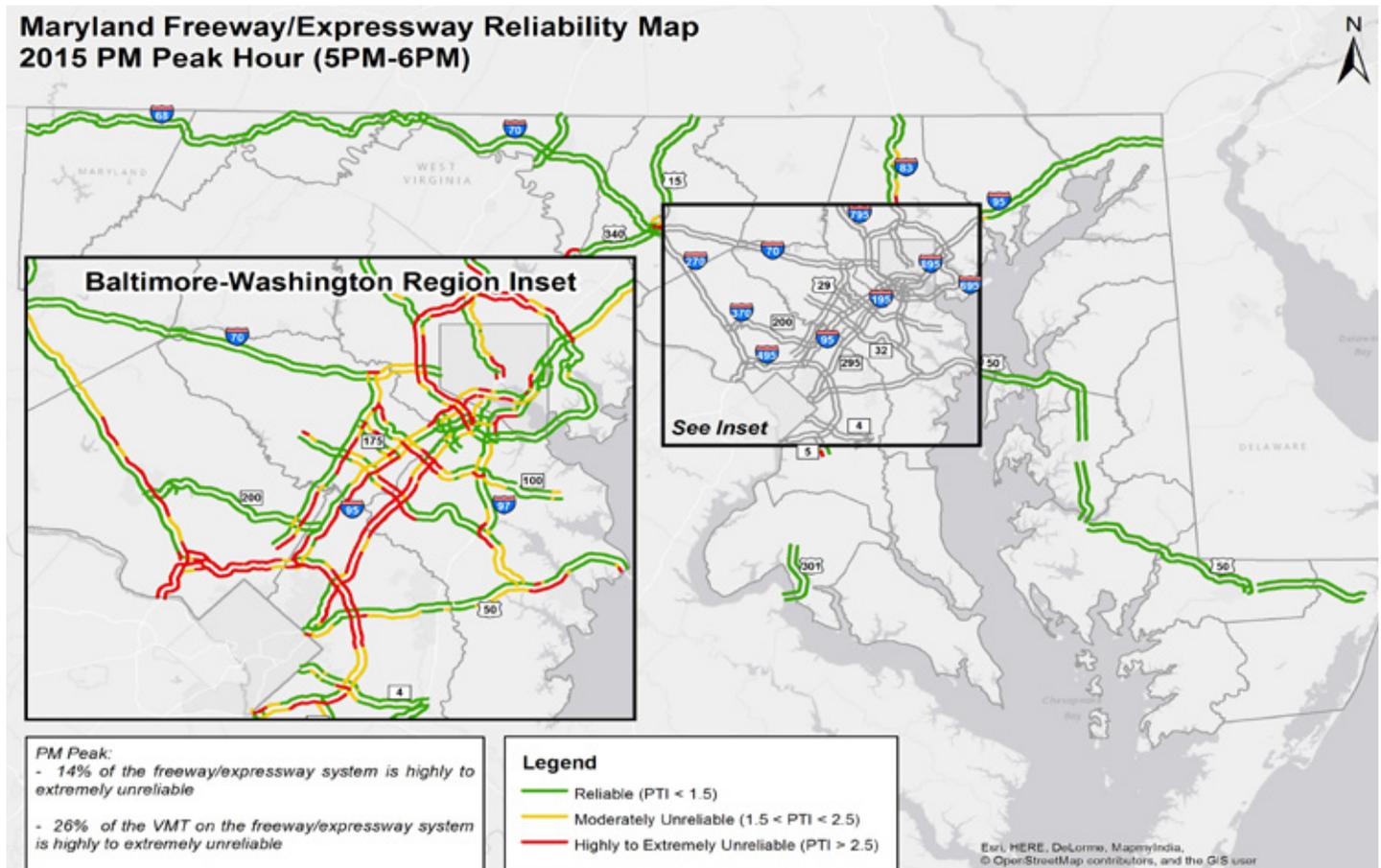
Source: 2016 Maryland State Highway Mobility Report

# Provide an Efficient, Well-Connected Transportation Experience

## PERFORMANCE MEASURE 5.1E

### Planning Time Index for Highway Travel

When compared to 2014, the PM Peak reflects a 3 percent increase in VMT and a 1 percent increase in the number of freeway and expressway miles with a PTI > 2.5.



Source: 2016 Maryland State Highway Mobility Report

# Provide an Efficient, Well-Connected Transportation Experience

## TANGIBLE RESULT DRIVER:

Phil Sullivan

Maryland Transit Administration (MTA)

## PERFORMANCE MEASURE DRIVER:

Joseph Sagal

State Highway Administration (SHA)

## PURPOSE OF MEASURE:

To understand the impact on efficiency of quickly restoring transportation services after incidents for customers.

## FREQUENCY:

Annually (in April)

## DATA COLLECTION METHODOLOGY:

The methodology involves an analysis of operational records collected in real-time, and results are contingent on the scale, number and types of incidents causing disruptions.

## NATIONAL BENCHMARK:

Arizona – 32 minutes

North Carolina – 69 minutes

Connecticut – 45 minutes

Iowa – 56 minutes

Michigan – 54 minutes

Minnesota – 35 minutes

Missouri – 24 minutes

New Jersey – 43 minutes

Virginia – 32 minutes

## PERFORMANCE MEASURE 5.2A

### Restoring Transportation Services: Average Time to Restore Normal Operations After Disruptions

MDOT's customers expect a safe, well-maintained, efficient and reliable transportation system with minimal disruption to travel. Rapid response to effectively manage and clear incidents that disrupt highway travel is one strategy that is essential in meeting these expectations. Efforts to improve coordination and cooperation among TBUs and emergency responders facilitate the reduction in response times and the overall average incident duration, restoring travel more quickly for customers. The "average incident duration" is a measure of the time it takes a response unit to arrive, plus the elapsed time between the arrival of the first unit and the time stamp in the CHART advanced traffic management system denoting the restoration of normal operating conditions.

As shown in chart 5.2A.1, the average incident duration between years 2010 and 2015 has been consistently less than 30 minutes. The slight increase in average incident duration in 2014 (23.32 min.) and 2015 (23.54 min.) is likely due to the addition of overnight and weekend patrol hours. During the night and weekends, incident clearance takes slightly longer, since emergency responding agencies operate at reduced staffing levels, or depend on "on-call" staff. However, performance measures show that night and weekend patrols have a significant positive impact on reducing overall travel delays.

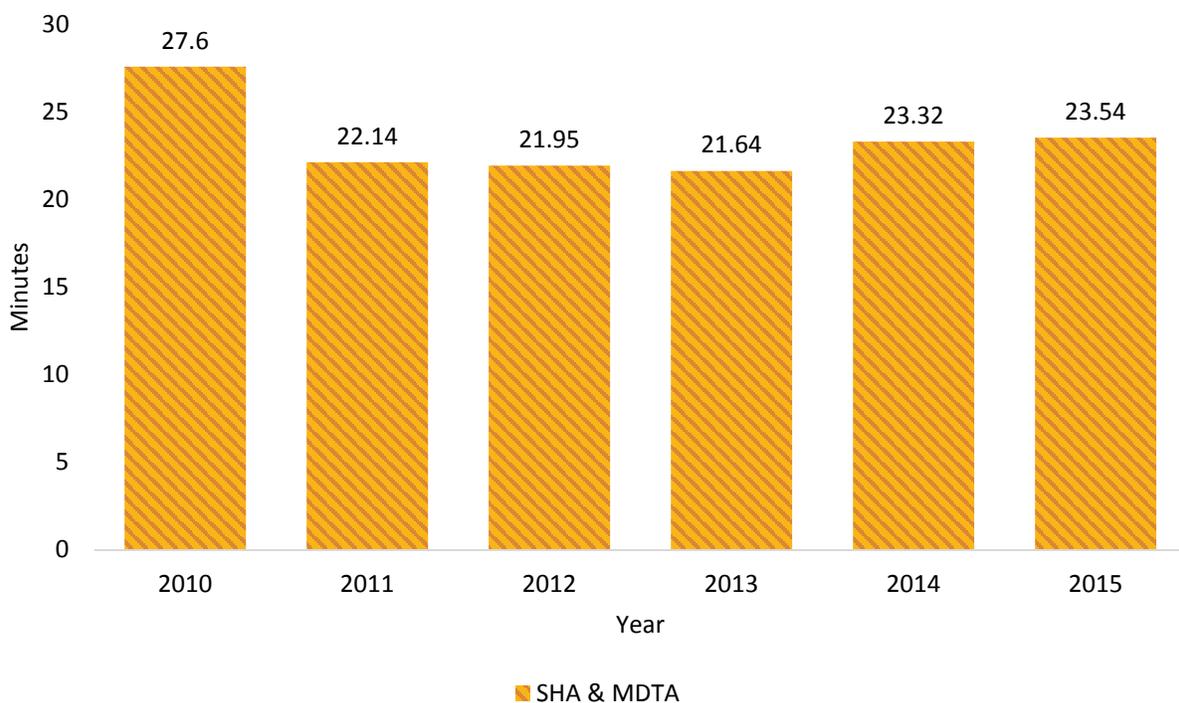
The primary strategies for improving Transportation Incident Management focus on assuring that emergency responders have well established coordination procedures, effective communications, thorough training and the resources available to address any type of incident. MDOT is leading three initiatives to improve coordination with the MSP including; formalizing working relationships with the heavy tow industry through MSP managed agreements which may include performance incentives for prompt vehicle recovery; organizational modifications to better support inter-organization coordination between MSP and MDOT; and enhancing data collection on reported crashes including the identification of preventable secondary incidents. MDOT is also supporting the deployment of the Maryland First radio system statewide to improve inter-organization emergency communication. And, MDOT is leading efforts to provide standardized incident management training to raise the level of emergency preparedness and safety of emergency responders who manage incidents on the transportation system.

# Provide an Efficient, Well-Connected Transportation Experience

## PERFORMANCE MEASURE 5.2A

Restoring Transportation Services: Average Time to Restore Normal Operations After Disruptions

Chart 5.2A.1: Average Highway Incident Duration (minutes) CY2010-CY2015



# Provide an Efficient, Well-Connected Transportation Experience

## TANGIBLE RESULT DRIVER:

Phil Sullivan

Maryland Transit Administration (MTA)

## PERFORMANCE MEASURE DRIVER:

Joseph Sagal

State Highway Administration (SHA)

## PURPOSE OF MEASURE:

To understand the impact on efficiency of quickly restoring transportation services after weather events.

## FREQUENCY:

Annually (in April)

## DATA COLLECTION METHODOLOGY:

The methodology involves an analysis of operational records collected in real-time, and results are contingent on the scale, number and types of weather events.

## NATIONAL BENCHMARK:

Minnesota – 3 hours

Washington, DC – 18 hours

Missouri – 3.8 hours

## PERFORMANCE MEASURE 5.2B

### Restoring Transportation Services: Average Time to Restore Normal Operations After a Weather Event

Disruptions in travel due to inclement weather (snow, ice, etc.) require specialized operations experience and rapid response to restore normal operating conditions. To understand performance during winter storms, MDOT collects data on the “average time to restore normal operations after weather events.” This measure is calculated by identifying the lapse in time from the ending of frozen precipitation in a maintenance shop’s area of responsibility and achieving bare (wet or dry) pavement conditions.

As shown in chart 5.2B.1, the average time to restore normal operations after weather events for the years 2011 through 2015 was consistently less than the benchmark value (3.8 hours –Missouri). The Average Time to Restore Normal Operations after a Weather Event increased to 6 hours in Fiscal Year 2016, mostly due to the impacts of Winter Storm Jonas which involved more than 24 inches of snow accumulation, over the period of January 22-24, 2016.

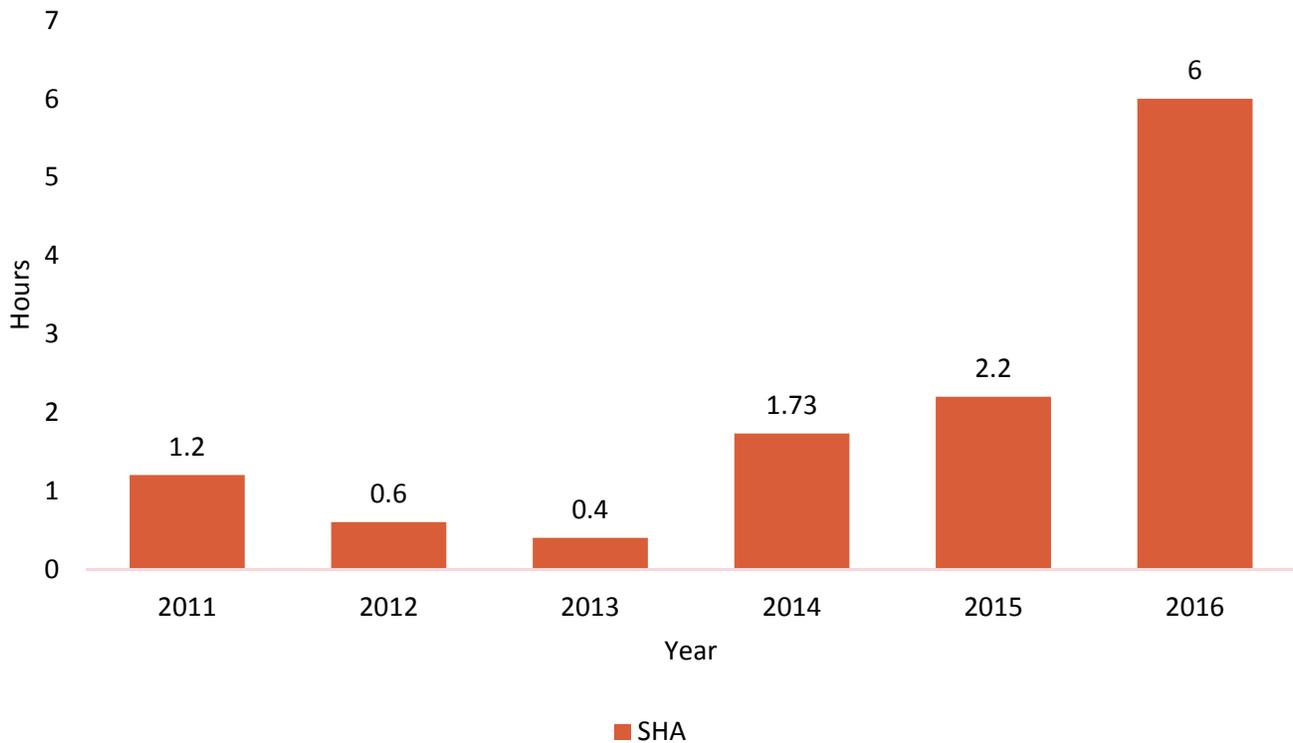
Recognizing that a large winter event such as Jonas presented unique challenges, MDOT initiated a major after-action initiative, which identified 30 tasks for improving Maryland’s winter storm preparedness. Some of the major tasks included compiling and maintaining winter storm emergency contact lists; updating emergency procurement procedures for obtaining necessary resources (e.g. food, lodging and supplies) during major weather events; developing the capability of displaying automated emergency weather warning on programmable highway message signs; identifying resources for transporting personnel during heavy snow conditions; and documenting and distributing lists of “pre-identified” snow disposal areas. All tasks were accomplished between February and October 2016. Another major strategy was to incorporate contracts for private, heavy-tow services under the emergency snow removal procurement regulations. These services are used to recover and relocate trucks stranded in the snow from travel lanes, to maintain a clear roadway and facilitate overall snow removal efforts.

# Provide an Efficient, Well-Connected Transportation Experience

## PERFORMANCE MEASURE 5.2B

Restoring Transportation Services: Average Time to Restore Normal Operations After a Weather Event

Chart 5.2B.1: Time to Regain Bare Pavement After Snow (hours) CY2011-CY2016



# Provide an Efficient, Well-Connected Transportation Experience

## TANGIBLE RESULT DRIVER:

Phil Sullivan

Maryland Transit Administration (MTA)

## PERFORMANCE MEASURE DRIVER:

Negash Assefa

Motor Vehicle Administration (MVA)

## PURPOSE OF MEASURE:

To measure percentage of services through alternate methods other than in-person visit as an indicator of easy and reliable access to MDOT services and products.

## FREQUENCY:

Semi-Annually (in April and October)

## DATA COLLECTION METHODOLOGY:

Formula accounts for total customer transportation services and products compared to those acquired by alternate methods.

## NATIONAL BENCHMARK:

FY2018 - 68 percent

## PERFORMANCE MEASURE 5.3

### Percent of Transportation Services and Products Provided Through Alternative Service Delivery (ASD) Methods

MDOT customers want easy and reliable access to acquire transportation services and products. A 2015 Pew Research Center study, shows 42 percent of Americans use the internet to get government services and/or information and 22 percent use the internet to make or receive payments. Including the projected increase in use of smart phones, it is expected that up to 68 percent of MDOT customers will complete transactions at their leisure without having to visit MDOT offices.

The methodology used to capture data is transaction count for services or goods delivered by ASD. Service Delivery Channel (SDC) for ASD includes Web, KIOSK, call center/IVR and mail-in. The percentage of ASD is derived by dividing ASD transactions by the number of total transactions. At present MDTA, MTA, MVA, SHA and TSO combined have 65 services available to customers through ASD methods.

For FY2017 over 25.9 million transactions were completed using ASD out of 41.2 million total. This accounts for 62.8 percent of all transactions.

The strategy to grow ASD includes marketing to effect behavior change, looking for services to be added to ASD and capturing services that may not be reported.



# Provide an Efficient, Well-Connected Transportation Experience

## PERFORMANCE MEASURE 5.3

Percent of Transportation Services and Products Provided Through Alternative Service Delivery (ASD) Methods

Chart 5.3.1: Alternative Service Delivery by TBU CY2013-CY2017 (YTD)

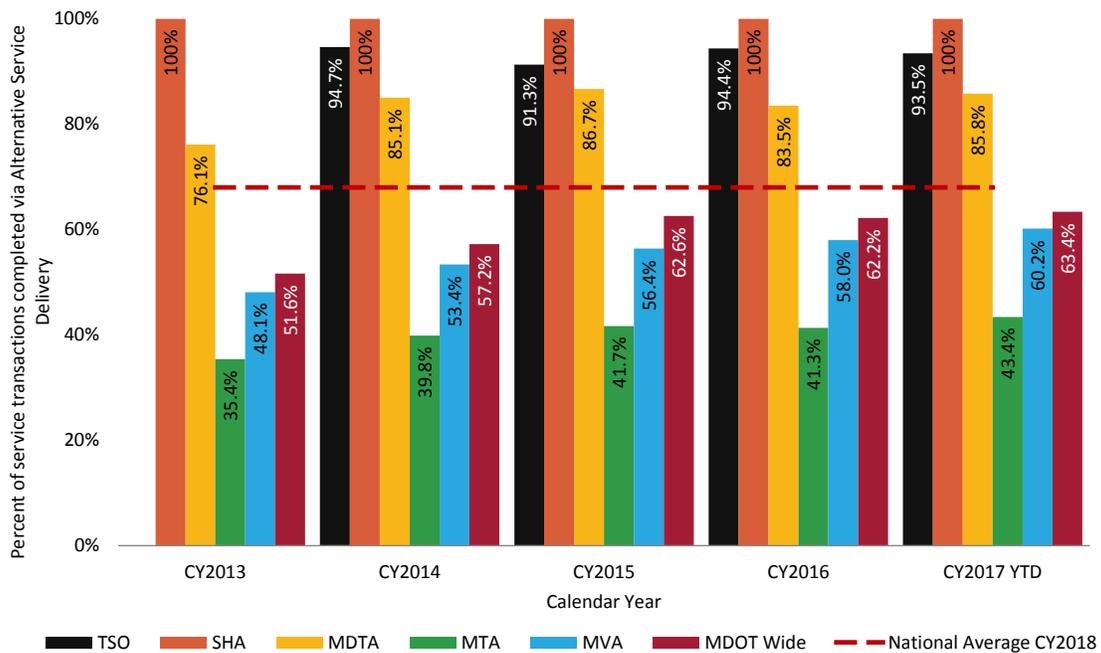
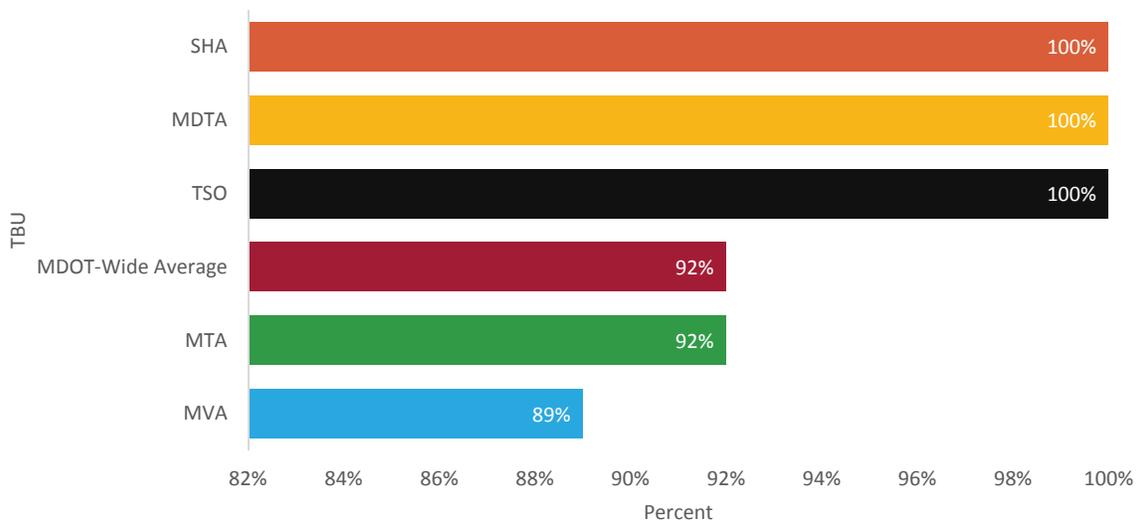


Chart 5.3.2: Percent of Customer Services Available via Alternative Service Delivery by TBU CY2017 (YTD)



# Provide an Efficient, Well-Connected Transportation Experience

## TANGIBLE RESULT DRIVER:

Phil Sullivan

*Maryland Transit Administration (MTA)*

## PERFORMANCE MEASURE DRIVER:

Ralign T. Wells

*Maryland Aviation Administration (MAA)*

## PURPOSE OF MEASURE:

To assess the functionality and value of real-time signage and information systems offered.

## FREQUENCY:

Quarterly for functionality.

Annually for customer satisfaction (in July).

## DATA COLLECTION METHODOLOGY:

Sampling of real-time signage or IVR systems to determine a percentage of functionality.

Survey users to assess their opinion of usefulness and satisfaction with Real-Time Information Systems.

## NATIONAL BENCHMARK:

85 percent-90 percent functionality (according to Clever Devices, a private consulting firm specializing in public transportation real-time information technologies)

## PERFORMANCE MEASURE 5.4A AND 5.4B

### Percent of Functional Real-Time Information Systems Provided; Customer Satisfaction with the Usefulness & Accuracy of Real-Time Information

MDOT's customers benefit from "real-time" information systems installed throughout the transportation network offering travelers the most accurate and up to date information available. These systems help customers prepare for and manage their time while using statewide transportation services.

Combined, all TBUs exceed industry standards of 90 percent functionality, averaging 99 percent functionality for Q1 of CY2017.

Currently, all TBUs have processes in place to ensure that any system failures are immediately addressed to ensure near 100 percent functionality at any given time. Systems will continually be monitored to ensure continued stellar "up-time" performance of these systems.

# Provide an Efficient, Well-Connected Transportation Experience

## PERFORMANCE MEASURE 5.4B

Percent of Transportation Services and Products Provided Through Alternative Service Delivery (ASD) Methods

Chart 5.4A.1: Percent of Functional Real-Time Information Systems Provided CY2016-CY2017

	CY2016 Q3	CY2016 Q4	CY2017 Q1	CY2017 Q2
MVA Wait Time	100%	100%	100%	100%
MTA Mobility	100%	100%	100%	100%
MTA Bus Tracker	100%	100%	100%	100%
MTA Light Rail	100%	100%	100%	100%

	CY2016 Q2	CY2016 Q3	CY2016 Q4	CY2017 Q1
MAA Flight Info	100%	100%	100%	100%
MDTA CHART	100%	98.5%	98%	99.3%
SHA CHART	97.5%	100%	98.7%	99.1%
MAA Next Vehicle	92.5%	96.5%	98%	96%
MTA MARC	94%	97%	98.5%	99.1%

## TANGIBLE RESULT #6

# Communicate Effectively With Our Customers



Every MDOT employee has to communicate with customers, some on a daily basis. It is critical to communicate clearly, concisely, timely and accurately with customers.

### RESULT DRIVER:

Diane Langhorne

*The Secretary's Office (TSO)*

# Communicate Effectively With Our Customers

## TANGIBLE RESULT DRIVER:

Diane Langhorne  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Katie Bennett  
*Maryland Transportation Authority (MDTA)*

## PURPOSE OF MEASURE:

To examine and analyze the social media activities of each MDOT TBU to gauge if we are communicating effectively with our customers/followers.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

MDOT gathers social media analytics for this measure from MDOT Twitter and Facebook accounts.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 6.1A

### Communicate Effectively Utilizing Social Media: Social Reach

Social media has become a standard method for businesses to communicate with their customers. MDOT uses social media channels to disburse clear and accurate information to their customers and the media in a timely manner.

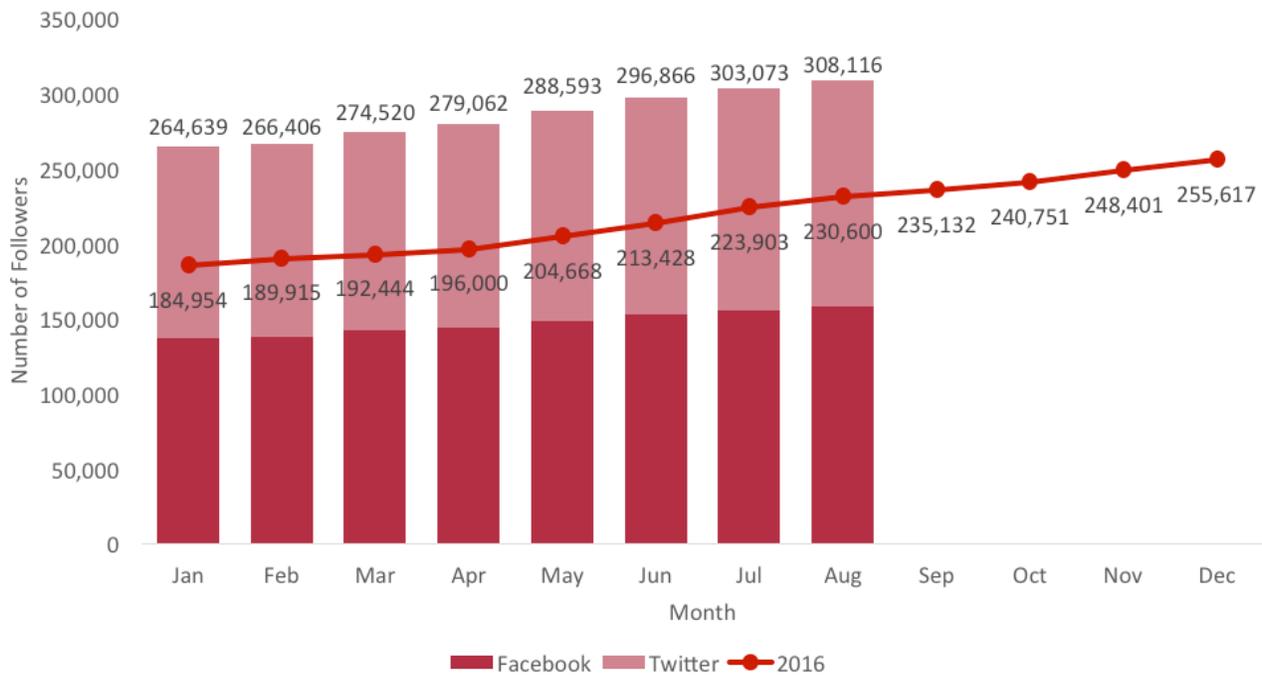
“Social reach” measures the number of customers who have seen our message on Facebook and Twitter. MDOT strives to reach customers through the channels they use which is why efforts are focused on developing social media strategic skills and programs MDOT-wide to enhance social reach. To date, MDOT proudly has over 300,000 fans on social media and continues to grow by each month.

# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.1A

### Communicate Effectively Utilizing Social Media: Social Reach

Chart 6.1A.1: Total MDOT Social Media Followers CY2017

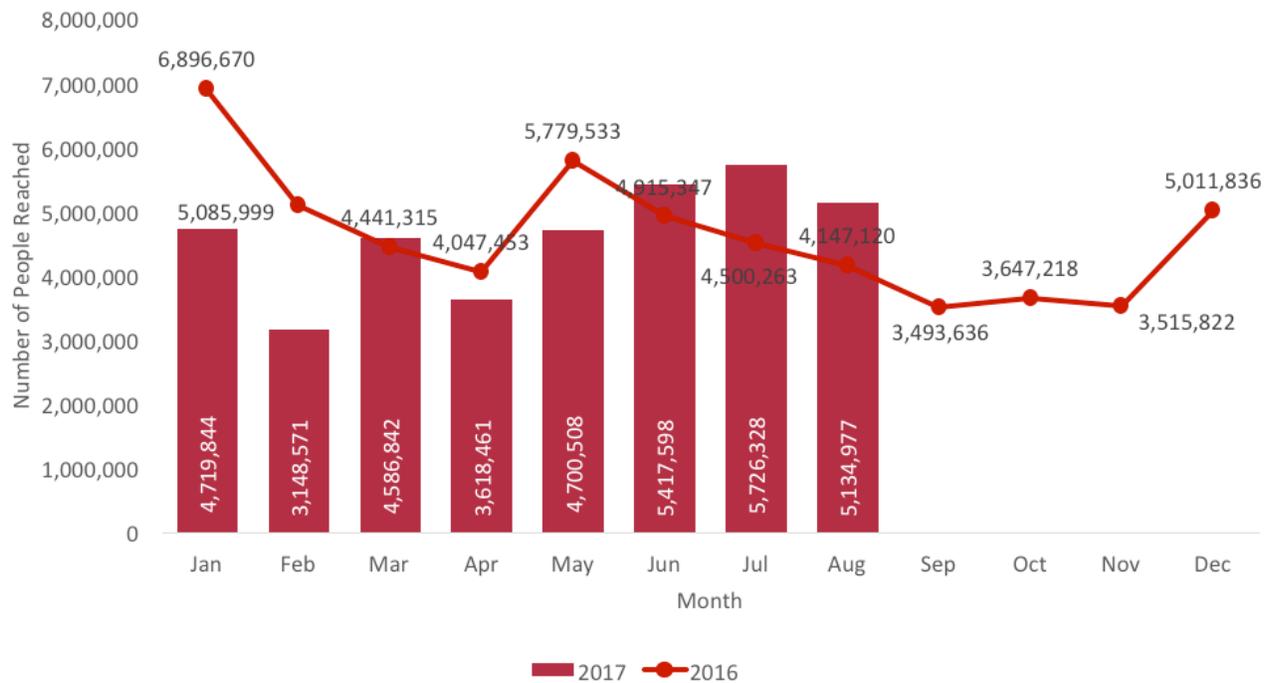


# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.1A

### Communicate Effectively Utilizing Social Media: Social Reach

Chart 6.1A.2: Total MDOT Social Media Reach CY2017



# Communicate Effectively With Our Customers

## TANGIBLE RESULT DRIVER:

Diane Langhorne  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Richard Scher  
*Maryland Transportation Authority (MDTA)*

## PURPOSE OF MEASURE:

To examine and analyze the social media activities of each MDOT TBU to gauge if we are communicating effectively with our customers/followers.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

MDOT gathers social media analytics for this measure from all MDOT Twitter and Facebook accounts.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 6.1B

### Communicate Effectively Utilizing Social Media: Social Engagement

While “social reach” measures the total number of people who have seen a message, “social engagement” recognizes how followers engaged with that message. Engagements initiate opportunities to communicate interactively with customers.

To determine the effectiveness of its social media communication, MDOT measures social engagement across all MDOT social media accounts, looking for trends in likes, comments and shares in order to better provide content its followers will enjoy and find informative. Through education and training, MDOT staff are determined to heighten the social experience of their customers.

MDOT continues to learn the interests of its customers through social media channels in order to provide the content customers expect.

# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.1B

### Communicate Effectively Utilizing Social Media: Social Engagement

Chart 6.1B.1: Total MDOT Social Media Engagements CY2017



# Communicate Effectively With Our Customers

## TANGIBLE RESULT DRIVER:

Diane Langhorne  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Sharon Rutzebeck  
*Motor Vehicle Administration (MVA)*

## PURPOSE OF MEASURE:

To track how clearly and effectively MDOT communicates with customers at public meetings.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Data will be collected via survey at all public meetings hosted by MDOT business units. The data will be owned and housed by the business unit in charge of the public meetings and sent to MVA on a quarterly basis.

## NATIONAL BENCHMARK:

84 percent (ASCI index)

## PERFORMANCE MEASURE 6.2

### Satisfaction with Communication at Public Meetings

MDOT encourages enjoyable and productive customer experiences during its public transportation information sessions and presentations. Knowing that all transportation related programs and projects can benefit greatly from increased community involvement, MDOT eagerly seeks open and honest feedback from its customers (residents, community leaders, and stakeholders).

A standardized survey method is used to measure and track customer perception of how clearly and effectively MDOT personnel communicates during its hosted public meetings. From July 2016 – September 2017, 85 percent of customers (216 customers) surveyed during 19 separate MDOT hosted events indicated they were satisfied with the received project information.

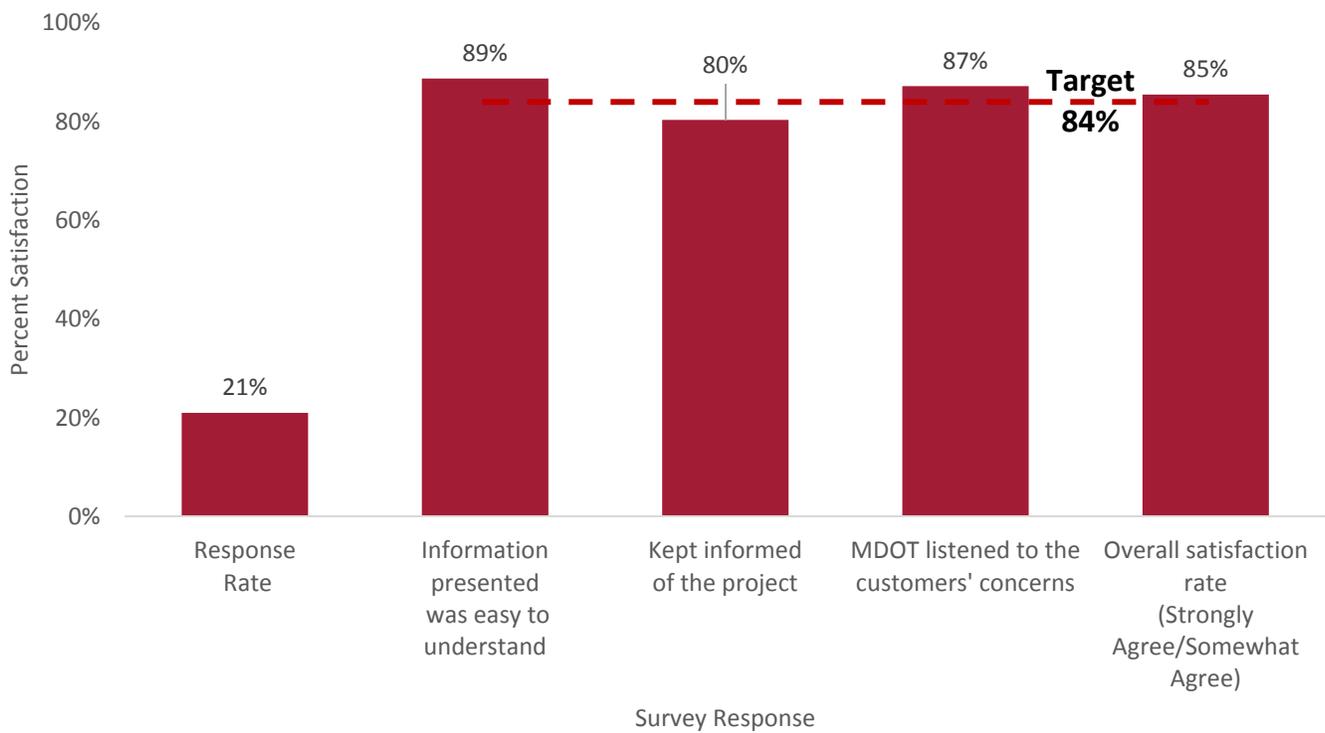
We are pleased to have slightly exceeded the national benchmark of 84 percent, but believe there is much more to be accomplished to ensure we are effectively communicating with our customers. To increase opportunities for customer participation, we recently expanded outreach efforts and re-designed the customer feedback mechanism. All MDOT transportation sessions and presentations to include public workshops, hearings, and meetings as well as civic and educational outreach events, will now be offered a standardized approach for customer comment, as this insight is most valuable in meeting the transportation needs of Marylanders.

# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.2

### Satisfaction with Communication at Public Meetings

Chart 6.2.1: Overall Customer Satisfaction with Communication at Public Meetings  
FY2017 (Q1-Q4) & FY2018 (Q1 up to September 2017)



# Communicate Effectively With Our Customers

## TANGIBLE RESULT DRIVER:

Diane Langhorne  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Jonathan Dean  
*Maryland Aviation Administration (MAA)*

## PURPOSE OF MEASURE:

To track number of stories generated to ensure maximum customer reach.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Data gathered, measured, and analyzed with software system.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 6.3A

### Communicate Effectively Through News Releases: Number of News Stories Generated from Major Releases

MDOT communications and media relations professionals work to showcase the good work performed by our employees across MDOT on behalf of our customers. These public information specialists use their skills, experience, and knowledge to represent MDOT and serve as spokespersons before the news media.

Performance measure 6.3A encourages each MDOT TBU to monitor and analyze the news that it creates and disseminates. Press releases remain an important tool to distribute news to Maryland residents, businesses, and visitors. This performance measure examines the number of press releases issued each month and the corresponding number of news stories that resulted from the press releases.

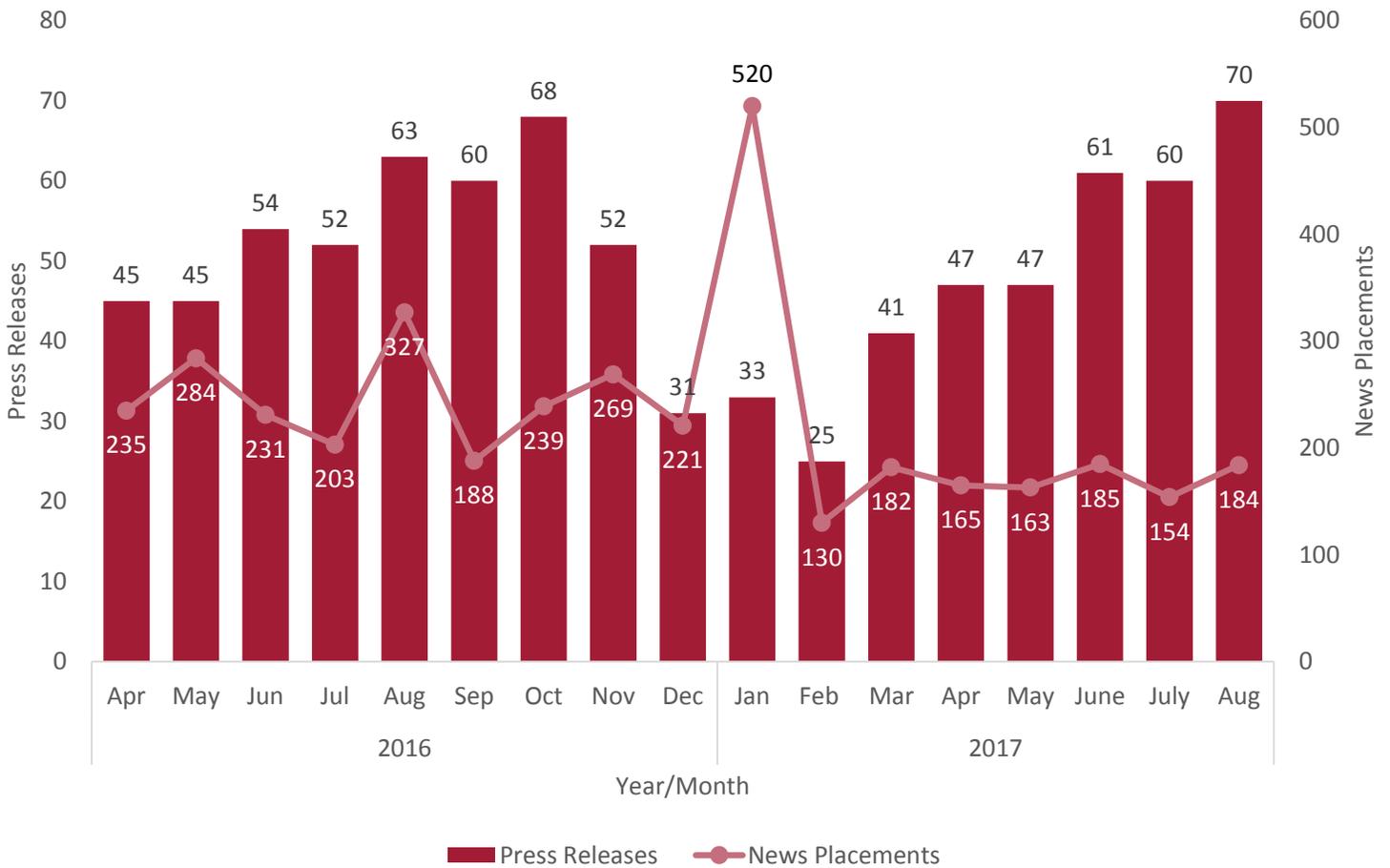
The press releases created by MDOT TBUs continue to result in broad reach across local, national, international, and transportation trade media.

# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.3A

Communicate Effectively Through News Releases: Number of News Stories Generated from Major Release

Chart 6.3A: MDOT Press Releases and News Placements CY2016-CY2017



# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.3A

Communicate Effectively Through News Releases: Number of News Stories Generated from Major Release



# Communicate Effectively With Our Customers

## TANGIBLE RESULT DRIVER:

Diane Langhorne  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Valerie Burnette Edgar, APR  
*State Highway Administration (SHA)*

## PURPOSE OF MEASURE:

To evaluate the effectiveness of the news releases issued by MDOT. Demonstrates cost effectiveness of releasing public information to media outlets vs. buying advertising space/time.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Data can be derived through software systems and some of the data is calculated per news story by individuals using advertising rates of media outlets.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 6.3B

### Communicate Effectively Through News Releases: Earned Media Value of Print and Broadcast Coverage Generated by News Releases

Print and broadcast media are the industry standard for business to customer communication. To reach its customers, MDOT has the option to buy advertising space or time in the market or to issue news releases that are then used and editorialized by media outlets. News releases offer a significant cost-savings to MDOT and the tax-paying public while allowing MDOT messages to reach more customers quickly and efficiently.

MDOT issues news releases to inform customers of important information they need regarding transportation services and projects. This measure shows the value of print and broadcast stories generated by news releases to determine the cost effectiveness of news releases (reaching customers with news and information without purchasing advertising for public notice).

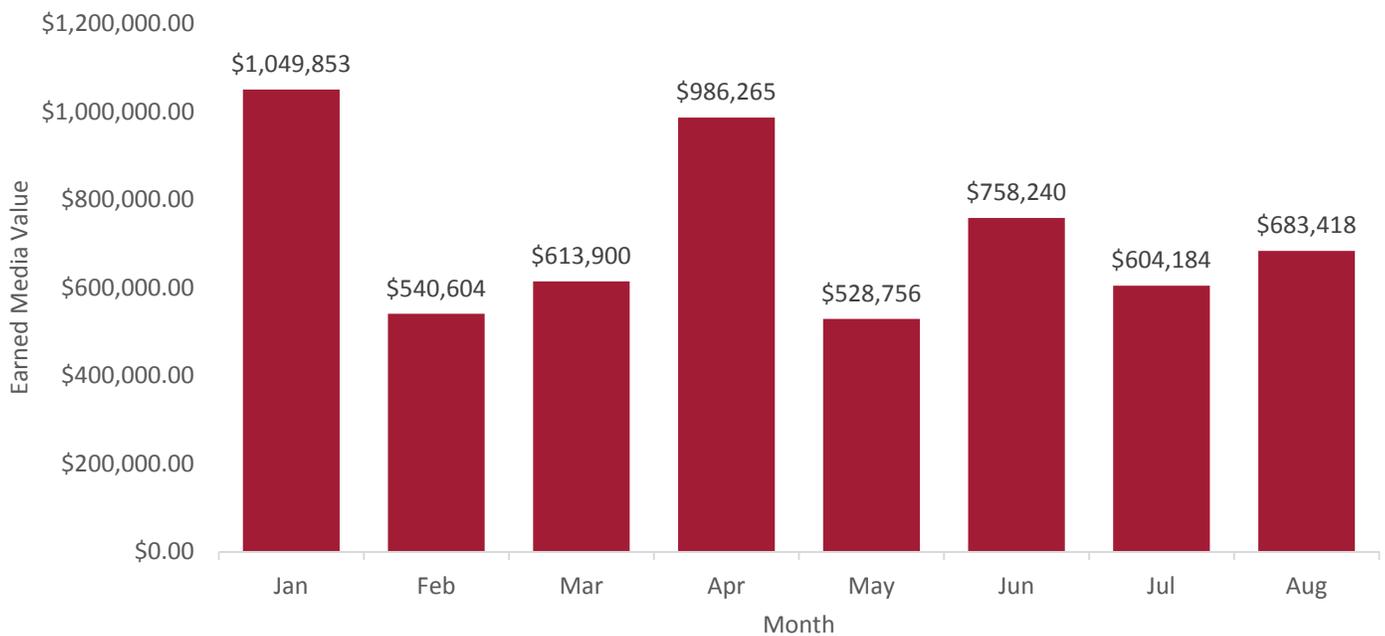
MDOT staff follows up with media outlets to assure the right person is receiving the news releases and encourage coverage, particularly in small media markets where transportation projects and programs are typically of great interest to customers.

# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.3B

Communicate Effectively Through News Releases: Earned Media Value of Print and Broadcast Coverage Generated by News Releases

Chart 6.3B.1: Total Earned Media Value (EMV) MDOT-Wide CY2017

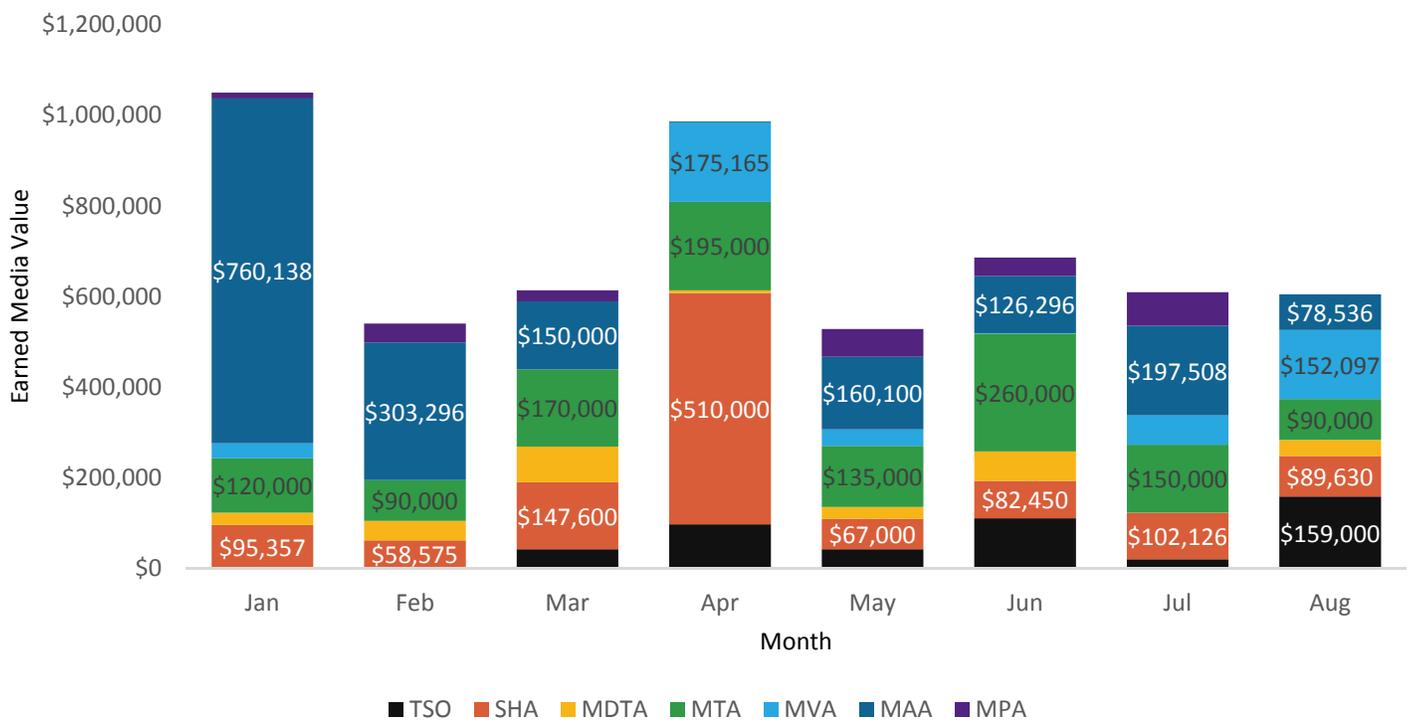


# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.3B

Communicate Effectively Through News Releases: Earned Media Value of Print and Broadcast Coverage Generated by News Releases

Chart 6.3B.2: Earned Media Value (EMV) by TBU CY2017



# Communicate Effectively With Our Customers

## TANGIBLE RESULT DRIVER:

Diane Langhorne  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Valerie Burnette Edgar  
*State Highway Administration (SHA)*

## PURPOSE OF MEASURE:

To evaluate the tone of media coverage resulting from news releases.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

MDOT's team will use software that tracks releases and news generated to evaluate tone of news stories.

## NATIONAL BENCHMARK:

N/A

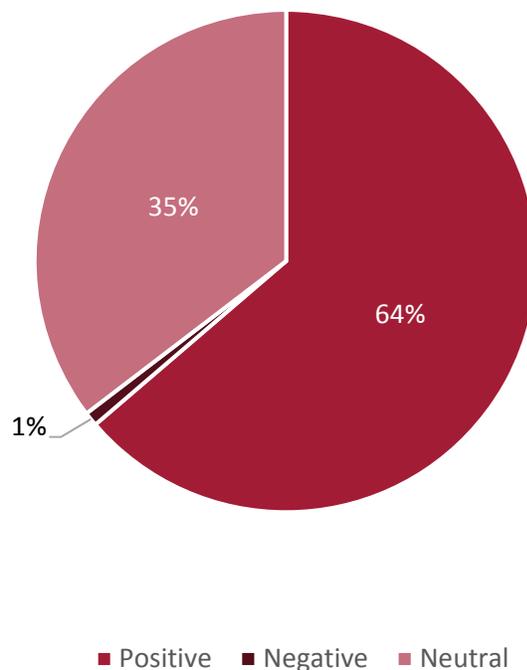
## PERFORMANCE MEASURE 6.3C

### Communicate Effectively Through New Releases: Evaluate Tone of News Stories by Publications Generated from MDOT Releases

MDOT has a responsibility to inform customers about important information they need relating to services, transportation options and improvements in their communities. One way MDOT shares information is through issuing news releases to the media.

This measure helps MDOT evaluate the tone of print and broadcast news stories that are directly related to MDOT news releases to determine if there is balanced coverage for customers. It also helps MDOT determine if more, less or different information is needed to ensure customers are receiving factual information via news outlets.

Chart 6.3C.1: "News Tone" MDOT-Wide March 2017 - August 2017

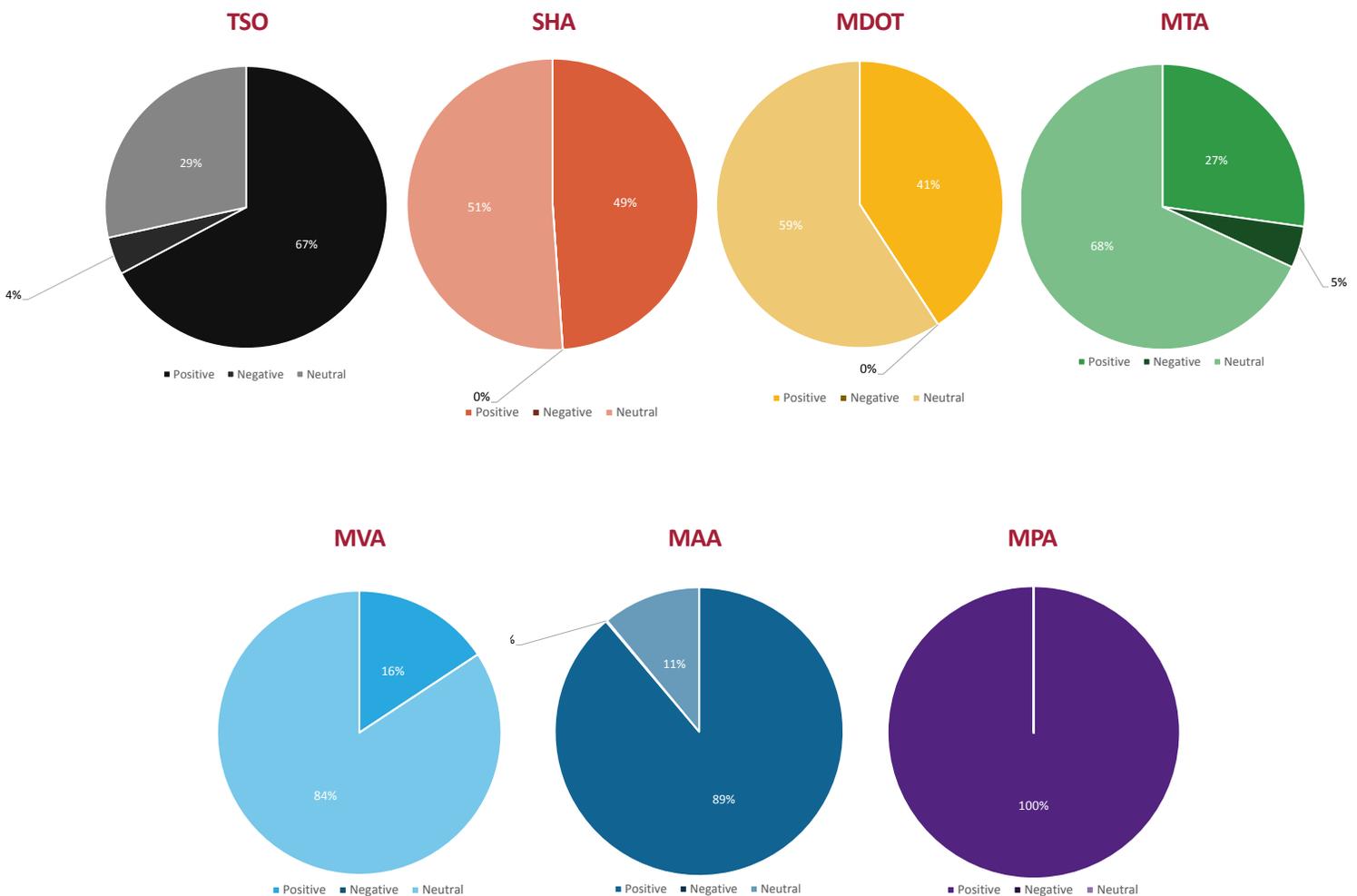


# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.3C

Communicate Effectively Through New Releases: Evaluate Tone of News Stories by Publications Generated from MDOT Releases

6.3C.1: Overall "News Tone" by TBU March 2017 - August 2017



# Communicate Effectively With Our Customers

## TANGIBLE RESULT DRIVER:

Diane Langhorne  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Lisa Dickerson  
*The Secretary's Office (TSO)*

## PURPOSE OF MEASURE:

To assess effective communication via translators at public meetings.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Translated customer surveys distributed at the conclusion of each public meeting.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 6.4

### Communicate Effectively to Customers with English Language Barriers

This measure has expanded from a strict focus on “public hearings” to examine more broadly how MDOT communicates with customers who do not speak English as a first language. The first stage in assessing MDOT’s communications strategy with customers who do not speak English as a first language is to institute a language component of MDOT’s customer satisfaction survey that is used at public meetings and other in-person events. This redesigned survey is under development and capture important information from MDOT customers.

Additionally, all MDOT web sites, thanks to the TBU IT departments, now feature a user-friendly “Translate” button. An MDOT proposal to list the languages offered in its original form is under consideration, as well as the use of icons for “translate” and for languages, is currently under consideration by the Maryland Department of Information Technology and may be deployed across all State of Maryland web sites.

Finally, MDOT Title VI Plan approval is pending with the U.S. Department of Transportation. Once the plan is approved (expected by December 2017) and federal funding secured, MDOT’s ability to implement changes to positively impact our customers who do not speak English as a first language will be enhanced.

# Communicate Effectively With Our Customers

## TANGIBLE RESULT DRIVER:

Diane Langhorne  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Jonathan Dean  
*Maryland Aviation Administration  
(MAA)*

## PURPOSE OF MEASURE:

To track number of stories generated to ensure maximum customer reach.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Data gathered, measured, and analyzed with software system.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 6.5

### News Customers Can Use – Proactive Media Stories

MDOT monitors activities to identify opportunities to share and promote unique and positive stories for our customers. Our communications professionals work to develop and maintain relationships with reporters and editors across the news media.

This new performance measure highlights MDOT communicators' work to create and disseminate distinctive stories to the news media and the general public. Customer service initiatives are a major emphasis of this media outreach. For this measure, our MDOT media relations employees are encouraged to "go beyond the press release" by directly pitching positive stories to the media.

For this new measure, we have worked to establish that TBUs will identify several significant, leading media outlets. Our communicators will coordinate with these news outlets to produce stories related to customer service or new MDOT services. For each quarter, we will highlight several positive news stories that were the result of the expanded outreach.



MVA introduces new features on its website

## The Frederick News-Post

SHA to begin Point of Rocks paving project

# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.5

News Customers Can Use – Proactive Media Stories



Crane Operator Has Bird's-Eye View of Port's Growth

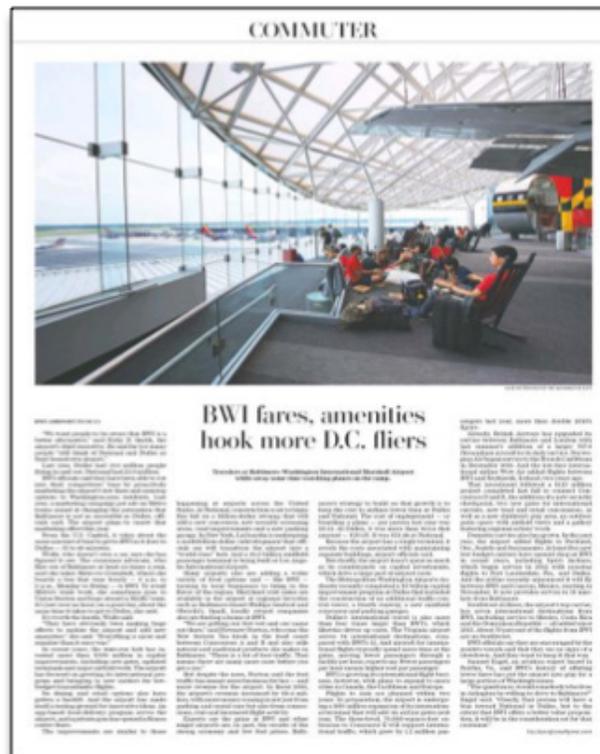
MTA reminds students, parents of new city bus routes  
before start of school year

# Communicate Effectively With Our Customers

## PERFORMANCE MEASURE 6.5

News Customers Can Use – Proactive Media Stories

# The Washington Post



How BWI soared past the D.C. area's other hubs

TANGIBLE RESULT #7

## Be Fair and Reasonable to Our Partners



MDOT will provide an easy, reliable procurement experience throughout the system.

**RESULT DRIVER:**

Wanda Dade

*State Highway Administration (SHA)*

#### TANGIBLE RESULT DRIVER:

Wanda Dade  
State Highway Administration (SHA)

#### PERFORMANCE MEASURE DRIVER:

Angela Martin  
Maryland Aviation Administration  
(MAA)

#### PURPOSE OF MEASURE:

To track MBE participation achieved on contracts within MDOT.

#### FREQUENCY:

Quarterly

#### DATA COLLECTION METHODOLOGY:

MDOT TBUs report the data on a quarterly basis to Governor's Office of Minority Affairs (GOMA) and MDOT. The information will be provided by MDOT from that report.

#### NATIONAL BENCHMARK:

N/A

The State goal/benchmark is 29 percent.

## PERFORMANCE MEASURE 7.1

### Percentage of Minority Business Enterprise (MBE) Participation Achieved by Each TBU

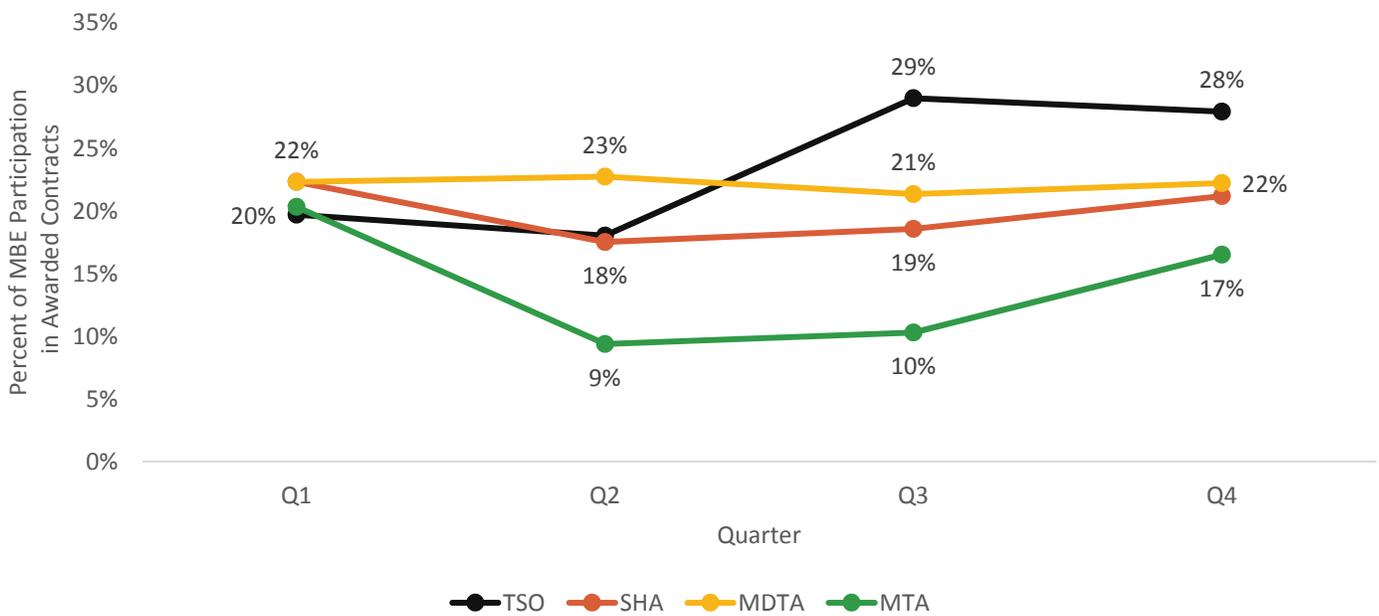
The MBE program is a Statewide program to facilitate minority business participation on contracts. Each MDOT TBU tracks MBE participation data for internal program monitoring. Participation is reported on a quarterly year-to-date basis.

- MDOT MBE participation for FY2017 was approximately 22.52 percent (average of all TBUs) reflecting an increase from 20 percent at the end of Q3 FY2017. Participation is reported as year to date participation so Q4 represents participation for all of FY 2017 (July 2016 – June 2017). Participation at the TBUs ranged from 16.5 percent to 28 percent.
- MBE participation is important as MDOT is subject to the Statewide MBE goal of 29 percent as are all State agencies. Participation has been up and down during the last fiscal year, but overall the participation has not been at that level.
- Per the strategic plan, input was obtained from MDOT Procurement and Fair Practices staff regarding approaches to positively impact the goal. Unbundling of contracts, an increase in the number of smaller contracts and increased/enhanced outreach efforts are items that were recommended. Implementation of these items should have a positive impact on participation.
- MDOT MBE Participation for FY2016 was approximately 19 percent (average of all TBUs).

**PERFORMANCE MEASURE 7.1**

Percentage of Minority Business Enterprise (MBE) Participation Achieved  
by Each TBU

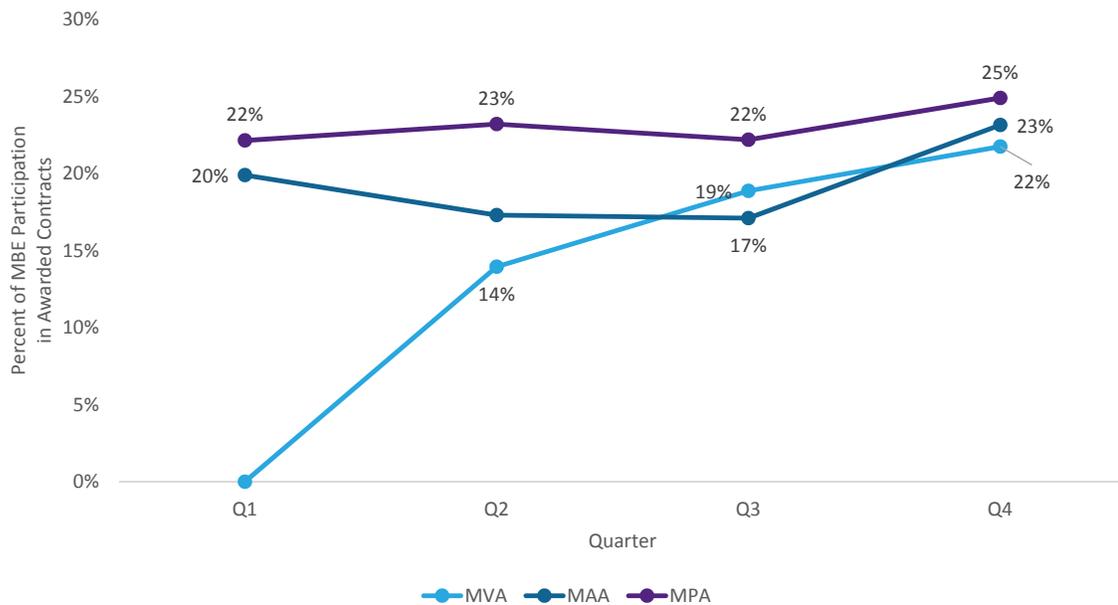
**Chart 7.1.1: MBE Participation Rate in Awarded Contracts by TBU FY2017**



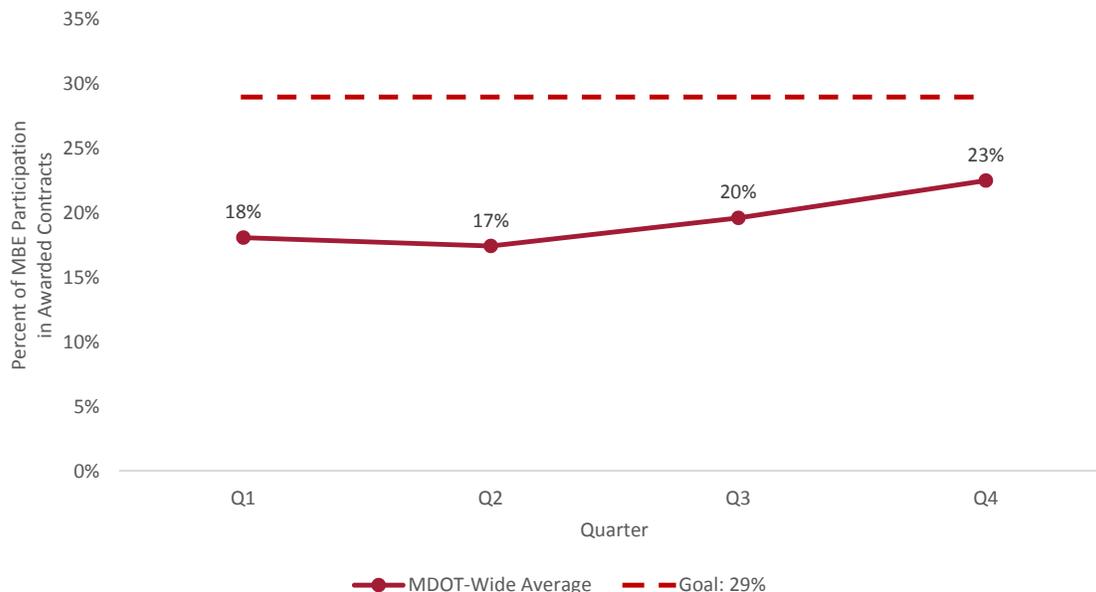
**PERFORMANCE MEASURE 7.1**

Percentage of Minority Business Enterprise (MBE) Participation Achieved by Each TBU

**Chart 7.1.2: MBE Participation Rate in Awarded Contracts by TBU FY2017**



**Chart 7.1.3: MBE Participation Rate in Awarded Contracts MDOT-Wide FY2017**



**TANGIBLE RESULT DRIVER:**

Wanda Dade  
*State Highway Administration (SHA)*

**PERFORMANCE MEASURE DRIVER:**

Angela Martin  
*Maryland Aviation Administration (MAA)*

**PURPOSE OF MEASURE:**

To track MBE prime contractor participation achieved on contracts within MDOT to ensure MDOT provides opportunities to all of business partners.

**FREQUENCY:**

Quarterly

**DATA COLLECTION METHODOLOGY:**

Data will be collected from MDOT and TBUs.

**NATIONAL BENCHMARK:**

N/A

## **PERFORMANCE MEASURE 7.2**

### **Number and Percent of Contracts Awarded to MBE Firms as the Prime Contractor**

Participation of MBE firms as a prime contractor is important to facilitate their growth and enable them to compete in the general marketplace after graduation. MBE firms “graduate” from the program when reaching designated thresholds (i.e., company gross receipts and personal net worth of owners).

The information previously reported in this measure was the number of MBE prime contractors awarded contracts at/above \$500,000, which did not include small purchases. The contracts covered a variety of areas including construction, architectural, engineering, maintenance and services. The overall percentage of MBE prime awards within MDOT at the designated threshold of \$500,000 and above fluctuated based on the number of prime contracts awarded overall, and the number of MBE prime contracts awarded. In instances where a smaller number of contracts were awarded overall, and a higher number of MBE prime contracts were awarded, the percentage of MBE primes was higher, but usually it was in a range at or below 10 percent.

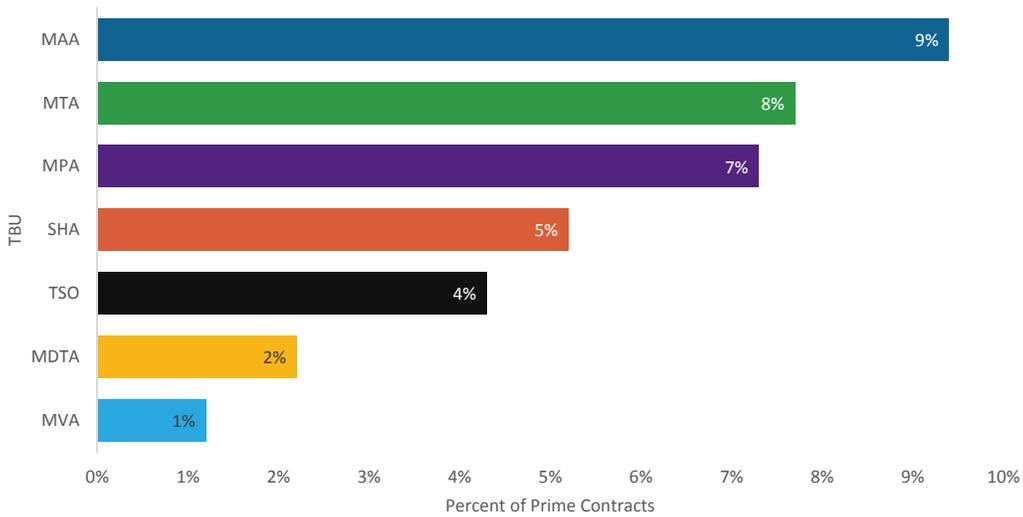
Due to the small number of contracts awarded at the \$500,000 and above level, it was determined that the better approach would be to review and report the total number of MBE prime contracts awarded. This approach would also reflect the information that is reported to the Governor’s Office of Small, Minority and Women Business Affairs (GOSBA). The year-to-date percentage of MBE prime contractors for MDOT for FY 2017 was 5.4 percent. The percentages for the MDOT TBUs ranged from 1.2 percent to 9.4 percent.

Per the strategic plan, input from the Procurement and Fair Practices staff was obtained regarding approaches to increase the number of MBE primes. Unbundling of contracts, increasing the number of smaller contracts in areas with high levels of MBE firms and increased/enhanced outreach and technical assistance to these MBE firms are items that were recommended. Implementation of these changes should have a positive impact on the participation of MBE firms as prime contractors.

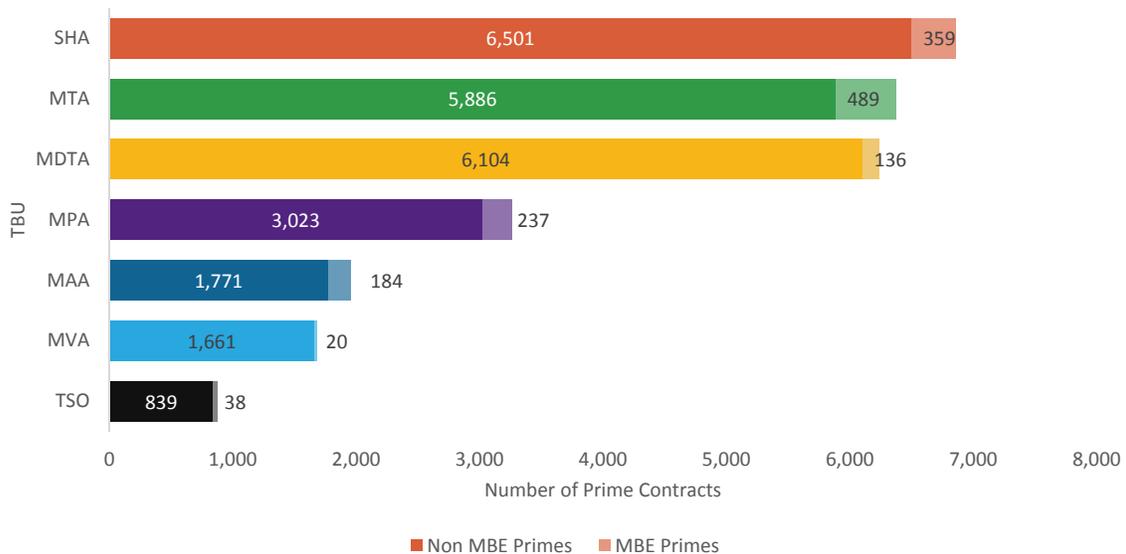
**PERFORMANCE MEASURE 7.2**

Number and Percent of Contracts Awarded to MBE Firms as the Prime Contractor

**Chart 7.2.1: Percent of MBE Prime of Total Contracts by TBU FY2017**



**Chart 7.2.2: MDOT Prime Contracts vs. MBE Prime Contracts by TBU FY2017**



#### TANGIBLE RESULT DRIVER:

Wanda Dade  
*State Highway Administration (SHA)*

#### PERFORMANCE MEASURE DRIVER:

Wonza Spann-Nicholas  
*Maryland Port Administration (MPA)*

#### PURPOSE OF MEASURE:

Track compliance with State mandate for awarding 10 percent of MDOT's total eligible procurement expenditures to certified Small Business Reserve contracts.

#### FREQUENCY:

Quarterly, compiled annually

#### DATA COLLECTION METHODOLOGY:

SBR goal is calculated quarterly from eligible contracts and expenditure data exported from FMIS, iFMIS and US Bank for Corporate Credit Card data.

#### NATIONAL BENCHMARK:

GOMA maintains the State's official record of SBR designation and spending across 23 participating agencies, including MDOT's TBUs. The State's mandate is 10 percent or better.

### PERFORMANCE MEASURE 7.3

## Percent of Payments Awarded to Small Business Reserve (SBR) Contracts

Maryland's economy is powered by the jobs and innovative resources generated by small businesses. The SBR Program is a race - and gender-neutral program that provides small businesses with the opportunity to participate as prime contractors on State contracts and procurements by competing with other small businesses instead of larger, more established firms.

To ensure compliance with State regulations, each TBU is required to participate in the SBR Program by spending at least 10 percent of their annual fiscal year eligible procurement expenditures with qualified small businesses.

For the first time since the SBR Program was established in 2004, MDOT achieved an 11.2 percent participation rate in FY2015. However, GOMA has not yet released the FY2016 annual achievement rates.

To increase the SBR Program participation rates, MDOT provided documented policy guidelines to all TBUs. These guidelines focus on increasing the SBR participation rate by requiring an annual strategic plan from each TBU.

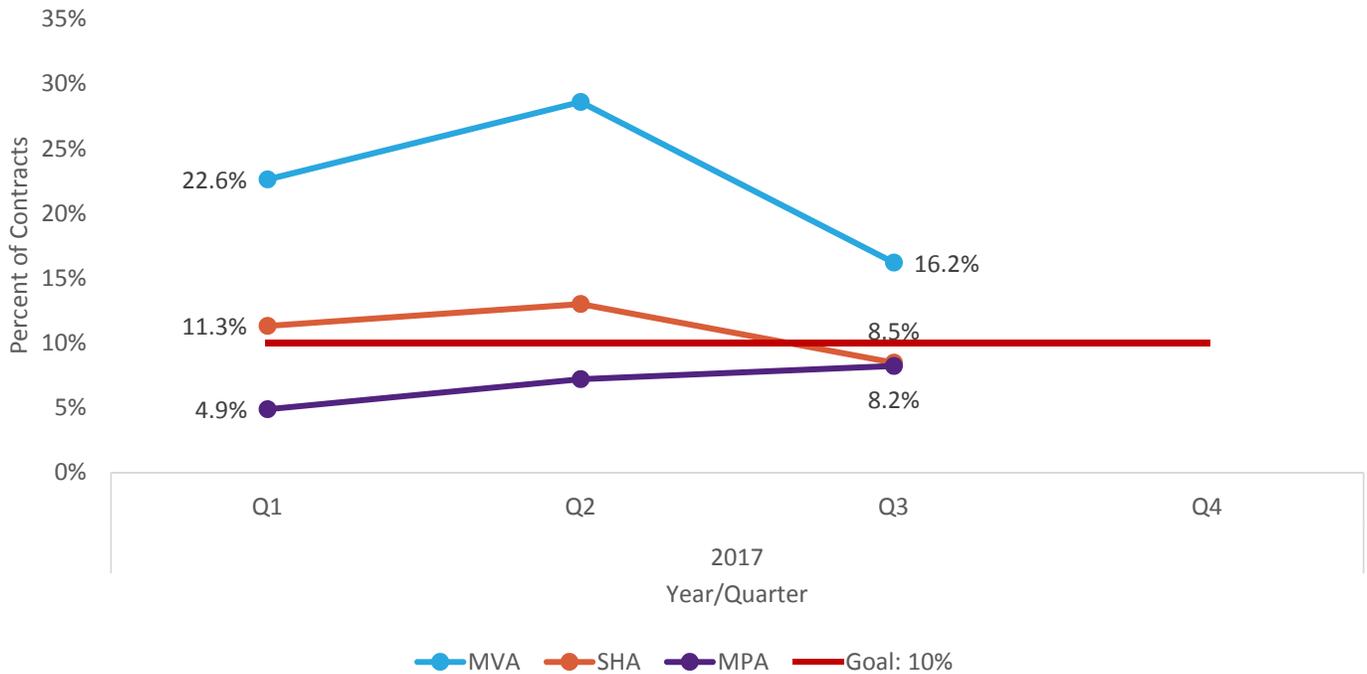
Some strategies include:

- Require Procurement Review Group's approval of SBR goals.
- Create a SBR liaison and reporting expert
- Train and work closely with purchasing card holders to emphasize SBR firms
- Increase small business outreach and vendor education

**PERFORMANCE MEASURE 7.3**

**Percent of Payments Awarded to Small Business Reserve (SBR) Contracts**

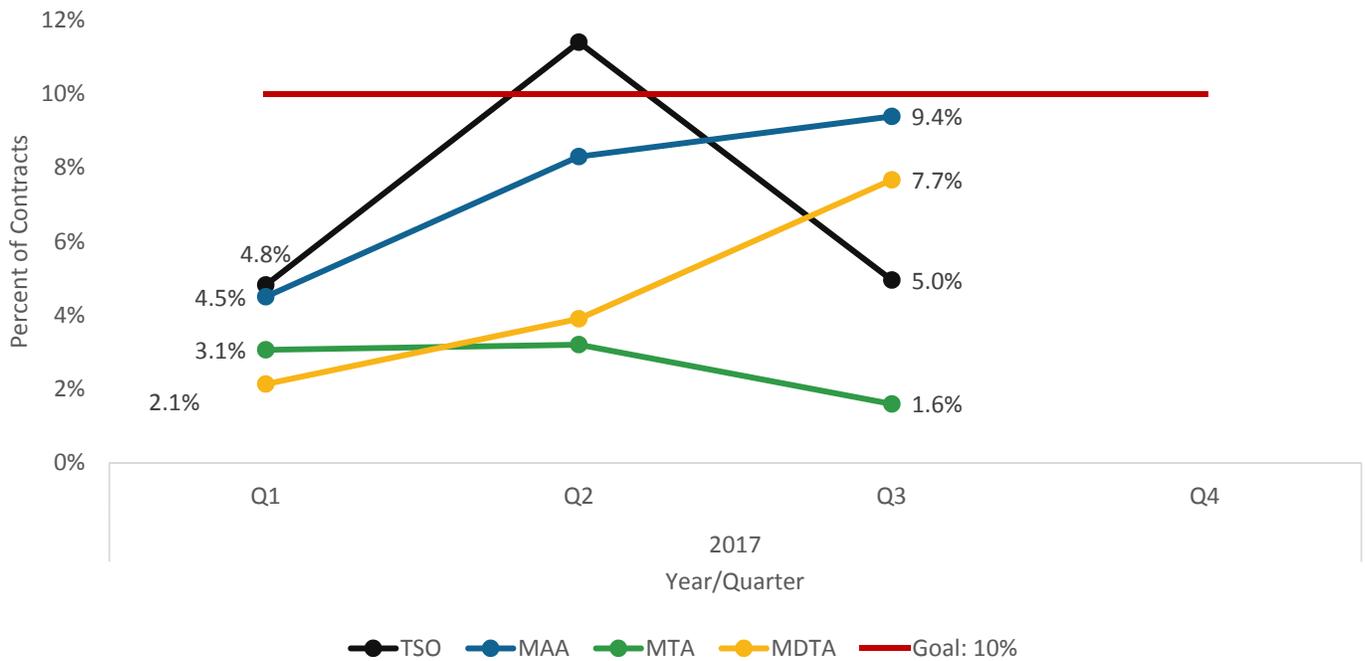
**Chart 7.3.1: Small Business Reserve Participation Rate by TBU FY2017**



**PERFORMANCE MEASURE 7.3**

Percent of Payments Awarded to Small Business Reserve (SBR) Contracts

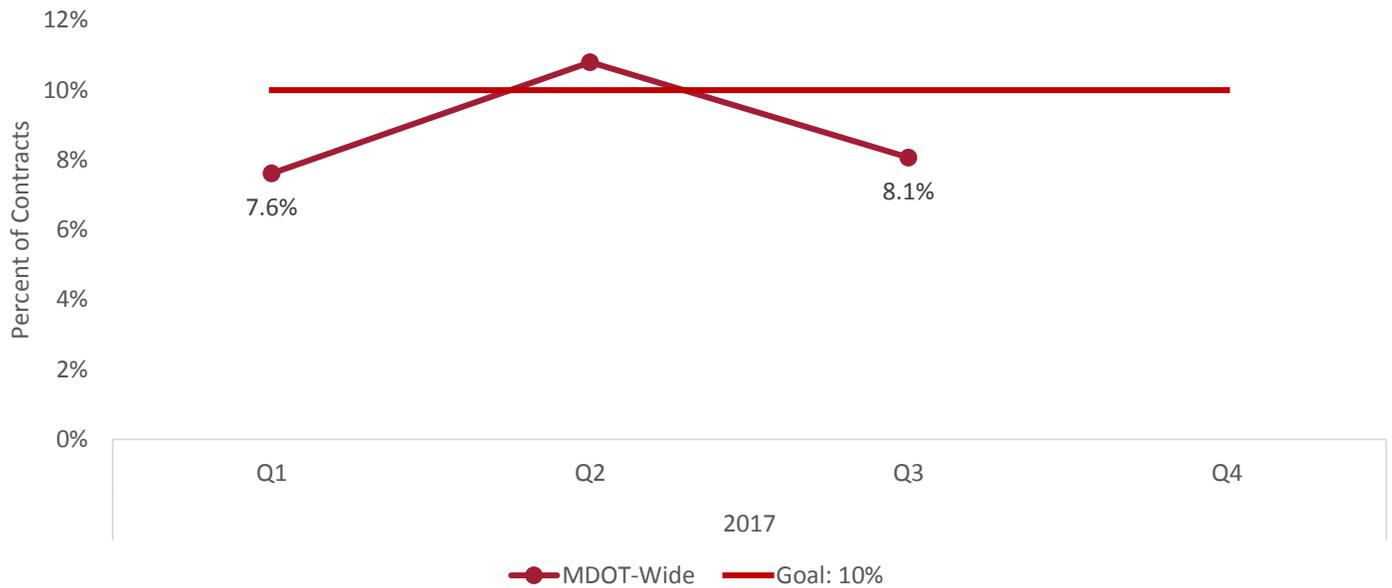
**Chart 7.3.2: Small Business Reserve Participation Rate by TBU FY2017**



**PERFORMANCE MEASURE 7.3**

Percent of Payments Awarded to Small Business Reserve (SBR) Contracts

**Chart 7.3.3: Small Business Reserve Participation Rate MDOT-Wide FY2017**



**TANGIBLE RESULT DRIVER:**

Wanda Dade  
*State Highway Administration (SHA)*

**PERFORMANCE MEASURE DRIVER:**

Natalie Grasso  
*Motor Vehicle Administration (MVA)*

**PURPOSE OF MEASURE:**

To track the percent of VSBE contract values to ensure that MDOT continues a contractual relationship with VSBEs in Maryland.

**FREQUENCY:**

Annually (in January)

**DATA COLLECTION METHODOLOGY:**

Using the Financial Management system at MDOT.

**NATIONAL BENCHMARK:**

N/A

The State's mandate is 1 percent or better of its total dollar value of procurement contracts.

## **PERFORMANCE MEASURE 7.4**

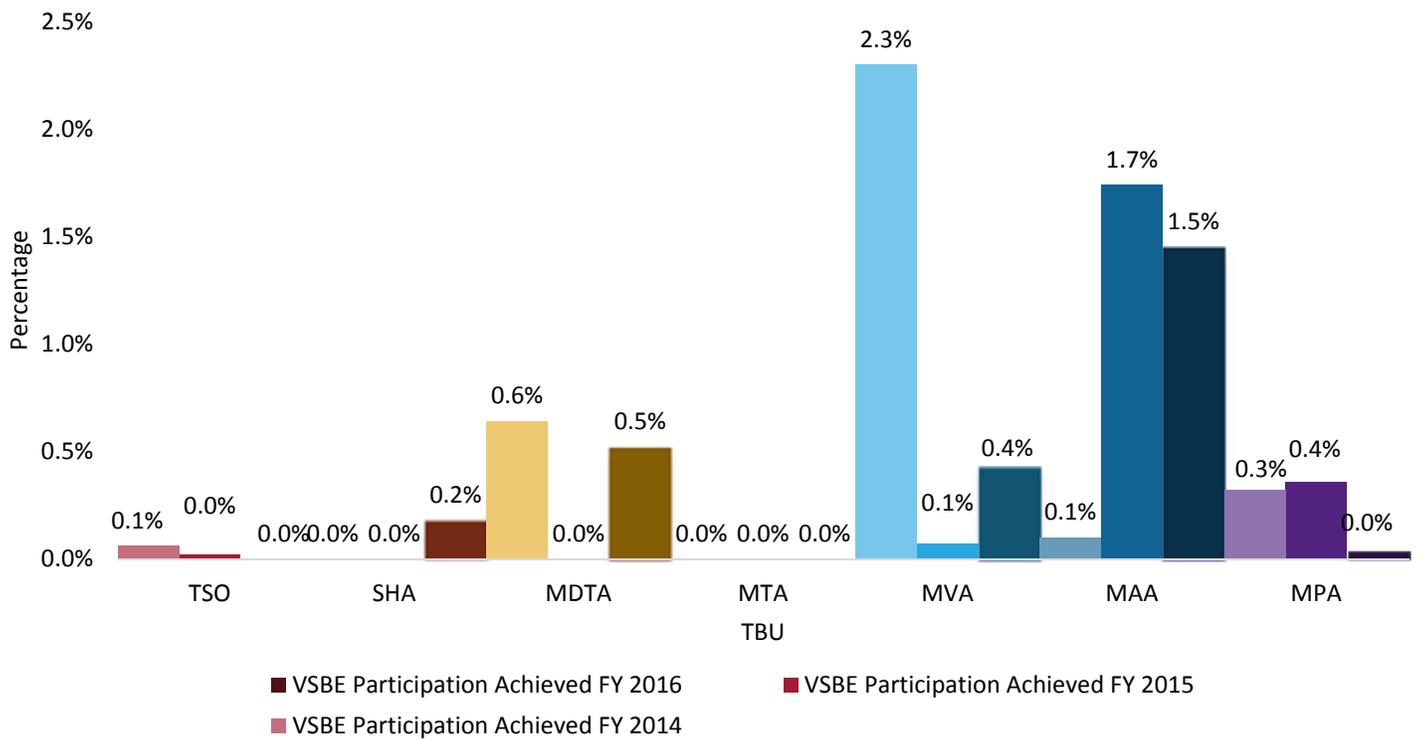
### **Percent of Veteran Owned Small Business Enterprise (VSBE) Participation**

MDOT considers small business, especially veteran owned small businesses, to be an important sector of the business community. Procurement opportunities for this business segment are directly linked to the socioeconomic well-being of the State. MDOT is committed to attaining or exceeding the State mandated goal for veteran businesses.

**PERFORMANCE MEASURE 7.4**

Percent of Veteran Owned Small Business Enterprise (VSBE) Participation

**Chart 7.4.1: VSBE Percentage Across MDOT FY2014-FY2016**



#### TANGIBLE RESULT DRIVER:

Wanda Dade  
*State Highway Administration (SHA)*

#### PERFORMANCE MEASURE DRIVER:

Luther Dolcar  
*Maryland Transportation Authority (MDTA)*

#### PURPOSE OF MEASURE:

To determine the level of satisfaction of our business partners with processes MDOT-wide.

#### FREQUENCY:

Quarterly

#### DATA COLLECTION METHODOLOGY:

The Performance Measure Driver administers a Level of Satisfaction survey to MDOT's partners. After the survey cutoff date, the data is then compiled and analyzed. An Outlook email address has been established for easier quarterly reporting.

#### NATIONAL BENCHMARK:

TBD

## PERFORMANCE MEASURE 7.5

### Level of Satisfaction of Our Business Partners

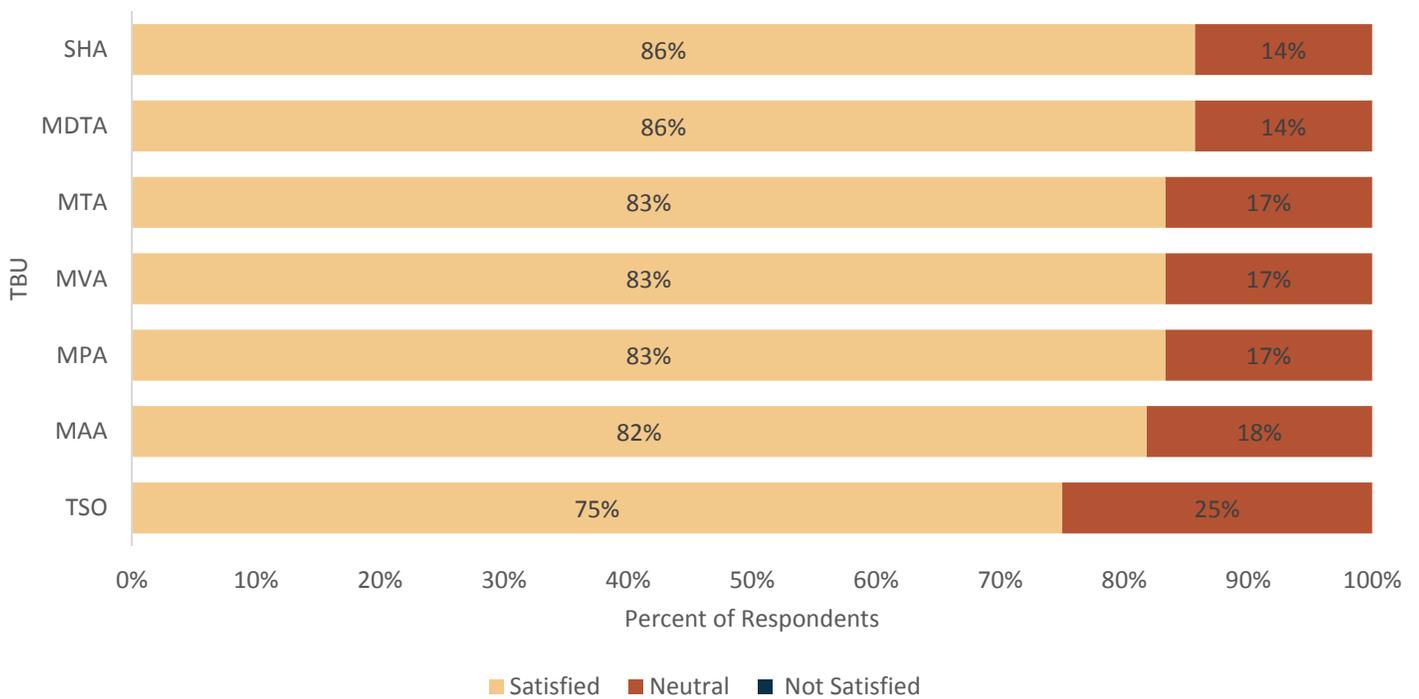
Tracking business partner satisfaction will allow MDOT to determine how satisfied partners are with current business processes. This performance measure is crucial to gauging MDOT's effectiveness in being fair and reasonable to its business partners. Partners include contractors, consultants, vendors, other State agencies, federal, State, and local governments, trade associations, commissions, etc. This data can be used to improve those processes that may be ambiguous or cumbersome, and make them more user-friendly. It is important that people who avail themselves of this opportunity know that their comments are taken seriously, and that MDOT is committed to meeting or exceeding business partner expectations.

This performance measure captures MDOT's business partner satisfaction through quarterly surveys. Each quarter, a certain business segment (i.e. Construction, IT, A&E, etc.) is selected to be surveyed and the results are then reported. Each business segment will be surveyed one time per year. This quarter we surveyed MDOT's Information Technology partners. Surveys are distributed via Survey Monkey.

**PERFORMANCE MEASURE 7.5**

Level of Satisfaction of Our Business Partners

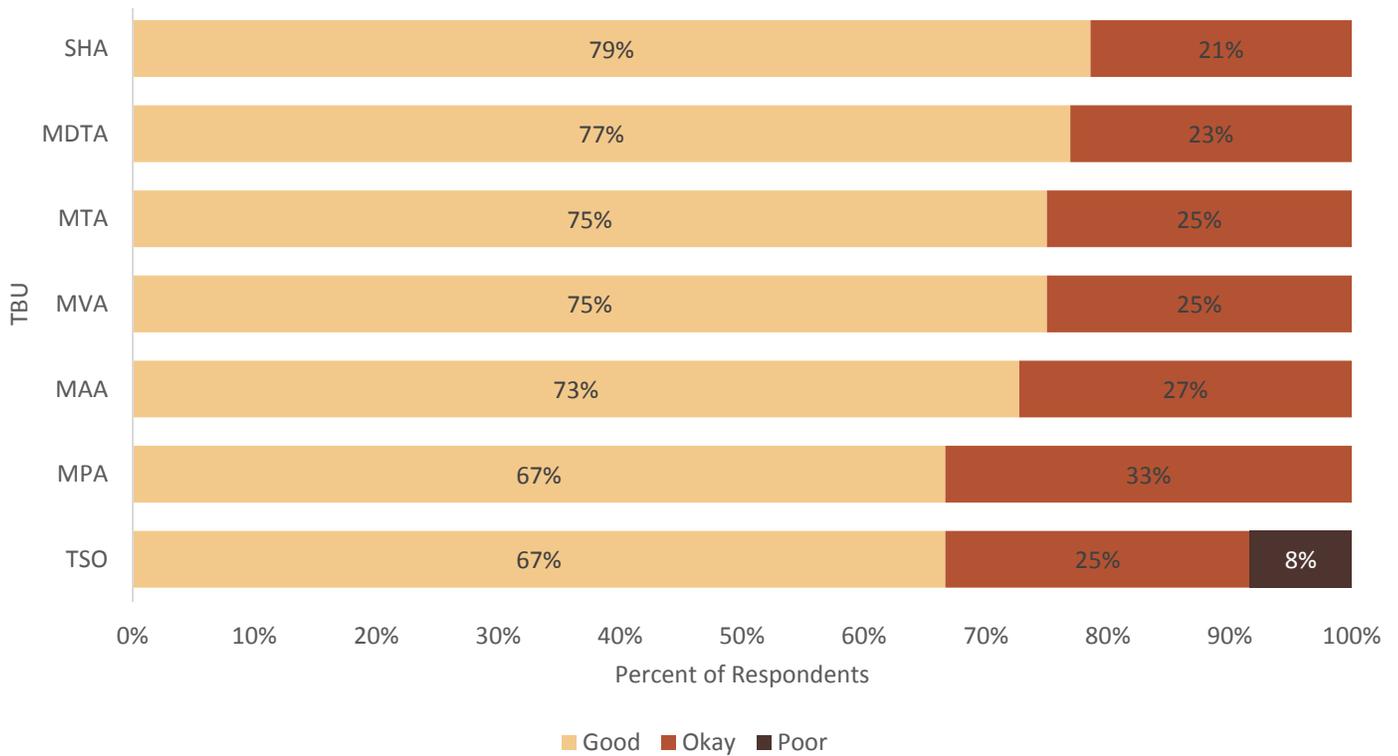
**Chart 7.5.1: Responses to “How satisfied are MDOT Information Technology Partners with the timeliness of payments after your invoice has been submitted?” CY2017**



## PERFORMANCE MEASURE 7.5

### Level of Satisfaction of Our Business Partners

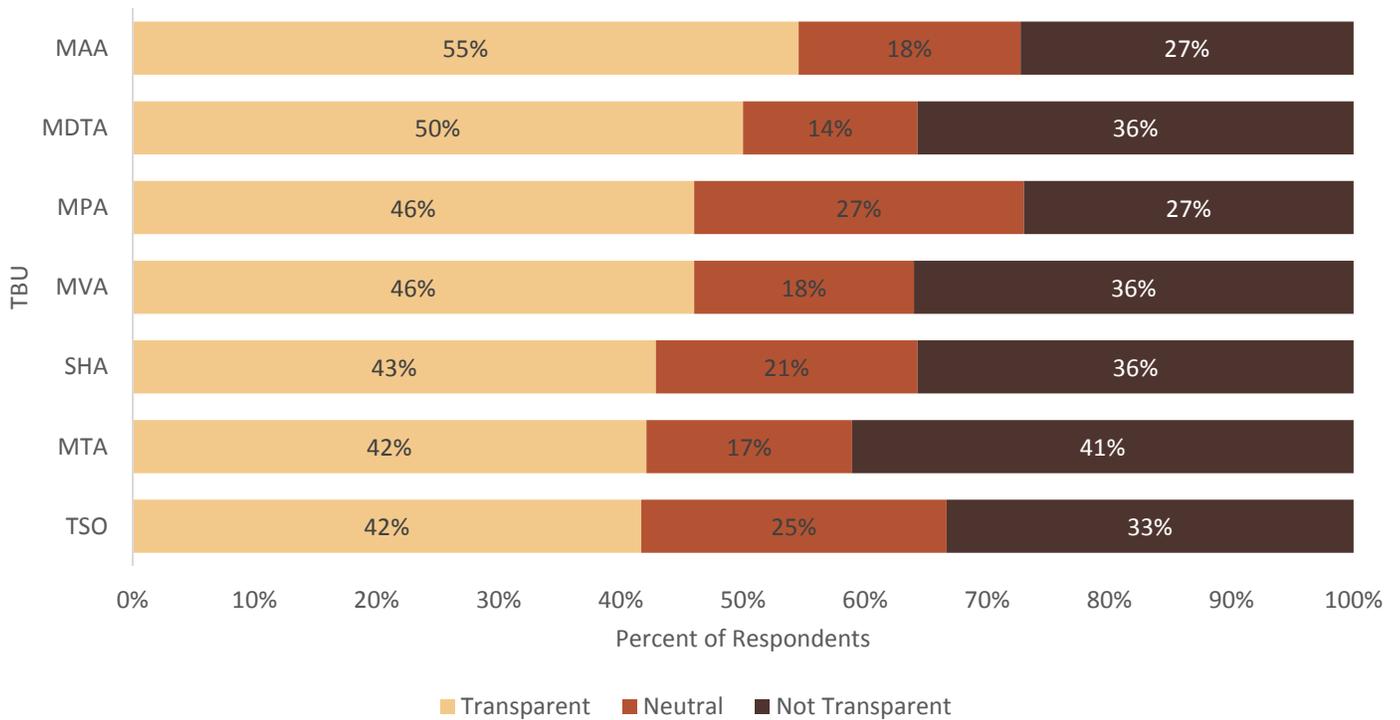
Chart 7.5.2: Responses to “How Fair and Reasonable are MDOT TBUs to Information Technology Partners in Management of MDOT contracts?” CY2017



**PERFORMANCE MEASURE 7.5**

Level of Satisfaction of Our Business Partners

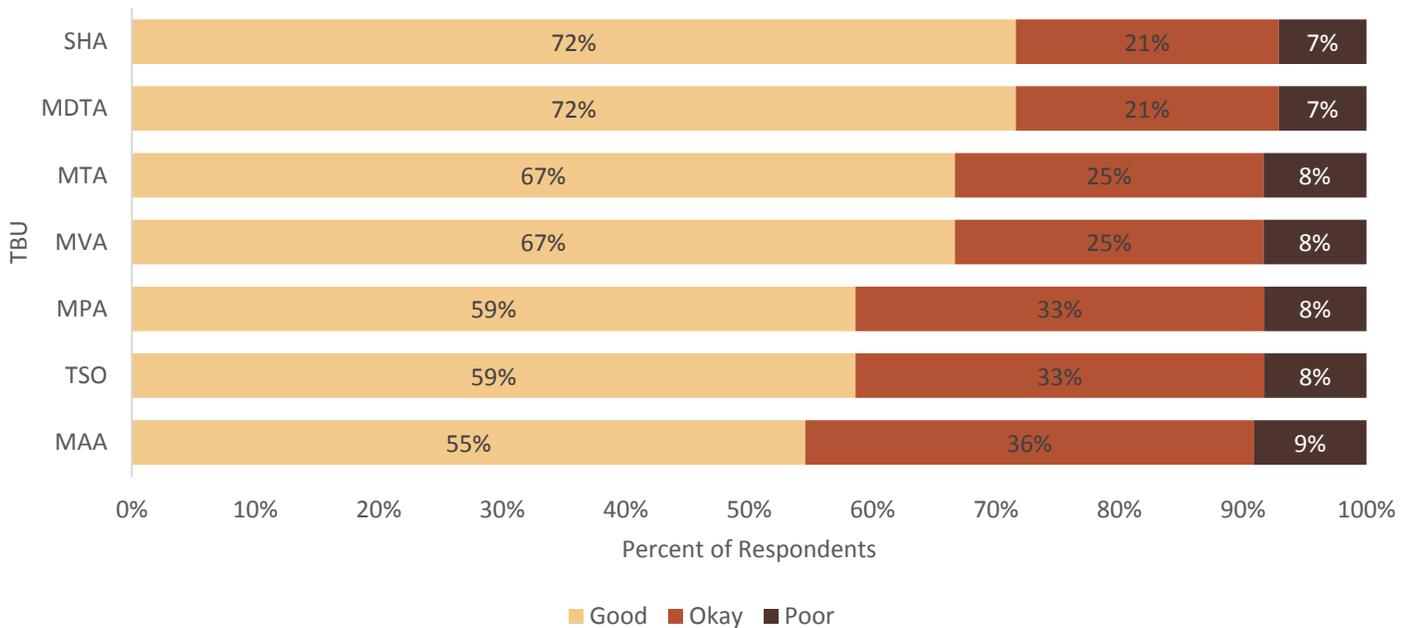
**Chart 7.5.3: Responses to “How Transparent is the MDOT Procurement Process to Information Technology Partners?” CY2017**



## PERFORMANCE MEASURE 7.5

### Level of Satisfaction of Our Business Partners

Chart 7.5.4: MDOT TBUs Rated as Business Partners to Information Technology Partners CY2017



**TANGIBLE RESULT DRIVER:**

Wanda Dade  
*State Highway Administration (SHA)*

**PERFORMANCE MEASURE DRIVER:**

David Lynch  
*Maryland Transit Administration (MTA)*

**PURPOSE OF MEASURE:**

To assess the number and percent of invoices properly paid to MDOT's partners in compliance with State requirements so MDOT can be responsive to business partners needs.

**FREQUENCY:**

Quarterly

**DATA COLLECTION METHODOLOGY:**

MDOT finance reports data monthly by TBUs.

**NATIONAL BENCHMARK:**

N/A

**PERFORMANCE MEASURE 7.6**

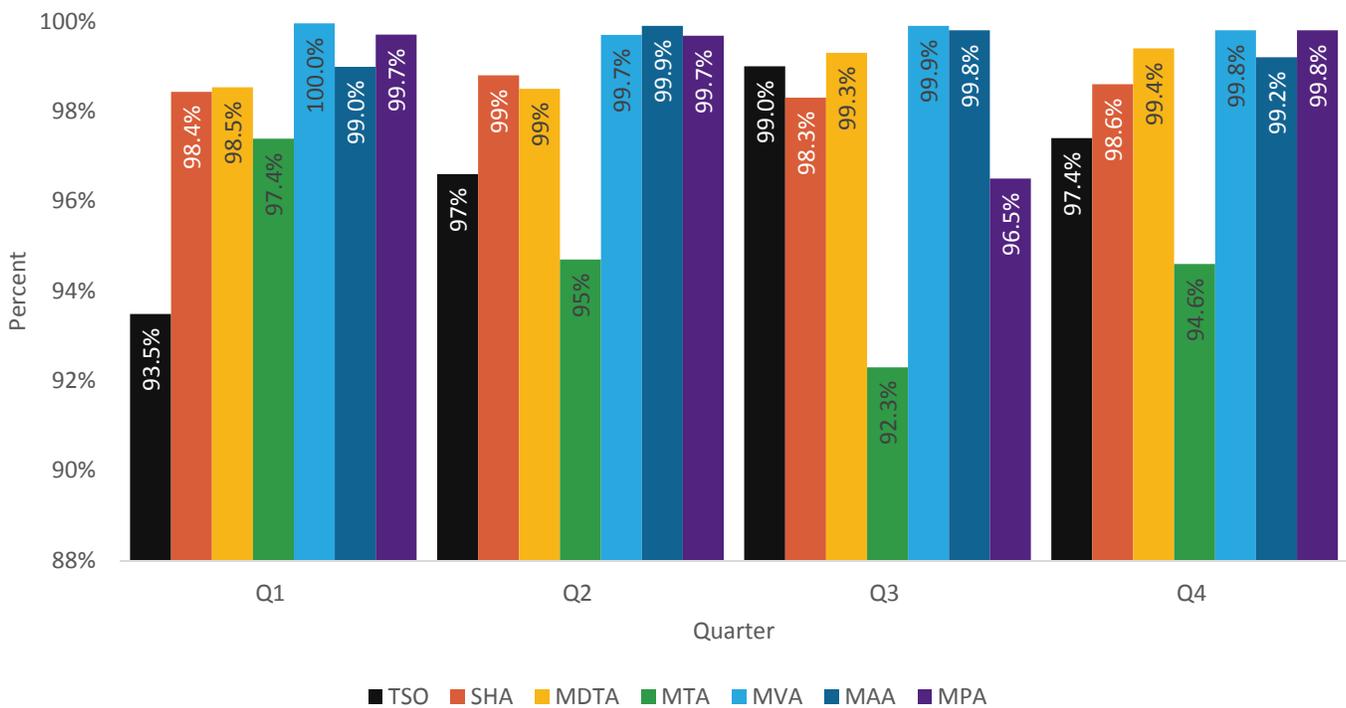
**Number and Percent of Invoices Properly Paid to Partners in Compliance with State Requirements**

MDOT will treat contractors fairly by promptly paying invoices. Contractors should be able to trust MDOT TBUs consistency of payment with a goal of paying invoices within 30 calendar days 99 percent of the time. For FY2016 MDOT achieved an on time payment rate of 98.62 percent. As of 4th quarter FY2016 data from MVA now only consists of vendor invoices.

## PERFORMANCE MEASURE 7.6

Number and Percent of Invoices Properly Paid to Partners in Compliance with State Requirements

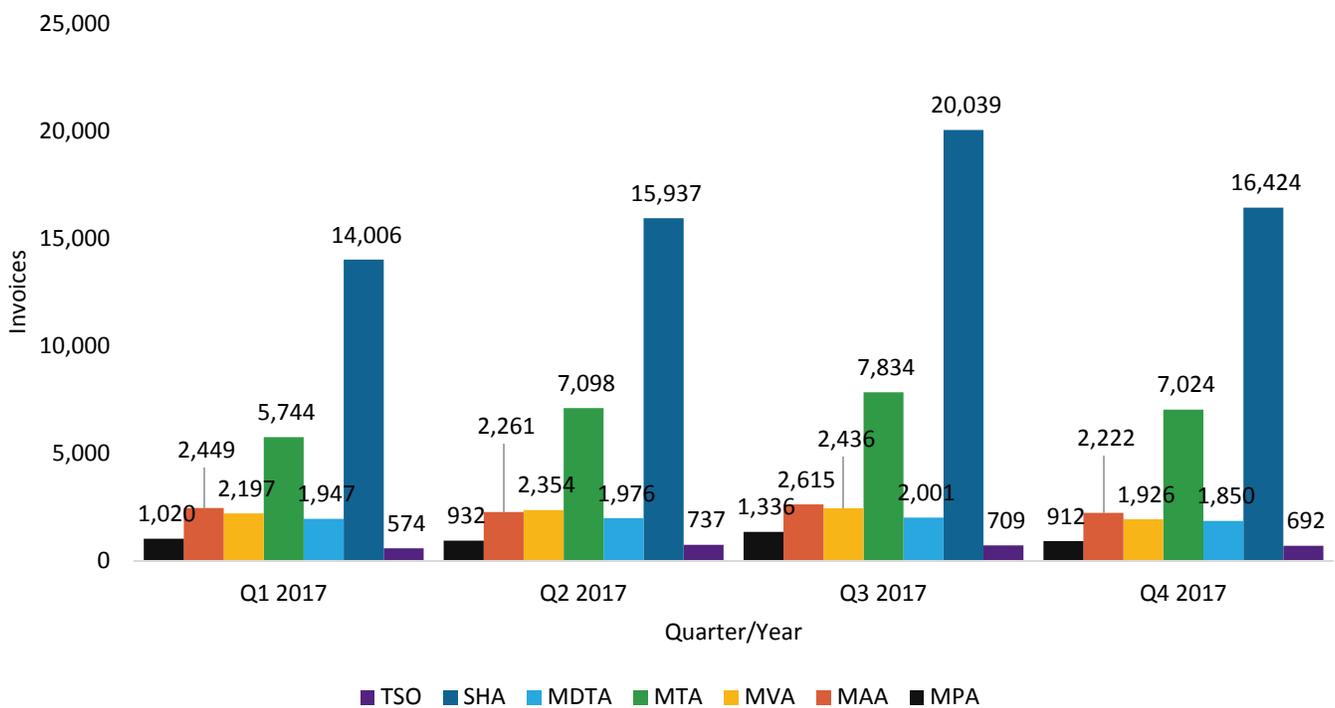
Chart 7.6.1: Percent of Invoices Properly Paid Within 30 Days of Invoices FY2017



**PERFORMANCE MEASURE 7.6**

Number and Percent of Invoices Properly Paid to Partners in Compliance with State Requirements

**Chart 7.6.2: Total Number of Invoices FY2017**



**TANGIBLE RESULT DRIVER:**

Wanda Dade  
*State Highway Administration (SHA)*

**PERFORMANCE MEASURE DRIVER:**

Mike Zimmerman  
*The Secretary's Office (TSO)*

**PURPOSE OF MEASURE:**

To determine what percentage of protests are legitimate and how MDOT can reduce the number of non-legitimate protests to create better solicitations for business partners.

**FREQUENCY:**

Quarterly

**DATA COLLECTION METHODOLOGY:**

MDOT TBU procurement departments report protest data to TSO Procurement on a monthly basis. Data is aggregated for reporting purposes.

**NATIONAL BENCHMARK:**

N/A

## **PERFORMANCE MEASURE 7.7**

### **Number of MDOT Procurement Protests Filed and Percent of Protests Upheld by the Board of Contract Appeals**

Minimizing protests and understanding how to avoid non-legitimate protests will enable MDOT to develop better solicitations and foster better relationships with business partners. Tracking contract protests will allow MDOT to determine how many protests are being filed without warrant, how many are legitimate, and how MDOT can create more concise solicitations for partners. The protest process is important because it allows a company doing business with the State to have confidence in the State's solicitation process by understanding that an aggrieved entity has the ability to be heard.

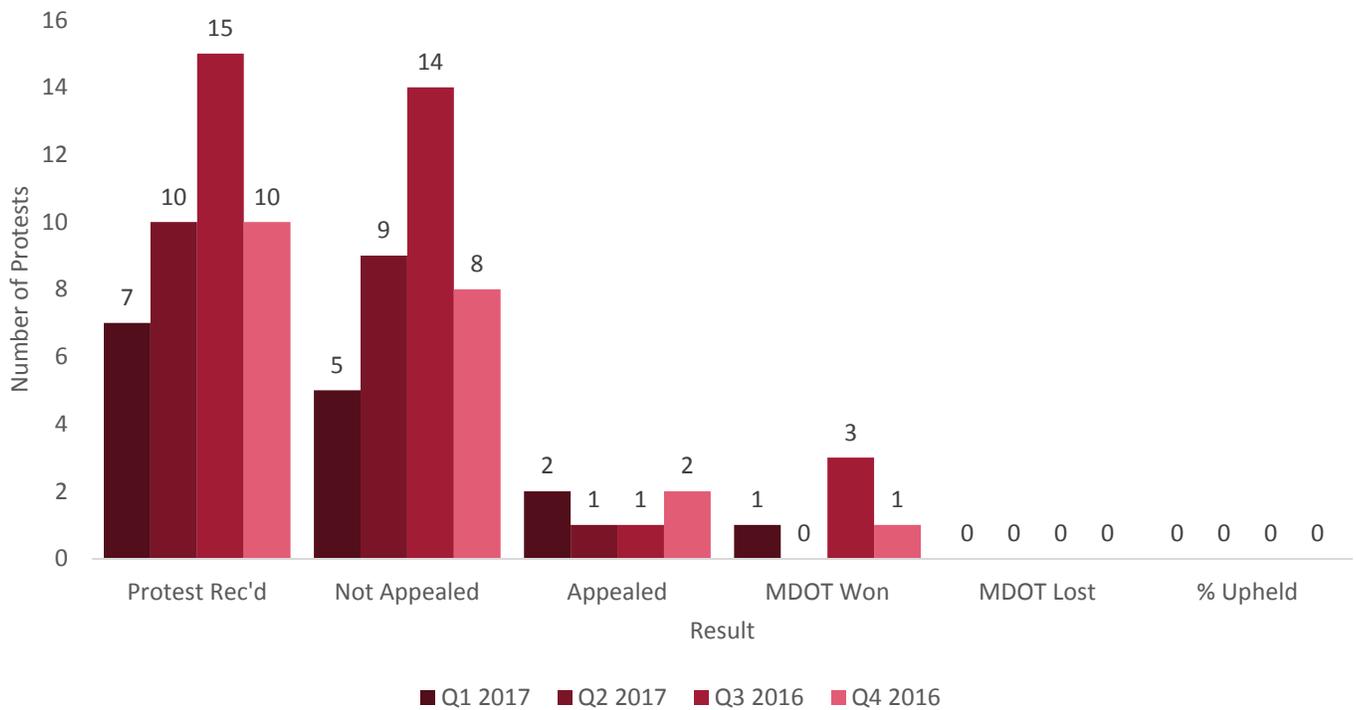
The TSO Office of Procurement (OOP) is collecting data from all the TBUs and is documenting the number of protests as well as the reason for the protest.

The TSO OOP will collect data regarding protests so that root cause and corrective/preventive action can be implemented. Currently there is not enough detail to determine the root cause.

**PERFORMANCE MEASURE 7.7**

Number of MDOT Procurement Protests Filed and Percent of Protests Upheld by the Board of Contract Appeals

**Chart 7.7.1: Running Twelve Month Procurement Protests by Quarter  
CY2016-CY2017**



TANGIBLE RESULT #8

## Be a Good Neighbor



As the owner of statewide transportation facilities, MDOT must work to find solutions that work for customers and are sensitive to our neighbors.

**RESULT DRIVER:**

Simon Taylor

*Maryland Aviation Administration (MAA)*

**TANGIBLE RESULT DRIVER:**

Simon Taylor  
*Maryland Aviation Administration*

**PERFORMANCE MEASURE DRIVER:**

Anthony Crawford  
*State Highway Administration (SHA)*

**PURPOSE OF MEASURE:**

To ensure that MDOT maintains attractive and clean facilities with amenities that benefit neighbors.

**FREQUENCY:**

Annually (April)

**DATA COLLECTION METHODOLOGY:**

This will be assessed through an internal assessment and satisfaction survey developed by staff with neighbor input including cleanliness, appearance, operations, access, and safety at MDOT facilities.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 8.1

### Percent of MDOT Facilities that Meet or Exceed Our Neighbor's Expectations

Attractive, efficient, and safe operations of MDOT facilities directly affect the surrounding neighbors and communities. MDOT values the relationships with neighbors and is committed to ensure the Department meets or exceeds their expectations. MDOT will engage neighbors through a survey and outreach to better understand the impact that its facilities have on communities and how the Department can be a better neighbor.

The Neighbor Satisfaction Surveys of 40 primary MDOT operating facilities were completed in the Spring of 2017. The surveys were conducted statewide using mailings, social media, and in-person visits focusing on the overall appearance and operations through the eyes of neighbors. The results reveal that 77 percent of survey respondents believe the facility appearance meets or exceeds their expectations, while 82 percent believe the operations at the facility meets or exceeds their expectations. Areas in need of improvement include grounds maintenance, noise, and traffic operations.

The facility assessments and survey results are used to develop improvement plans for each facility and ensure MDOT is committed to address our neighbors' concerns and continue to be good neighbors.

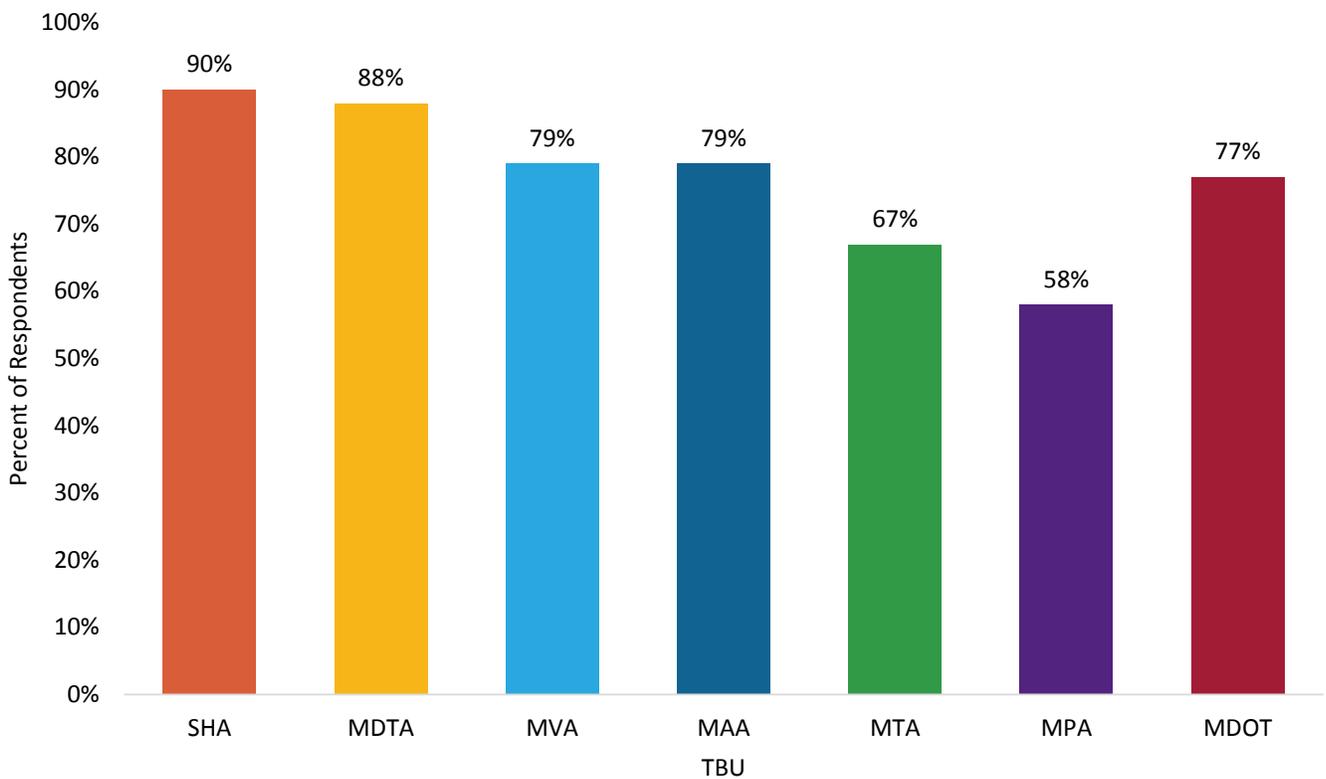
In addition to the improvement plans, the TBUs are implementing strategies to establish relationships and engage surrounding communities. Examples include:

- Facility Improvement Plans
- Increase Community Outreach and Engagement by:
  - Hosting Open House Events
  - Attending Community Association Meetings
- Program to Track and Address Neighbor Concerns

## PERFORMANCE MEASURE 8.1

### Percent of MDOT Facilities that Meet or Exceed Our Neighbor's Expectations

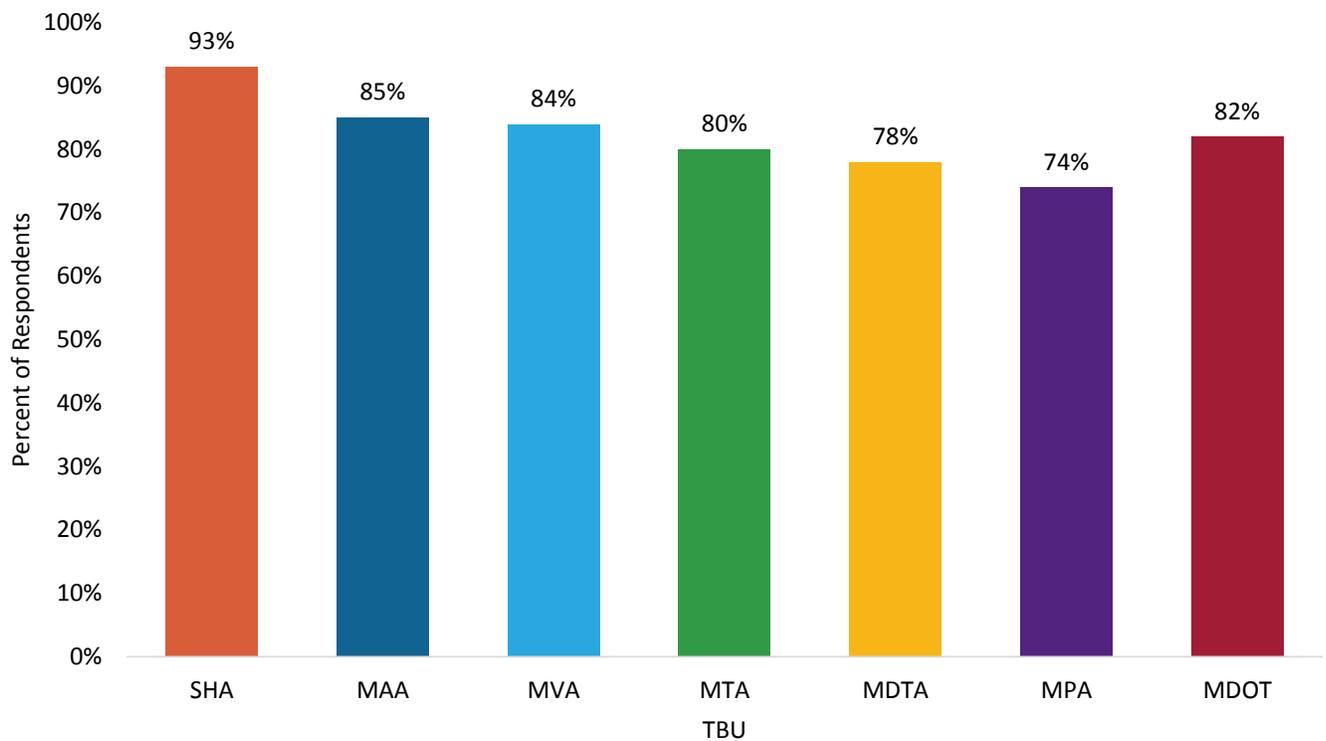
Chart 8.1.1: Percent of Surveyed Neighbors Who Say MDOT Facilities Meet or Exceed Expectations CY2017



**PERFORMANCE MEASURE 8.1**

Percent of MDOT Facilities that Meet or Exceed Our Neighbor's Expectations

Chart 8.1.2: Percent of Surveyed Neighbors Who Say MDOT Operations Meet or Exceed Expectations CY2017



**TANGIBLE RESULT DRIVER:**

Simon Taylor  
Maryland Aviation Administration  
(MAA)

**PERFORMANCE MEASURE DRIVER:**

Priya Iyer  
Maryland Transit Administration (MTA)

Terri Whitehead  
Maryland Vehicle Administration  
(MVA)

**PURPOSE OF MEASURE:**

To assess the percent of facilities that meet or exceed ADA accessibility mandates and to ensure everyone access to facilities.

**FREQUENCY:**

Annually (in April)

**DATA COLLECTION METHODOLOGY:**

Data on the number of owned and occupied facilities along with the number of facilities that are Americans with Disabilities Act (ADA) compliant are tallied and reported by each business unit on an annual basis.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 8.2

### Percent of MDOT Facilities that are ADA Compliant

Compiling and charting data for seven TBUs on the percent of their administrative buildings that are owned and occupied daily that meet or exceed ADA mandates is essential to MDOT's customers and more importantly to MDOT's neighbors to ensure everyone can visit MDOT facilities. Data collected will help to inform each TBU across MDOT on how and where to focus their resources to meet ADA compliance and make administrative buildings more accommodating to all customers and neighbors who visit our buildings.

Percent of owned and occupied TBU administrative buildings that are ADA compliant:

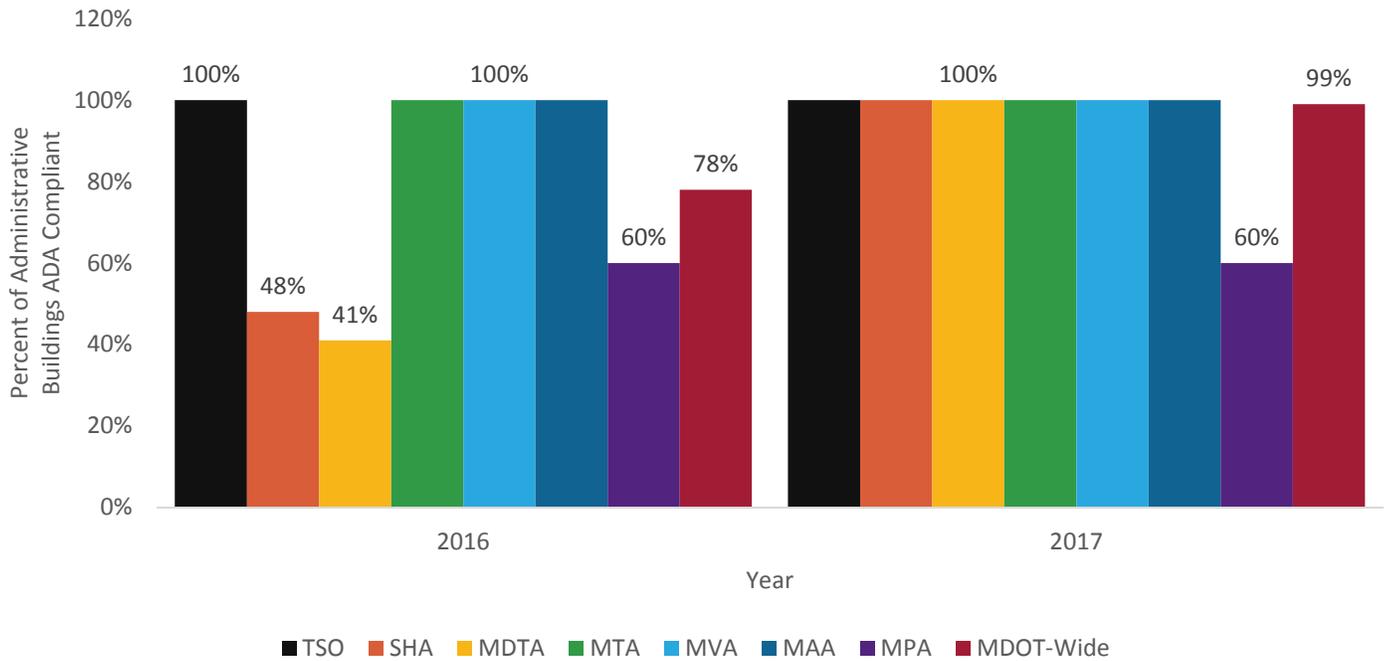
1. TSO - 01 owned and occupied; 01 compliant = (100 percent)
2. SHA - 33 owned and occupied; 33 compliant = (100 percent)
3. MDTA - 12 owned and occupied; 12 compliant = (100 percent)
4. MTA - 16 owned and occupied; 16 compliant = (100 percent)
5. MVA - 33 owned and occupied; 33 compliant = (100 percent)
6. MAA - 61 owned and occupied; 61 compliant = (100 percent)
7. MPA - 05 owned and occupied; 03 compliant = (60 percent)
8. MDOT WIDE – 161 owned and occupied; 159 compliant = (99 percent)

MDOT owned properties include several different elements that meet or exceed the ADA requirements. The report is related to administrative buildings only that are owned and occupied daily.

**PERFORMANCE MEASURE 8.2**

Percent of MDOT Facilities that are ADA Compliant

**Chart 8.2.1: Percent of Administrative Buildings that are ADA Compliant by TBU CY2016-CY2017**



**TANGIBLE RESULT DRIVER:**

Simon Taylor  
*Maryland Aviation Administration*

**PERFORMANCE MEASURE DRIVER:**

Jill Lemke  
*Maryland Port Administration (MPA)*

**PURPOSE OF MEASURE:**

Understand how many property damage claims are being made by neighbors against MDOT TBU's and customer satisfaction with the claim process.

**FREQUENCY:**

Quarterly

**DATA COLLECTION METHODOLOGY:**

Maryland Treasurer's Office records on State department property damage claims.

**NATIONAL BENCHMARK:**

N/A

## **PERFORMANCE MEASURE 8.3A AND B**

### **Number of Property Damage Claims and Percent of Customers Satisfied with How Their Property Claim was Handled**

Measuring the number of property damage claims by neighbors adjacent to MDOT facilities informs each TBU where extra awareness can keep claims from occurring.

In March 2017, this measure was added to TR 8. After requesting information on claims submitted by neighbors from the Treasurer's office and then each TBU, the data showed there were few instances of property damage being filed by neighbors. The vast majority of claims were "slip and falls" or a special circumstance such as a mailbox being knocked over by a snow plow in western Maryland.

The initial performance measure did not include claims like rocks hitting windshields while a road is being milled prior to paving. In mid-June, a decision was made to expand the measure to all property damage claims, which will include but is not limited to rocks in windshields, side swipes on parked (or moving vehicles) by TBU vehicles, and possible water contamination issues from salting the roads in the winter.

This baseline data will be shared in October along with the strategies on ways to make property claims from neighbors in a more satisfactory way, regardless of the outcome to the neighbor and/or TBU.

**TANGIBLE RESULT DRIVER:**

Simon Taylor  
*Maryland Aviation Administration*

**PERFORMANCE MEASURE DRIVER:**

David Seman  
*The Secretary's Office (TSO)*

**PURPOSE OF MEASURE:**

Tracking instances of traffic violations will enable MDOT to better assess its impact on communities and contribute to improved public safety.

**FREQUENCY:**

Quarterly

**DATA COLLECTION METHODOLOGY:**

Traffic violation data provided by individual TBU fleet managers.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 8.4

### Number of Traffic Violations While Driving a State Vehicle

Tracking vehicle citations by TBU will give MDOT the ability to strengthen driver education training and direct corrective action. This will show that MDOT employees care about public safety by reducing instances of violations. MDOT's mission is to ensure safe and dependable modes of transportation to the community and lead by example.

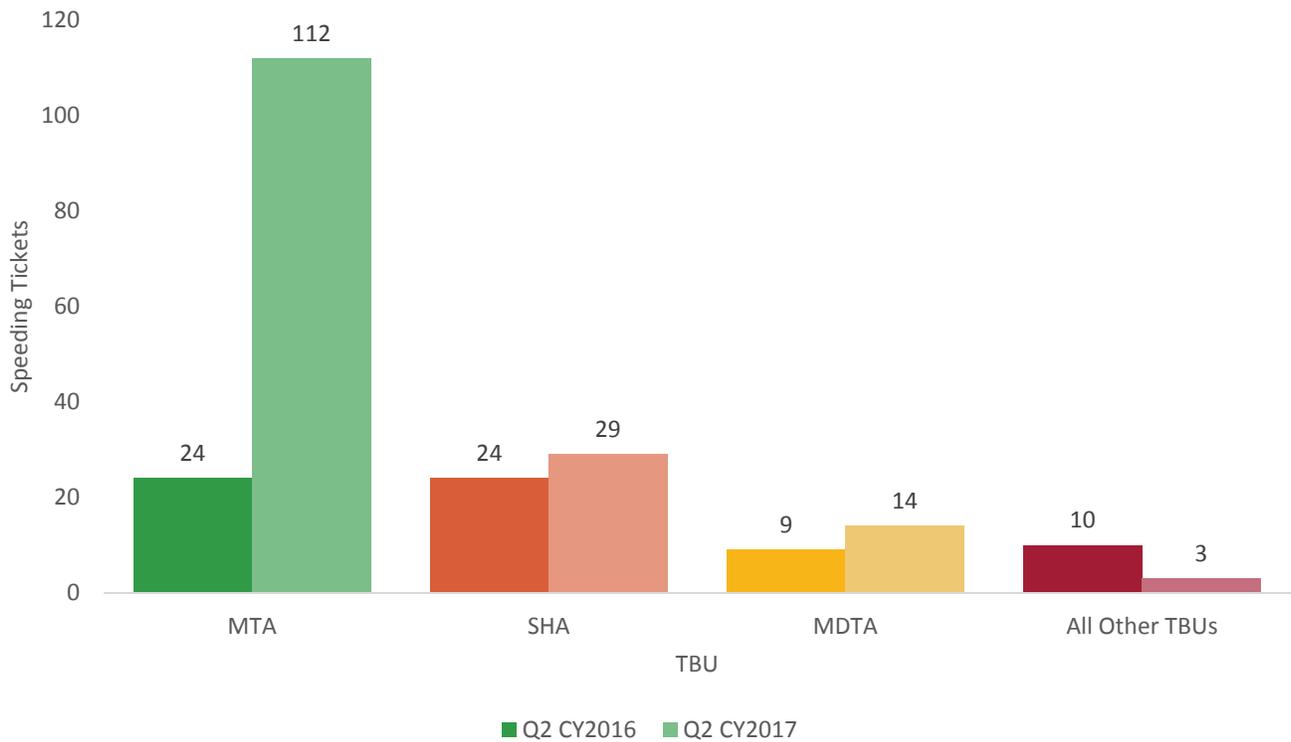
Although data collection for this measure continues to improve, the initial analysis of available data shows that MTA and SHA, TBUs with the largest vehicle fleets in MDOT, account for the majority of all traffic violations, including speeding and red light running. MDOT also collects data on parking and other violations and will report findings after they have been verified for accuracy.

To improve MDOT's understanding of traffic violation patterns and trends, TBUs will work toward a more standardized collection and reporting method. More accurate reporting will help MDOT to limit risk, ensure safe performance of MDOT's fleet vehicles, and keep the public and MDOT employees safe during daily operations.

## PERFORMANCE MEASURE 8.4

### Number of Traffic Violations While Driving a State Vehicle

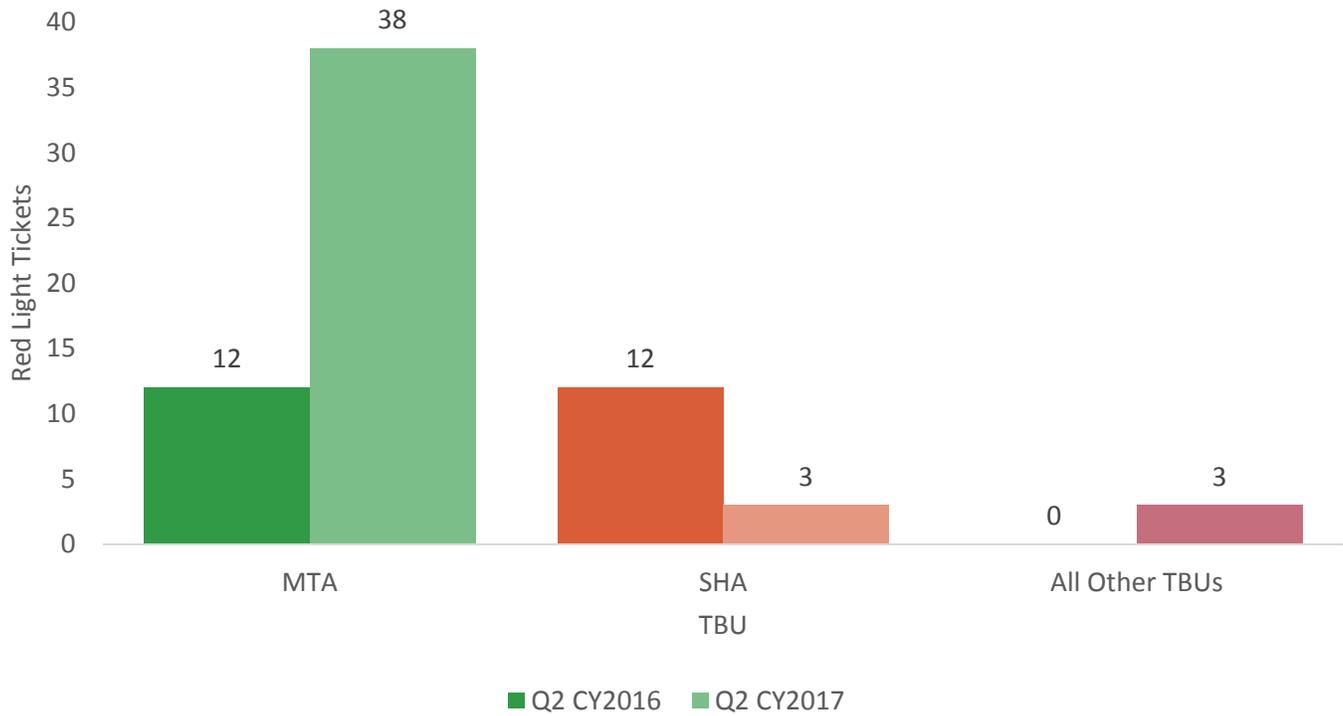
Chart 8.4.1: Speeding Tickets by TBU Q2 CY2016 vs. Q2 CY2017



**PERFORMANCE MEASURE 8.4**

Number of Traffic Violations While Driving a State Vehicle

**Chart 8.4.2: Red Light Camera Tickets by TBU Q2 CY2016 vs. Q2 CY2017**



TANGIBLE RESULT #9

## Be a Good Steward of Our Environment



MDOT will be accountable to customers for the wise use of resources and impacts on the environment when designing, building, operating and maintaining a transportation system.

**RESULT DRIVER:**

Dorothy Morrison

*The Secretary's Office (TSO)*

**TANGIBLE RESULT DRIVER:**

Dorothy Morrison  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Sonal Ram  
*State Highway Administration (SHA)*

**PURPOSE OF MEASURE:**

To evaluate the health of the Chesapeake Bay by measuring how well MDOT is achieving compliance with impervious surface restoration as required by the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit.

**FREQUENCY:**

Annually (in October)

**DATA COLLECTION METHODOLOGY:**

MDOT is tracking all Bay restoration projects and impervious surface treatment associated with those projects to determine overall progress toward the 20 percent goal during their five-year permit term.

**NATIONAL BENCHMARK:**

N/A

**PERFORMANCE MEASURE 9.1**

## Water Quality Treatment to Protect and Restore the Chesapeake Bay

The fastest growing source of pollution in the Chesapeake Bay is stormwater runoff. Urbanization intensifies runoff by increasing paved surfaces and decreasing areas where rainfall can seep into the ground. Stormwater runoff increases delivery of pollutants including trash, organic debris, and sediment from impervious areas to urban streams.

Restoration efforts for 20 percent of MDOT's existing impervious surfaces will increase infiltration and reduce stormwater runoff. MDOT uses restoration practices such as installing new and upgrading existing stormwater management facilities, stream restoration, tree planting, and operations like street sweeping and inlet cleaning. This will improve conditions in urban streams, and reduce pollution in the Chesapeake Bay.

Chart 9.1.1 compares the impervious restoration accomplished by each TBU with the remaining acreage to be treated to meet the 20 percent restoration goal.

Approaching the 20 percent restoration requirements with a holistic one-MDOT strategy will include:

- Increased collaboration and data sharing between TBUs;
- Intelligent analysis of cost and restoration strategy to determine the most economical opportunities for impervious restoration across all of MDOT; and
- Close coordination and collaboration to ensure all TBUs are adequately tracking and implementing Bay restoration projects and impervious surface treatment.

## PERFORMANCE MEASURE 9.1

### Water Quality Treatment to Protect and Restore the Chesapeake Bay

Chart 9.1.1: MDOT Impervious Restoration in Acres YTD

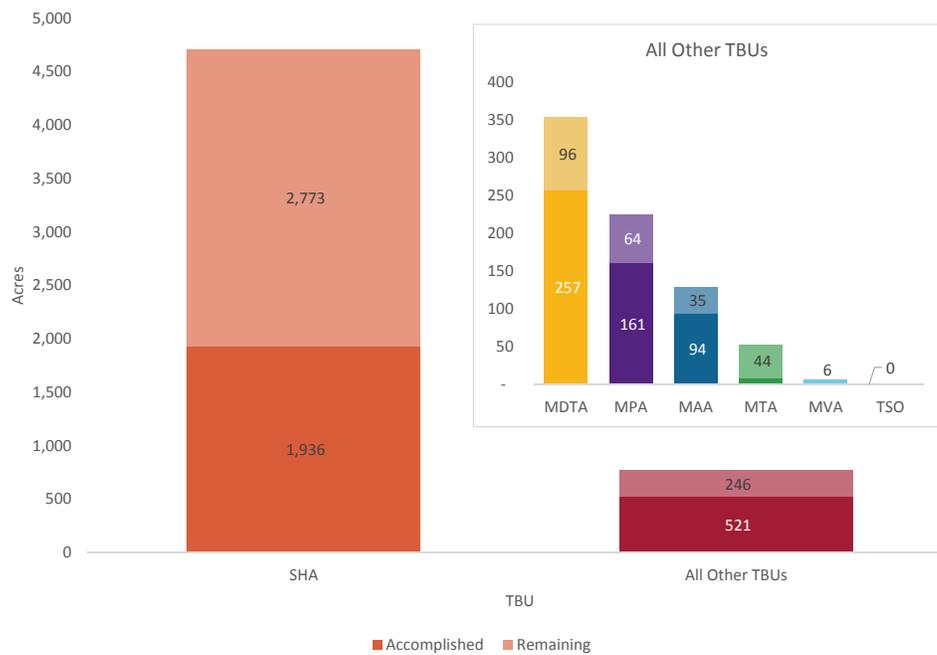
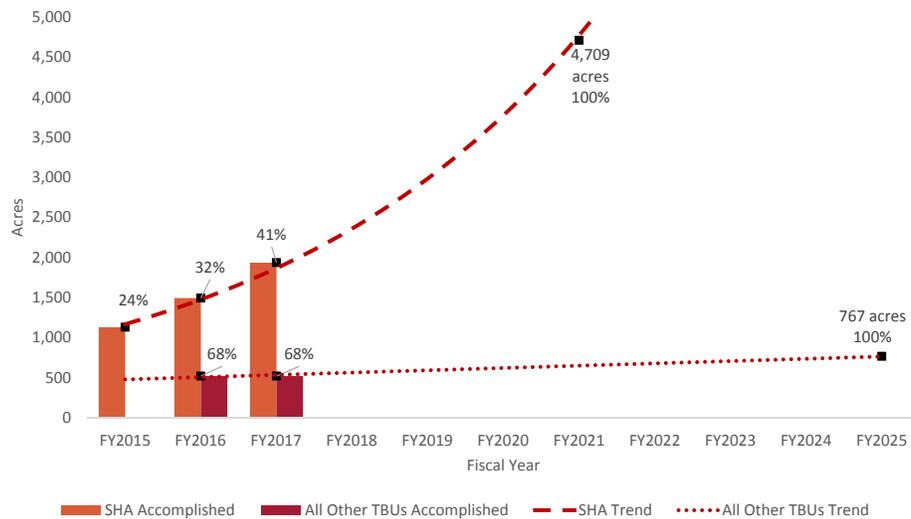


Chart 9.1.2: MDOT Impervious Restoration Trend FY2015-FY2025



## TANGIBLE RESULT DRIVER:

Dorothy Morrison  
The Secretary's Office (TSO)

## PERFORMANCE MEASURE DRIVER:

Paul Truntich Jr.  
Maryland Transportation Authority (MDTA)

## PURPOSE OF MEASURE:

To track overall fuel economy of fleet vehicles and ensure better air quality through the use of State vehicles. It is important to track miles per gallon in a meaningful manner to ensure that State vehicles are fuel efficient and not detrimental to air quality. Fuel economy data will be used to evaluate driving patterns as well as when the procurement of new fleet vehicles is considered.

## FREQUENCY:

Annually (in April)

## DATA COLLECTION METHODOLOGY:

Fleet MPG data will be obtained from the State of Maryland's fuel service vendor.

## NATIONAL BENCHMARK:

N/A

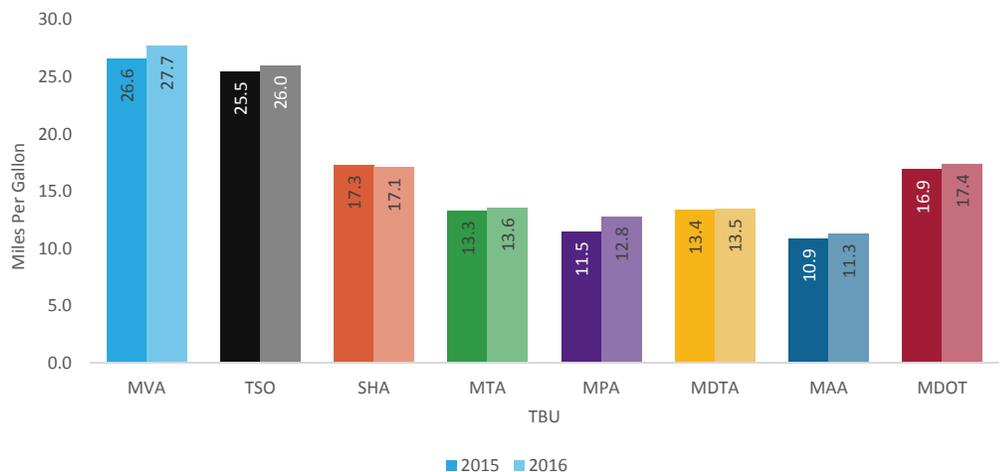
## PERFORMANCE MEASURE 9.2A

### Fuel Efficiency: Miles Per Gallon

Reduced fuel costs and conservation of petroleum-based resources are the direct results of a more fuel efficient fleet (as determined through increases in vehicle miles per gallon calculations). Efforts with Mansfield Oil Company (statewide fueling vendor) have resulted in developing a means of tracking miles per gallon (MPG) data for the light-duty fleet throughout all TBUs. MPG data for CY2015 and CY2016 has been calculated and presented in Chart 9.2A.1. Although data is only presented for two years, fuel efficiency has increased by 0.5 MPG MDOT-wide from 2015 (16.9 MPG) to 2016 (17.4 MPG).

Vehicle replacement practices represent the largest factor affecting change to this measure. At pre-determined age or mileage thresholds, fleet vehicles are replaced. Since the presumption is that newer models are more fuel efficient than their predecessors, MPG calculations for each TBU and the MDOT-wide should increase from year to year through fleet replacement activities. However, in addition to fleet replacement, strategies such as encouraging carpooling to meetings and other functions and modifying State vehicle purchasing contract requirements are being evaluated as additional means of improving fleet MPG.

Chart 9.2A.1: MDOT TBU Light-Duty Vehicle Average MPG CY2015-CY2016



**TANGIBLE RESULT DRIVER:**

Dorothy Morrison  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Paul Truntich Jr.  
*Maryland Transportation Authority (MDTA)*

**PURPOSE OF MEASURE:**

To track overall fuel consumption of fleet vehicles as well as fixed-equipment in an effort to use less of our resources with State vehicles and equipment. Consumption patterns will be evaluated for improving fuel efficiency and shifting towards use of renewable fuels.

**FREQUENCY:**

Annually (in October)

**DATA COLLECTION METHODOLOGY:**

Fleet vehicle data will be obtained from the State fuel service vendor. Fixed-equipment data will be supplied from Fleet and Facility Managers at the TBUs.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 9.2B

### Fuel Efficiency: Total Gallons Consumed

Analyzing fuel consumption patterns enables fleet and facility managers to budget more effectively and use resources more efficiently. This data also will be beneficial as fleet acquisition purchases and facility heating upgrades are considered. Additionally, identifying opportunities for reducing fuel consumption not only benefits the environment via resource conservation and reduced emissions, but also results in true cost-savings through reduced fuel costs.

While ultra-low sulfur diesel continues to be the most consumed fuel for fiscal years FY2014-FY2017, a distinct reduction (approximately 198,000 gallons) in consumption was noted from FY2016 to FY2017. This reduction is attributed to the MTA's procurement of 172 clean diesel busses which replaced older, less fuel-efficient models.

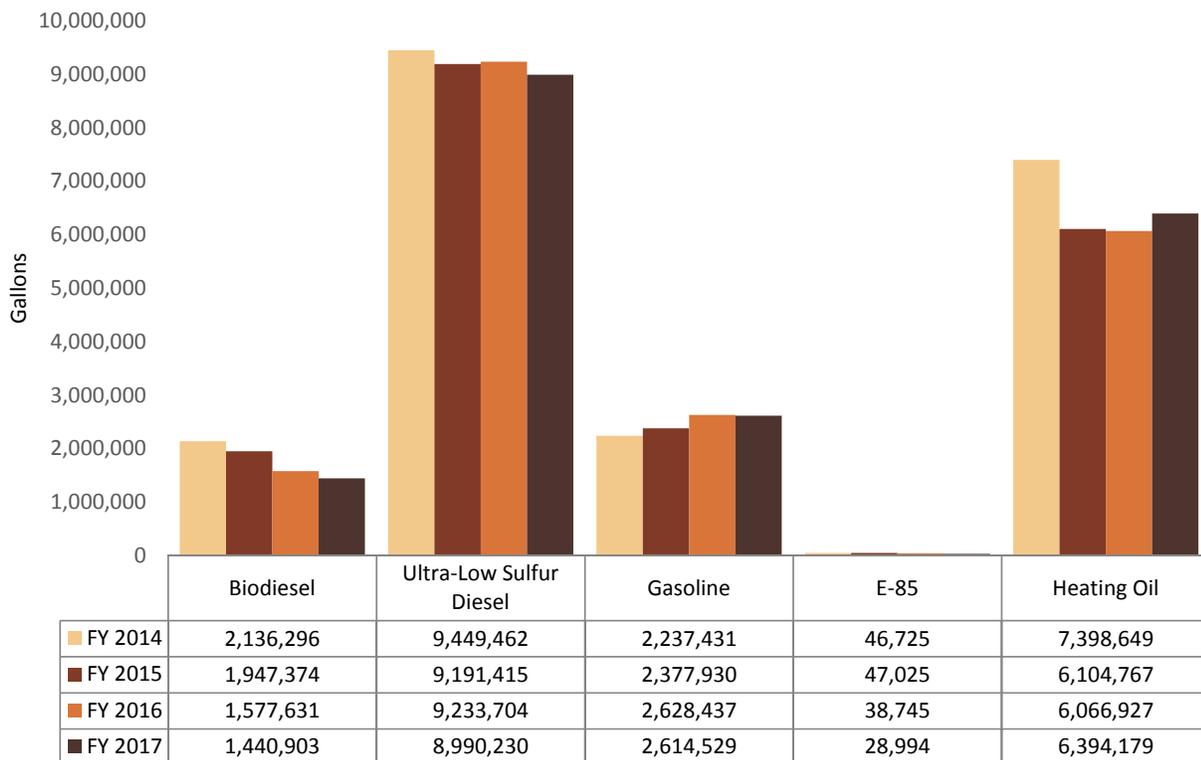
Heating oil consumption experienced a slight increase from FY2016 to FY2017. A portion of the increase is attributed to procurement strategies several TBUs used to purchase fuel where some were able to defer or minimize purchases during FY2016, but were required to make greater purchases in FY2017 to maintain appropriate on-hand fuel quantities. Furthermore, the inverse relationship between biodiesel and gasoline continued its trend in FY2017 as fleet managers continued to transition from diesel to gasoline powered vehicles.

The consumption of E-85 continued its downward trend in FY2017. As this is a renewable energy source, the desired outcome would be to achieve an overall increase in consumption. As an organization, MDOT needs to evaluate its overall commitment towards E-85 and possibly institute an overarching policy regarding its use throughout the TBUs.

**PERFORMANCE MEASURE 9.2B**

Fuel Efficiency: Miles Per Gallon

**Chart 9.2B.1: Total Gallons of Fuel Consumed FY2014-FY2017**



**TANGIBLE RESULT DRIVER:**

Dorothy Morrison  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Hargurpreet Singh, P.E.  
*Motor Vehicle Administration (MVA)*

**PURPOSE OF MEASURE:**

To track the percentage of waste diverted from the landfill or incineration through recycling.

**FREQUENCY:**

Annually (in April)

**DATA COLLECTION METHODOLOGY:**

Maryland Department of the Environment All State Organization Recycling (All StAR) reporting.

**NATIONAL BENCHMARK:**

N/A

## **PERFORMANCE MEASURE 9.3**

### **Percent of Maryland Recycling Act Materials Recycled**

Recycling conserves resources, saves energy, reduces greenhouse gas emissions, reduces the amount of waste sent to landfills, reduces carbon footprint and helps protect the environment.

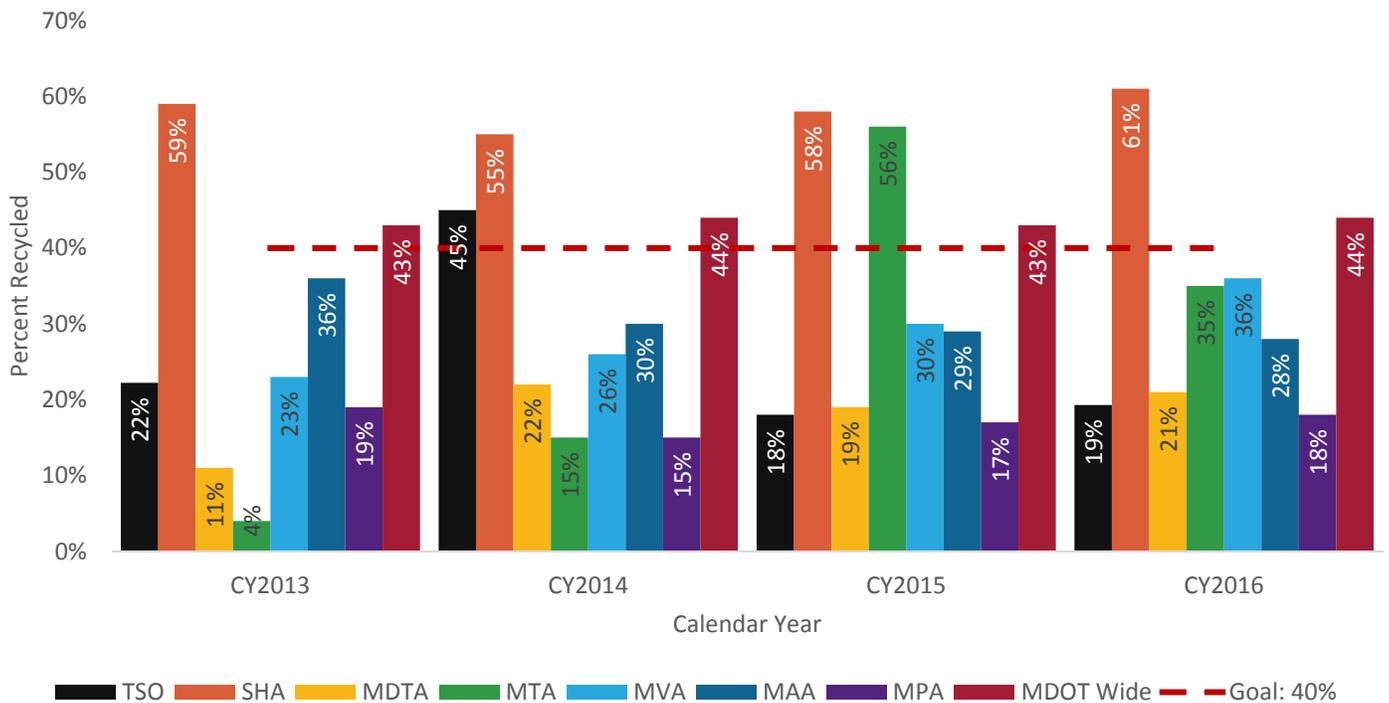
It also demonstrates that MDOT is in compliance with the State of Maryland established recycling and waste reduction goals. And, it is the Right Thing to Do!

Currently, MDOT meets the 40 percent goal set by the Maryland State Legislature. To continue to meet and exceed State legislative recycling goals, each MDOT TBU continues to provide awareness training and to evaluate dumpster size and frequency of trash collection services.

## PERFORMANCE MEASURE 9.3

### Percent of Maryland Recycling Act Materials Recycled

Chart 9.3.1: Percent of Waste Recycled by TBU CY2013-CY2016



**TANGIBLE RESULT DRIVER:**

Dorothy Morrison  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Barbara McMahon  
*Maryland Port Administration (MPA)*

**PURPOSE OF MEASURE:**

To reduce TBU impact on solid waste landfill through recycling/ reuse of steel, asphalt and concrete.

**FREQUENCY:**

Annually (in April)

**DATA COLLECTION METHODOLOGY:**

The data collection methodology will include disposal weights by each TBU's Facility Maintenance and Engineering Departments. The data are and/or should be reported on the annual Non-Maryland Recycling Act Report.

**NATIONAL BENCHMARK:**

N/A

## **PERFORMANCE MEASURE 9.4**

### **Recycled/Reused Materials from Maintenance Activities and Construction/ Demolition Projects**

MDOT is committed to reducing its impact on solid waste, non-hazardous landfills, potentially resulting in reduction of the number of waste disposal facilities in Maryland as stated in the Maryland Department of the Environment's "Zero Waste" Action Plan. The TBUs established plans to recycle and/or reuse their solid waste: steel, asphalt and concrete. These materials are to be collected, weighed and recycled/reused. Benefits include saving energy and natural resources, preserving the capacity of landfills, reducing waste disposal costs, generating revenue for materials and reducing pollutants generated by landfill process.

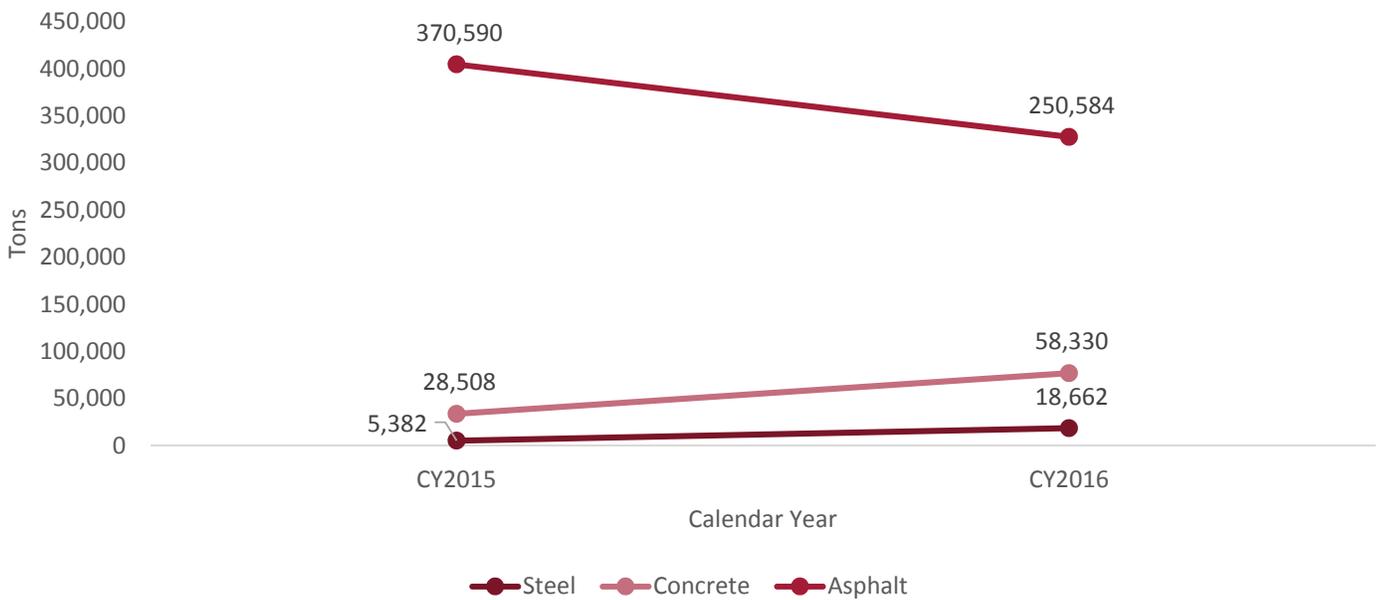
Due to the number and type of construction/demolition activities and projects, MDOT recognizes there may be variability among reporting periods and TBUs, but positive change can still occur by implementing some or all the following:

- Establish central data collection mechanisms and procedures in each TBU.
- Require contractors to segregate, collect, weigh and recycle these materials and provide information to the TBU.
- Ensure commitment to the goal and its positive impact on the environment by making employees and contractors aware of this PM.

## PERFORMANCE MEASURE 9.4

### Recycled/Reused Materials from Maintenance Activities and Construction/ Demolition Projects

Chart 9.4.1: Recycled/Reused Materials from Maintenance Activities & Construction/Demolition Projects, CY2015-CY2016



## TANGIBLE RESULT DRIVER:

Dorothy Morrison  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Laura Rogers  
*The Secretary's Office (TSO)*

## PURPOSE OF MEASURE:

To reduce our consumption of conventional energy through efficiency measures and renewable energy sources.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Data for MDOT's electricity usage collected by EnergyCAP will be evaluated. Data for energy efficiency measures and renewable energy sources utilized by MDOT will be collected from the TBU Energy Managers. Emissions calculated based on the amount of energy used and regional energy mix.

## NATIONAL BENCHMARK:

Renewable Energy Consumption as a Share of State Total (2014): Oregon, 49.3 percent; Washington, 47.1 percent; Maine, 38.3 percent

American Council for an Energy Efficient Economy ranked Maryland 9 in the 2016 State Energy Efficiency Scorecard. California and Massachusetts tied for number 1.

## PERFORMANCE MEASURE 9.5 Energy Consumption

Reducing our conventional energy consumption through energy efficiency measures and use of renewable energy can generate revenue, save Maryland taxpayers money, and reduce harmful air emissions while also helping Maryland meet its clean energy and greenhouse gas reduction goals.

The desired trend for conventional electricity use, cost, and associated carbon dioxide equivalent (CO<sub>2</sub>e) emissions is to decrease. In CY2017 (January-May), there was a decrease over CY2016 (January-May) in usage (2,228 megawatt hours), cost (\$866,000), and CO<sub>2</sub>e emissions (1,374 metric tons). The desired trend for renewable energy generation, cost avoidance, and CO<sub>2</sub>e emissions avoidance is to increase. In CY2017 (January-August), there was an increase over CY2016 (January-August) in generation (155 megawatt hours), cost savings (\$16,700), and CO<sub>2</sub>e emissions avoidance (109 metric tons).

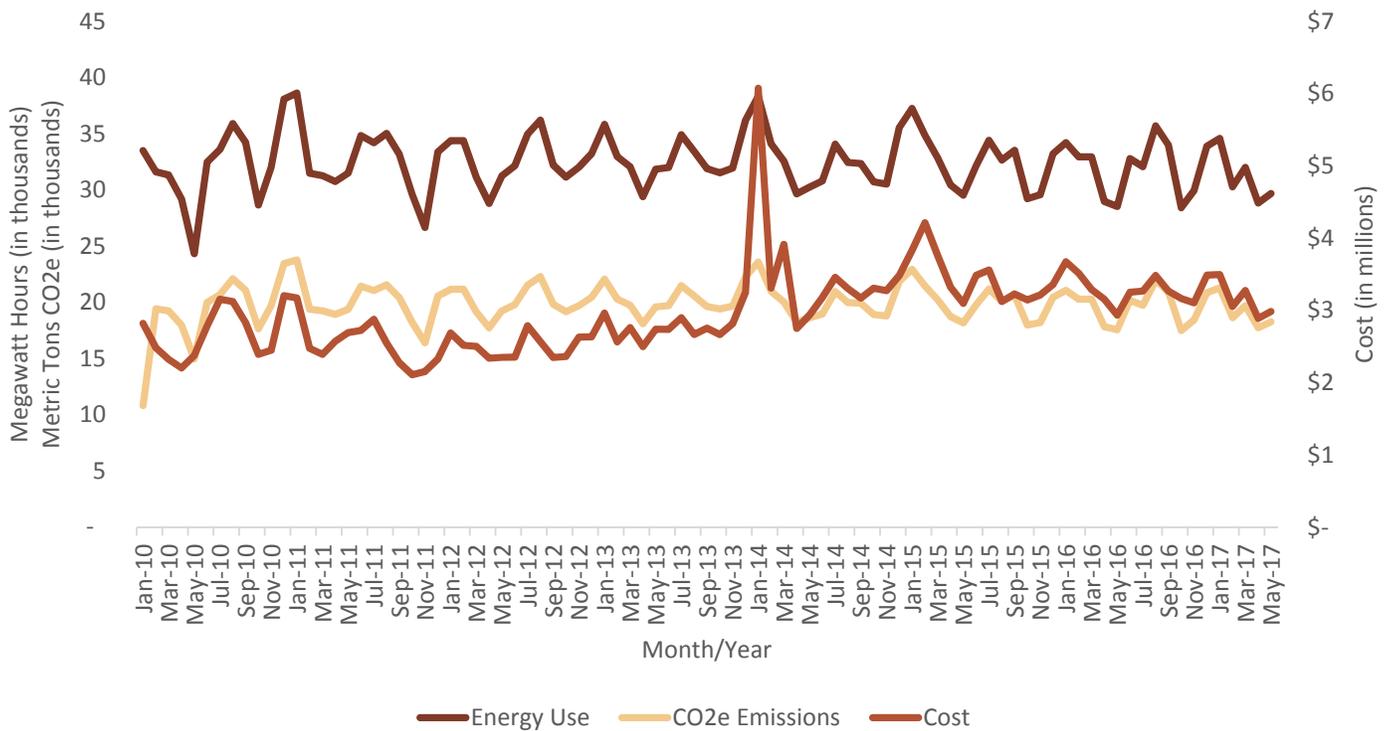
MDOT released a Renewable Energy Development Request for Proposal on June 20, 2017, and received proposals on August 17, 2017. MDOT will use the resulting Master Services Agreement(s) to develop solar renewable energy systems quickly and efficiently on MDOT properties throughout the State.

MDOT is undertaking many strategies to increase energy efficiency. Each TBU has completed a comprehensive Energy Plan that details its energy consuming entities, existing and future energy conservation strategies, and future energy conservation goals. Many of the energy conservation measures MDOT implements also realize secondary benefits, such as improved lighting quality, lower operation and maintenance expenses, increased life span of equipment, improved indoor air quality, and enhanced tenant comfort.

MDOT is expanding its services to meet the needs of its customers. The more people use MDOT facilities and the more these facilities increase in size to meet customer needs, the more energy is used. While the desired trend for energy consumption is to go down, simply looking at the amount of energy used does not give an accurate picture of MDOT's energy conservation efforts. For this reason, MDOT is working to develop a standardized Energy Use Index that considers energy use, square footage, and number of users. This Index will give MDOT a better baseline to work from and affect change.

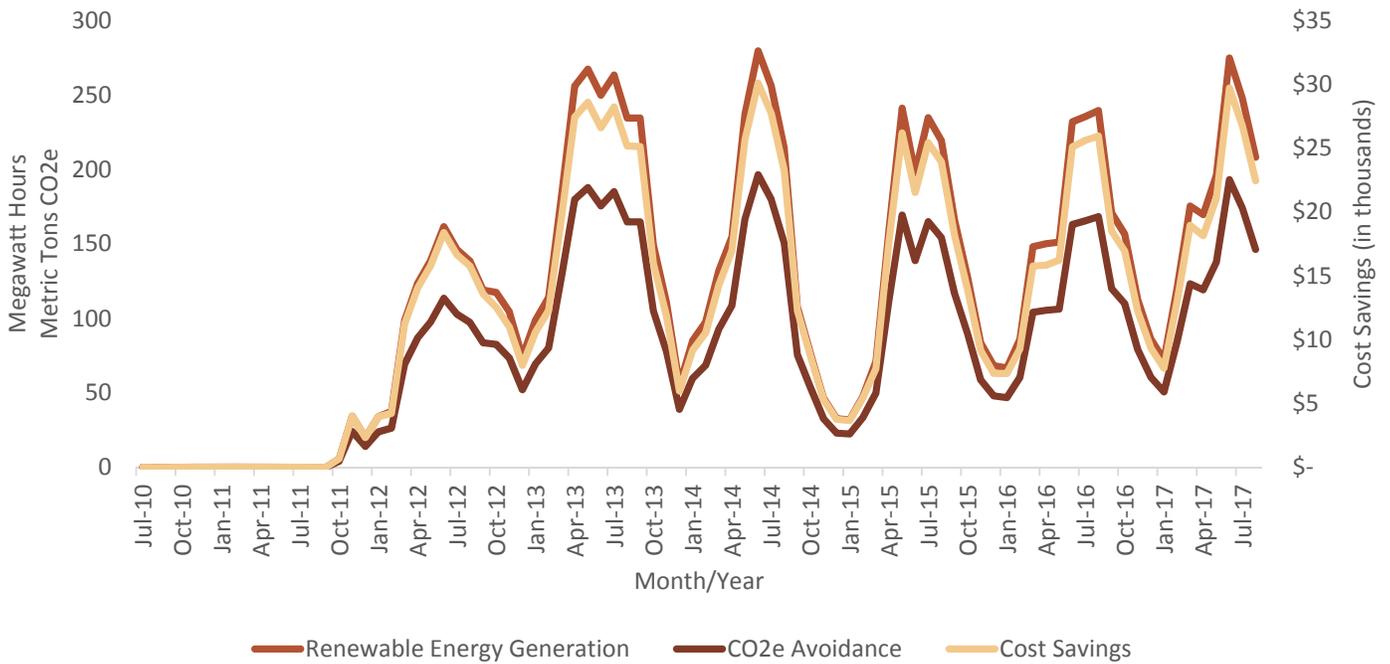
## PERFORMANCE MEASURE 9.5 Energy Consumption

Chart 9.5.1: Total MDOT Conventional Energy Use, Cost & CO2e Emissions CY2010-YTD 2017



## PERFORMANCE MEASURE 9.5 Energy Consumption

Chart 9.5.2: Total MDOT Renewable Energy Generation, Cost Savings & CO2e Avoidance CY2010-YTD 2017



Be a Good Steward of  
Our Environment



## TANGIBLE RESULT #10

# Facilitate Economic Opportunity in Maryland



Maryland's transportation system is essential to the State's economy. An efficient transportation system provides a competitive advantage to businesses in a regional, national and global marketplace. Transportation directly impacts the viability of a region as a place where people want to live, work and raise families, and is critical to attracting a competent workforce.

### RESULT DRIVER:

Jim Dwyer

*Maryland Port Administration (MPA)*

# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Eric Beckett  
*State Highway Administration (SHA)*

## PURPOSE OF MEASURE:

To track direct, indirect and induced jobs generated by annual construction investments as an indicator of transportation projects contribution to economic return.

## FREQUENCY:

Annually (in January)

## DATA COLLECTION METHODOLOGY:

MDOT compiles the necessary data through the annual CTP process.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 10.1

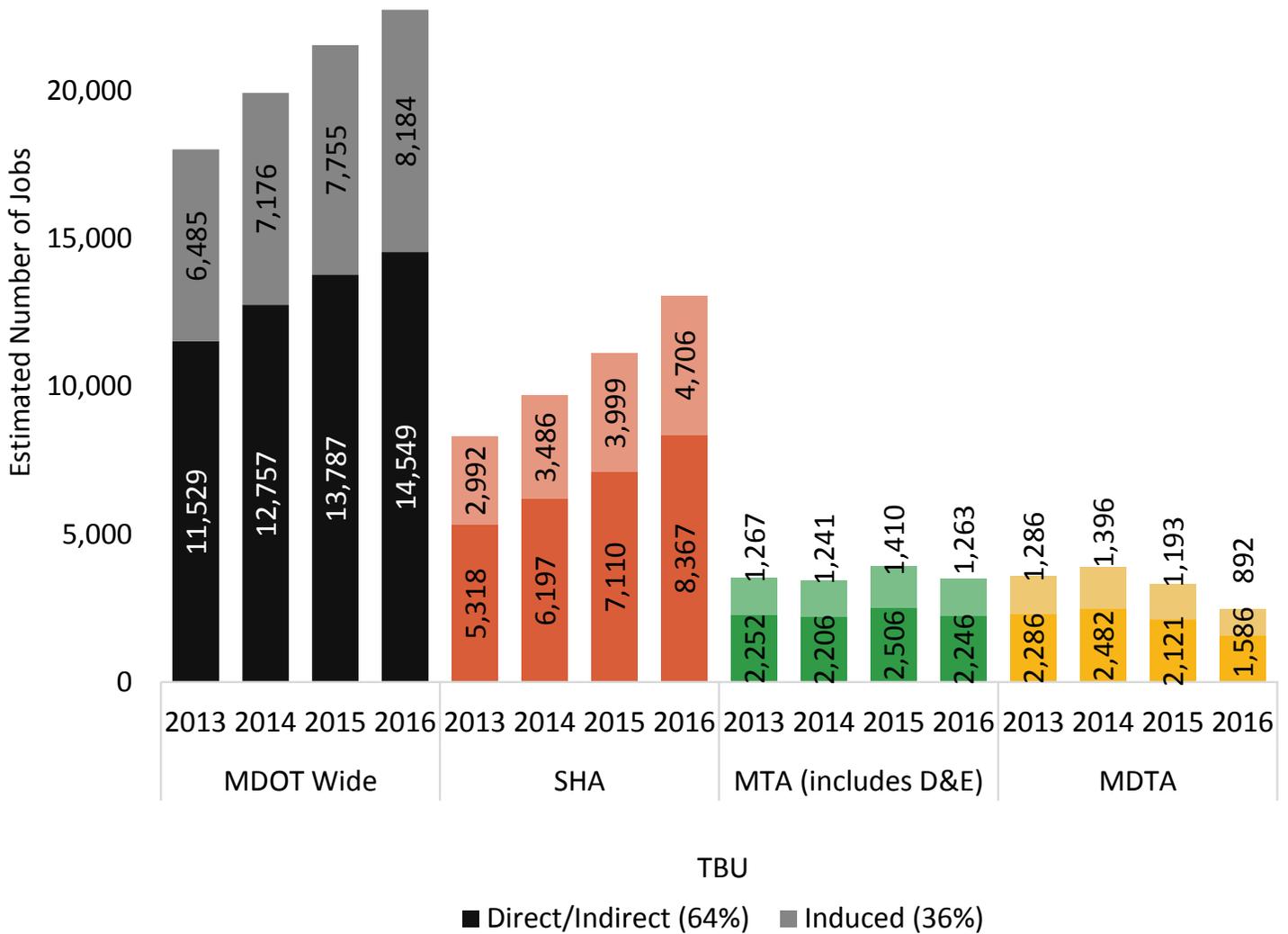
### Economic Return from Transportation Investment

Construction spending on transportation projects has a significant economic impact on people and businesses throughout the State. Economic return from transportation investment is based on the estimated number of jobs created as a result of MDOT investments in capital projects. In FY2016, it is estimated that over 22,500 jobs were created by MDOT. The annual CTP is used to identify planned investments by each MDOT TBU on major construction projects. Construction projects generate three types of jobs: direct jobs are those generated by the actual construction activity; indirect jobs are supported by the business purchases necessary for the project's construction; and induced jobs are a result of 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.

## PERFORMANCE MEASURE 10.1

### Economic Return from Transportation Investment

Chart 10.1.2: Estimated Number of Jobs Created by TBU Capital/Construction Programs FY2013-FY2016

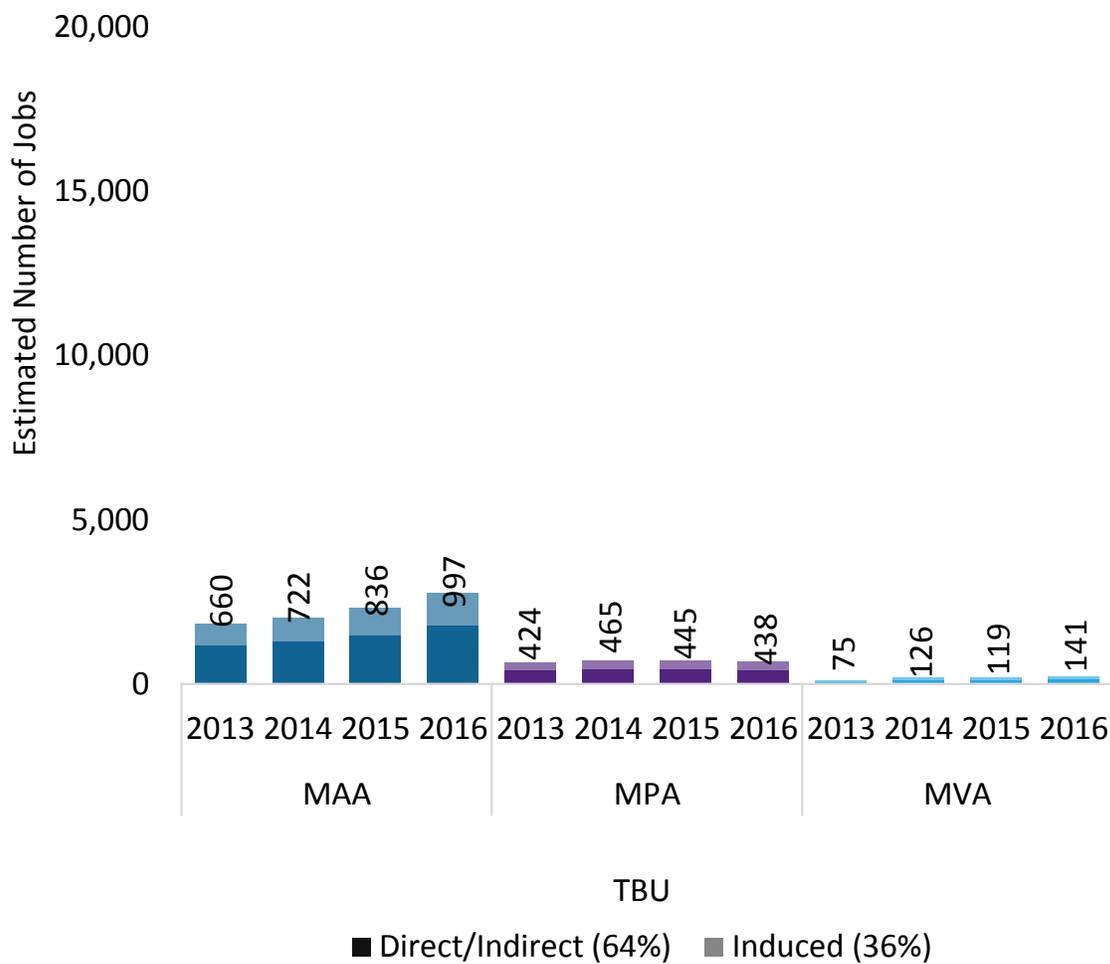


# Facilitate Economic Opportunity in Maryland

## PERFORMANCE MEASURE 10.1

### Economic Return from Transportation Investment

Chart 10.1.2: Estimated Number of Jobs Created by TBU Capital/Construction Programs FY2013-FY2016



# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Nicole Katsikides  
*State Highway Administration (SHA)*

## PURPOSE OF MEASURE:

To compare Maryland against other states' economic activity based on access to and condition of the infrastructure.

## FREQUENCY:

Annually (in October)

## DATA COLLECTION METHODOLOGY:

Using publicly available data, CNBC assesses every states' infrastructure including value of goods movement; availability of air travel; road and bridge conditions; and commute times.

## NATIONAL BENCHMARK:

CNBC annual ranking

Source: <https://www.cnbc.com/2017/07/11/top-states-for-business-25-maryland.html>

## PERFORMANCE MEASURE 10.2

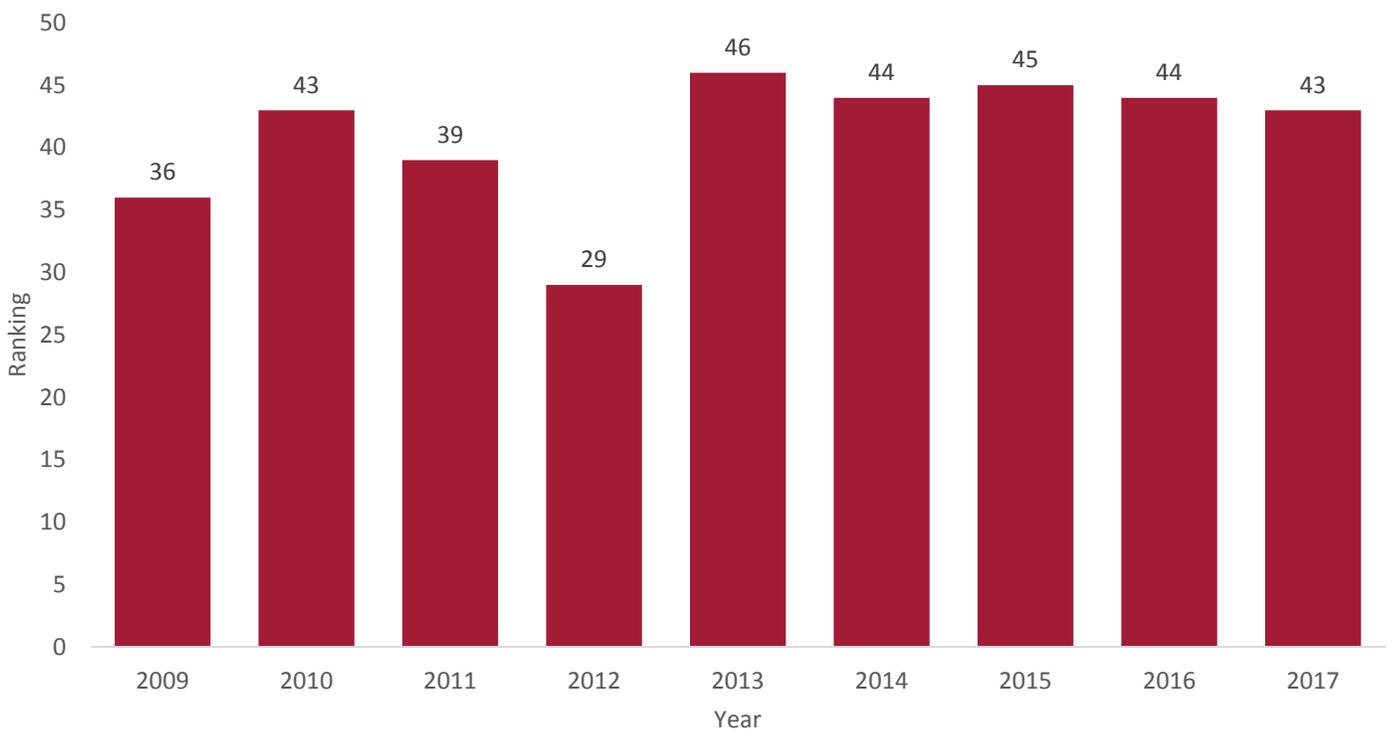
### Maryland's Ranking in National Transportation Infrastructure Assessment

The CNBC business news media group uses publicly available data on 60 measures of competitiveness to score each state. The metrics are organized into ten broad categories and weighted based on how frequently each is used as a selling point in state economic development marketing materials. The infrastructure category is a measure of a state's transportation system and supply of safe drinking water. It includes metrics to compare the value of goods shipped by air, waterways, roads and rail within a state, the quality of roads and bridges, and commute times. The annual rankings can be used as a national benchmark for infrastructure conditions over time as a means of comparing Maryland's standing versus other states. For 2017, Maryland is ranked 43rd, which is a three-point improvement since 2013. Maryland ranks in the bottom ten because of the mobility/congestion components used to compute the infrastructure metric.

## PERFORMANCE MEASURE 10.2

### Maryland's Ranking in National Transportation Infrastructure Assessment

Chart 10.2.1: America's Top States for Business Annual Rankings for Maryland in Infrastructure CY2008-CY2017



# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer

*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Juan Torrico

*Maryland Transit Administration (MTA)*

## PURPOSE OF MEASURE:

To assess freight mobility and the amount and value of freight originating and terminating in Maryland as an indicator of how supportive transportation infrastructure is for freight and Maryland's economy.

## FREQUENCY:

Annually (in April)

## DATA COLLECTION METHODOLOGY:

U.S. Department of Transportation Freight Analysis Framework (FAF4) Version 4 and MPA.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 10.3A

### Freight Mobility: Freight Analysis Framework (FAF) Tonnage and Value of Freight

Efficient and interconnected multimodal freight movement is essential to the State's economy because freight is the economy-in-motion. Maryland manufacturers depend on the freight system to move raw materials and finished goods between production facilities, distribution centers and retail outlets in Maryland and throughout the U.S. and the world. Freight-dependent industries account for over one million jobs in Maryland.

- Water and rail are well-suited to cost-effectively haul goods long distances. Commercial ships utilize the Port of Baltimore to transfer waterborne goods to land, at which point trucks and rail haul these imported goods to communities around the nation.
- Trucks carry nearly every type of commodity from consumer products to chemicals to machinery.
- High value and time-sensitive products are commonly shipped via air. The top air freight commodities shipped out of MAA facilities include mail, machinery and transportation equipment.

MDOT is currently updating the Strategic Goods Movement Plan to address the latest Fixing America's Surface Transportation (FAST) Act requirements.

# Facilitate Economic Opportunity in Maryland

## PERFORMANCE MEASURE 10.3A

### Freight Mobility: Freight Analysis Framework (FAF) Tonnage and Value of Freight

Chart 10.3A: Freight Analysis Framework (FAF) Tonnage and Value of Freight

METHOD FOR MOVING FREIGHT	TOTAL VALUE (MILLIONS)	TOTAL TONNAGE (THOUSANDS)
<b>Air*</b>	<b>\$13,379</b>	<b>141</b>
<i>Pipeline &amp; Other**</i>	<i>\$72,539</i>	<i>39,488</i>
<i>Rail*</i>	<i>\$15,063</i>	<i>26,206</i>
<i>Truck*</i>	<i>\$318,074</i>	<i>214,317</i>
<i>Water***</i>	<i>\$49,915</i>	<i>31,834</i>
<i>All Freight</i>	<i>\$468,970</i>	<i>311,986</i>

\*Source: U.S. Department of Transportation Freight Analysis Framework (FAF4). Other, Multiple Modes and Mail, Rail, and Truck value and tonnage data is estimated based on FAF4 data. The data is based off of 2012 actual data collected by FHWA and is factored by FHWA through 2015. MDOT adjusts the yearly by a 2% annual growth rate that reflects a conservative estimate of domestic and international freight growth given current economic conditions.

\*\*Pipeline and Other freight consists largely pipeline, postal and courier shipments weighing less than 100 pounds and other intermodal combinations. Represents a combination of FAF4 Pipeline, Other and Unknown and Multiple Modes and Mail categories.

\*\*\* International cargo through the Port of Baltimore in 2016, source: MPA.

Data for air, rail and truck is adjusted yearly to account for 2016 FHWA FAF data (based on 2012 actual data and FHWA adjustments) and a 2% annual growth rate.

# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Juan Torrico  
*Maryland Transit Administration (MTA)*

## PURPOSE OF MEASURE:

To track public and private international waterborne cargo activity in the Port of Baltimore, which is a strong indicator of jobs generated and economic activity.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

U.S. Census data via website – USA Trade Online.

## NATIONAL BENCHMARK:

Mid-Atlantic ports' international cargo.

## PERFORMANCE MEASURE 10.3B

### Freight Mobility: Port of Baltimore International Cargo Market Share and Rankings

Cargo through the Port of Baltimore is an indicator of the region's commercial health, because freight is the economy in motion; if freight is not moving, then neither is the economy. International tonnage in Baltimore increased 25 percent in the 2nd quarter due to strong export coal and container volumes. The Port's general cargo was up 7.9 percent in the 2nd quarter, and bulk commodities were up 35 percent.

Baltimore's international cargo tonnage increased two million tons in the 2nd quarter compared to the same period of the prior year, and market share increased by two percentage points for the Mid-Atlantic ports.

The Maryland Port Administration is an active partner with the Corps of Engineers to ensure the navigation channels are dredged to allow the world's fleets easy access to the port.

In the Mid-Atlantic region, the Port of Baltimore ranks:

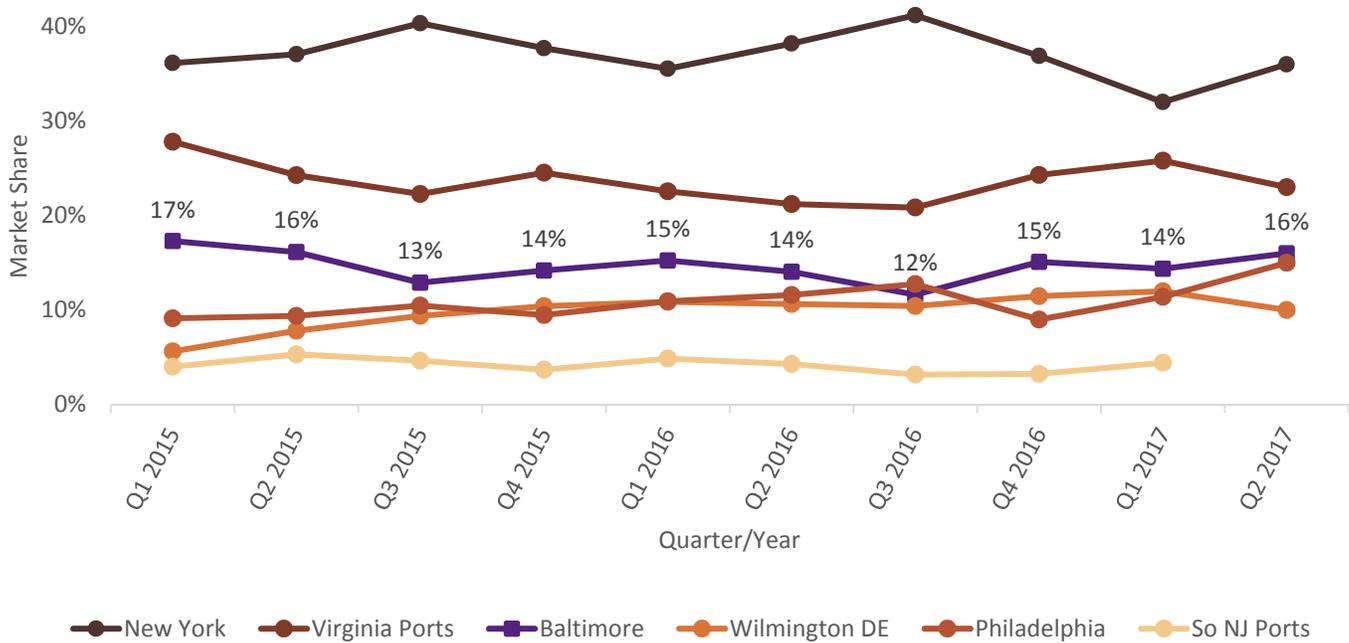
- 1st in Autos and Roll-on/Roll-off (Ro/Ro) heavy equipment
- 1st in imported sugar
- 2nd in imported forest products
- 2nd in exported coal
- 3rd in containers
- 3rd in total international cargo

# Facilitate Economic Opportunity in Maryland

## PERFORMANCE MEASURE 10.3B

### Freight Mobility: Port of Baltimore International Cargo Market Share and Rankings

Chart 10.3B.1: Market Share, Mid-Atlantic Ports International Waterborne Cargo Q1 FY2015 - Q2 FY2017



Note: So. NJ Ports' data for Q2 2017 could not be separated from Philadelphia's data.

# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Deb Rogers  
*Maryland Vehicle Administration (MVA)*

## PURPOSE OF MEASURE:

Data shows level of activity at Public Marine Terminals.

## FREQUENCY:

Monthly

## DATA COLLECTION METHODOLOGY:

Data obtained from MPA cargo billing reporting and statistical system (BRASS). Historical data are available to 1998.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 10.3C

MPA Total General Cargo Tonnage including the following strategic commodities:  
Containers, Autos, Ro/Ro and Imported Forest Products

As a rule of thumb, general cargo generates more jobs per ton than bulk commodities. Although international general cargo is one-third of the Port's total tonnage, it accounts for 96 percent of the Port's cargo value, and the State's public terminals handle the clear majority of general cargo. Therefore, it is an important measure to track. Plus, freight is the economy in motion and marine terminals are a hive of activity which generates jobs.

Although the MPA set a record of 10.1 million tons in 2016, the Port's public terminals continue the record breaking trend in 2017, i.e., January set a new all-time monthly high, which was beaten in May; the second quarter was 6.5 percent higher than prior second quarter; and the first seven months of 2017 are 6.6 percent higher than the same period of the prior year. Containers showed the strongest growth. Although low commodity prices on both agricultural products and minerals keep sales of farm, construction and mining equipment suppressed and the strong US dollar discourages exports, Baltimore remains the top Ro/Ro port on the East Coast.

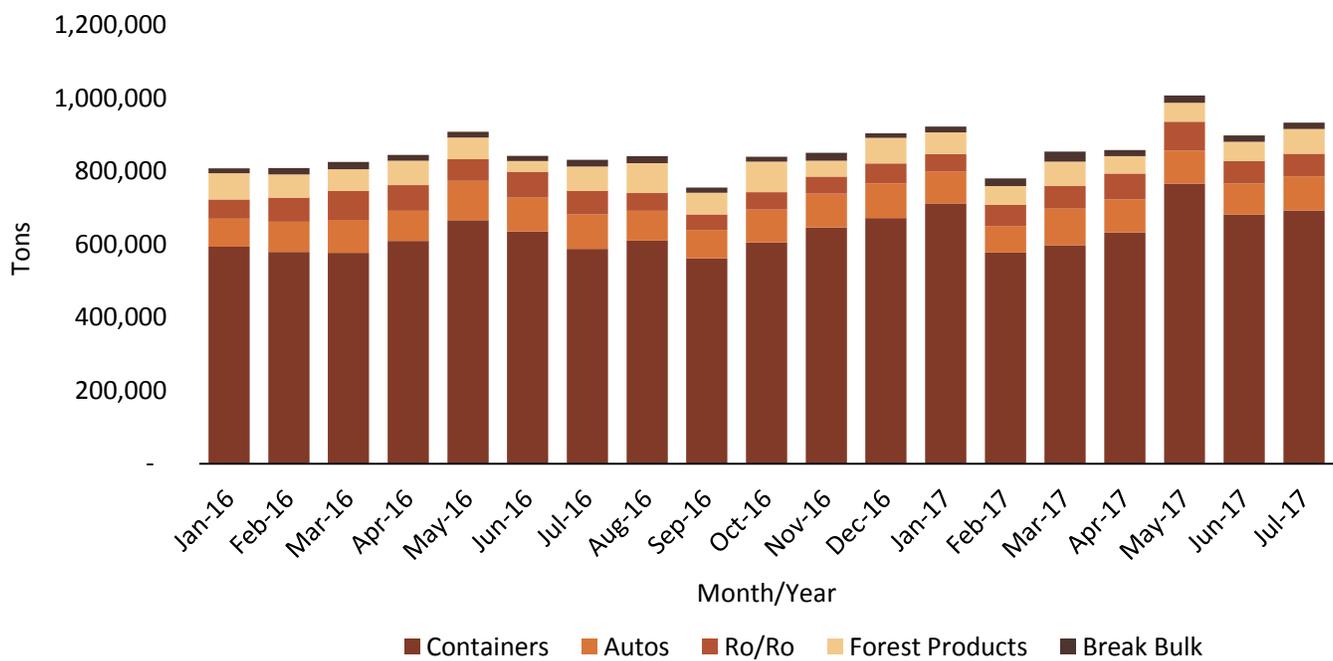
MPA conducts a multi-pronged effort to sustain and expand cargo volumes, e.g., emphasizing long term contracts with favorable rates; marketing for the whole Port; facilitating ways to improve efficiency at Seagirt Marine Terminal to increase truck productivity; managing the capital program to focus on system preservation to keep current customers; and enhancements to keep pace with the evolving global logistics and ever increasing fleet size and vessel sharing agreements.

# Facilitate Economic Opportunity in Maryland

## PERFORMANCE MEASURE 10.3C

MPA Total General Cargo Tonnage including the following strategic commodities: Containers, Autos, Ro/Ro and Imported Forest Products

Chart 10.3C.1: MPA General Cargo Tonnage January 2016-July 2017



# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Rafael Espinoza  
*Maryland Transportation Authority (MDTA)*

## PURPOSE OF MEASURE:

To minimize the number of weight-posted bridges to facilitate the improvement in movement of goods to businesses, communities and the economy.

## FREQUENCY:

Annually (in July)

## DATA COLLECTION METHODOLOGY:

Data reflects federal reporting in April of each year. The number of bridges on the State-owned system that are weight-posted are reported in the Structure Inventory and Appraisal (SI&A) report. That number is then divided by the total number of SHA and MDTA bridges, resulting in the calculation of the percentage of weight-posted bridges on the State system.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 10.4

### Number and Percentage of Bridges on the State-Owned System that are Weight-Posted

Weight-posted bridges are those that are unable to safely carry the maximum weight of a legally loaded vehicle (80,000 lbs. for tractor trailers and 70,000 lbs. for dump trucks). Weight-posted bridges adversely affect movement of goods for businesses and communities, and can impact daily commercial operations and business growth. Allowing all legally-loaded vehicles to traverse the bridges on the State system is essential to commerce in Maryland, facilitating the movement of goods and provision of services efficiently throughout the State. Minimizing weight-posted bridges ensures the safety of the traveling public and facilitates emergency response time by avoiding the need for detour routes. If a bridge cannot safely carry all legal loads, due to its present condition or original design criteria, it will be evaluated and a vehicle weight will be established that it can safely carry. This lower vehicle weight (which is less than the legal weight) will be placed on signs alerting all potential users of the maximum load that the bridge should carry.

Whenever inspections of weight-posted bridges or structurally deficient bridges indicate that repairs are necessary to prevent a weight posting or the lowering of the existing allowable weight restriction, the work to prevent this will be given top priority, and where possible, complete actual construction 18 months from the date when the need for the work was established.

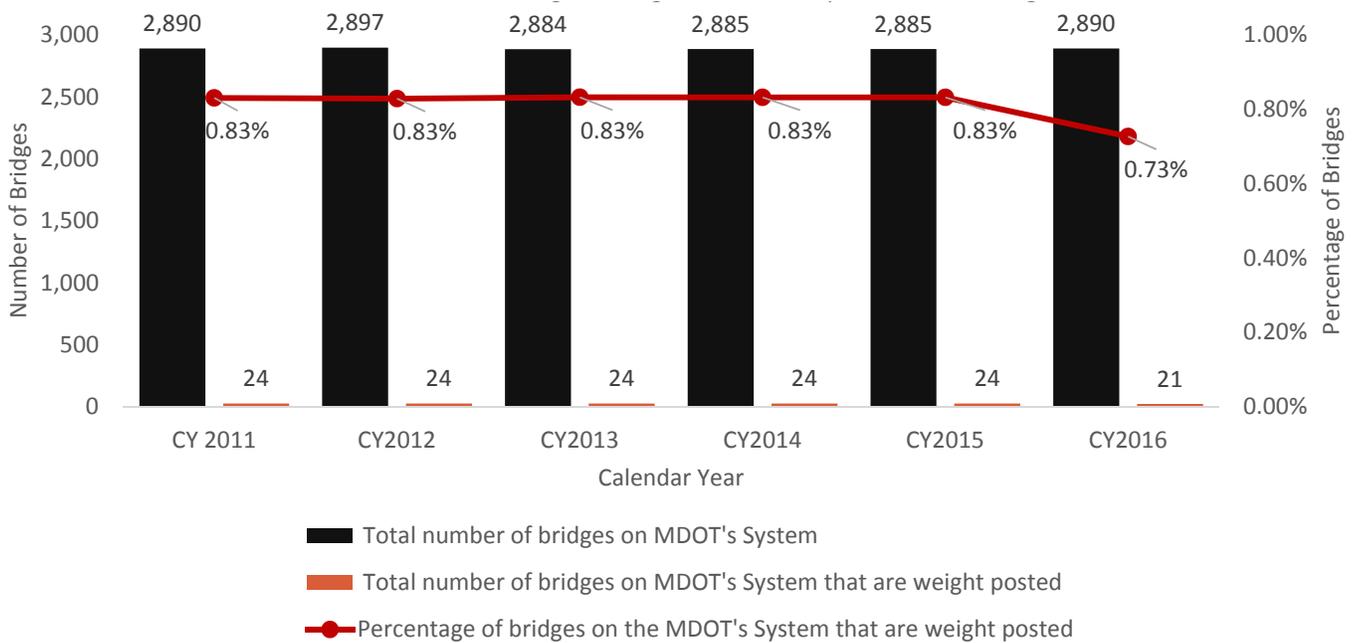
Less than 1 percent of SHA and MDTA bridges have a weight restriction.

# Facilitate Economic Opportunity in Maryland

## PERFORMANCE MEASURE 10.4

Number and Percentage of Bridges on the State-Owned System that are Weight-Posted

Chart 10.4.1 Number & Percentage of Bridges on MDOT's System that are Weight-Posted CY2011-CY2016



# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Corey Stottlemyer  
*The Secretary's Office (TSO)*

## PURPOSE OF MEASURE:

To quantify the impacts of changes in the transportation network on the state's economy due to completed transportation projects providing businesses with access to labor, customers, and suppliers. Improved access leads to greater opportunities.

## FREQUENCY:

Annually

## DATA COLLECTION METHODOLOGY:

As transportation projects are completed and the transportation network is enhanced, changes in travel demand and user choice will be modeled using a transportation economic impact model, which is a multimodal measure.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 10.5

### Change in Market Access due to Improvements in the Transportation Network

Improving access within Maryland's transportation network is a critical role MDOT plays in facilitating economic opportunity for the citizens of Maryland, its businesses and those who come to the State to do business. Currently, MDOT does not measure the impact of changes to the transportation network and its effect on market access. This measure would allow MDOT to look at how improvements in roads and multimodal access is affecting Maryland's economy and assess whether businesses have better access to labor, customers, suppliers and international markets.

This measure includes potential impacts from:

- Business Relocation – Improved market access has the effect of strengthening an economy's competitiveness in attracting and retaining business relative to other locations.
- Productivity Growth – Increasing an economy's accessibility and connectivity generates agglomeration benefits from returns to scale in production, knowledge spillovers, and better matching of suppliers and employees to businesses.
- Increased Import/Export Activity – Improving an economy's access to international gateways can enable new import/export activity.

The Multimodal Process Improvement Team for this measure has met and the tool used to measure the market access has been secured. MDOT has developed a standardized approach to modeling projects and is running test simulations to ensure consistency.

# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Corey Stottlemeyer  
*The Secretary's Office (TSO)*

## PURPOSE OF MEASURE:

To quantify the impacts of changes in the transportation network on the productivity of people and businesses in Maryland.

## FREQUENCY:

Annually

## DATA COLLECTION METHODOLOGY:

As transportation projects are completed and the transportation network is enhanced, changes in travel demand and user choice will be modeled using a transportation economic impact model; this is a multimodal measure.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 10.6

### Change in Productivity due to Improvements in the Transportation Network

Productivity gains are essential to economic growth as businesses and people have to do more with fewer resources. The transportation network is similar to the Internet and other innovations that allow people and businesses to be more productive. Currently, MDOT does not measure the impact of changes to the transportation network and its effect on productivity.

Using a transportation economic impact model, MDOT will be able to assess four types of productivity benefits to ensure it helps facilitate business opportunities throughout Maryland:

1. Travel cost savings;
2. Reliability benefits for industry;
3. Delivery logistics and supply chain benefits; and
4. Agglomeration effects on access to specialized skills and services.

The Multimodal Process Improvement Team for this measure has met and the tool used to measure the productivity has been secured. MDOT has developed a standardized approach to modeling projects and is running test simulations to ensure consistency.

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Eric Beckett  
*State Highway Administration (SHA)*

## PURPOSE OF MEASURE:

To estimate benefits to highway users due to CHART incident management, major/minor capital improvements, signal retiming, HOV lane, and park-and-ride operations as an indicator of cost savings due to reduced delay.

## FREQUENCY:

Annually (in January)

## DATA COLLECTION METHODOLOGY:

MDOT collects and maintains data on travel speeds, traffic volumes, incidents, and facility usage to develop user cost savings.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 10.7

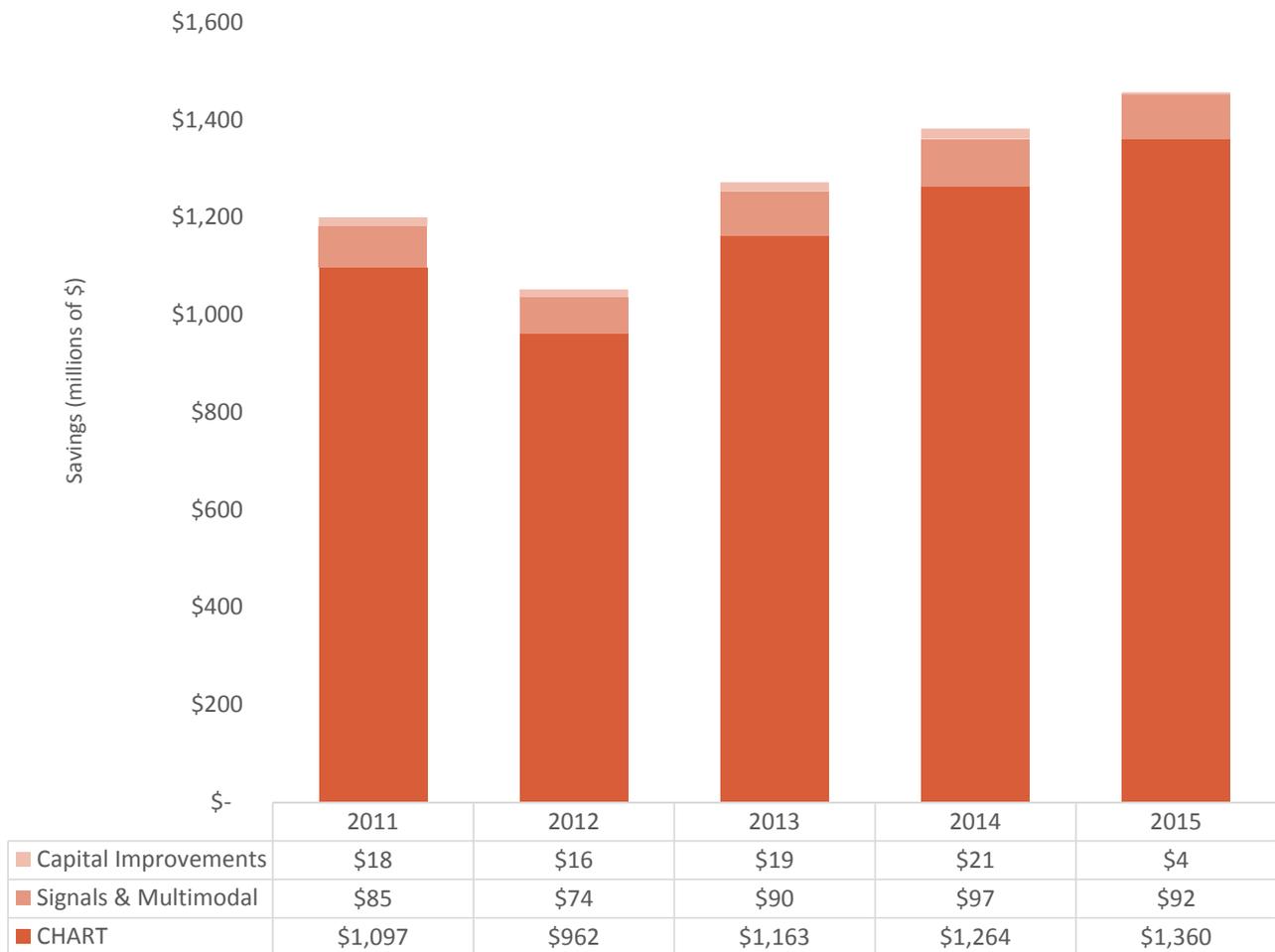
### Total User Cost Savings for the Traveling Public due to Congestion Management

The SHA and MDTA implement various projects, programs and policies to reduce congestion and enhance mobility on their facilities. The SHA focuses on both recurrent and non-recurrent aspects of congestion. These include CHART, Incident Management and Intelligent Transportation Systems (ITS) programs, major/minor roadway geometric improvements, traffic signal system optimization, and multimodal strategies like HOV lane operations and park-and-ride facilities. The congestion management solutions implemented by SHA and MDTA result in significant user cost savings (e.g. delay reduction, fuel savings) to automobile and truck traffic. MDOT continues to implement operational strategies, including a Transportation Systems Management and Operations (TSM&O) Strategic Plan, and provides Traffic Incident Management training to partner organizations, while also exploring local, regional and State incident management coordination opportunities. Reductions in travel times directly result in roadway user cost savings.

## PERFORMANCE MEASURE 10.7

### Total User Cost Savings for the Traveling Public due to Congestion Management

Chart 10.7.1: Annual User Cost Savings Through MDOT Congestion Management Efforts CY2011-CY2015



# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Eric Beckett  
*State Highway Administration (SHA)*

## PURPOSE OF MEASURE:

To quantify the degree of congestion experienced by highway users when traveling during peak hours.

## FREQUENCY:

Annually (in January)

## DATA COLLECTION METHODOLOGY:

Includes private sector vehicle probe speed data, and traffic count data on average weekdays.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 10.8

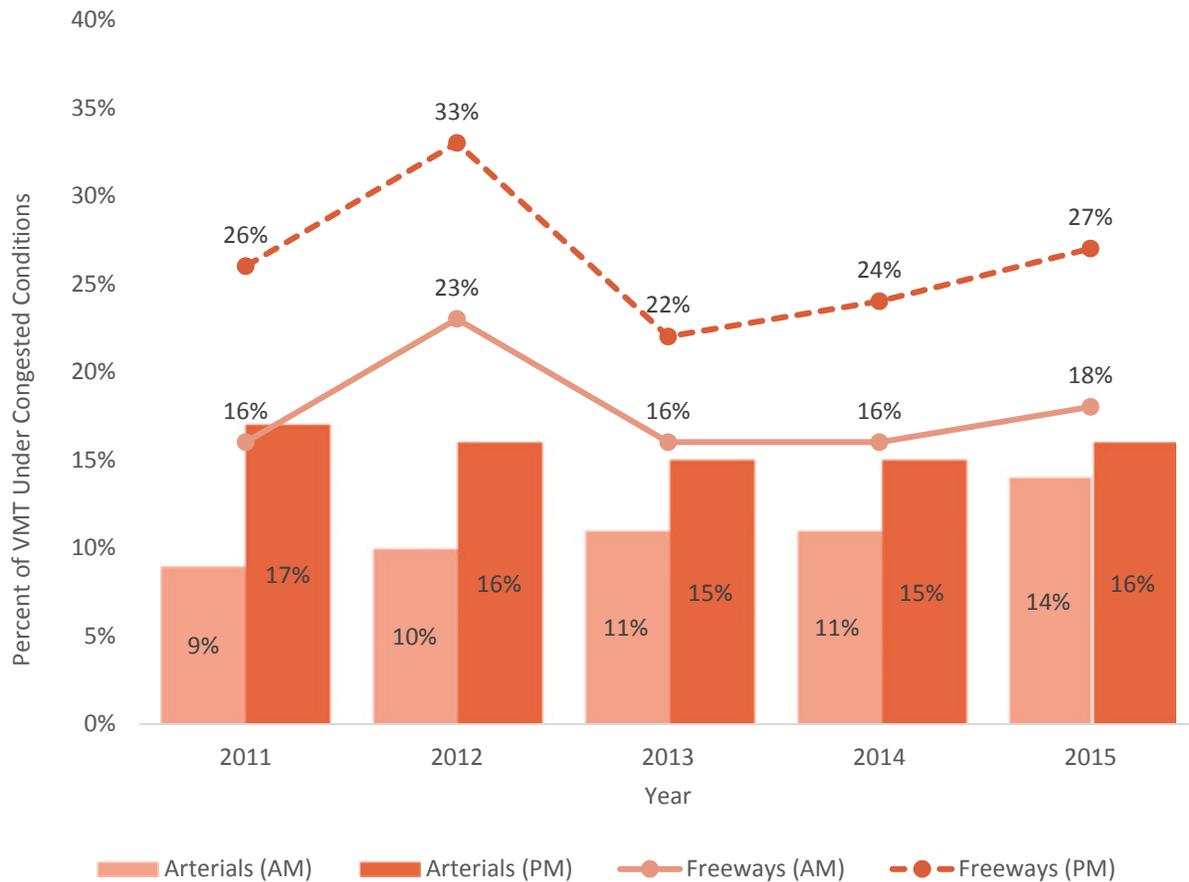
### Percent of VMT in Congested Conditions on Maryland Freeways and Arterials in the AM/PM Peak Hours

This measure represents the percentage of peak hour VMT on Maryland highways that occur in congested conditions. Congestion on freeways is said to occur when the travel time index (TTI) ratio is greater than 1.3 (traffic travels at 25 percent slower than the free flow speed). Congestion on arterials is said to occur when the traffic Level of Service (LOS) is rated E, or worse, on a scale of A through F. These congestion metrics are a good indicator of customer experience on roadways in morning and evening peak hours. The share of VMT on the freeways/expressways which occurred in congested conditions is generally higher than the share for arterial roadways. Peak hour congestion is dominated by non-discretionary trips including goods movement, commute and school trips. Reducing congestion and enhancing the reliability of peak hour trips make Maryland more attractive for economic development and provide users with a high quality safe, efficient and reliable highway system.

## PERFORMANCE MEASURE 10.8

Percent of VMT in Congested Conditions on Maryland Freeways and Arterials in the AM/PM Peak Hours

Chart 10.8.1: Peak Hour Congested VMT Trends CY2011-CY2015



# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Jack Cahalan  
*Maryland Aviation Administration (MAA)*

## PURPOSE OF MEASURE:

To demonstrate Martin State Airport's share of the general aviation business in the Baltimore region.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Operations Network Data compiled by the Federal Aviation Administration.

## NATIONAL BENCHMARK:

General aviation activity at BWI Marshall's general aviation facility.

## PERFORMANCE MEASURE 10.9A

### Market Share: Martin State Airport's Regional Market Share

Martin State Airport is a general aviation facility located in eastern Baltimore County, Maryland serving the general aviation needs of the Baltimore region. It is owned and operated by the State of Maryland. This performance measure gauges the percentage of itinerant general aviation activity at Martin State Airport as compared to the itinerant general aviation activity at BWI Marshall. Itinerant general aviation activity is defined as a flight where its origin or destination takes it beyond the electronic control of the local control tower. This measure captures the amount of discretionary use of Martin State Airport by the business and general aviation community flying in and out of the Baltimore region.

The volume of itinerant general aviation operations is an indicator of how much business traffic Martin State Airport is, or is not, attracting. The more itinerant operations, the more in potential fuel sales and other support operations occur at Martin State Airport. Such operations generate revenue and support existing jobs at, and around, the airport. Strong market share also indicates Martin State is adequately performing one of its primary missions, serving as a "reliever airport" for BWI Marshall. A reliever airport is one that attracts general aviation traffic away from a region's primary commercial airport, reducing demand on the congested airspace surrounding the commercial airport.

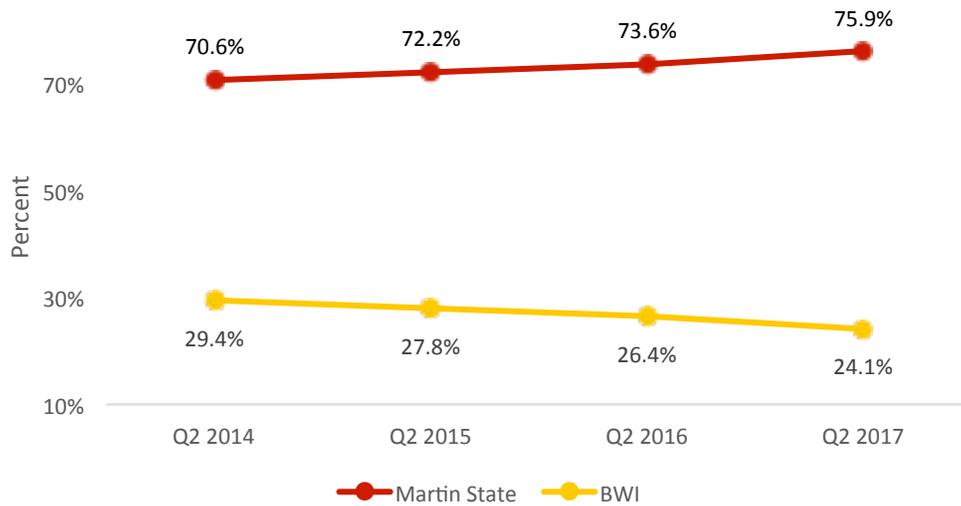
Martin State Airport is performing well. From Q4 2014 through Q4 2016, Martin State demonstrated strong growth in market share of itinerant general aviation operations, increasing from 70 percent to 76 percent while general aviation activity at BWI Marshall declined from 29 percent to 23 percent.

# Facilitate Economic Opportunity in Maryland

## PERFORMANCE MEASURE 10.9A

### Market Share: Martin State Airport's Regional Market Share

Chart 10.9A.1: Percent of all General Aviation Operations other than Local Operations Q2 CY2014-CY2017



# Facilitate Economic Opportunity in Maryland

## TANGIBLE RESULT DRIVER:

Jim Dwyer  
*Maryland Port Administration (MPA)*

## PERFORMANCE MEASURE DRIVER:

Jack Cahalan  
*Maryland Aviation Administration (MAA)*

## PURPOSE OF MEASURE:

To demonstrate the percent of scheduled nonstop destinations served by BWI Marshall against the total number of nonstop destinations served by the region's three major airports.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Air service schedule analysis.

## NATIONAL BENCHMARK:

Reagan National Airport; Dulles International Airport.

## PERFORMANCE MEASURE 10.9B

### Market Share: Percent of Nonstop Markets Served Relative to Benchmark Airports

The Washington-Baltimore region is served by three primary airports. They include: Baltimore/Washington International (BWI) Thurgood Marshall Airport; Ronald Reagan National Airport; and Dulles International Airport. More than 25 million passengers flew through BWI Marshall Airport in 2016, an all-time-record for passenger traffic. In fact, BWI Marshall has posted 18-straight monthly passenger records through December 2016. International passenger traffic reached 1,233,466 million passengers in 2016, also a new record, and 2016 was the second-straight year with more than one million international passengers.

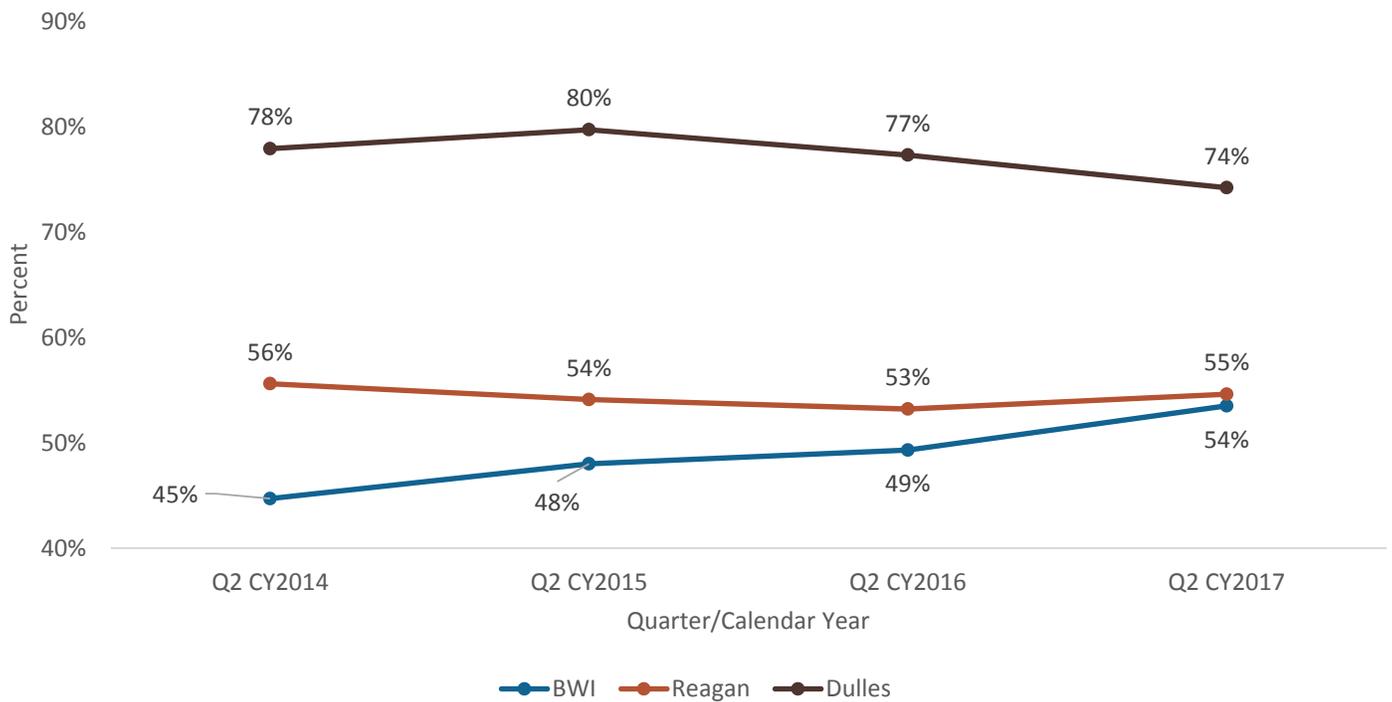
The number of nonstop destinations at an airport serves is an important performance metric, as nonstop service is preferred by passengers. Due to the seasonal nature of air travel, the way to evaluate performance is by comparing how an airport performs in a particular quarter one year compared to that same quarter in another year. Chart 10.9B.1 demonstrates that BWI Marshall has produced a steady increase in nonstop destinations in the fourth quarter of the calendar year from 2014 to 2016. The number of nonstop destinations grew to 52 percent of all markets served by the region's three airports in Q4 2016 compared to 46 percent of all markets served in Q4 2014. Today, BWI Marshall provides more than 300 daily nonstop departures and nonstop service to more than 80 domestic and international destinations.

# Facilitate Economic Opportunity in Maryland

## PERFORMANCE MEASURE 10.9B

Market Share: Percent of Nonstop Markets Served Relative to Benchmark Airports

Chart 10.9B.1: Percent of Nonstop Markets Served Relative to Benchmark Airports in Q2 CY2014-CY2017



## TANGIBLE RESULT DRIVER:

Jim Dwyer  
Maryland Port Administration (MPA)

## PERFORMANCE MEASURE DRIVER:

Jack Cahalan  
Maryland Aviation Administration (MAA)

## PURPOSE OF MEASURE:

To determine market share in Baltimore/Washington region by tracking number of passengers and departing flights at BWI Marshall compared to other airports in the region.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Air service schedule analysis.

## NATIONAL BENCHMARK:

Reagan National Airport; Dulles International Airport.

## PERFORMANCE MEASURE 10.9C

### Market Share: Percent of Passengers and Departing Flights Relative to Benchmark Airports

The Washington-Baltimore region is served by three primary airports. They include: Baltimore/Washington International (BWI) Thurgood Marshall Airport; Ronald Reagan National Airport; and Dulles International Airport. More than 25 million passengers flew through BWI Marshall Airport in 2016, an all-time-record for passenger traffic. In fact, BWI Marshall has posted 18-straight monthly passenger records through December 2016. International passenger traffic reached 1,233,466 million passengers in 2016, also a new record, and 2016 was the second-straight year with more than one million international passengers.

Due to the seasonal nature of air service schedules, the most valid way to track service performance is a comparison of identical quarters in prior calendar years. As seen in the following charts, BWI Marshall Airport's percentage of departing flights steadily increased between the fourth quarter of 2014 and the same time-period in 2016. This positive performance is due primarily to continued growth by Southwest, jetBlue, Spirit and Allegiant Airlines in 2016. In the fourth quarter of 2016, BWI Marshall Airport served more passengers than any other airport in the region.

BWI is first in market share of passengers and third in market share of number of departing flights. This is because Reagan National handles a great deal of commuter flights which use smaller aircraft and carry fewer passengers. This fact results in a larger number of overall departures at Reagan than BWI Marshall. This "commuter factor" is also present, to a lesser degree, at Dulles.

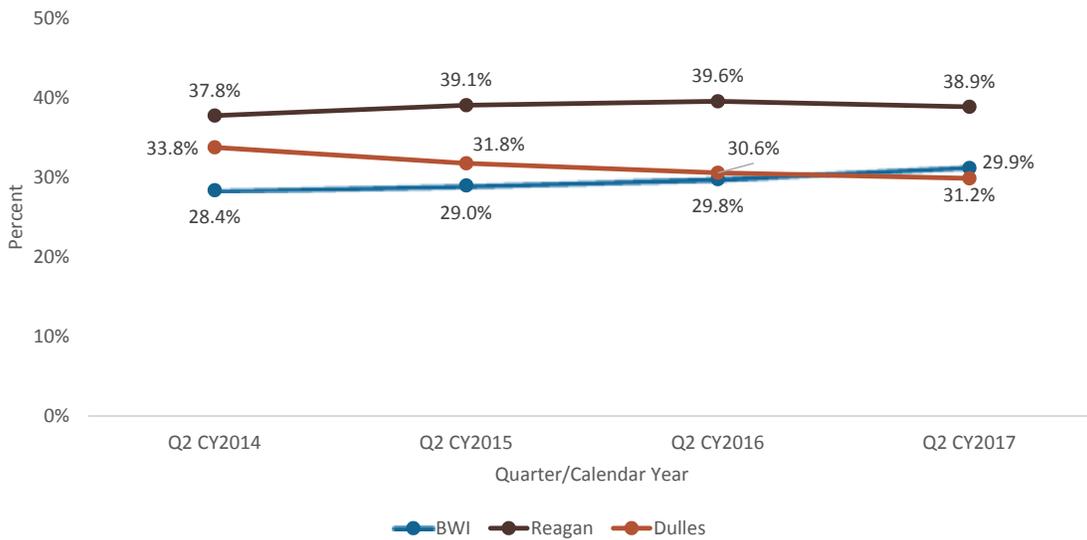
By contrast, BWI Marshall handles relatively few commuter flights. The overwhelming majority of flights at BWI Marshall involve regularly scheduled, longer distance flights using standard size commercial aircraft like the Boeing 737 flown by Southwest Airlines, which is responsible for 70 percent of the traffic at BWI Marshall. As an example, a commuter jet may carry 50 passengers where a 737-800 model aircraft flown by Southwest will carry 175.

# Facilitate Economic Opportunity in Maryland

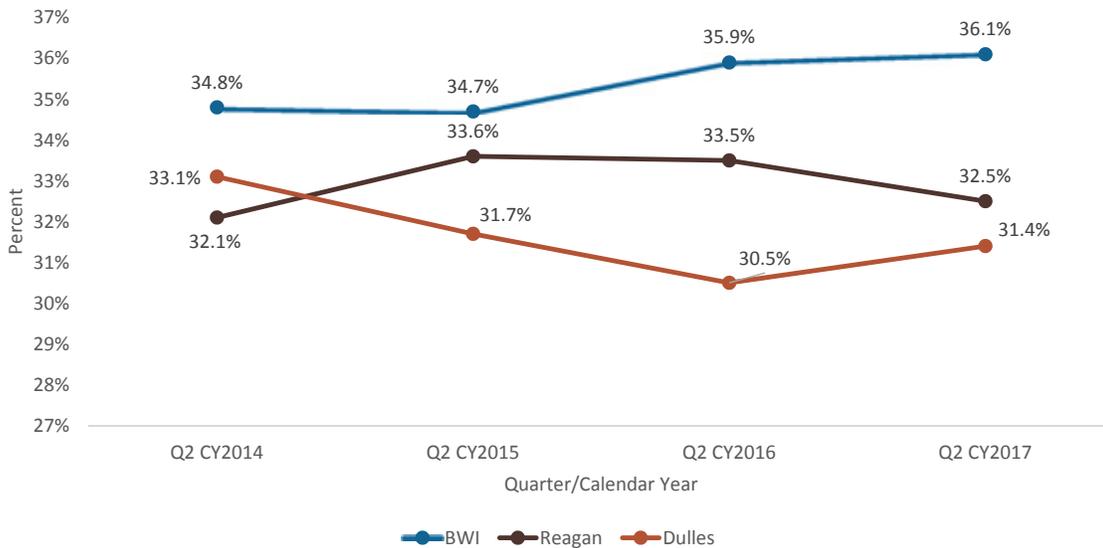
## PERFORMANCE MEASURE 10.9C

Market Share: Percent of Passengers and Departing Flights Relative to Benchmark Airports

**Chart 10.9C.1: Percent Total Daily Departures at the Region's Airports Q2 CY2014-CY2017**



**Chart 10.9C.2: Percent Total Passengers Served by the Regions Airport's Q2 CY2014-CY2017**



**TANGIBLE RESULT DRIVER:**

Jim Dwyer  
*Maryland Port Administration (MPA)*

**PERFORMANCE MEASURE DRIVER:**

Glen Carter  
*The Secretary's Office (TSO)*

**PURPOSE OF MEASURE:**

To improve customer service with a predictable, consistent and transparent process for obtaining an access permit for development in Maryland.

**FREQUENCY:**

Quarterly

**DATA COLLECTION METHODOLOGY:**

Reviews, permits and delivery times are tracked in the Access Management Database.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 10.10

### Percent of Roadway Access Permits Issued within 21 Days or Less

Access permits help promote safe and efficient roads for travel while supporting economic development and growth in jobs and businesses. The issuance of access permits, and the resulting construction of roadway and entrance improvements by developers, are some of the last steps before opening a business or selling commercial or residential properties for occupancy. This activity contributes to the creation of new jobs, businesses and development/redevelopment opportunities.

This measure tracks MDOT-SHA efforts to improve customer service with a predictable, consistent and transparent process for obtaining an access permit. The performance target is 100 percent of permits are issued within 21 days (after receipt of a complete application package). On average over the last five years, 105-125 completed applications are received each year.

Ongoing practices include:

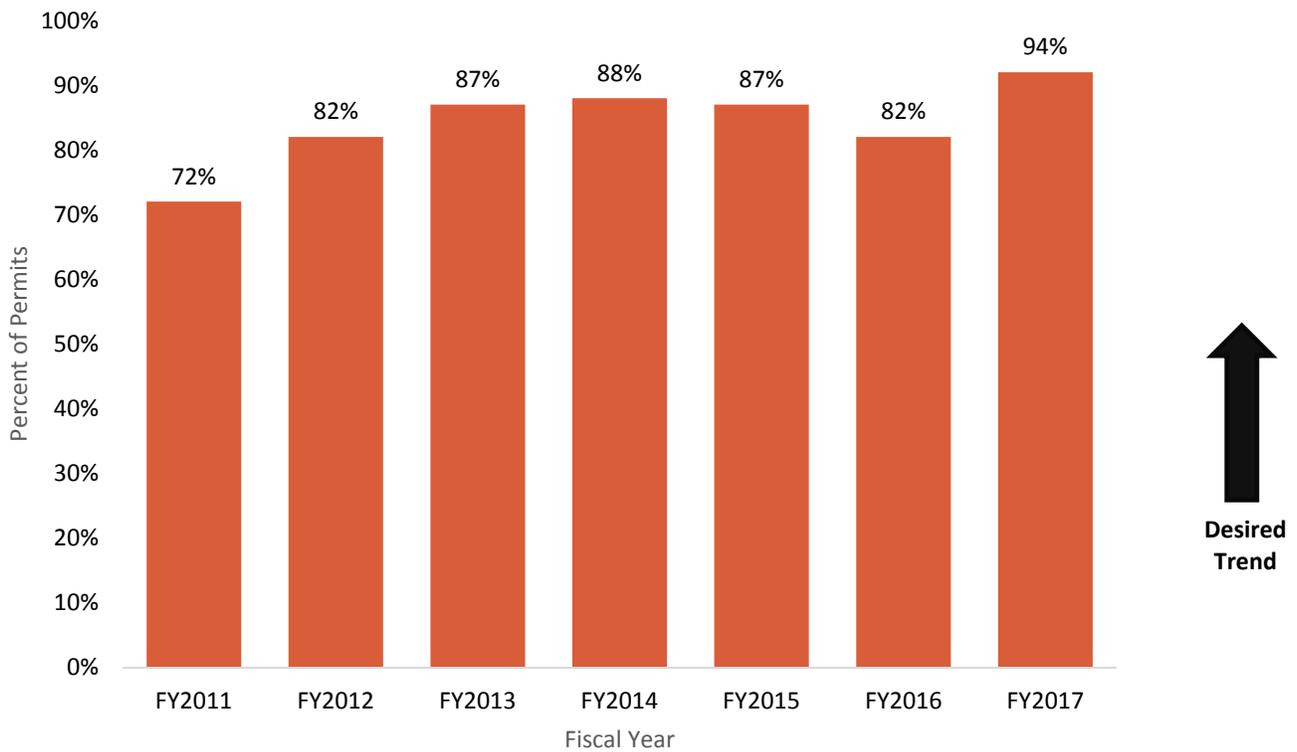
- Meeting with stakeholders in working group to establish clear expectations;
- Weekly project status alerts to the District Access Management Team.

# Facilitate Economic Opportunity in Maryland

## PERFORMANCE MEASURE 10.10

Percent of Roadway Access Permits Issued within 21 Days or Less

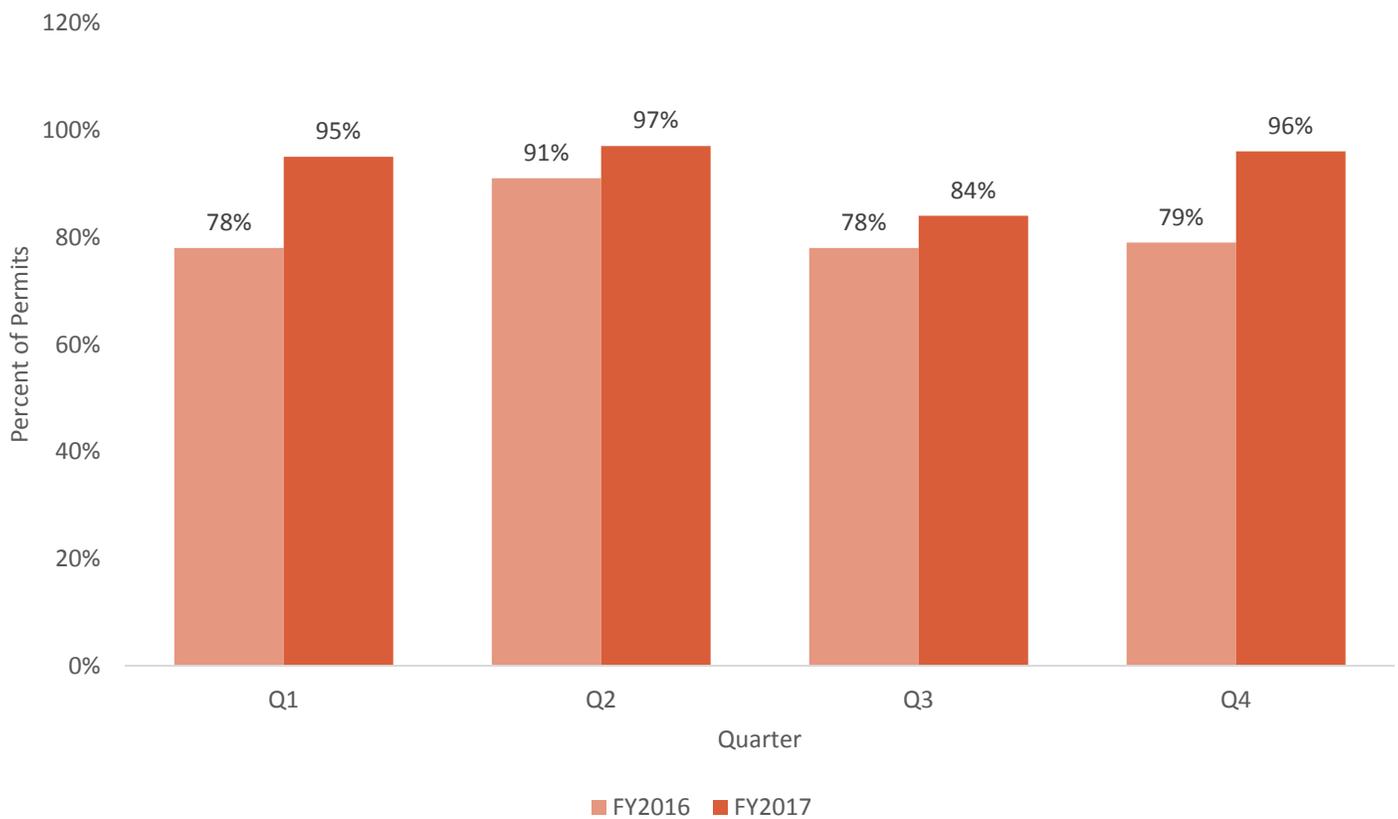
Chart 10.10.1: Percent of Permits Issued Within 21 Days FY2011-FY2017



## PERFORMANCE MEASURE 10.10

### Percent of Roadway Access Permits Issued within 21 Days or Less

Chart 10.10.2: Percent of Permits Issued Within 21 Days per Quarter FY2016 & FY2017



**All Electronic Tolling (AET)** – Collection of tolls at highway speeds using *E-ZPass* transponders or video tolling; no toll booths or cash collection.

**Annual Attainment Report on Transportation System Performance** – Pursuant to Transportation Article Section 2-103.1 of the Annotated Code of Maryland, the State is required to develop or update an annual performance report on the attainment of transportation goals and benchmarks in the Maryland Transportation Plan (MTP) and Consolidated Transportation Program (CTP). The Attainment Report must be presented annually to the Governor and General Assembly before they may consider the MTP and CTP.

**Calendar Year (CY)** – The period of 12 months beginning January 1 and ending December 31 of each reporting year.

**Coordinated Highways Action Response Team (CHART)** – CHART is an incident management system aimed at improving real-time travel conditions on Maryland’s highway system. CHART is a joint effort of the State Highway Administration, Maryland Transportation Authority and the Maryland State Police, in cooperation with other federal, state and local agencies.

**Consolidated Transportation Program (CTP)** – A six-year program of capital projects, which is updated annually to add new projects and reflect changes in financial commitments.

**Fiscal Year (FY)** – A yearly accounting period covering the time frame between July 1 and June 30 of each reporting year.

**MPA General Cargo** – Foreign and domestic waterborne general cargo handled at the public (MPA) terminals.

**Port of Baltimore Foreign Cargo** – International (Foreign) cargo handled at public and private terminals within the Baltimore Port District. This includes bulk cargo (e.g., coal, sugar, petroleum, ore, etc. shipped in bulk) and all general cargo (e.g., miscellaneous goods shipped in various packaging).

**MAA** – Maryland Aviation Administration operates Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall) and Martin State Airport, a general aviation/reliever airport northeast of Baltimore.

**MDTA** – Maryland Transportation Authority operates and maintains the State’s eight toll facilities.

**Mode** - Form of transportation used to move people or cargo (e.g., truck, rail, air).

**MPA** – Maryland Port Administration promotes the Port of Baltimore as a leading east coast hub for cargo and cruise activity.

**MTA** – Maryland Transit Administration provides Local Bus, Light Rail, Metro Rail, Paratransit services and regional services through commuter rail (MARC) and Commuter Bus, as well as grant funding and technical assistance.

**MVA** – Motor Vehicle Administration serves as the gateway to Maryland’s transportation infrastructure, providing a host of services for drivers and vehicles, including registration, licensing and highway safety initiatives.

**SHA** – State Highway Administration manages the State’s highway system which includes 17,117 lane miles of roads and 2,564 bridges

**TBU** – Transportation Business Unit

**TSO** – The Secretary’s Office

**Vehicle Miles of Travel (VMT)** – A measurement of the total miles traveled by all vehicles.



**Boyd K. Rutherford**  
*Lt. Governor*



**Larry Hogan**  
*Governor*



**Pete K. Rahn**  
*Secretary of Transportation*

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*The data contained herein is impacted by a number of variables and may vary and evolve depending on those variables.*

