FY 2013 Investment Report Transportation, the DRIVING force behind a strong economy

Georgia Departme t of Transportati

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MESSAGE FROM THE COMMISSIONER

Keith Golden, P.E., Commissioner



GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW Atlanta, Georgia 30308 Telephone: (404) 631-1000

On behalf of the Georgia Department of Transportation, I want to thank you for taking a moment to review our FY2013 Investment Report. This report is one way we strive to detail GDOT's commitment to serving nearly 10 million Georgians, while being transparent and accountable. Nationally recognized for both ontime and on-budget delivery of projects, we know that our work is never finished and that there are always opportunities to improve our system for our citizens who expect and deserve the best return on their investment in our transportation system.

This report is an important tool to provide information to our partners in the public, state government, and federal government on our accomplishments and the opportunities for the future. We appreciate the advances which were made in the 2013 legislative session to help interstates and freight corridors (H.B. 202) which are critical statewide priorities as well as providing greater flexibility to work with the private sector to design and build the best projects possible (S.B. 70). We thank the General Assembly for their passage and the Governor for signing them into law.

We know that investment in transportation secures our economic vitality and quality of life. Transportation and economic development go hand in hand in making Georgia one of the greatest states to live, work, or visit. Our goal is to enhance Georgia's economic competitiveness by maintaining and enhancing an innovative transportation system for the 21st Century that offers more choices to the traveling public.

I want to point out our highest commitment to improving safety and reducing highway fatalities. You will see the efforts made to extend the life of our existing assets while also identifying innovative ways to better free people and goods to move across the state through a managed lanes system and a vigorous freight corridor network. We also cannot forget the meaningful impact that can be achieved through lower cost operational improvements and our commitment to an environmentally sensitive transportation system. These items and much more are detailed in this report including the delivery of the TIA projects in three important regions.

I want to thank Governor Nathan Deal, the members of the Georgia General Assembly, the GDOT board members, our federal partners and our 4,400 dedicated employees for working together to ensure that we remain one of our nation's leaders in transportation delivery. Quality customer service is a critical value for us. As you review the 2013 Investment Report please feel free to provide us your feedback. Thank you.

Sincere

Keith Golden, P.E. Commissioner

Transportation. The Driving Force Behind a Strong Economy

MEET GEORGIA DOT



The Georgia Department of Transportation is committed to providing the citizens of Georgia with a safe, connected and environmentally sensitive transportation system. This goal is achieved by conducting business efficiently and communicating effectively with our internal and external partners. The purpose of this report is to provide an accounting of Georgia DOT's commitments and accomplishments in Fiscal Year 2013 (July 1, 2012 thru June 30, 2013).

Georgia has consistently been recognized for maintaining some of the best roads in the country and has the world's busiest airport, the 4th fastest growing port and the 9th largest public transit system in the U.S. Georgia also serves as a leader in moving commerce across the country. Georgia DOT's role in providing a quality transportation system is paramount in allowing Georgia to remain a leader in the economic community.

Georgia DOT is primarily responsible for planning, constructing, maintaining and improving the roads and bridges contained on the National Highway System. In addition to the roadway system, Georgia DOT provides coordination and financial support for other modes of transportation such as transit, rail, airports and waterways. The Department also works with Local Governments to provide assistance with local projects, maintenance and training needs.

A majority of the Department's resources are directed towards maintaining and improving the state's network of roads and bridges. By law, proceeds from the state's motor fuel taxes are solely for use on Georgia's roads and bridges. Non-road and bridge construction projects such as intermodal projects are funded by a combination of state general funds, federal funds and local funds.

Georgia DOT has a centralized office located in Atlanta where policy decisions are made. Its senior leadership team consists of the Commissioner, Deputy Commissioner, Chief Engineer and Treasurer. In addition to the Central Office, there are seven district offices throughout the state. These district offices are primarily charged with oversight of maintenance and construction activities as well as communication with local governments and citizens in their areas.

Each of Georgia DOT's approximately 4,400 employees continues to work towards enhancing Georgia's economic competitiveness through sound, effective and accountable leadership in transportation.



Georgia DOT has seven district offices which are responsible for operating and maintaining the transportation system at the local level.

Georgia Department of Transportation District Offices



District 1

Bayne Ellis Smith PO Box 1057 2505 Athens Highway SE Gainesville, GA 30507 770-532-5526 <u>bsmith@dot.ga.gov</u>

District 2

James H. Smith PO Box 8 801 Hwy 15 South Tennille, GA 31089 478-552-4600 jismith@dot.ga.gov

District 3

Thomas B. Howell 115 Transportation Blvd Thomaston, GA 30286 706-646-6900 thowell@dot.ga.gov

District 4

Joe W. Sheffield PO Box 7510 710 West 2nd Street Tifton, GA 31793 Map 229-386-3280 josheffield@dot.ga.gov

District 5

Karon Lamar Ivery PO Box 610 Jesup, GA 31598 912-427-5711 kivery@dot.ga.gov

District 6

Curtis Dewayne Comer PO Box 10 500 Joe Frank Harris Pkwy Cartersville, GA 30120 770-387-3602 dcomer@dot.ga.gov

District 7

Rachel Sanders Brown 5025 New Peachtree Road Chamblee, GA 30341 770-986-1011 rabrown@dot.ga.gov

MAJOR FY 2013 TRANSPORTATION HIGHLIGHTS

MANAGED LANES, FREIGHT NETWORK AND MAP-21

Georgia DOT has had numerous successes throughout FY 2013. Highlighted in this section are initiatives and creative solutions that will help sustain Georgia's economic competitiveness while maintaining our extensive transportation network. Additional FY 2013 achievements can be found throughout this document.

MANAGED LANES

ANOTHER TOOL IN THE CONGESTION TOOL BOX

As congestion steadily increases in metro Atlanta, Managed Lanes have become one of the tools used to provide mobility options within the region. Managed Lanes provide a reliable alternative to travelling in the typically congested, general purpose lanes. FHWA defines managed lanes as:

A set of lanes within the freeway that are managed using a combination of tools and techniques such as free flow speeds, pricing, vehicle eligibility and access control in order to continuously achieve optimal conditions.



In Georgia the following definitions are used for various types of Managed Lanes:

- High Occupancy Vehicle (HOV): Use of this lane is limited to vehicles meeting a requirement for the number of persons in the vehicle or an occupancy policy such as 2+ or 3+
- High Occupancy Toll (HOT): Use of this lane is limited to vehicles meeting an occupancy policy, generally 2+ or 3+, while allowing other vehicles to use the lanes by paying a toll
- Express Toll Lanes (ETL): Use of this lane is limited strictly to vehicles paying a toll

In Georgia, transit buses and registered vanpools generally use each of these options toll free.

In January 2010, the Department completed and published the "Atlanta Regional Managed Lane System Plan" (MLSP). The MLSP set a vision of a network of Managed Lanes, traversing and serving the metro area on key, limited access freeways. The MLSP detailed varying Managed Lane strategies, by corridor, on a staged approach.

Since adoption of the MLSP various corridors have proceeded to implement this vision of managed lanes. The I-85 HOV 2+ lanes in northern DeKalb and Gwinnett counties were converted to HOT 3+ lanes, shortly after the MLSP was completed. The need to maintain free flow speeds in the managed lane, in the existing and future conditions, required the occupancy requirement be raised from 2+ to 3+.



An Express Toll Lane (ETL) project along I-75

South between I-675 and SR 155 in Clayton and Henry counties was recently let at \$176 million as a design-build project. Once completed, I-75 South will provide an ETL reversible facility on this congested section of I-75 in the southern portion of metro Atlanta. The Northwest Corridor (NWC) project along I-75 and I-575 North is also proposed for ETLs. Recently receiving a Record-of-Decision (ROD) from FHWA, this project is currently proceeding through the P3 procurement process.

Currently, the "Atlanta Regional Managed Lane Implementation Plan" (MLIP) is under development, with an anticipated 2014 completion date. The intent of the MLIP is to refresh the MLSP by revisiting funding availability and the practicality of delivering the recommended corridors. The MLIP is developing a more focused vision of Managed Lanes for the metro Atlanta region, with an eye towards recommending lower-cost Managed Lane projects, which can be delivered in a shorter period of time.

Managed Lanes are but one "tool in the tool box" that Georgia DOT is pursuing in the coming years, with the goal of providing enhanced mobility options for both motorists and transit riders. For more information please see <u>www.dot.ga.gov/MLIP</u>.

GEORGIA'S FREIGHT NETWORK

THE CORNERSTONE OF GEORGIA'S COMPETITIVENESS



Georgia DOT recognizes the crucial role that the freight and logistics industry plays in Georgia's economy – both now and into the future. Governor Deal calls the freight and logistics industry a "solid cornerstone of Georgia's competitiveness" while Georgia Trend's 2009 report stated that Georgia's freight and logistics sectors were "a \$15-billion annual industry".

In support of these vital economic interests, Georgia DOT developed the State Freight and Logistics Plan, which was finalized and adopted in the spring of 2012. Centered on a broad, business-focused outreach, the plan was crafted with direct participation of executives from several Georgia-based companies, such as: Coca-Cola; Delta Airlines; CSX and Norfolk-Southern Railroads; Georgia Motor Trucking Association; The Home Depot; Southern Freight and UPS. Inter-governmental coordination with the Georgia Department of Economic Development was also crucial to the project's success and consensus. The State Freight and Logistics Plan recommended key strategic investments to all modes – highways, railroads, ports and airports – to grow Georgia's economy.



During the 2013 regular legislative session the Georgia General Assembly passed House Bill 202. The law allows for roads listed on a State Freight Corridor network – as recommended by the Director of Planning and adopted by the Georgia DOT State Transportation Board – to be exempted from state "Congressional Balancing" requirements. The Department relied on the Freight Plan to develop the State Freight Corridor network required in HB

202 (www.dot.ga.gov/travelingingeorgia/rail/Documents/Freight/BaseFreightNetwork.pdf). This network will provide the framework for implementing those strategic investments that Georgia needs to support its freight and logistics activities. Shortly after the network's completion, it was presented to the State Transportation Board and unanimously adopted at their August 2013 meeting.

Georgia DOT continues to demonstrate its commitment to growing the state's economy by delivering the most economical highway projects, including those identified in the Freight and Logistics Plan. When completed, these projects will demonstrate a positive return-on-investment that will support Georgia's continued economic competitiveness. For more information regarding the Freight Plan see <u>www.dot.ga.gov/freight</u>.

MAP-21

HIGHWAY TRUST FUND SHORTFALLS

The Moving Ahead for Progress in the 21st Century Act (MAP-21) is the federal transportation bill signed by President Barack Obama on July 6, 2012. This legislation funds transportation investments for federal fiscal years 2013 and 2014 (October 1, 2012 through September 30, 2014).



While MAP-21 made important progress to increase flexibility

and improve project delivery, it did not identify a long-term solution to the funding shortfalls that will begin on October 1, 2014. MAP-21 combined revenues from federal gasoline taxes and general funds to ensure continuation of historical funding levels for transportation through September 30, 2014. However, if no actions are taken to shore up the highway trust fund, current projections indicate that there will be no federal transportation funds available in federal fiscal year 2015. As collections build in the trust fund, federal transportation funds will eventually be available in federal fiscal year 2016 but will be at reduced levels (between 25% and 33% lower than current federal funding). Identifying a solution to the federal shortfall will help maintain a consistent level of road maintenance and project delivery to improve the transportation infrastructure and promote economic development in the state.

Although this \$105 billion bill does not significantly alter total funding from the previous authorization, it does include many significant reforms; one being the transition to a performance and outcome-based federal aid program.

One of the main objectives of MAP-21 are to increase the transparency and accountability of states for their investment of taxpayer dollars. The bill also ensures that states invest money in transportation projects that collectively make progress towards achieving these national goals:

- Improving safety
- Improving system reliability
- Ensuring environmental sustainability
- Reducing congestion
- Reducing project delivery delays
- Maintaining and improving infrastructure
- Supporting freight movement and economic vitality

This will mark the first time that all state DOTs and Metropolitan Planning Organizations (MPOs) are required to track and report results using a national framework of consistent performance measures. The measures are applied within four program areas:

- 1. Highway Safety Improvement Program
- 2. National Performance Program
- 3. Congestion Mitigation
- 4. Air Quality

States and MPO's are expected to work together to set targets for national measures in these program areas. The Federal Highway Administration (FHWA) is responsible for establishing rules guiding the implementation of this new process. FHWA anticipates that rules guiding implementation of this process should be in place by spring 2015.

Georgia DOT has supported and implemented performance management Department-wide for over a decade. Following careful review of our agency's primary mission, a crucial set of measures were identified that drive performance and inform decisions. These measures support and work hand-in-hand with our agency Strategic Plan. In 2011, the Department launched its first public dashboard which informs stakeholders of the Department's priorities and performance. The Dashboard can be found at www.dot.ga.gov/statistics/performance/Pages/default.aspx.

TRANSPORTATION FUNDING

DOING MORE WITH LESS

Georgia DOT's FY 2013 budget was \$2.237 billion. More than 99 percent of the funding was derived from motor fuel taxes, federal funds, and other sources; less than 1 percent came from State General Funds.





The Department's first funding obligation is to repay the annual debt service. Figure 2 reflects the total debt service for the Department over the next three years. General Obligation Bonds (GO) and Guaranteed Revenue Bonds (GRB) must be repaid using State Motor fuel dollars. Grant Anticipation Revenue Vehicle Bonds (GARVEE) are repaid using both Federal Obligations funds and State funds. In essence this means that the overall funds available to toward transportation spend are substantially reduced each year.



GO Bond Debt Service appropriated directly GSFIC GRB and GARVEE Debt Service appropriated to the GDOT Payments to SRTA program AFY 13 GRB total includes funds appropriated for the retirement of GA400 tolls Debt Service based on information provided by GSFIC and SRTA

Figure 2

In FY 2013 for example, \$396.5 million of the \$2.2 billion was allocated to debt service leaving about \$1.8 billion to allocate towards improving Georgia's transportation system.

Georgia DOT must also use motor fuel dollars to provide matching funds for the state's FHWAfunded projects and to fund the Department's annual general operations budget. Over the years state motor fuel funds have failed to keep up with Georgia's growing transportation needs. Figure 3 shows Motor Fuel trends over the past ten years.





Georgia DOT uses its available state and federal funds to plan, design, construct and maintain projects throughout the state. These projects range from addressing safety concerns to increasing capacity on our roadway system. They also include maintaining our existing system through resurfacing and routine maintenance projects. Figure 4 shows the distribution of the FY 2013 State Motor Fuel Budget.



LMIG-Local Maintenance and Improvement Grants Program

Figure 4

STATEWIDE STRATEGIC TRANSPORTATION PLAN

2013 PLAN UPDATE

HISTORY

Senate Bill 200 (SB 200), as passed during the 2009 General Assembly Regular Session, required the appointed position of State Director of Planning to prepare and deliver a Statewide Strategic Transportation Plan (SSTP) to the Governor, the Speaker of the House Lieutenant Governor, the of Representatives, and the chairpersons of the Senate Transportation Committee and the House Committee on Transportation. The plan is a comprehensive, fiscally constrained transportation plan which includes projects, programs, and other activities to support implementation of the state's strategic transportation goals and policies.

The bill also requires the plan to be developed with consideration of investment policies addressing the ten investment priority areas laid out in SB 200. The first SSTP was officially approved by Governor Sonny Perdue on June 2, 2010 and adopted by the Georgia DOT State Transportation Board on June 17, 2010. The bill requires the plan to be revised and

Points of Emphasis

- Senate Bill 200 passed in 2009
- Appointed State
 Director of Planning
 who is responsible for
 preparation of SSTP
- SSTP concluded that the right investment strategy supported by additional funding resources could transform Georgia's transportation network

updated semiannually. The first update to the original SSTP was recently completed and has been approved by the Governor and the Georgia DOT State Transportation Board.

PURPOSE

The SSTP is a comprehensive document which sets the strategic direction and makes the business case for an increased transportation investment within the state. It examines a wide variety of transportation options and solutions for Georgia and its citizens and uses a strategic planning process that is outcome-driven and return-on-investment oriented. The SSTP is comprised of four statewide goals, which are: to support Georgia's economic growth and competitiveness, to ensure safety and security, to maximize the value of Georgia's assets, getting the most out of the existing network and to minimize impact on the environment. The SSTP concludes that the right investment strategy supported by additional funding resources could transform Georgia's transportation network, generating billions of dollars in additional GDP growth and creating thousands of new jobs over the next 30 years.

MOVING FORWARD

The Department is in the initial stages of creating a document that will meet all state requirements for a Statewide Strategic Transportation Plan and all federal requirements for a Statewide Transportation Plan for Georgia. This document will, for the first time, combine the traditional transportation analyses of a long-range transportation plan with the strategic business case for transportation investment. This will be done by joining and updating the current 2035 Statewide Transportation Plan (SWTP) with the current 2013 Statewide Strategic Transportation Plan. This two year project began in May 2013 and will end in the spring of 2015. It will result in a plan that will provide a comprehensive look at all transportation issues facing Georgia now and through the year 2040. The plan will include growth trends and projections, economics, existing conditions, future needs and an investment strategy for transportation in the state.

This new document will also focus on the application of transportation policies and investments to the pursuit of Governor Nathan Deal's strategic goals for the State of Georgia. The requirements of MAP-21 will also influence the development of this new statewide document. MAP-21, the current federal transportation funding bill, requires the development of performance measures for various identified areas. Georgia already has performance measures for many of the goals envisioned under MAP-21. The state's readiness to develop performance measures provides Georgia with a competitive advantage to benefit from opportunities under MAP-21 to improve the state's highway and freight network.

REQUIRED REPORTS

Senate Bill 200 set requirements for three separate reports to be submitted by the Director of Planning to the Governor, the Lieutenant Governor, the Speaker of the House of Representatives, and the chairpersons of the Senate Transportation Committee and the House Committee on Transportation. The reports are the following:

- A report detailing the progress of projects and programs in the Statewide Strategic Transportation Plan (to be delivered semi-annually).
- A report detailing the progress of every construction project valued at \$10 million or more against the benchmarks. This includes projects open to traffic during calendar year, projects in active construction and projects currently under design (to be delivered semi-annually).
- A report detailing the amount of money saved due to value engineering studies each calendar year (to be delivered annually).

These reports are published on the Department's website and can be found in the Appendix of this Investment Report.

HIGHWAY SAFETY

GEORGIA HIGHWAYS ARE SAFER THAN ONLY A FEW YEARS AGO



In 2013, 549 fewer fatalities occurred on Georgia's highways than in 2005. The Department intends to sustain and build on that momentum. In support of the Federal Highway Administration's *Toward Zero Deaths* national initiative to reduce fatalities, Georgia DOT is promoting a series of educational safety videos. These "Drive Smart" videos posted on the Department's You Tube channel

and the Department's website encourage drivers to fully focus on their most important activity and responsibility – driving safely and courteously. The "Drive Smart" videos can be viewed at website http://www.youtube.com/playlist?list=PLOmONQQOLK5AcHL9uTK7QXVIFIfu23dKL.

This educational video outreach is part of Georgia DOT's overall effort to continue to reduce fatalities. That work is grounded in the Governor's Strategic Highway Safety Plan, a data-driven program that focuses on key safety initiatives attainable through the four E's – Education, Engineering, Enforcement and Emergency medical services.

Nationally, highway fatalities increased five percent in 2012 to approximately 36,200. The aggressive safety emphasis undertaken by Georgia DOT, the Department of Public Safety and the Governor's Office of Highway Safety, however, kept the state's numbers trending downward. Every Georgia DOT project is designed and constructed to meet or exceed federal safety guidelines. There is a broad array of efforts the Office of Traffic Operations is refining and utilizing to improve safety and reduce fatalities, injuries and crashes. Roundabout intersections, increased use of cable barrier on interstate highways and freeways, raised center median barriers, rumble strips, more reflective signage and striping, coordination of traffic signal timing and pedestrian accommodations are all among the efforts Georgia DOT is undertaking to make Georgia's roads safer.

The Department's Complete Streets policy is aimed in part at helping address an area of continuing concern – incidents in which pedestrians are injured or killed. There were a total of 168 pedestrian fatalities in Georgia last year. Complete Streets is a long-term, broad initiative to design and build transportation infrastructure in a way that best serves all of its users, be they drivers, bicyclists or pedestrians.

In FY 2013 \$67,633,059 in safety funds were expended. Of those funds 29 projects were awarded to construction valued at \$60,010,876 dollars. The remaining funds were used on preliminary engineering, utility cost and right-of-way cost. Notable projects delivered using these funds include:

SR 3/Northside Drive @ Various Intersections:

The proposed project consists of roadway and waterline improvements along Northside Drive. The roadway portion of the project includes converting the existing reversible lane to a more traditional two way roadway system. In addition intersection improvements will be included throughout the route. Signal equipment and pedestrian accommodations will also be upgraded along the route to improve safety.





SR 13/BUFORD HIGHWAY from Lenox Rd. to Afton Lane:

This project includes pedestrian lighting, adding a raised median in the existing two way left turn lane, and upgrading existing or adding new sidewalk to meet ADA standards. In addition, multiple pedestrian hybrid beacons are proposed along with mid-block pedestrian refuge/crossing islands.



Off-System Safety Projects: The Department partnered with local governments statewide to fund 38 projects to enhance signing and striping on local routes. A total of \$6.84 million was spent on construction costs for local roads. An additional \$1 million per District was spent on the funding of the Off-System Safety Program.

INFRASTRUCTURE PRESERVATION

HEALTH OF INTERSTATES AND NON-INTERSTATES FACE CHALLENGES

Georgia DOT maintains a State Highway System of approximately 18,000 centerline miles of roadway and 6,600 bridges while consistently ranking near the top of the nation's best maintained roadways. In this time of limited resources, the Department must make sound investment decisions that extend the life of its assets. Georgia DOT has identified over a billion dollars in maintenance needs that are currently unfunded. These needs are addressed through both routine maintenance activities as well as rehabilitation and reconstruction activities.

ROUTINE MAINTENANCE

Through the use of permanent staff, contractors and temporary labor, the Department implements different strategies and activities to maintain the roadway system. These include routine maintenance activities as well as more substantial reconstruction projects. Georgia DOT's Routine Maintenance Program includes activities such as pavement repair, mowing and maintenance of



roadside vegetation, maintenance and repair of wall and bridge structures and others. Routine maintenance projects utilize state motor fuel funding and are not eligible for federal funds. An additional \$2.26 million was also allocated to comprehensive routine maintenance of the complete I-95 Georgia corridor as well as the portion of I-75 from Cobb County to the Tennessee state line. Planned work in some activities was not completed due to several things such as major storms requiring resources for clean-up, availability of materials and functionality of equipment. As Georgia DOT moves forward, the use of contractors will continue to be used to fill the gap between needed and completed work as funding will allow.

Poutine Maintenance Activities	Value of Needed	Value of Planned	Value of Completed RM Work **	
Routine Maintenance Activities	RM Work	RM Work *	GDOT	Contractor
Asphalt Pavement Maint. & Repair	\$79,768,233	\$16,181,913	\$13,303,751	\$0
Concrete Pavement Resurfacing and Repair	\$47,070,584	\$1,367,210	\$1,893,959	\$4,538,766
Maintenance and Upkeep of Grass Shoulders	\$38,553,544	\$10,712,477	\$7,676,318	\$0
Maint. & Repair of Drainage Structures	\$26,976,295	\$8,401,890	\$9,328,314	\$0
Mowing, Planting and Maintenance of Roadside Vegetation	\$67,714,822	\$39,425,722	\$33,447,079	\$13,922,341
Sign and Pavement Marking Replacement and Repair	\$128,386,762	\$28,861,691	\$15,737,422	\$15,430,212
Grounds and Facilities Upkeep	\$56,831,402	\$32,704,642	\$22,334,393	\$7,337,080
Maintenance and Repair of Bridges	\$18,249,103	\$2,938,643	\$2,635,983	\$0
Inspections	\$24,578,845	\$19,172,704	\$17,783,996	\$0

Table 1

* Value of Planned RM Work is limited to GDOT forces only

****** Value of Completed RM Work includes GDOT forces and Contract forces

SYSTEM REHABILITATION AND RECONSTRUCTION

In addition to Routine Maintenance, Georgia DOT uses Interstate Maintenance and Maintenance Lump Sum federal funds for reconstruction and rehabilitation improvements along the existing system. These improvements include activities beyond routine maintenance that must be made to existing infrastructure such as painting and joint repairs on bridges and major resurfacing and rehabilitation of roadways. Rehabilitation and reconstruction activities are generally higher in cost, involve a



more detailed level of design, and can be impactful to our traveling public.

In FY 2013, nearly \$70 million was authorized in Interstate Maintenance funds for major interstate maintenance projects. An additional \$210 million was authorized in Maintenance Lump Sum funds for maintenance projects costing less than \$10 million.

Major projects using these types of funding include:

I-16 Concrete rehabilitation Project – \$56 million

Rehabilitation of 27 miles of concrete interstate from SR 26 to SR 29 in Laurens County The work consisted of the outside shoulder being replaced with Roller Compacted Concrete (RCC), removal and replacement of the second lane for the entire length, and the full depth slab replacement of broken slabs in lane 1.

I-24 Resurfacing Project – \$5 million

Milling and resurfacing of 4 miles of interstate from the Tennessee state line to the Tennessee state line in Dade County.

I-59 resurfacing Project – \$4.9 million

Milling and resurfacing of 12 miles of interstate from the Alabama state line to SR 136 in Dade County.

The Department's maintenance staff is working efficiently to meet its commitments. By addressing as many needs as resources will allow, Georgia DOT can extend the life of its aging roadway system as long as possible.

CAPITAL IMPROVEMENTS

ADDRESSING COMMUTING AND FREIGHT NEEDS

PROJECT DELIVERY

Capital improvements to Georgia's Roadway System are critically needed to support our thriving economic system and growing population needs. In addition to supporting our economy, capital improvements can enhance the quality of life for all Georgians by providing a reliable transportation system. The State Transportation Improvement Program (STIP) documents the projects that the Department, as well as our local partners, have committed to design, purchase right-of-way and construct over a four year period. In a sense, this is our promise to the citizens of Georgia. There were 83 projects included in the STIP to be authorized for construction in FY 2013. Of those original 83 projects the Department authorized 62 projects or 75 percent.

Numerous other projects were authorized for construction in FY 2013 that address needed improvements in Georgia. These projects were either authorized early or had been delayed in previous years. When they are included in the overall total, the Department authorized 370 projects valued at just under \$1.4 billion in fiscal year 2013.





* In addition to capacity projects, the 2013 total includes 146 restoration, rehabilitation & resurfacing projects, 35 bridge rehabilitation and replacement projects, 97 local projects and others.

The Department has set an aggressive target of delivering 80% of the Construction Authorization phases per the currently approved STIP. By implementation of strategies such as "cradle to grave" project managers, stabilization of projects in the STIP and coordination with partnering agencies, Georgia DOT continues to improve in this area, having increased Construction Authorization delivery from 71% in FY 2012 to 75% in FY 2013. The Department continues to explore innovative ways to deliver projects per the current STIP.

MAJOR AND SIGNIFICANT PROJECTS

29.7 MILES OF REVERSIBLE TOLLED LANES PROPOSED

Georgia DOT is also responsible for delivering major investment projects - projects valued at over \$500 million. The Northwest Corridor (NWC) project is one of the Department's most impactful initiatives underway. This project will improve traffic flow, increase options for motorists, provide reliable trip times, create jobs, and bring economic benefits not only to residents of the corridor, but also to the Southeastern region of the United States. The NWC project, formerly part of the West by Northwest Public-Private Partnership (P3) procurement, includes the construction of



managed toll lanes along I-75 from I-285 to Hickory Grove Road and along I-575 to Sixes Road.

The Department met several milestones in 2013 indicating significant progress on this major project. Three proposals were submitted to Georgia DOT on June 10, 2013. The proposals were evaluated and on July 23, 2013, Northwest Express Roadbuilders was selected as the Apparent Best Value Proposal. Northwest Express Roadbuilders is comprised of Archer Western Contractors, The Hubbard Group and Parsons Transportation Group.

The Department is committed to delivery of this crucial project according to the proposed schedule. For additional information regarding this project, visit

www.dot.ga.gov/informationcenter/p3/projects/nwc/pages/default.aspx.

Other significant projects making progress in 2013 include:

I-16/I-75 Improvement - Widening and reconstruction of I-75 from Hardeman Avenue to Pierce Avenue and I-16 from I-75 to Walnut Creek within the City of Macon in Bibb County, Georgia. For more information see www.il6i75.com/.

Fall Line Freeway - The final nine miles of the highway linking Columbus, Macon and Augusta is under construction between State Route 24 and U.S. 441 in Baldwin and Wilkinson counties.

I-75 Express Lanes - A managed lane system along I-75 from the SR 155 interchange in Henry County north to the SR 138 interchange in Henry and Clayton counties, a distance of 12.24 miles. This project marks the largest Design-Build project in Georgia DOT history. For more information see <u>www.dot.ga.gov/travelingingeorgia/expresslanes/I75expresslanes/Pages/default.aspx</u>.

OPERATIONAL IMPROVEMENTS

LOW COST SOLUTIONS YIELDING HIGH IMPACT RESULTS

The Department has focused in recent years on "Operational Improvement" projects that are designed to address nagging traffic flow issues that negatively impact the overall system. Projects and programs such as ramp metering, flex shoulder lanes, improved incident management, restriping of merge sections and ramp reconfigurations were undertaken in an attempt to unclog some of the bottlenecks in the region. The projects, much smaller in scale than massive multi-million dollar interchange reconstruction or freeway widening projects, were selected for their relatively quick deployment time and low cost. The goal of these projects is to improve the flow of traffic through affected corridors. This is measured by looking at travel times and average speeds both before and after project deployment. The expected result is that travel times during the peak hours will decrease and average speeds in the corridor will increase.

The following Operational Improvement efforts are in full operation on Georgia's roadways:

Metered Ramps: 170 entrance ramps in the metro Atlanta area now utilize ramp metering. These signal systems allow just one car to enter the freeway at a time, reducing conflicts at the merge point and allowing freeway traffic to stay free-flowing for a longer period each day.





Flex Shoulder Lanes: Between Holcomb Bridge Rd and the MARTA North Springs station on GA 400 Southbound, a part-time shoulder lane operates during the morning hours; 6:30 AM until 10:00 AM. This additional lane allows more vehicles to travel through this busy corridor.

Restriping of the GA 400 and I-85 South merge

Prior to this project, three lanes of GA 400 southbound merged into a single lane in the same vicinity that the toll way merged with I-85. This caused significant backups on GA 400 southbound in the mornings. To combat this problem, one of the right lanes on I-85 southbound was modified to allow GA 400 to carry two lanes into the merge. The change all but erased the delays on GA 400 southbound approaching this area.



The following systems have been in place for many years, and are continuing to serve their purpose as strategies for reducing congestion.

HERO Incident Management Unit

Highway Emergency Response Operators (HEROs) patrol the metro area Interstates looking for accidents and other incidents that affect the flow of traffic. The goal of the nationally-acclaimed incident management program is to safely and expeditiously clear the lanes of blockages and help restore normal traffic flow. On average HEROs had an incident response time of 13 minutes and a travel lane clearance time of 10 minutes for cars and 27



minutes for heavy tractor trailers. This is a noticeable improvement over recent years where the average clearance time for trucks was approximately 45 minutes.

511 phone system, website and apps



511 information sources provide real-time traffic condition data to users. By keeping the traveling public well-informed of trouble spots, the Department can lessen the impact of incidents by encouraging drivers to use a different route or mode of travel to avoid being caught in delays. In FY 2013 the 511 system received approximately 1.2 million calls and 2.5 million visits to the website. In addition, there have been over 48,000 Android and iOS Mobile Application downloads.

TRAFFIC OPERATION QUICK RESPONSE PROGRAM (QR)

The Department's Traffic Operation Quick Response program (QR) has been in existence for several years and proved to be a successful means of constructing safety and operational type projects on the state route system through the use of state motor fuel tax funds. However, due to budgetary constraints the program was not funded for the past few years. Funding became available for the program in FY 2013 and the Department quickly developed a process for efficiently utilizing the funds. The primary goal of the QR program is to provide a mechanism to quickly identify, approve and construct small traffic operational projects around the State. These projects are managed by our seven district offices.

This process provides each district engineer the ability to quickly identify a needed project, solicit a minimum of three (3) bids and then award the project to the lowest bidder. Over the years, Georgia law has been revised to allow the cost of a QR project to reach a maximum amount of \$200,000 which has greatly improved the flexibility of the program. In FY 2013 the district offices identified and implemented over ninety (90) QR projects around the state that totaled over \$8.6 million in improvements to the state route system. As the new FY 2014 progresses the Department has approved an additional \$7 million in motor fuel funds to be added to the program and it is expected that the District Offices will submit an equal amount of greatly needed QR projects.

Before and after results of the extension of Turn Lane on US 80 at Wallin Street in Chatham County.



TRAVEL TIME TRENDS

The Georgia DOT Office of Traffic Operations tracks peak or rush hour trends in travel times and speeds along the most congested Interstate corridors in metro Atlanta. The data is collected by the NaviGAtor Intelligent Transportation System (ITS) which collects information through vehicle sensors evenly spaced along the Interstates. These sensors, using a variety of technologies, indicate the speed, number of vehicles and traffic density for each corridor. By analyzing this data over a rolling 30-day average, the Department can determine how well congestion is being addressed during the region's highest peak travel periods; 6:00 a.m. until 10:00 a.m. and 3:00 p.m. until 7:00 p.m. Currently, the average speeds can be found on the Georgia DOT Performance Dashboard at www.dot.ga.gov/statistics/performance/Pages/default.aspx.





External factors are the most challenging part of interpreting trends in travel times and speeds. Several things can significantly affect the volume of traffic using the roads, which in turn affects the performance of the roadway. Two such examples are the economy and the size of the workforce. Figure 6 reflects that the downward turn in the economy and high unemployment of 2008 resulted in noticeably better traffic conditions. This is demonstrated by the average speed of 45.3 mph in the AM peak for 2008. As the unemployment rate dropped and more drivers returned to the roads in the following years, the traffic conditions worsened.

Another external factor is weather. A particularly rainy period, such as the summer of 2013, can impact the travel time and speed trends in the form of "worse" conditions. Even though operational improvements may have been made, their benefit may be negated by poor weather conditions that caused commuters to drive more slowly.

These are examples of the many impacting factors that can sometimes influence travel trends. The Department continues to use all available data to make the most informed decisions possible.

INTERMODAL PROGRAM

RAIL, TRANSIT, AVIATION, AND WATERWAYS

The Intermodal Division of Georgia DOT is responsible for setting policies and administering all major statewide non-highway programs for the development of a comprehensive transportation system. Specifically, these include the Rail, Transit, Aviation and Waterways Programs. These units work with local and federal agencies to oversee the distribution of funds as well as various projects in each area.

RAIL PROGRAM

The responsibility of the Rail Program is to preserve and enhance the State's rail transportation system for future development of freight and passenger rail service; thereby providing opportunities for economic development. The Department has nine lease agreements with six separate railroad companies which generated \$303,592 in FY 2013. These lease payments in addition to appropriated bonds are used for rehabilitation and maintenance of state owned facilities.

During FY 2013 the Rail Program completed 9 rail projects in 18 counties. These projects replaced or rehabilitated 8 bridges, 233 miles of track, 82,000 crossties and 15,294 tons of ballast for a total value of \$18,221,806.

Railroad	Project Description		Amount
HOG	Crosstie replacement, ballast		\$4,000,000
HOG	Crosstie repla	cement, ballast	\$1,000,000
HOG	Bridge rel	Bridge rehabilitation	
ССКҮ	Crosstie replacement, ballast		\$2,000,000
GCR	Bridge rehabilitation		\$2,000,000
GCR	Bridge rehabilitation		\$ 600,000
GCR	Crosstie replacement		\$ 465,790
G&F	Crosstie, ballast, and rail replacement		\$ 3,700,000
GPA	Earthwork, drainage, and new track		\$2,696,016
	Total:		\$18,221,806
Table 2			
HOG - Heart of Georgia Railroad G&F - Georgia & Florida Railway		vay	
CCKY - Chattooga & Chickamauga Railway GPA - Georgia Port Authority			

In addition to work on state rail lines, the Rail Program participated in a joint project with Georgia Ports Authority and Norfolk Southern on the Mason Intermodal Container Transfer Facility. This project expanded the capacity and efficiency of the facility reducing cost and increasing commuter safety. The new operation will avoid the use of 21 at grade crossings and reduce round trip time to Atlanta by six hours.

TRANSIT

The Transit Program is primarily responsible for receiving and administering Federal Grant Funds and providing technical assistance as well as safety and regulatory training for local transit operators. They also identify funding opportunities for local transit agencies as well as provide guidance in the planning and operation of local transit systems. The Transit Program distributed 216 contracts to sub-recipients for a total of \$75 million. An additional \$93 million was distributed to large urban areas for a total of \$167.6 million statewide.

Program	Total Project	Federal	State	Local
Rural	\$39,169,989	\$24,735,123	\$69,250	\$14,365,616
Small Urban	\$31,067,635	\$16.445,742	\$782,619	\$13,839,274
MPOs	\$4,769,398	\$3,557,156	\$709,264	\$502,979
Sub-recipient Contracts Total	\$75,007,023	\$44,738,021	\$1,561,133	\$28,707,869
Large Urban	\$92,628,157	\$74,102,526	-0-	\$18,525,631
Statewide Total	\$167,635,179	\$118,840,547	\$1,561,133	\$47,233,500





Transit services are provided in 122 counties throughout Georgia in various forms. The Transit Program plays a vital role in assuring that the services follow federal guidelines while meeting the needs of their customers.



AVIATION

The Aviation Program has the responsibility of assuring that the 104 publicly owned airports in Georgia are safe, adequate, and well maintained. Their primary functions include guiding airport development, licensing and inspecting general aviation airports and fostering safer operating conditions. In FY 2013 the Aviation Program oversaw an investment of \$87,296,816 in Federal, State and Local funding to implement design/planning, land acquisition, Navigational Aids (NAVAIDS) and construction type projects. Notable projects included:

- Runway extensions in Elberton, Hampton, Hazlehurst, Homerville
- A comprehensive Airport Pavement Study Update
- Updated Airport Licensing Rules and Regulations.

In Georgia 84% of state airport runway lengths met system plan goals and 77% met or exceeded a pavement condition index (PCI) rating of 70 for their primary runway pavement. In FY 2013 51 airports were inspected resulting in 96% meeting state standards.

Hampton - Atlanta South Regional Runway Extension - \$3,044,664

Albany – SW GA Regional New Terminal - \$10,796,000





WATERWAYS

The Waterways branch is responsible for oversight of navigable harbors and waterways. The branch works closely with the Savannah and Brunswick Ports to provide real estate for disposal of dredged material as well as coordination of funding and review for dredging and construction projects. Federal law requires each sponsor to provide 35% of the cost of new construction. The Corps of Engineers then provides the remaining 65%. The Corps removes approximately 6.25 million cubic yards of material every year in Savannah.





In FY 2013 the Waterways unit coordinated a Record of Decision signed by Corps of Engineers for the Savannah Harbor Expansion Project (SHEP). Property acquisition also began for the project. Georgia is the sponsor for SHEP.

Containment Area Improvement Projects

Project	Total Project	Federal (65%)	State (35%)
14A	\$5,558,594	\$3,613,086	\$1,945,508
14B	\$6,164,533	\$4,006,946	\$2,157,587
Total	\$11,723,127	\$7,620,032	\$4,103,095

Table 4

ENVIRONMENTAL NEWS

CHALLENGES AND SUCCESSES

The impacts of the Department's projects on the natural and cultural environment as well as the community are given due consideration during project development. For federal-aid projects and those requiring USDOT approval, the overarching federal environmental law is the National Environmental Policy Act, commonly referred to as NEPA. This federal environmental law requires compliance with a variety of federal environmental laws, regulations and executive orders to ensure that information on environmental impacts of any federal action is available to public officials and citizens before decisions are made and before actions are taken. Environmental studies utilize an interdisciplinary identify approach to environmental considerations. This process must weigh and balance concerns such as historic properties vs. wetlands, threatened and endangered species vs. community impacts. Environmental compliance is about making project decisions while being aware of environmental impacts.

In accordance with NEPA, many studies are conducted, including traffic, air quality and noise analyses; historic and archaeological

Federal environmental laws include

- Section 4(f), USDOT Act of 1966
- Economic, Social and Environmental Effects, 23 USC 109(h)
- Uniform Relocation Assistance and Real Property Acquisition Act of 1970
- Title VI of the Civil Rights of 1964
- Executive Order 12898 Environmental Justice
- Public Hearings, 23 USC 128
- Section 6(f), Land and Water Conservation Fund Act
- Executive Order 11990 Protection of Wetlands
- Section 404 of the Clean Water Act
- Executive Order 11988 Floodplain Management
- National Flood Insurance Act
- Farmland Protection Policy Act of 1981
- Resource Conservation & Recovery Act of 1976
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund)
- Endangered Species Act of 1973
- Fish and Wildlife Coordination Act
- Migratory Bird Treaty Act
- Section 106, National Historical Preservation Act of 1966
- Archeological Resources Protection Act
- Native American Grave Protection and Repatriation Act
- Noise Standards 23 USC 109
- Clean Air Act, Conformity

resource assessments; evaluation of community impacts; as well as ecological studies. Public input is also sought during this process. As these studies reveal anticipated impacts, project plans are evaluated for ways to reduce these impacts. These studies often require consultation with nontransportation agencies. Once the agencies concur with our findings, the environmental document is shared with the public to disclose the impacts as well as the decisions reached. USDOT, generally through the Federal Highway Administration, approves the Department's NEPA document.

For state-funded projects and those not requiring a USDOT approval, the Department must comply with the Georgia Environmental Policy Act, commonly referred to as GEPA. In 1991, the state

legislature passed GEPA which allows the responsible agency such as Georgia DOT to determine if a proposed action significantly adversely affects the quality of the environment. In general, this process is thorough but less time consuming than the federally required process.

Prior to the authorization of federal right-of-way or construction funds, the Department must ensure that the environmental analysis is current and matches the project plans. A reevaluation of the NEPA document is needed if plans have changed, if new requirements have come into effect, or if newly identified environmental resources are identified.

CHALLENGES

AN UNINVITED GUEST RESULTS IN REEVALUATING NUMEROUS NORTH GEORGIA PROJECTS

In the spring of 2012, a female Indiana bat (*Myotis sodalist*) was radio tracked from a cave in Tennessee to Gilmer County. This is the first recorded occurrence of this endangered species in Georgia since 1966. Previously considered for projects in only two counties in extreme northwest Georgia, its presence in a place outside these two counties caused the US Fish and Wildlife Service (FWS) to reconsider its range.



Due to its protection under the Endangered Species Act of 1973, the Department cannot harm, harass or kill threatened or endangered species and cannot destroy its habitat. This increase in the range of this endangered species necessitated the reevaluation of many ongoing projects throughout north Georgia. To determine next steps, the Department deployed electronic listening devices on numerous projects during the summer of 2012 that were designed to hear bat frequencies. Many more projects also required mist netting during this time. Mist netting is a highly specialized activity that requires the installation of large trapping nets that must be monitored over several nights and at different locations on a project. Persons who handle the trapped bats must have a special permit from USFWS so that they do not harm the species or possibly spread disease. If the mist nets had captured an Indiana bat, a small radio transmitter would have been placed on them. This transmitter would allow the tracking of the animal.

While the mist netting did not capture any Indiana bats, numerous Gray bats (*Myotis grisescens*) were captured and the acoustic data confirmed a much larger range than previously understood. The range of the Gray bat has increased from 7 counties to 13 counties. Now that more information is known about these species, the Department will be able to quantify impacts and move forward with its projects in a timely manner.

SUCCESS

GIVING BACK TO THE CITIZENS OF GEORGIA

A Macon area project presented the Department with an opportunity to study the history of an unmarked African American cemetery, referred to as the Avondale Burial Place. A local property owner alerted the Department to the presence of this site which lacked permanent burial monuments and depressions. The road project required the relocation of this historic cemetery as constraints prevented preservation in place.



Based on the historical and archaeological information

uncovered, this cemetery appears to be related to the late nineteenth-century, post-emancipation African-American tenant farmer community near Walden and Avondale in southern Bibb County. The arrangement of the graves suggests several African American families in the area used the cemetery during the 19th and early 20th centuries. The burials were found in clusters that likely represented different family groupings. The remains were possibly the descendants of slaves from the McArthur and other nearby plantations, who lived on adjacent land in the mid to late 1800s.

The Department arranged for professional mortuary archaeologists to respectfully recover and relocate the burials to a new location at a local cemetery. A total of 101 burials were identified, recovered and reburied as part of this project. All remains, associated objects, coffin hardware and grave details were carefully mapped, recorded, analyzed and reburied at a site in Peach County. This work included DNA analysis of remains. Results were compared with DNA samples from the potential descendent community to reconnect the deceased with the living. Two living members of the community have been found to be directly related to two of the deceased recovered from the Avondale Burial Place.

The Avondale Burial Place and the local African American history were documented through a detailed report of the removal, analysis, and reburial; a project website; a film; and a marked reburial site. Several organizations recognized this effort through awards, including, the Exemplary Human Environment Initiatives Award from FHWA. The project's film *I Remember I Believe* was selected for showing at the Archaeology Channel International Film and Video Festival 2013 in Eugene, Oregon and was recognized for Best Script and Best Music and received Honorable Mention in three other categories including Best Film. The Department also received an Apex Award for the film on YouTube.

Georgia DOT is committed to providing a quality transportation system for its citizens while being good stewards to the natural and cultural environment across our state.

INNOVATIVE SOLUTIONS

SAVING MONEY AND TIME

INNOVATIVE PROGRAM DELIVERY

The Department's Office of Innovative Program Delivery (IPD) specializes in managing projects through the use of alternative delivery methods such as Design-Build, innovative contracting, and specialty finance projects. In addition, IPD is responsible for providing technical support and engineering project management during the development and implementation of Public Private Partnership (P3) projects. Since 2006, IPD has delivered 15 Design-Build projects for a total value of \$482 million. Design-Build delivery, when properly utilized, can offer several advantages over the typical Design-Build model. These advantages include schedule compression, single point of contact, integrated solutions and a focus on maximizing value. Figures 7 and 8 provide an overview of Design-Build project activity over the past seven fiscal years.



Number of Awarded Design-Build Projects



Amount Awarded to Design-Build Projects

The Design-Build program continues to evolve as the Department gains experience with Design-Build delivery. Most recently, GA Code 32-2-81 (2013) was passed which allows the Department to award Design-Build contracts using a Best Value or One Phase Low Bid selection method. Prior to this legislative action the Department was only allowed to award projects using a Two Phase Low Bid selection method. The change will create additional opportunities to utilize Design-Build delivery in an efficient manner.

In FY 2013 the following successes were realized utilizing Design-Build, P3 or some form of innovative delivery.

- Design-Build Projects
 - Variable Speed Limit Implementation for I-285 North
 - Programmatic Intersection Improvement in District 3
 - GA 400 @ Abernathy Road Ramp Extension (60 days early)
 - GA 400 @ McFarland Road Lane Extension (60 days early)
 - I-575 @ Ridgewalk Parkway Interchange (45 days early)
 - GA 400 @ Northridge Road Bridge Replacement
 - I-75 south Express Lanes
- P3 Projects
 - Northwest Corridor (see Major Projects for additional information)
 - Utilized Best Value selection method and facilitated review of Alternative Technical Concepts (ATCs)
- Design-Bid-Build Projects
 - I-285 North Deep Milling & Resurfacing using A + B Contracting
 - Diverging Diamond Interchange in Georgia on I-285 @ Ashford-Dunwoody Road (Open to Traffic 30 days early)
- Research and Demonstration Projects
 - Flex Lane Implementation on GA 400 Southbound
 - Next Generation of Design-Build Research and Training with Georgia Institute of Technology which was awarded a high-value research award from the American Association of State Highway and Transportation Officials

INNOVATIVE APPROACH TO OPERATIONAL IMPROVEMENTS

The metro Atlanta area has a population of more than 5 million and experienced a population growth rate of 18.3 percent from 2000 to 2010. This growth has contributed to increased traffic congestion and delay. Georgia DOT is committed to implementing strategies to reduce traffic congestion in metro Atlanta and statewide. Two strategies include:

- Implementing **Alternative Intersection Designs** including roundabouts, diverging diamond interchanges, and displaced left-turn intersections
- Active management and maintenance of high priority signalized corridors in metro Atlanta with the **Regional Traffic Operations Program**

SR 400 at SR 53 (Dawson County):

Originally conceptualized as a grade separation project, Georgia's first continuous flow intersection (CFI) is under final design to improve operations near the North Georgia outlets. The CFI will allow all GA 400 left turn and through traffic to move at the same time by allowing left turn traffic to cross opposing traffic upstream of the main intersection with SR 53. This innovative concept reduces overall intersection delay by 85% and saves the Department nearly \$8 million when compared to the original concept.



Gwinnett County DDIs (I-85 at Pleasant Hill Road & I-85 at SR 140/Jimmy Carter Blvd):

On the heels of Georgia's first Diverging Diamond Interchange (DDI) retrofit in Dunwoody, Gwinnett County began construction on two of its most congested interchanges to improve the flow of traffic to and from the interstate. The DDI is a significant money-saver over traditional interchanges which usually include major bridge widening. The design shifts traffic flow to the opposite side of the road to allow vehicles to enter the freeway by turning left onto an entrance ramp without stopping.



ROUNDABOUTS AROUND GEORGIA

Georgia has continued to expand and invest in the implementation of roundabouts. There are approximately 120 roundabouts in urban and rural communities, including 12 on state routes. Ninety projects in the construction work program will install over 115 proposed roundabouts in over 50 Georgia counties. In FY 2013, an all-way-stop controlled intersection was reconstructed to install the first mini-roundabout on the state route system as a quick safety and intersection operations improvement in a rural area. The Department has expanded its Roundabout Webpage to include helpful resources for motorists and engineers at www.dot.ga.gov/roundabouts.



THE RAID TEAM

To meet the demand for new innovative designs, the Department has created the Roundabouts & Alternative Intersection Design (RAID) Team. This community of practice includes more than 110 professionals from various offices that share knowledge and insight on new concepts, design, and construction. The RAID Team offers training, case studies, photos, videos, and a message board to communicate with National and Department subject matter experts.

REGIONAL TRAFFIC OPERATIONS PROGRAM

Traffic signals impact the movement of people and goods on arterial roadways more than any other traffic control device. Improperly operated and maintained traffic signals can result in increased travel times, stops, and delays for motorists and can increase vehicle emissions, which can have a negative impact on air quality.

In 2010, Georgia DOT initiated the Regional Traffic

Operations Program (RTOP) to take a more comprehensive approach to managing congestion in metro Atlanta by actively monitoring, managing, and maintaining traffic signals in the region. The program is a multi-jurisdictional, cutting-edge signal timing program with the goal of improving traffic flow and reducing vehicle emissions through more efficient signal operation.
The RTOP program expanded from 430 intersections in November 2010 to more than 650 intersections by January 2013. By targeting the three key areas of surveillance, communication, and detection, traffic signal operations along congested corridors can be improved. As part of the RTOP, 113 new closed-circuit television (CCTV) cameras have been installed along roadways to allow for active management of traffic and quick and effective response to changing conditions caused by events and incidents. Each of these cameras is accessible to the public through the <u>www.511ga.org</u> website.

Traffic signal maintenance is also critical to provide a safe and reliable experience along arterial roadways. RTOP has set a goal to have 95 percent of all vehicle and pedestrian detection equipment operational along the routes that it manages. This objective has been met for all corridors for which the initial repair has been completed. Throughout the life of the RTOP, 1,311 vehicle and 506 pedestrian detection systems have been repaired.

A good preventive maintenance program leads to fewer signal malfunctions. During fiscal year 2013, under the RTOP, ground-level preventive maintenance activities were completed at 636 locations, aerial preventive maintenance activities was completed at 206 locations, and comprehensive grounding testing was completed at 207 locations.

THE RESULTS

A key indicator over time of the performance of an arterial corridor is that trips are actually diverted onto the corridor, especially during peak periods. It has been determined that over time the volume and demand have increased in RTOP corridors, while travel time and overall delay have decreased. While there was an eventual return of the increase in delay over time, the increase was at a lower rate than the volume.

Georgia DOT is proud of these results and our innovative investment of human and financial resources to produce a significant benefit for metro Atlanta. Additional information can be found at http://www.dot.ga.gov/travelingingeorgia/trafficcontrol/Pages/Operations.aspx.

TRANSPORTATION INVESTMENT ACT

\$1.2 BILLION DOLLARS AT WORK IN MIDDLE GEORGIA

The Transportation Investment Act (TIA) Referendum was passed by Georgia voters in the regions of Central Savannah River Area, Heart of Georgia Altamaha and River Valley. These three regions will implement a one percent regional sales tax over a ten year



period to fund transportation improvements specifically in their areas. Georgia DOT is responsible for the management of the budget, schedule, execution and delivery of all projects contained on the approved investment lists. Georgia DOT is collaborating with local and state agencies to ensure timely delivery of TIA projects with a structure that focuses on high-level project management, intergovernmental coordination, transparency and successful program delivery.

Collection of TIA funds began on January 1, 2013. Funds are collected by the Georgia Department of Revenue (DoR). The DoR will collect and enforce the transportation sales and use tax to be used by each Special District. Georgia State Financing and Investment Commission (GSFIC) will disburse



the proceeds of the special district transportation sales and use tax as soon as practicable after collection. GSFIC will transfer 25% of the distributions to the local government allocations monthly. Funds for building projects were first distributed in March 2013.

LOCAL MAINTENANCE AND IMPROVEMENT GRANT PROGRAM

THE PAST, PRESENT AND FUTURE

There are approximately 125,000 centerline miles of federal, state and local roads in Georgia which carry our commuters from their homes to employment centers and support our thriving industry and interstate commerce. Approximately 107,000 centerline miles of this road network consist of county roads and city streets which fall under the responsibility of 159 counties and 531 cities in Georgia.



The Local Maintenance and Improvement Grant Program, commonly referred to as LMIG, gives the Department a mechanism to administer state motor fuel tax funds to local governments to help with improvements to their local road systems. The program officially began in July of 2011. Prior to 2011 the program was administered under the Local Assistance Road Program (LARP) and the State-Aid Program. Since 2011 Georgia DOT has distributed approximately \$100 to \$120 million per year under the new program.

The Georgia DOT Local Grants Division has increased efficiency of the program by streamlining the process. This new process distributes LMIG funds to local governments much faster and provides a greater amount of flexibility in managing their local program. Once a year all counties and cities are asked to submit an application listing projects to be built using LMIG funds. Once the application and project lists are received, they are quickly reviewed and if no errors are noted payment is made to the local government within a two week period.

Project types include patching and resurfacing, new location roadways, widening, turn lanes, rehabilitation, intersections, dirt road upgrades, safety upgrades, culvert/bridge repair or replacement, roadway signing and markings and others. Upon completion of the project, Georgia DOT performs a construction field audit and if satisfactory, the project is officially closed out. Local governments are required to provide a match to their LMIG funds depending on whether their region passed the Transportation Investment Act (TIA).

Georgia DOT also uses a small amount of LMIG funds each year to assist local governments with possible economic development opportunities, emergency situations, and educational school access in their communities. Examples of these types of projects include:



The emergency repairs on numerous washed out roads, pipes and bridges resulting from heavy summer rainfall. Georgia DOT was able to commit \$200,000 to the City of Augusta to help repair this emergency wash out on Mims Road.

The construction of access roads leading to the new CATERPILLAR development in Athens, which will bring nearly 1,500 jobs to Georgia. Approximately \$1.3 million of LMIG funds were committed to the project.





LMIG funds are also used to provide assistance to local governments to ensure that students have safe access to their public schools. This project is on Jefferson Street in Statham, Georgia. Georgia DOT contributed \$200,000 towards the widening of the roadway and adding turn lanes into the new school.

LMIG EXPENDITURES

The annual allocation for the FY 2013 LMIG program was \$110.6 million. Following the review and approval of 588 applications and project lists from 689 city and county governments \$109 million in LMIG funds were distributed. Over \$9 million in LMIG grants were also distributed to local governments for economic development, educational school access and emergency type projects.



Figure 9

The Department continues to receive great feedback from local governments around the State regarding the new LMIG program. Thomas Handley, Coweta County's Director of Engineering, recently wrote a letter stating "The LMIG Program is a great resource for Local Governments in the maintenance of our roadways and we appreciate the opportunity provided by GDOT". The Department will always support and welcome partnerships with all local governments to help meet their local transportation needs and provide the citizens of Georgia the best transportation system possible.

VALUE ENGINEERING

SIGNIFICANT SAVINGS BETWEEN FY 2008 AND 2013

Since the 1990's, the Federal Highway Administration (FHWA) has required Value Engineering Studies on projects with a total programmed cost over \$25 million. In 2008, the State of Georgia passed a law requiring a Value Engineering Study to be performed on all projects exceeding \$10 million in total programmed costs. With little flexibility in the law, the number of projects requiring a Value Engineering Study increased drastically. Most every type of project required a VE Study and those results were documented annually for the Governor and FHWA. The yearly historical results overwhelmingly confirm that the VE process managed by the Department's Office of Engineering Services has proven to be successful by adding value and reducing overall costs to projects. Between FY 2008 and FY 2013 this program has potentially saved \$1.08 billion from various projects that could be reallocated to other programmed projects. Furthermore, these results have averaged a substantial Return on Investment (ROI) of \$189 for every dollar spent conducting these studies during that timeframe.



Figure 11

Value Engineering does not suggest cutting costs by simply recommending a cheaper alternative while ignoring the potential impact to quality. Instead, success is most commonly measured by how well projects function after they are constructed and opened to the travelling public. Since there is no real quantitative way to put an actual price on public satisfaction, the most common form of documenting VE results is by tracking its overall cost savings.

In 2013 the Department conducted 10 VE Analyses resulting in 106 recommended cost saving design changes. Of these, 59 were approved and implemented in projects resulting in \$39.1 million in savings.

In April 2013, HB 202 amended current state law and raised the threshold for VE Studies to \$50 million in total programmed costs to match the Federal Transportation Bill, MAP-21. While this means fewer VE Studies, the innovation and creativity shown by the VE process continues to provide real savings for projects requiring a VE study. One such example involves a VE Study done in early FY 2013 for the local government sponsored Douthit Ferry Road Widening Project in Bartow County. Costs were initially programmed at \$16.7 million. The Consultant Design Team approved 5 of the proposed 14 VE alternatives resulting in a net savings of \$3.4 million (20%).

While changes in the VE threshold in both State and Federal law have influenced the numbers of projects requiring VE Studies, Georgia DOT has continued to achieve successful results with its Value Engineering Program.

WORKFORCE

ACHIEVING MORE WITH LESS

Georgia DOT faces a number of evolving challenges to provide vital services to the public. Like many state DOTs around the country, the Department has seen a decline in the number of its employees. With 42 percent of senior leadership within 5 years of retirement, Georgia DOT has an immediate need to fill the leadership roles of retiring employees over the next three to five years. It will be important for the department to find the right people to fill the voids left by retirees in key leadership and technical roles.

Several staffing solutions are under consideration that will adequately address the Department's need for a trained and knowledgeable leadership team. These challenges require DOT leadership to develop new strategies to build and maintain an effective transportation workforce. The Workforce Planning Initiative and the Succession Planning Program are two such strategies.

WORKFORCE PLANNING INITIATIVE

In 2011 the Office of Human Resources launched a Workforce Planning Initiative to research workforce planning programs currently existing in other state DOTs and to identify a comprehensive strategy to manage the workforce challenges facing the agency. The Workforce Efficiency Committee began the process by researching best practices in workforce planning. State DOTs were surveyed through the American Association of State Highway and Transportation Officials (AASHTO).

After the research component was completed, the committee met with leadership and division directors to outline roles and discuss expected outcomes. This group identified a three to five-year outlook for the Department. Finally, the team met to outline the process and set deliverables.

A three-part process was used to establish optimal staffing levels for the agency. The first phase involved developing the core functions within the department by working with office managers to document primary roles and determine current and future work functions. These were identified in 2012.

After the core responsibilities and functions were determined, the second phase involved conducting a workforce demand forecast to identify minimum staffing needs. The forecasts will determine the critical functions that must be performed to achieve the agency's strategic plan, what job titles/levels possess the needed competencies, and what minimum qualifications are needed to perform each of the job functions. Staffing charts illustrating the optimal staff size of each office and the most efficient combination of full-time employees, temporary workers and contract services are being developed. This information will be used to identify current and upcoming staffing gaps and develop strategies to address the gaps. Phase two is currently ongoing.

The implementation phase is the third phase of the process and includes the deployment of staff development strategies and training, as well as other innovative recruitment strategies to meet the performance objectives of the agency.

The Department has identified a desired set of outcomes for the workforce efficiency initiative. These outcomes include:

- Minimum staff organization charts for each office and District
- Determination of the overall department-right-size
- Identification of potential staffing solutions
- A defined Strategic Workforce Plan to reach staffing goals

SUCCESSION PLANNING

Georgia DOT's Succession Planning Program identifies highly competent, motivated employees and prepares them for an internal applicant pool from which key





management level position openings may be filled. Succession planning is a talent management process used by public and private sector organizations to ensure that highly competent and motivated employees are prepared to fill key management level positions. The practice of succession planning allows an agency to identify, train and develop high performers beyond their current roles, to better prepare them for more senior roles within the organization. A successful succession planning program is a fair and effective way to maintain organizational stability and to transfer critical knowledge and decision making competence to new leaders as current leaders exit the organization.

AWARDS AND RECOGNITION

RECOGNIZED NATIONALLY FOR ITS INNOVATIVE SOLUTIONS

Georgia DOT is recognized statewide and nationally for its many accomplishments. The following are just a sample of the many awards and recognitions received over the course of the last fiscal year.

GEORGIA INTELLIGENT TRANSPORTATION SOCIETY AWARDS

The Georgia Intelligent Transportation Society (ITS) awarded Georgia DOT with the 2012 Outstanding Public Member Agency Award for the implementation of the Regional Operations Traffic Program phases 1 and 2.

ITS also presented Deputy Commissioner Todd I. Long with the Larry R. Dreihaup Award for his outstanding service as Director of Planning, his leadership for the Transportation Investment Act, and his championing of ITS as a way to improve the service level of the state highway system.

AASHTO AWARD

Georgia DOT was awarded the Excellence in Right-of-Way Award at the 2012 AASHTO Subcommittee on Right of Way and Utilities Conference. The recognition came as a result of the Office of Right-of-Way's innovative ROW Cost Estimation Tool, which was developed to prepare project cost estimates at the Planning and ROW Authorization phases of project development.

FHWA EXEMPLARY HUMAN ENVIRONMENT INITIATIVE AWARD

The Office of Environmental Services was recognized for the documentary on the Avondale Burial Place. The FHWA awarded the OES staff with the 2012 Exemplary Human Environment Initiatives award in the category of Education and Training Programs for developing a comprehensive strategy to educate the public on the discovery and relocation of the historic cemetery in Bibb County.

AASHTO AWARD

The Communications Office was awarded the 2012 AASHTO Transportation Communication Subcommittee Design Graphic award in the category of photography. The award winning photo of the Fort Benning Gateway Bridge was taken by Creative & Design Project Manager Cedric Mohr.

Documentary Award

The Georgia DOT documentary, "I Remember, I Believe" was awarded best script and best music at the 2013 Archaeology Channel Film Festival in Eugene, Oregon, on Sunday, May 12th. There were 79 films from 22 countries around the world in the competition, including projects from National Geographic and PBS NOVA.

GEORGIA DOT STATE TRANSPORTATION BOARD

Georgia DOT is governed by a 14-member State Transportation Board which exercises general control and supervision of the Department. The Board is entrusted with powers which include, but are not limited to: naming the Commissioner; designating which public roads are encompassed within the state highway system; approving long-range transportation plans. Board Members are elected by a majority of a General Assembly caucus from each of Georgia's fourteen congressional districts. Each board member serves a five-year term.

Congressional District 1 Ann R. Purcell 410 Willowpeg Way Rincon, GA 31326

Congressional District 2 Johnny Floyd P.O. Box 5260

P.O. Box 5260 Cordele, GA 31010 jofloyd@dot.ga.gov

apurcell@dot.ga.gov

Congressional District 3 Sam M. Wellborn

2110 Oak Ave Columbus, GA 31906 <u>swellborn@dot.ga.gov</u>

Congressional District 4 Robert L. Brown, Jr. 250 E. Ponce de Leon, Eighth Floor

Decatur, GA 30030 robrown@dot.ga.gov

Congressional District 5 Stacey Key

PO Box 29033 Atlanta, GA 30359 <u>skey@dot.ga.gov</u>

Congressional District 6

Dan Moody 605 Brisbaine Manor Johns Creek, GA 30022 danmoody@dot.ga.gov

Congressional District 7 Rudy Bowen 5696 Kennedy Road

Suwanee, GA 30024 rubowen@dot.ga.gov















Congressional District 8 Jay Shaw, Chairman PO Box 245 Lakeland, GA 31635 jayshaw@dot.ga.gov



Congressional District 9 Emily Dunn PO Box 56 Blue Ridge, GA 30513

edunn@dot.ga.gov Congressional District 10 Jamie T. Boswell

788 Prince Avenue Athens, GA 30606 jboswell@dot.ga.gov

Congressional District 11 Jeff Lewis PO Box 480 White GA 20184

White, GA 30184 jeflewis@dot.ga.gov

Congressional District 12

Don Grantham PO Box 3145 Augusta, GA 30914 dgrantham@dot.ga.gov

Congressional District 13 Dana L. Lemon 300 Griffin Street McDonough, GA 30253 dalemon@dot.ga.gov

Congressional District 14 Roger Williams 132 Huntington Road Dalton, GA 30720 rogwilliams@dot.ga.gov













ATTACHMENTS

- Attachment A Projects Opened to Traffic Valued at \$10 Million or Greater
- Attachment B On-going Construction Projects Valued \$10 million or Greater
- Attachment C Active Projects Under Design Valued at \$10 Million or Greater
- Attachment D Value Engineering Summary for FY 2013

Georgia Department of Transportation

Organizational Performance Management One Georgia Center 600 West Peachtree Street Atlanta, GA 30308 www.dot.ga.gov

