



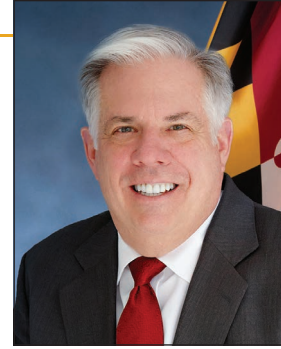
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STATE HIGHWAY
ADMINISTRATION

FISCAL YEAR IN REVIEW

MESSAGE FROM THE GOVERNOR



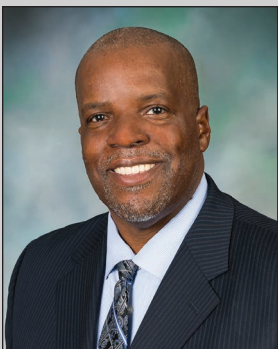
Larry Hogan

Our Administration is dedicated to providing reliable, safe and efficient transportation to all who live in and travel through the State of Maryland. Our transportation system facilitates economic growth, fosters job creation, supports business development and improves our overall quality of life. Our State's highway network is the backbone of our transportation system and supports the vitality and quality of life for Marylanders and our visitors. From the interstates that support Maryland's thriving economic engines to the sidewalks that our children use to walk to school, the work of Maryland Department of Transportation (MDOT) is crucial to our promise to *"Change Maryland for the Better"*.

The FY 2016 MDOT State Highway Administration's Year in Review highlights successes, progress on projects and our commitment to safety and innovation. We have made tremendous progress on major projects, including our commitment of an unprecedented additional \$2 billion in shovel-ready infrastructure projects, and the replacement or repair of every structurally deficient state-owned bridge.

We are focused on improving our transportation infrastructure through the completion of both long and short term projects that are essential to the safety of the millions of people who travel our roadways every year. Our innovative and sustainable solutions will help contribute to building the Maryland economy for years to come.

MDOT will embark on bold endeavors and new business practices this Fiscal Year that remove us from the malaise of bureaucracy and hasten progress with a new focus on customer service. The Hogan Administration will continue to plan and invest in safe, sustainable and innovative transportation solutions. Maryland plays an important role in transportation throughout the Capital Region and the eastern United States, and with your continued support, we can ensure that our State remains *"Open for Business"*!



Gregory C. Johnson, P.E.

MESSAGE FROM THE ADMINISTRATOR

Just as Maryland continues to change for the better, so does the Maryland Department of Transportation State Highway Administration (MDOT SHA). Our vision to deliver a world class network is predicated upon the need to get our customers – you – safely from point A to point B whether walking, bicycling, driving, or delivering goods. As you review SHA's work from FY 2016 and the highlights for FY 2017, you will see how SHA is changing how we do business – abandoning antiquated practices and harnessing technologies.

Moving forward as an agency, SHA's focus is on procurement, project delivery, human resources/hiring and culture and customer service. We are reducing the time it takes to procure our architectural and engineering service contracts. We are speeding up the time it takes to develop a project and start it as



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."

MESSAGE FROM THE SECRETARY

The Maryland Department of Transportation (MDOT) is a customer-driven agency that directly touches the lives of Maryland residents and visitors each and every day. We facilitate the movement of millions of people and the daily flow of goods and services helping connect our customers to life's opportunities. Under the leadership of Governor Hogan, we serve our customers as "One MDOT" through the work of the seven transportation business units.

During the past year, the Maryland Department of Transportation continued to deliver a safe and reliable transportation system through the use of practical design, innovative project delivery, strategic costs savings and targeted investments. We remain vigilant in developing new ways to implement cost-effective transportation services that provide better and faster transportation solutions for those who live, work and travel in Maryland.

For example, we have aggressively focused on reducing the number of structurally deficient bridges by repairing or replacing aging structures. Our combination of employing the latest technologies in our operational strategies with prudent investments in our transportation systems allows Maryland's residents, businesses and visitors to travel more safely and efficiently through our State.

We are dedicated to expanding economic opportunities by creating jobs and connecting communities, while preserving environmental resources. Through our Excellerator program, we have 10 tangible results directly tied to customer priorities to make MDOT the best transportation agency in America. Combined with our Consolidated Transportation Program, MDOT is delivering on the Hogan Administration goals, objectives and priorities that are committed to investing in our highways, interchanges and bridge projects throughout Maryland.

MDOT's State Highway Administration Year in Review provides a brief summary of the accomplishments from Fiscal Year 2016 and outlines impressive initiatives underway in the current fiscal year.



Pete K. Rahn

well as the duration to build it. Given the highly specialized and technical work that we do, we are working to attract and retain the best and brightest people available.

Together these professionals are embarking on a journey to change the culture of our organization and create more sense of urgency. SHA is committed to Governor Hogan's customer service promise to deliver courteous, timely, accurate and accessible information to all customers. At SHA, we think about transportation every day, all day, and we want that to show in every customer interaction. We want all our work to be as incredible as our response to Blizzard Jonas, which restored the vast majority of the system within 10 days of the storm's end, as compared to 16-18 days after the big 2010 storm.

As you travel through Maryland, please drive sober and alert, always buckle up and share the road with cyclists, pedestrians, motorcyclists and other drivers. We are committed to Maryland's Toward Zero Deaths plan and we want everyone to get home safely.

OVERVIEW

An excellent highway system is crucial to a strong economy, enabling mobility and access for people and goods from and throughout the State of Maryland, maintaining the quality of life of Maryland's citizens, and keeping people safe as they travel.

The Maryland Department of Transportation State Highway Administration (MDOT SHA) owns and maintains the Interstate, U.S., and Maryland numbered, non-toll routes in Maryland's 23 counties that represent the backbone of Maryland's transportation system. This infrastructure forms the majority of the National Highway System¹ in Maryland that connects local and county roads to major activity centers and other modes of transportation.

SHA roads carry 66 percent of the traffic in the state but comprise 17 percent of the road mileage. This translates to more than 37 billion vehicle miles of travel² a year. SHA roads carry 214 million tons of freight with an estimated value of \$32 billion. In addition, SHA delivers more than \$1 billion of work annually that is competitively awarded to private entities, sustaining thousands of jobs in the highway industry for contractors, suppliers, engineering firms, and small and minority businesses.

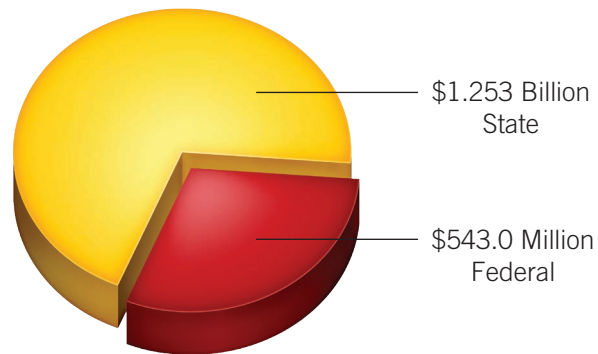
SHA has 2,983 employees who carry out MDOT's mission, seven engineering districts, and 28 maintenance shops around the state, with at least one maintenance facility in each county.

SHA's headquarters in Baltimore City provides central administrative, planning and engineering functions, while our operations offices and the 24/7 Statewide Operations Center are centrally located in Hanover near MDOT headquarters.

SHA operates and maintains more than 17,000 lane-miles³ of roads and 2,564 bridges. SHA also assists local governments with federal funding for 2,343 locally owned bridges and other various federal programs.

SHA SOURCES OF FUNDING FOR FY 2016

(Total: \$1.796 Billion)



¹ The National Highway System is a federally designated category of roads important to the nations' economy, defense and mobility.

² Vehicle miles of travel (VMT) is the number of miles traveled by all vehicles on all roads.

³ Lane-miles is the term used for the mileage down the center line, multiplied by the number of lanes.

EMBRACING CHANGE TO IMPROVE SERVICE

Under new leadership, SHA is changing for the better, so that we can stretch resources and deliver more for our customers. Some of our innovations may seem like “inside baseball,” yet they have a profound effect on our services and projects.

Leveraging Technology and Innovative Practices

Maryland is implementing electronic bidding for our construction contracts, modernizing an antiquated paper process. E-bidding will make contractors’ submissions for bids much smoother – saving them time and money. Since SHA advertises more than a billion dollars in construction contracts each year, the benefits are tremendous.

Since time is money, we are advertising projects in new ways – including time as part of the bidding. Called A + B bidding, SHA considers the time a contractor commits to complete a project in addition to price. For example, the MD 32 widening project winning bidder committed to finishing nine months earlier than others, which equates to \$5 million user savings with less traffic delays.

During construction, we are changing how we manage projects to improve communication and timeliness. SHA will implement “E-Construction” later this year, modernizing the approval process to reduce time, hold people accountable and speed billing. The efficiency will ultimately save money that can be used for additional projects.

Getting the Jam out of Traffic on I-270

Usually MDOT’s SHA prescribes what we want contractors to build. In July, Secretary Pete Rahn joined Governor Hogan to turn the tables and ask contractors what they could do with \$100 million to improve I-270 corridor traffic congestion. This spring, MDOT will award the Innovative Congestion Management project to the firm that can move the most vehicles, the fastest and the farthest! The new approach will be a model for SHA to enlist the best and the brightest from private industry to improve congestion throughout the region.

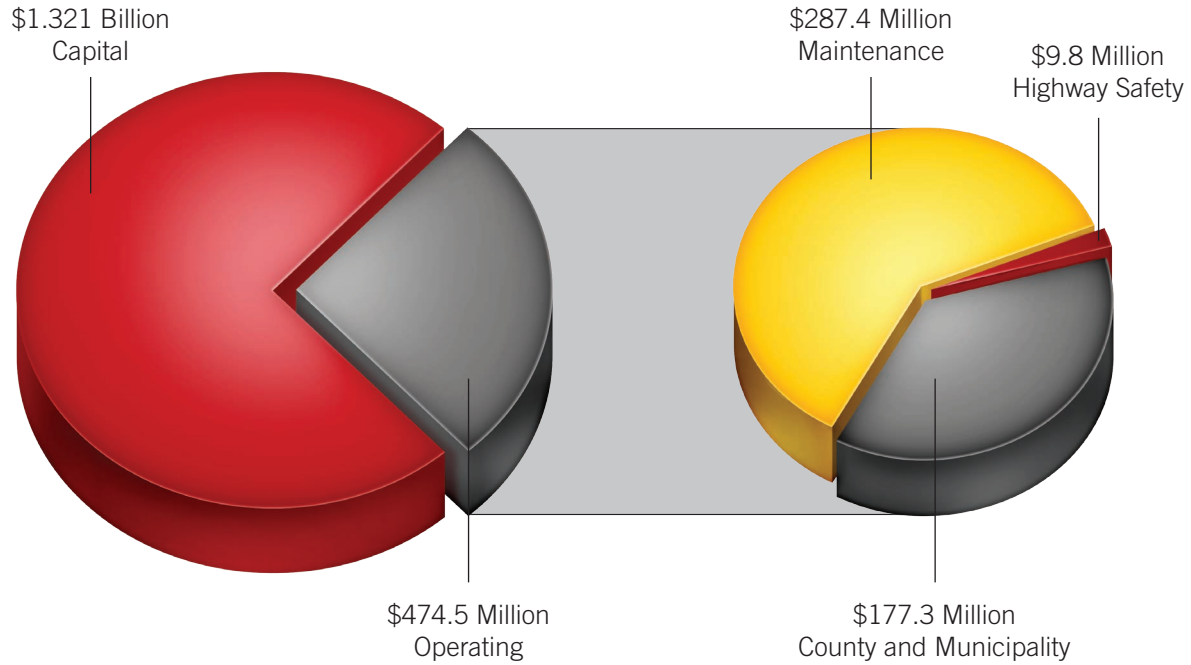


I-270 press conference.

Customer Service Promise

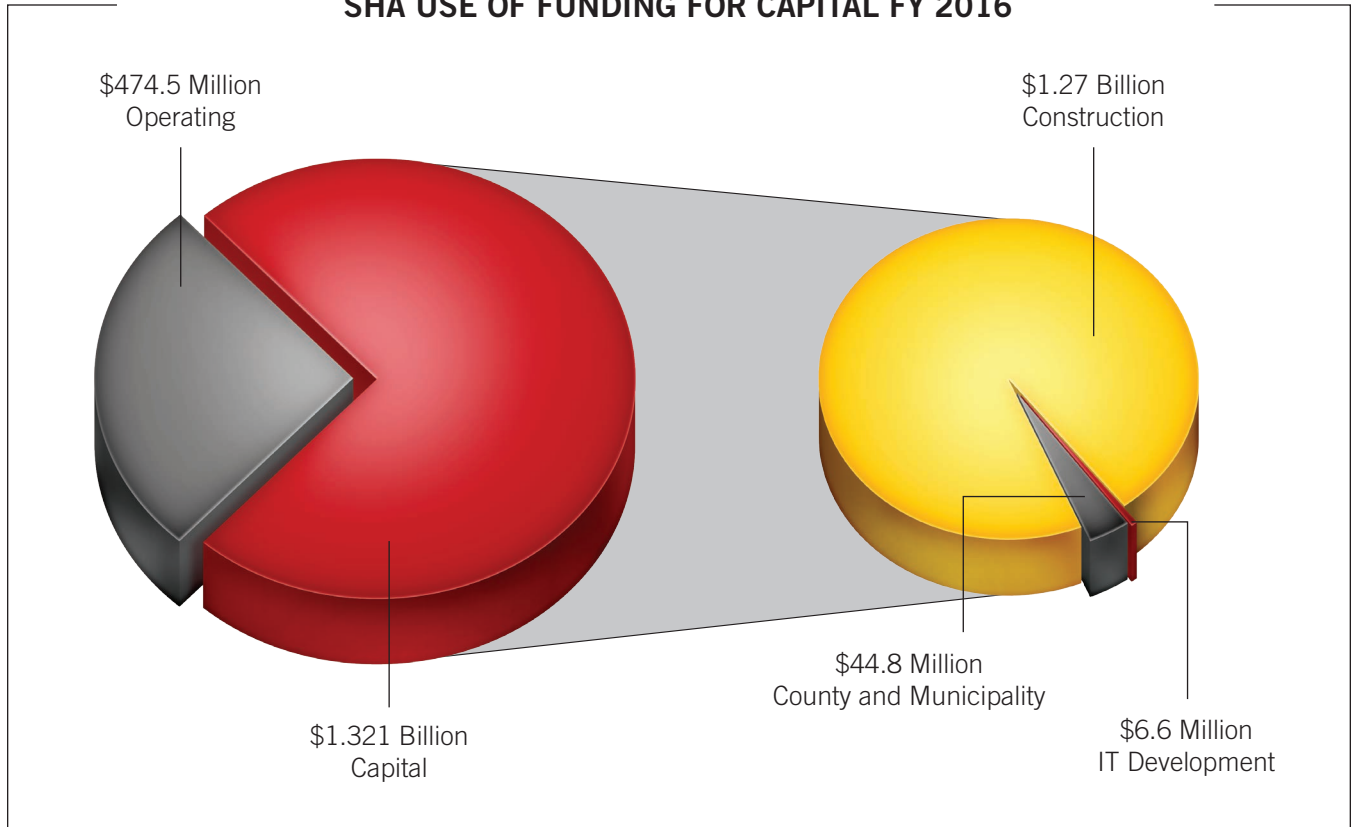
Governor Hogan made a promise to Marylanders that government will provide excellent customer service. MDOT’s SHA is embarking on a journey to change our culture and create more sense of urgency. We are improving internal communication so that we can enhance external communication and better hear our customers. SHA has dramatically improved customer service to commercial trucking partners with the Maryland One automated truck permit system. The new system offers 24/7 on-demand access, saving commercial truck companies \$6 million annually. Maryland One has been recognized internationally as a model program.

SHA USE OF FUNDING FOR OPERATING FY 2016



OPERATING MAINTENANCE FUNDS SPENT	FY 2016
Routine Maintenance	\$119.6M
Bridge Maintenance	\$4.1M
Environmental Design and Compliance	\$6.4M
Traffic/CHART Operations	\$23.1M
Winter Operations	\$100.2M
Electricity	\$9.8M
Maintenance Support	\$17.3M
Other	\$6.9M
TOTAL	\$287.4M

SHA USE OF FUNDING FOR CAPITAL FY 2016



CAPITAL CONSTRUCTION FUNDS SPENT	FY 2016
Major Projects (planning, design, right of way and construction phases)	\$299.5M
Bridge Rehabilitation Projects	\$150.6M
Pavement Resurfacing/Rehabilitation Projects	\$294.5M
Safety-related Infrastructure Projects	\$123.0M
Multimodal Access Projects	\$60.1M
Traffic Management	\$99.2M
Environmental Projects	\$97.6M
Facilities, Equipment, Research	\$105.0M
Reimbursable Expenses, Other	\$40.5M
TOTAL	\$1.270B

FY 2016 ACCOMPLISHMENTS

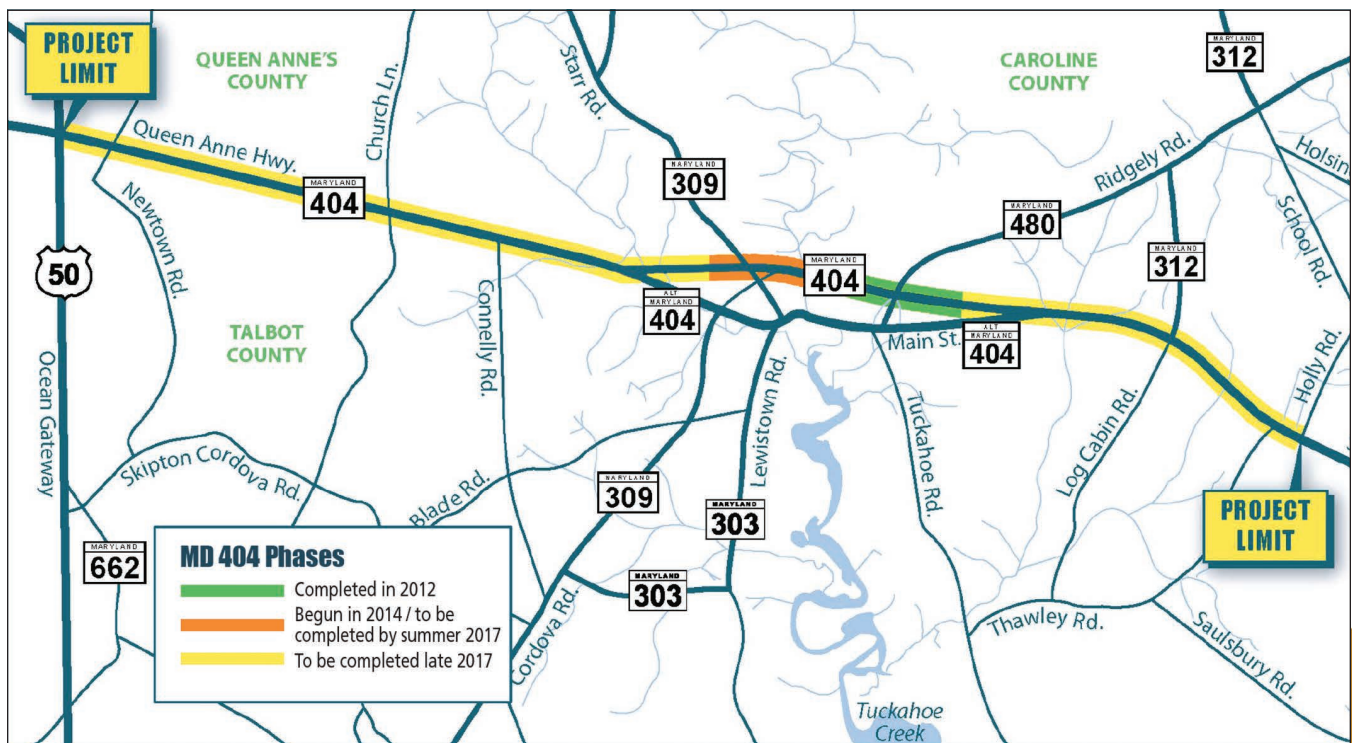
SHA completed numerous minor and major projects in FY 2016 throughout Maryland.

HIGHLIGHTS OF PROJECT COMPLETIONS	AMOUNT
MD 5, Branch Avenue; MD 5, MD 223 to south of I-95 (Prince George's)	\$8.2 million
US 29, Columbia Pike; US 29, from MD 175 to Seneca Drive Access Road Improvements (Phase IA) (Howard)	\$8.2 million
MD 25, Falls Road; MD 25, Bridge to Georges Run (Baltimore)	\$4.9 million
MD 75, Green Valley Road; MD 75, Replaced Bridge over Haines Branch (Frederick)	\$2.9 million
Southbound US 13 (Ocean Highway) Rehabilitated Bridge over Kings Creek (Somerset)	\$2.0 million
MD 528 (Coastal Highway) from the Delaware State Line to 62nd Street; resurface 4.7 miles (Worcester)	\$3.8 million
MD 213 bridge over the Sassafras River bridge rehabilitation (Kent)	\$1.2 million



Southbound US 13 bridge.

HIGHLIGHTS OF PROJECTS AWARDED BY SHA IN FY 2016	AMOUNT
MD 404 from US 50 to East of Holly Road; widen from two to four lanes (Queen Anne's, Talbot and Caroline). The MD 404 project is on an accelerated schedule with multiple phases under construction simultaneously.	\$160 million
A+B Bidding Contract: MD 32, Sykesville Rd, MD 108 to Linden Church Road Interchange; widen from two to four lanes (Howard)	\$39.1 million
A+B Bidding Contract: US 113, Worcester Highway, from North of MD 365 to Five Mile Branch Road – Phase 4; construct two additional lanes (Worcester)	\$82.3 million
I-695 South of US 40 to MD 144; multi-lane reconstruction to widen Baltimore Beltway Outer Loop (Baltimore)	\$105.9 million
US 15 Bridge over MD 26; Replace Bridge (Frederick)	\$6.4 million



Map of MD 404 project.

KEEPING YOU SAFE

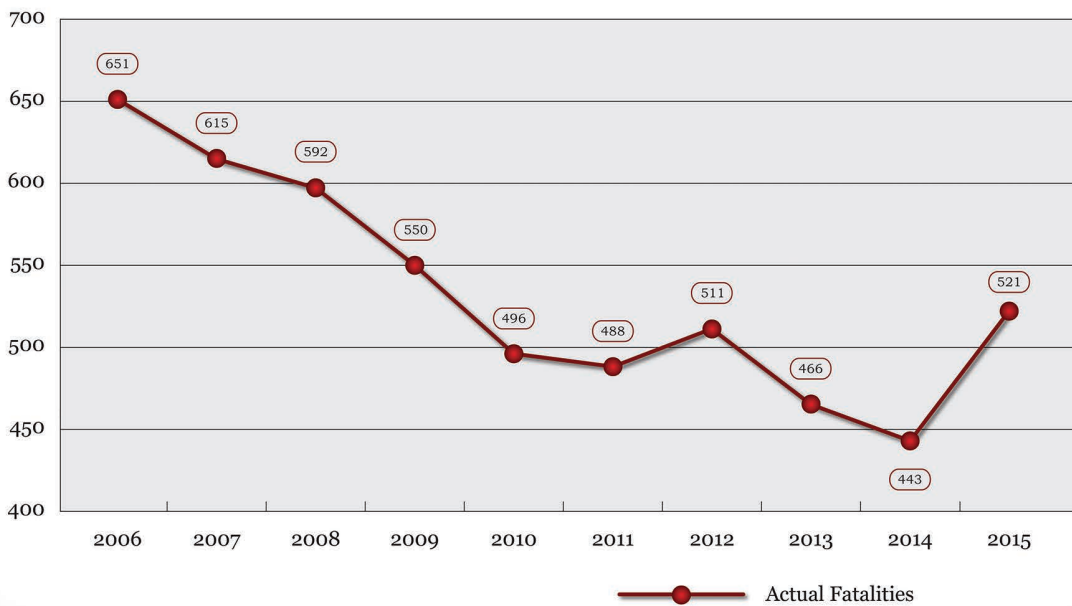
SHA works every day to keep motorists, bicyclists and pedestrians safe on our state highways.

- Driver-related issues are the leading factor in the majority of crashes, and Maryland loses hundreds of people in traffic crashes every year.

In CY 2014, that number reached a record low of 443. In CY 2015, Maryland recorded 521 fatalities. The final crash data for 2016 is not yet available, but it appears that 2016 fatalities will be similar to the 2015 totals.



MARYLAND ROADWAY FATALITIES 2006 - 2015



Maryland Department
of Transportation

ZERO TOWARD ZERO DEATHS
MARYLAND
EVERY LIFE COUNTS

- The long-term trend from CY 2008 to CY 2015 indicates that total injuries experienced a 7 percent decrease. Preliminary data indicates that 2016 totals will be equivalent to 2015 data.
- SHA recorded a decrease in Maryland's pedestrian fatalities on all roads for the third year in a row, to 99 in CY 2015. Preliminary data for 2016 indicates that totals will be equivalent to 2015.
- In CY 2015, there were six work zone fatalities, down from 11 each the previous two years. Preliminary data indicates that 2016 totals will be equivalent to 2015.
- Launched the "In Your Hands" work zone safety campaign. The campaign focused on protecting workers, as well as drivers and passengers who travel through Maryland work zones.
- In CY 2015, there were 11 bicycle-related fatalities, which unfortunately marks a significant increase over the five-year average of seven bicycle-related fatalities annually. This increase in bicycle-related fatalities demonstrates the need for continued outreach and public education regarding bicycle safety with efforts such as SHA's "A Bicyclist Might Be Someone You Know" campaign.

KEEPING YOU MOVING

An important goal for SHA is to facilitate economic opportunity in Maryland. Improving mobility enhances commerce throughout the state. SHA has numerous programs to enhance transportation and multimodal operations to ensure the safety and accessibility of all customers. The Coordinated Highways Action Response Team (CHART) keeps traffic moving with policies, programs, and projects to ease bottlenecks and traffic congestion due to weather, crashes, and vehicle breakdowns. SHA uses a data-driven, performance-based approach to provide a high quality, reliable highway system with multimodal alternatives for travelers.



- Effectively managed roadway incidents, saving drivers nearly \$1.4 billion in user costs and helping to reduce delay by 39.2 million vehicle-hours in CY 2015, the most recent data available.
- Handled 115,552 events in FY 2016, such as incident responses, assistance with disabled vehicles, and traffic management operations for special and weather-related events.

- Increased patrol hours to 101,061 hours in CY 2016, an increase of 4,038 hours from the previous year, and nearly 10,200 more hours annually since CHART expanded its patrol program in 2014, enabling SHA to quickly respond to stranded motorists and clear incidents, improving safety and mobility.



State Farm sponsored CHART emergency traffic patrols responding to a traffic incident.

- Increased the percentage of accessible pedestrian signals to 80 percent in CY 2016 since the program began in 2006. These signals provide visual and audible information, such as speech messages that sight-impaired pedestrians can use to safely cross streets.
- Increased the directional miles of bicycle lanes and shared use lanes by 127.6 miles since FY 2011.
- Continued upgrading sidewalks for Americans with Disabilities Act (ADA) compliance at a rate of 2 percent per year. In FY 2016, sidewalks were 67 percent ADA compliant. All new sidewalks are ADA compliant.



Bicycle and pedestrian travel.

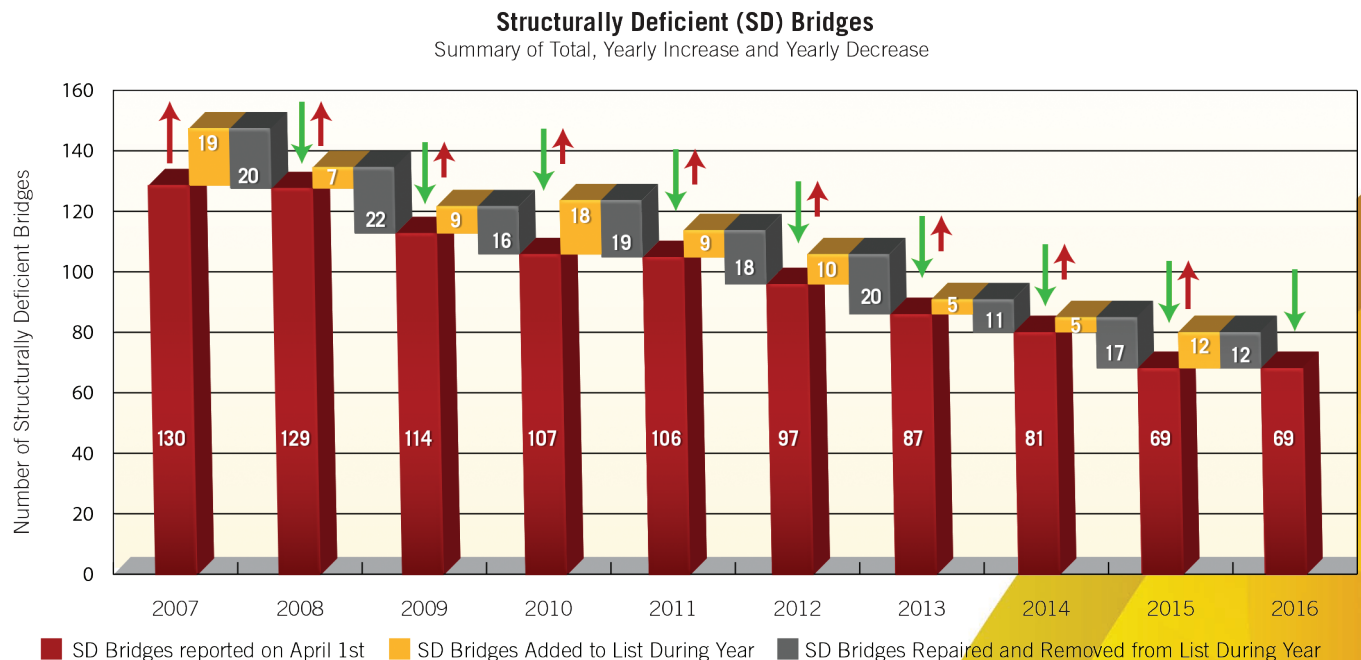
- During the 2015-2016 winter season, SHA forces kept Maryland roads open and safe for drivers, reaching bare pavement on interstate and primary highways in less than one hour after the end of frozen precipitation (excluding Winter Storm Jonas), which surpasses SHA's target of four hours to reach bare pavement.
- Reduced the usage of pounds of salt per lane mile per inch of snow by 25 percent in the 2015-2016 winter season, compared to the previous season.



KEEPING YOUR ROADS WELL MAINTAINED

The condition of roadways and bridges is vital for ensuring these connections remain viable, efficient and safe. SHA has continuously invested in roadway resurfacing and improving structurally deficient bridges.

- In CY 2016 on the State highway network, SHA recorded 69 SHA structurally deficient (SD) bridges, less than three percent of SHA's 2,564 bridges. Each year SHA removes structurally deficient bridges through replacement and rehabilitation projects, but identifies new structurally deficient bridges through its aggressive inspection program. Structurally deficient bridges are safe for travel; if a bridge becomes unsafe, the engineers close it.



- Advertised for bids or began construction of 20 of these 69 structurally deficient bridges as of April 1, 2016; SHA will advertise an additional 14 projects to improve structurally deficient bridges by April 2017.

- Achieved 87 percent of the SHA pavement network in acceptable or better ride quality in CY 2015, the most recent data available, as represented by the International Roughness Index.

- Invested more than \$294 million for resurfacing and pavement maintenance in FY 2016, an increase of 10 percent from FY 2015. This is part of an additional \$250 million investment in our pavements over the next three fiscal years, made possible by the Governor. SHA repaired 1,360 miles or 8 percent of the roadway mileage.



Coastal Highway (MD 528) resurfacing.



I-495 resurfacing in Montgomery County.

PROTECTING OUR ENVIRONMENT

SHA works to restore the Chesapeake Bay and local waterways through stormwater permit compliance programs. SHA will restore more than 4,700 acres of impervious surfaces by October 2020 and employ best management practices (BMPs) to achieve restoration targets including tree planting, stream restoration, stormwater control structures, outfall stabilization, and pavement removal.

Tree plantings are an economical strategy that convert grass or meadow areas to forested land while providing many water quality benefits, including reducing stormwater runoff quantities, retaining and reducing pollutants, improving soil quality and infiltration characteristics, and providing habitat, shelter and food sources for wildlife, insects, and beneficial micro-organisms. Many plants included in the SHA restoration tree plantings also support native pollinators.



Tree planting along I-195 and US 1 loop ramp in Baltimore County.

The SHA implementation plan, annual municipal separate storm sewer system (MS4) reports, Bay Restoration Viewer, and educational outreach are available at <http://www.roads.maryland.gov>.

- SHA offers a Chesapeake Bay Restoration Viewer, which provides an online map for information on completed and proposed projects SHA is implementing to improve Chesapeake Bay water quality. These projects are BMPs that reduce pollutants in stormwater runoff and are anticipated to reduce annual pollutant loading and offset runoff impacts by as much as 75 percent by 2020.
- Achieved a 99.5 percent in-compliance rating for erosion and sediment control requirements on all SHA construction projects and maintenance activities. Performed over 3,500 erosion and sediment control inspections with only 17 non-compliance findings by SHA's Quality Assurance Team.
- Continued to make conditions favorable for pollinators such as honeybees and butterflies to once again thrive by reducing roadside mowing, using beneficial insects for vegetation control, and creating meadows of nectar and pollen-producing native species. Bees and butterflies help to pollinate more than 75 percent of crops and flowering plants. Through its mowing reduction and Statewide Native Plants Establishment Program, SHA has planted a variety of plant species specially designed to attract honeybees and Monarch butterflies. Meadow restoration occurs along roadside medians, shoulders, and near stormwater management facilities. SHA launched a three-year study with the University of Maryland on creating bee and butterfly friendly habitats through roadside vegetation management best practices.



Monarch butterfly on purple coneflower planted in SHA native meadow.

SERVING YOU

SHA works every day to provide outstanding customer service to Marylanders and the traveling public, providing services and assistance (for example, motorist assistance with the CHART Incident Management Program), customer communications (Customer Care Management System, easy access to travel information via the CHART and Maryland 511 websites, dynamic message signs, Facebook, Twitter and other social media), and improvements to customer-focused processes.

- Modified the Advanced Traffic Management System (ATMS) to automatically post inclement weather messages on its devices (dynamic message signs and highway advisory radios) based on data from nearby weather detection stations.
- Handled more than 26,000 service requests in the Customer Care Management System (CCMS), SHA's online customer service system.
- Completed enhancement to CCMS that streamlines SHA's ability to create service requests from social media posts via Facebook and Twitter.
- Nearly 70 percent of customers rated their service interaction at SHA Excellent, Good, or Neutral.
- Access permits support safe access to state roadways and economic development. SHA continues to improve the processing of access permits with 96 percent of roadway access permits issued within 21 days or less during the second half of CY 2016. In total for CY 2016, SHA issued 88 percent of 131 roadway access permits within 21 days. Continued to meet with stakeholder groups to assess the effectiveness of changes and resource needs to process access permit approvals.
- Improved customer service to our access management stakeholders, according to an Access Management Customer Feedback survey conducted by Anne Arundel Community College in July 2016. Compared to interactions with SHA access management staff prior to decentralization in July 2015, respondents rated SHA as 66 percent better in the working relationships and providing helpful recommendations and information, and 58 percent better in the speed and accuracy of SHA responses.



- Board of Public Works approved e-bidding, a paperless process that will allow companies to submit bids, revise submitted bids and bid on multiple projects, all while using an electronic system, reducing postal costs and paper usage, and saving time and money for contractors and the state. Savings are estimated to be \$800,0000 every year for private industry, with \$68,000 in savings for SHA alone.
- Launched the Maryland One System, a state-of-the-art, first-in-the-nation automated truck permit system for State, toll and Baltimore City roads, which eliminates the final vestiges of manual paper processing. The new system has reduced oversize/overweight hauling permit processing from days and weeks to seconds and hours, with a direct impact on heavy cargo utilizing the Port of Baltimore, and eliminates review fees, which will save the trucking industry \$6 million in fees annually.

WINTER STORM JONAS

- From January 22-24, 2016, parts of Maryland saw more than 38 inches of snow fall over three days. The historic blizzard, named Winter Storm Jonas, blanketed much of the Mid-Atlantic and Northeast United States and virtually all of Maryland with heavy snow, extreme winds, and nearly zero visibility. The storm dropped 1-3 inches of snow per hour for more than 14 straight hours.
- Governor Larry Hogan declared a State of Emergency and encouraged Marylanders to stay home and remain off the roads.
- At the height of the storm, Maryland deployed more than 2,800 people and plows and supplemented with out-of-state contract resources.
- SHA and the Maryland Transportation Authority reached bare pavement in an average of one day and 21 hours following the historic winter storm, a 12 percent improvement in clean-up compared to the blizzard in January 2010.
- The cleanup continued for up to 10 days as SHA hauled snow away from urban areas using loaders and dump trucks, which was 50 percent less time than the 2010 blizzard.
- SHA used 11 percent less salt per lane mile per inch of snow during Jonas compared to the blizzard of January 2010.



Governor Hogan, Secretary Rahn, and Administrator Johnson visited the Annapolis Shop prior to the storm.



JONAS SNOWFALL TOTALS

County	Shop	Snow Totals	Record
Dorchester	Cambridge	10	No
Somerset	Princess Anne	7.75	No
Wicomico	Salisbury	7.5	No
Worcester	Snow Hill	7.5	No
Kent	Chestertown	17	Yes
Queen Anne's	Centreville	21	Yes
Caroline	Denton	24	Yes
Talbot	Easton	21	No
Cecil	Elkton	17.5	Yes
Montgomery	Gaithersburg	27	Yes
Montgomery	Fairland	27	Yes
Prince George's	Laurel	23.5	Yes
Prince George's	Marlboro	20.5	Yes
Harford	Churchville	37	Yes
Baltimore	Owings Mills	28	Yes
Baltimore	Hereford	32	Yes
Baltimore	Golden Ring	28	Yes
Anne Arundel	Annapolis	27	Yes
Anne Arundel	Glen Burnie	29.8	Yes
Charles	La Plata	18	Yes
St. Mary's	Leonardtown	19	No
Calvert	Prince Frederick	22	Yes
Allegany	LaVale	34	Yes
Washington	Hagerstown	37	Yes
Garrett	Keyser's Ridge	38	Yes
Howard	Dayton	27.5	Yes
Frederick	Frederick	36	Yes
Carroll	Westminster	37	Yes



GOVERNOR'S FEE REDUCTIONS

As part of Governor Hogan's Fee Rollback Plan, the Governor reduced or completely eliminated dozens of fees across state government in FY 2016, putting money back into the pockets of Marylanders. SHA fee rollbacks will save businesses nearly \$7 million annually.

FEE DESCRIPTION	CURRENT AMOUNT	NEW AMOUNT
Maryland One System (Improved and automated process for issuing hauling permits to commercial vehicle operators)	Varied	Estimated \$6 million in savings for industry partners
Ag-Tourism Program Application Fee	\$250	Eliminated
Access Management Inspection Fee Escrow (Avg. Annual Bus. Cost)	\$800,000 (15% of project cost)	\$400,000 (7%)
Access Management Inspection Cost Recovery (Avg. Ann. Local Gov't Cost)	\$250,000 (15% of project cost)	Eliminated
Roadside Vendors (Seafood/Produce) Lease Application Fee	\$500	\$100
Access Permit Fee (Commercial – Industrial or Subdivision Street)	\$50	Eliminated
Access Permit Fee (Residential Entrance Permits)	\$50	Eliminated
Outdoor Advertising License Fee (10/fewer)	\$50	Eliminated
Outdoor Advertising License Fee (11-50)	\$200	Eliminated
Outdoor Advertising License Fee (50+)	\$700	Eliminated
Outdoor Advertising Sign Permit Fee (up to 200 ft.)	\$10	\$1
Outdoor Advertising Sign Permit Fee (up to 201-400 ft.)	\$16	\$1
Outdoor Advertising Sign Permit Fee (up to 401-700 ft.)	\$20	\$1
Outdoor Advertising Sign Permit Fee (up to 701-1999 ft.)	\$35	\$1
Outdoor Advertising Sign Permit Fee (Late Fee)	\$5	Eliminated
Outdoor Advertising Replacement Sign Permit Tag	\$5	Eliminated

GOVERNOR'S PRIORITY PROJECTS

Governor Hogan announced a \$1.97 billion investment in transportation funding for highways and bridges in June 2015. The priority projects include \$1.35 billion in new projects going to construction and \$635 million in preserved projects. The costs shown are the total project cost as shown in the final CTP. Construction has begun or is anticipated to begin in 2017, on the projects below:

MD 404 Widening (Queen Anne's, Talbot, and Caroline) - \$160 million

Safety and operations improvement project to widen MD 404 from a two-lane road to a four-lane divided highway from US 50 to Denton. *For this accelerated project, construction activities began in summer 2016. In November 2017, MDOT anticipates opening improvements to traffic.*



Progress on MD 404 near Church Lane.

US 113 Widening (Phase 4) (Worcester) - \$82 million

Safety and operations improvement, and congestion relief project to upgrade US 113 from two to four lanes from Five Mile Branch Road to north of Public Landing Road. *The MDOT anticipates construction beginning in spring 2017 and opening improvements to traffic fall 2019. This contract features A+B Bidding, with abbreviated schedule and less construction disruption for customers.*

US 50 Severn River Bridge Lane Reconfiguration (Anne Arundel) - \$26 million

Congestion relief project along US 50 bridge over the Severn River. *MDOT is advancing planning and design on parallel tracks and anticipates receiving federal approval spring 2017. MDOT anticipates beginning construction summer 2017 and opening improvements to traffic fall 2018.*

Full I-95/I-495 Interchange to Access the Greenbelt Metro Station (Prince George's) - \$171 million

Safety and operations improvement and future growth support project to improve access to the Greenbelt Metro Station. *MDOT is pursuing a construction management at risk (CMAR) procurement process for this project. The Greenbelt Metro Station interchange is in design. MDOT anticipates beginning construction in summer 2017 and opening improvements to traffic in summer 2020. Final approval is pending the FBI relocation to Maryland.*



MD 140 Widening at Painters Mill Road (Baltimore) - \$18 million

Motorist, bicycle and pedestrian safety improvement and congestion relief project at northbound MD 140 from Painters Mill Road to Garrison View Road. *Construction of the southbound widening is complete and MDOT completed advanced construction of a culvert in December 2015. MDOT anticipates beginning construction in spring 2017 and opening improvements to traffic in spring 2018.*

MD 85 Highway Reconstruction – Phase I (Frederick) - \$107 million

Congestion relief and economic growth project on the MD 85 (Buckeystown Pike) interchange at I-270 and MD 85 between Spectrum Drive and Shockley Drive/Crestwood Drive in Ballenger Creek. *MDOT anticipates beginning construction summer 2017 and opening improvements to traffic summer 2021.*

MD 32 Widening – Phase I (Howard) - \$39 million

Congestion relief and safety improvement project to widen MD 32 (Patuxent Freeway) from MD 108 to Linden Church Road to create a four-lane divided highway. *MDOT will begin construction spring 2017. Improvements to traffic will open in 2019. This contract features A+B Bidding, with abbreviated schedule and less construction disruption for customers.*

I-270 Innovative Congestion Management (ICM) (Montgomery) - \$100 million

Congestion relief project to improve reliability along I-270, from I-495 to I-70. This innovative contract will be awarded to the firm that provides the best solution for moving the most traffic the fastest and the farthest.

Work continues on these priority projects:

- **US 219 Realignment** (Garrett) - \$91 million traffic operations enhancement, access improvement, and economic growth project for a new interchange at I-68.
- **MD 175/MD 295 Interchange Reconstruction** (Anne Arundel) - \$90 million safety improvement and current and future congestion relief project at MD 175 to improve access to Fort George G. Meade.
- **US 1 College Park Pedestrian, Bicycle, and Safety Improvements** (Prince George's) - \$50 million traffic operations improvement, pedestrian and bicycle safety improvement, and facilities revitalization project to reconstruct US 1 to a four-lane divided highway.
- **MD 2/MD 4 Highway Widening (Phase 2)** (Calvert) - \$37 million congestion relief and future growth project from MD 2/MD 4 (Solomons Island Road) from north of Stoakley Road to south of MD 765A (Main Street) in Prince Frederick.
- **MD 5 Intersection Improvements** (St. Mary's) - \$13 million safety, traffic operations improvement, and congestion relief project for MD 5 left turn lanes at Abell Street/Moakley Street and associated MD 5 widening.
- **MD 5 Point Lookout State Park** (St. Mary's) - \$19 million safety improvement project for MD 5 from south of Camp Brown Road to the causeway at Point Lookout State Park.



MD 5 at Abell/Moakley Street

MAXIMIZING YOUR INVESTMENT

SHA continually explores new methods and ideas with more effective processes, technologies, and services to better serve our customers. This helps Maryland improve the quality of its services, be more competitive, and makes state government more efficient and responsive. Some notable innovations and efficiencies include:

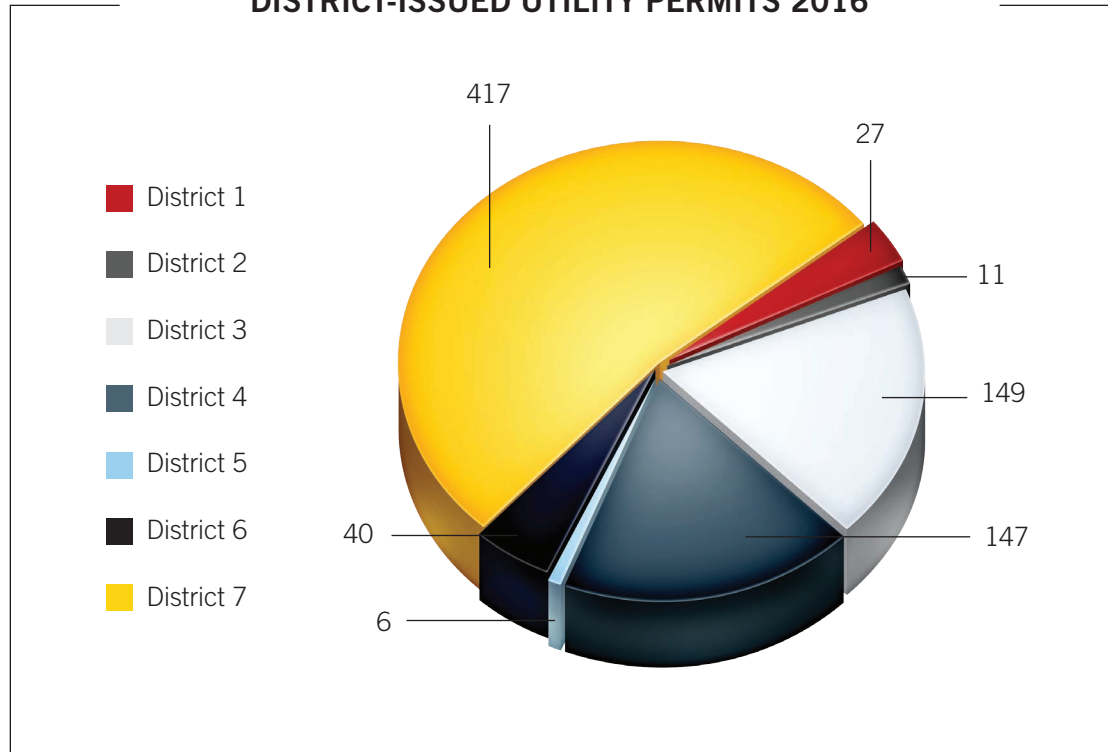
- Reduced the average amount of time to procure architectural/engineering (A/E) services contracts from 49 months in FY 2015 to 34 months in FY 2016. Improved SHA internal business processes and developed the A/E contract advertisement schedule, which tracks the progress of every A/E contract. SHA procures the most A/E services contracts within MDOT. Procurement staff will further reduce the process to 18 months this year and ultimately 12 months.
- Constructed the first Cold-In-Place Recycling (CIR) project using Portland Cement Slurry for 5.7 lane miles on MD 135 in Garrett County. SHA selected this location due to the existing condition of the roadway and large amount of heavy truck travel. CIR is a process in which crews mill the deteriorated asphalt layers and mix in-place with a new asphalt binder, then place the materials back on the roadway, then place a final asphalt layer for a smooth ride surface. On this project, the top six inches of existing distressed pavement was recycled and stabilized for use as a base. On highly distressed roadways, this treatment is faster and cheaper than conventional asphalt patching, and provides a more uniform stabilized base for subsequent surfacing.
- Constructed the first Ultrathin Bonded Wearing Course for 4.6 lane miles on MD 36 in Allegany County. Crews placed a spray paver at $\frac{3}{4}$ inch thick, which is significantly thinner than conventional 2-inch thick resurfacing, and provides superior bond to underlying pavement. This treatment uses less material and can be placed in less than half of the time, compared with conventional resurfacing.



Crews applying ultrathin bonded wearing course on MD 36 in Allegany County.

- Implemented the District Utility Permit Tracking System, a centralized program that standardizes district-issued utility permits and supports consistency in the way permits are processed statewide throughout all seven districts. This system also captures GIS location points of work area and generates reports and dashboards.

DISTRICT-ISSUED UTILITY PERMITS 2016



- Piloted and began using alternative line striping technologies. This includes grooved in thermoplastic with all-weather elements (installed on locations on I-70, US 50 and MD 51), polyuria with all-weather elements, and recessed pavement marker plastic devices. These alternative technologies will be deployed to replace non-durable pavement markings (paint) and snow-plowable recessed pavement markers.
- Partnered with industry and improved the overall turnaround time for landscaping materials from four to six weeks to five to 15 business days, depending on the availability of nutrient management plans at the time the material is sourced.



- Procured an auto-consolidation device which reduced the turnaround time for soil specimen testing and results delivery from three to four weeks to less than seven calendar days.
- Purchased a carbon/sulfur analyzer, an instrument which helped significantly reduce sulfur sample testing/analysis turnaround time from two days to four hours. The new instrument eliminates the generation of hazardous acid chemical waste associated with the previous test procedure.
- Revised the concrete mix for precast bridge elements to require self-consolidating concrete in order to eliminate construction defects. SHA believes this change in mix will minimize honeycombing and other surface defects in new precast concrete without compromising strength or durability of the concrete.



- Participated in a research project that explored the use of ground penetrating radar, a technique that uses radio waves, to map structures and features for inspection purposes. The traditional method of inspecting highway structures requires destructive testing and having engineers visually inspect structures, often requiring lanes of traffic closures and taking substantial field time to complete. This project enabled SHA to collect a significantly larger number of structures, safer, faster, and cheaper, reducing impacts to the traveling public by 80 percent (from two weeks to two days per structure), and creating a substantial decrease in collection costs per structure.

RESEARCH AND CONGESTION RELIEF

SHA has established itself at the forefront of several nationwide research and innovative project initiatives. Since 2014, SHA has received \$2.3 million in Strategic Highway Research Program (SHRP) 2 implementation assistance and other federal grants. Much of this research is aimed at reducing traffic congestion. Current projects being developed or implemented with metropolitan planning organization partners such as the Baltimore Metropolitan Council (BMC), university researchers, and industry experts from the consultant community include:



- **Organizing for Reliability**

SHA has a well-established operational framework in CHART, but is using this funding to institutionalize business processes to ensure a reliable travel experience for people and goods. SHA developed a Transportation Systems Management and Operations (TSM&O) Strategic and Implementation Plan in support of this effort.

- **Behavior-based Freight Models**

SHA, in partnership with the BMC, developed a supply-chain based statewide freight travel demand model and a regional tour-based commercial vehicle model to feed into SHA and BMC travel demand modeling programs and improve the accuracy and flexibility of existing planning tools.

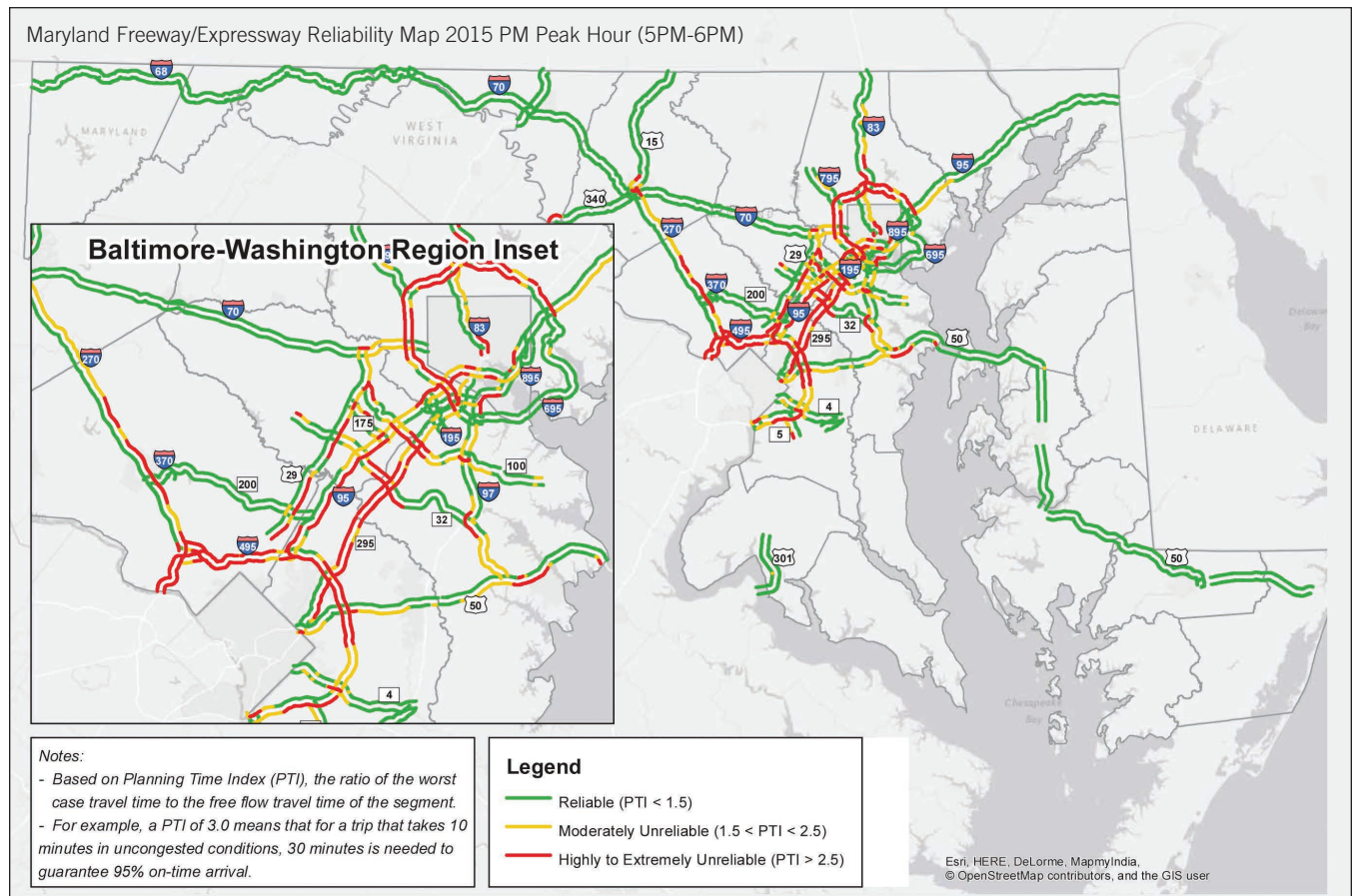
- **Advanced Travel Analysis Tools**

SHA is developing multi-resolution and time-dependent travel demand models which will help integrate planning and operations and identify new mobility improvements for Maryland roadways.



- **Reliability Data and Analysis Tools**

These tools help SHA manage congestion events in order to provide safe and reliable travel. Solutions include geometric improvements, Active Traffic Management, and Active Travel Demand Management (ATDM) strategies, incident management, and special event and work zone protocols.



- **Work Zone Impact and Strategies Estimator (WISE) Tool**

This tool should help with better work zone planning and help SHA and partner agencies to determine work zone schedules that reduce traffic impacts to roadway users.

- **Reliability in Simulation and Planning Models**

SHA, in partnership with the BMC, is developing advanced demand and simulation models that help in understanding the effect of reliability on travel behavior and its interaction with the Maryland transportation system.

- **Integrated Corridor Management (ICM) Pilot Deployment**

SHA received FHWA grants to support an ICM pilot deployment in Maryland. In partnership with the BMC, SHA is developing a concept of operations to improve traffic flow and mobility for three of the busiest routes between Washington, DC, and Baltimore: I-95, MD 95 (Baltimore-Washington Parkway), and US 1 between MD 32 and I-695 (Baltimore Beltway).

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alternative formats upon request.*

