Modernizing Georgia's Transportation System:

Progress and Challenges in Providing Safe, Efficient and Well-Maintained Roads, Highways and Bridges

TRIP
a national transportation research group

Founded in 1971, TRIP ® of Washington, DC, is a nonprofit organization that researches, evaluates and distributes economic and technical data on surface transportation issues. TRIP is sponsored by insurance companies, equipment manufacturers, distributors and suppliers; businesses involved in highway and transit engineering and construction; labor unions; and organizations concerned with efficient and safe surface transportation.

Executive Summary

Three years ago, faced with inadequate investment in the state's transportation system to support a growing population and quality of life, the Georgia legislature approved a long-term increase in transportation funding.

The 2015 Transportation Funding Act (TFA) provided a significant boost in transportation funding in Georgia, allowing the state to address many of its critical transportation challenges. Approval of the TFA has allowed the state to increase its investment in road, highway and bridge repairs and roadway safety improvements. It has also enabled the acceleration of numerous highway improvements, including the Major Mobility Investment Program, to relieve traffic congestion and support economic development opportunities in the Peach State.

With an economy based largely on agriculture, manufacturing, industry and tourism, and with Atlanta serving as the chief distributor of goods and the communications and transportation center for the Southeast, the quality of Georgia's transportation system plays a vital role in the state's economic growth and quality of life. An efficient, safe and well-maintained transportation system provides economic and social benefits by affording individuals access to employment, housing, healthcare, education, goods and services, recreation, entertainment, family, and social activities. It also provides businesses access to suppliers, markets and employees, all critical to a business' level of productivity and ability to expand. Reduced accessibility and mobility - as a result of traffic congestion, a lack of adequate capacity, or deteriorated roads, highways, bridges and transit facilities - diminishes a region's quality of life by reducing economic productivity and limiting opportunities for economic, health or social transactions and activities.

While approval of the TFA greatly improves Georgia's ability to fund needed roadway repairs and improvements, with Georgia's population anticipated to increase by 2.5 million people over the next two decades, the state will continue to face transportation challenges. From continuing to maintain its aging transportation system to further improving roadway safety and making additional transportation improvements to serve the future needs of its growing economy, Georgia will need additional increases in reliable transportation funding from local, state and federal governments. Achieving the state's goals for a modern, well-maintained and safe transportation system will require staying the course with Georgia's current transportation program and achieving additional increases in transportation investment.

TRANSPORTATION FUNDING AND NEEDED TRANSPORTATION PROJECTS

Transportation funding provided by the 2015 Transportation Funding Act will allow for the completion of numerous projects throughout the state to improve road and bridge conditions, relieve traffic congestion, and improve traffic safety. While the additional transportation funding will allow dozens of needed projects to proceed, many other transportation projects still lack adequate funding.

- The 2015 Transportation Funding Act (HB 170) replaced the existing gasoline tax with an excise tax of 26 cents per gallon on gasoline and 29 cents on diesel (which will be indexed on the Consumer Price Index and Georgia CAFE Standards), added a $200 fee on personal electric vehicles and a $300 fee for commercial electric vehicles, instated a $5 per night hotel room tax, and included a heavy truck impact fee of between $50 and $100 depending on the weight of the vehicle.

- The legislation is expected to provide an additional $5.4 billion for transportation from 2016 to 2021, an average of approximately $900 million per year.

- The chart below details anticipated additional funds that will be made available each year through 2021 due to the passage of the TFA.

Additional Funds Available Due To 2015 Transportation Funding Act	
2016	$ 765,114,468
2017	$ 845,629,709
2018	$ 909,160,509
2019	$ 933,198,709
2020	$ 958,896,609
2021	$ 984,938,609

- Proceeds from the TFA will allow for increased funding for maintenance, preservation, reconstruction, capacity expansion and local projects. The chart below details recent and projected expenditures by the Georgia Department of Transportation (GDOT) for maintenance, preservation, reconstruction, highway and bridge capacity expansion, and local projects from 2015 through 2021.

	2015	2016	2017	2018	2019	2020	2021
Maintenance	$ 229,307,807	$ 439,212,982	$ 435,507,607	$ 457,707,607	$ 407,807,607	$ 407,807,607	$ 409,557,607
Preservation	$ 149,498,149	$ 540,428,310	$ 402,757,327	$ 435,000,000	$ 445,000,000	$ 351,000,000	$ 384,533,496
Reconstruction	$ 386,008,730	$ 596,765,332	$ 768,475,712	$ 769,970,171	$ 680,834,971	$ 877,955,322	$ 537,497,117
Highway & Bridge Capacity	$ 806,645,330	$ 969,440,861	$ 871,036,192	$ 950,181,206	$1,065,279,411	$1,399,129,477	$1,129,079,630
Local Projects	$ 228,870,489	$ 258,202,963	$ 287,306,796	$ 305,015,382	$ 257,215,147	$ 310,125,453	$ 213,073,980
TOTAL EXPENDITURES	**$1,800,330,506**	**$2,804,050,449**	**$2,765,083,635**	**$2,917,874,367**	**$2,856,137,135**	**$3,346,017,859**	**$2,673,741,830**
HB 170 REVENUE	N/A	$ 765,114,468	$ 845,629,709	$ 909,160,509	$ 933,198,709	$ 958,896,609	$ 984,938,609

- The charts below detail transportation projects in the state's largest urban areas and statewide that will be underway by 2021, partially as a result of increased transportation funding.

Project Description	County/Counties	Improvement	Year	Cost	Benefit of Project
Atlanta Urban Area					
I-20 FROM COLUMBIA DR TO PANOLA RD - MOVABLE BARRIERS	DeKalb	Barriers	2020	$18.4M	Congestion Relief
I-75 NB CD SYSTEM FROM SR 331 TO I-285	Clayton	Ramp	2018	$41.8M	Congestion Relief
SR 3/US 19/US 41 FROM S OF TARA RD TO S OF SR 54	Clayton	Widening	2019	$30.4M	Congestion Relief
WEST WINDER BYP-CR 325/MATTHEWS SCHL RD TO SR 211- PH I	Barrow	Widening	2018	$38.3M	Congestion Relief, Safety
SR 316 @ SR 81, @ SR 11, & @ SR 53	Barrow	Interchanges (3)	2018	$47.0M	Congestion Relief, Safety
SR 20-SHARON CHURCH RD TO BRAND RD; 3 INTERSECTIONS	Gwinnett, Walton	Widening	2020-21	$47.6M	Congestion Relief, Safety
SR 92-SR 3/US 41 TO GLADE RD	Cobb	Widening	2019	$31.8M	Congestion Relief, Safety
SR 9-WINDWARD PKWY TO FORSYTH CO LINE	Fulton	Widening	2021	$31.5M	Congestion Relief, Safety
SR 9-FULTON CO LINE TO SR 141	Forsyth	Widening	2021	$55.8M	Congestion Relief, Safety
SR 20- I-575 TO NORTH CORNERS PKWY	Cherokee, Forsyth	Widening	2019-21	$91.0M	Congestion Relief, Safety
MLK JR DRIVE @ RICH'S PARKING LOT IN ATLANTA	Fulton	Bridges	2019	$44.0M	Replace Outdated Bridge
I-75-CHATTAHOOCHEE RVR TO ALLGOOD ROAD	Cobb	Resurfacing & Maintenance	2018	$32.0M	Preservation
I-20 FROM SR 5 TO SWEETWATER CREEK	Douglas	Resurfacing & Maintenance	2019	$31.7M	Preservation
Augusta Urban Area					
I-20 @ SAVANNAH RIVER	Richmond	Bridges	2019	$72.2M	Congestion Relief, Safety
SR 10-FORT GORDON NEW ACP/GATE 6 TO SR 223	Richmond	Widening	2018	$16.2M	Congestion Relief, Military Access
SR 4/US 25BU-SAVANNAH RIVER AT SC STATE LINE	Richmond	Bridges	2021	$16.2M	Replace Outdated Bridge
SR 388- I-20 TO SR 232	Columbia	Widening	2019	$8.1M	Congestion Relief
SR 4 -MILLEDGEVILLE RD TO GOVERNMENT ST	Richmond	Widening	2020	$5.0M	Congestion Relief
Columbus Urban Area					
SR 219 -SCHLEY CREEK NW OF COLUMBUS	Muscogee	Bridges	2020	$2.2M	Replace Outdated Bridge
SR 520/US 280 EB & WB - BAGLEY CREEK 2 MI SE OF CUSSETA	Chattahoochee	Bridges	2020	$2.3M	Replace Outdated Bridge
SR 85/US 27 ALT SB & NB - CR 1660/MILLER RD IN COLUMBUS	Muscogee	Bridges	2021	$4.8M	Replace Outdated Bridge
SR 22/US 80 - KENDALL CREEK IN COLUMBUS	Muscogee	Bridges	2020	$1.7M	Replace Outdated Bridge
SR 22/US 80 - FLATROCK CREEK IN COLUMBUS	Muscogee	Bridges	2021	$3.0M	Replace Outdated Bridge
Macon Urban Area					
I-16 EB FROM I-75 TO WALNUT CREEK - PHASE IV	Bibb	Bridges	2021	$128.7M	Bottleneck Relief; Congestion Relief
I-16 WB FROM I-75 TO WALNUT CREEK - PHASE V	Bibb	Bridges	2021	$97.2M	Bottleneck Relief; Congestion Relief
I-16 EB & WB - OCMULGEE RIVER OVERFLOW	Bibb	Bridges	2021	$10.8M	Bottleneck Relief; Congestion Relief
SR 11/SR 49 -ROCKY CRK & TOBESOFKEE CRK &OVFLW	Bibb	Bridges	2019	$16.3M	Replace Outdated Bridge
SR 11/SR 49/US 41 - 1.4 MI S OF MACON	Bibb	Bridges	2020	$3.8M	Econ. Dev.
Savannah Urban Area					
I-16 FROM I-95 TO I-516	Chatham	Widening	2018-21	$130.2M	Bottleneck & Congestion Relief
I-16 - I-95 INTERCHANGE RECONSTRUCTION	Chatham	Interchange	2018-21	$125.4M	Bottleneck & Congestion Relief
CR 787/ISLANDS EXPWY - WILMINGTON RVR/BASCULE BRIDGE	Chatham	Bridges	2018	$56.0M	Replace Outdated Bridges
JIMMY DELOACH PXWY EXT - I-16 TO SR 26/US 80	Chatham	New location roadway	2018	$26.3M	Freight Bottleneck & Congestion Relief
BRAMPTON RD FROM SR 21/SR 25 TO SR 21 SPUR	Chatham	New location roadway	2019	$43.3M	Freight Bottleneck & Congestion Relief
Other Areas in Georgia					
MCCAYSVILLE BYPASS FROM SR 5 TO TN STATE LINE	Fannin	New location roadway	2020	$31.3M	Congestion relief; Econ. Dev.
SR 5 - SR 2/BLUE RIDGE N TO PROP MCCAYSVILLE BYP NR CR 138	Fannin	Widening	2020	$61.0M	Congestion relief; Econ. Dev.
SR 133 - S OF SR 35/US 319 TO N OF CR540 HOLLY DR	Colquitt, Worth, Dougherty	Widening	2019-20	$185.7M	Econ.Dev.; Freight corridor
SR 24/US 441 - PUTNAM CO LN TO N OF CS 646/PIERCE DAIRY RD	Morgan	Widening	2021	$32.6M	Econ.Dev.; Freight corridor
SR 4/US 1- N OF WILLIAMS CK TO GREEN OAK RD	Toombs	Widening	2020-21	$145.4M	Econ.Dev.; Freight corridor
SE ROME BYP - SR 101 NE ON NEW LOC TO US 411	Floyd	Roadway Project	2019	$61.9M	Congestion relief; Econ. Dev.
EFFINGHAM PKWY- CR 156/BLUE JAY/EFFINGHAM TO SR 30/CHATHAM	Effingham	New Location Roadway	2020	$29.4M	Congestion relief; Econ. Dev.
SR 4/US 1 -N OF NIMROD RD TO LOUISVILLE BPS	Jefferson	Widening	2021	$31.1M	Econ. Dev.
SPOUT SPRINGS RD - I-985 TO UNION CIRCLE - PHASE I	Hall	Widening	2019	$39.5M	Congestion Relief
CR 274/CS 1078/LAKE PARK BELLVILLE RD - SR 7 TO I-75	Lowndes	Widening	2021	$32.3M	Congestion Relief; Econ. Dev.
SR 515/US 76 FM YOUNG HARRIS ST/UNION TO TIMBERLINE DR/TOWNS	Towns, Union	Widening	2020	$65.5M	Congestion Relief; Econ. Dev.
SR 67 FM I-16 TO STATESBORO BYPASS	Bulloch	Widening	2019	$24.2M	Congestion Relief; Econ. Dev.
SR 1/US 27/LAGRANGE FM AUBURN ST TO SR 219/MORGAN ST	Troup	Widening	2019	$10.9M	Congestion Relief

- Despite the additional funding, many needed projects will still lack sufficient funding to proceed. The below charts detail needed projects in the state's largest urban area and statewide that lack sufficient funding to proceed prior to 2022.

Project Description	County	Improvement	Cost	Project Benefit
Atlanta Urban Area				
PANOLA RD @ I-20 - FAIRINGTON RD TO SNAPFINGER WOODS DR	DeKalb	Interchange	$26.7M	Ops of Inch/Mainline - RW Phase
SR 92 -NEBO RD TO PICKETTS MILL PL	Cobb, Paulding	Widening	$30.2M	Congestion Relief
I-85 - SR 74/SENOIA RD	Fulton	Interchange	$35.0M	Ops of Inch/Mainline - RW Phase
I-20 @ SR 138/SR 20 INTCH RECON & WIDENING	Rockdale	Interchange	$36.4M	Congestion Relief
SR 42 - DOWNTOWN MCDONOUGH TO SR 138	Henry	Widening	$21.9M	Congestion Relief; RW phase
WEST WINDER BYP @ SR 316 - NEW INTERCHANGE - PH III	Barrow	Interchange	$19.6M	New Location; Access to Corridor
SR 9 - N OF SR 141 TO N OF SR 20	Forsyth	Widening	$18.1M	Congestion Relief
I-285/BOULDERCREST RD INTCH	DeKalb	Interchange	$35.1M	Congestion Relief; Ops of Inch/Mainline
SR 166 - OLD LOWER RIVER ROD/DOUGLAS TO SR 70/FULTON	Douglas, Fulton	Widening	$19.1M	Congestion Relief; RW phase
SR 20 - CR 762/UNION HILL RD TO E OF CS 579/N CORNERS PKWY	Cherokee, Forsyth	Widening	$183.9M	Congestion Relief, Safety
JONESBORO RD - W OF SR 3/US 41/CLAYTON TO I-75/HENRY	Clayton, Henry	Widening	$51.7M	Congestion Relief
SR 6 - I-20 WB TO SR 6 SPUR - TRUCK FRIENDLY LANES	Cobb, Douglas	Minor Widen & Resurf.	$35.7M	Congestion Relief
SR 61 - S OF CR 467/DALLAS NEBO RD TO SR 6	Paulding	Widening	$41.0M	Congestion Relief
SR 371 - SR 9 TO CR 5/KELLY MILL RD	Forsyth	Widening	$41.0M	Congestion Relief
Augusta Urban Area				
I-20 - MCDUFFIE CO LINE TO SR 383	Columbia	Widening	$98.3M	Congestion Relief
CR 102/HEREFORD FARM ROAD FROM SR 232 TO SR 383	Columbia	Widening	$32.1M	Congestion Relief
Columbus Urban Area				
SR 520/US 280 @ CHATTAHOOCHEE RVR IN COLUMBUS	Muscogee	Bridge	$10.8M	Replace Outdated Bridge
Macon Urban Area				
I-75 - I-16 TO CR 478/PIERCE AVE - PHASE VI	Bibb	Widening	$65.0M	Bottleneck Relief; Congestion Relief
Savannah Urban Area				
SR 144 EB - S OF CR 100 TO S OF CR 154	Bryan	Widening	$14.3M	Economic Development
SR 26/US 80 @ BULL RVR & @ LAZARETTO CRK	Chatham	Bridge	$74.2M	Widen & Raise Bridge, Rd to Tybee Isl.
ISLANDS EXPWY - GEN MCINTOSH BLVD TO TRUMAN PKWY	Chatham	Widening	$30.4M	Improved Connectivity
I-16 - CS 565/POOLER PKWY TO I-95	Chatham	Widening	$14.0M	Congestion Relief; Freight Movement
Other Areas in Georgia				
I-85 - N OF SR 211 TO SR 11/US 129	Barrow	Widening	$274.7M	Congestion Relief; Freight Movement
SR 85 - S OF CR 126/BERNHARD RD TO OLD SR 92/F'VILLE	Fayette	Widening	$32.4M	Congestion Relief
SR 166 BYPASS - E OF BIG INDIAN CREEK TO CS 1158/HAYS MILL RD	Carroll	Widening	$68.6M	Congestion Relief
SR 24 FM MADISON BPS/MORGAN TO N OF APALACHEE RVR/OCONEE	Morgan, Oconee	Widening	$48.4M	Congestion relief; Econ. Dev.
SR 40 - E OF ST MARYS RIVER TRIB TO E OF CR 66/COLERAIN RD	Camden, Charlton	Widening	$41.0M	Congestion relief; Econ. Dev.
S ROME BYP/US 27 - SR 1 ALONG BOOZE MTN RD TO SR 101 @CR 96	Floyd	Roadway Project	$80.7M	Congestion relief; Econ. Dev.
SR 113/OLD ALA RD RELOC FM SR 113 -PUMPKINVINE CK- TO CR 699	Bartow	Widening	$63.6M	Congestion Relief
ROME-CARTERSVILLE DEVELOPMENT CORRIDOR	Bartow	Roadway Project	$71.9M	Congestion relief; Econ. Dev.
SR 15 - CR 67/RIDGE RD TO EAST SPARTA BYPS	Hancock, Washington	Widening	$155.7M	Economic Development
SR 44 - CR 54/LINGER LONGER RD TO E GREENSBORO BYPS	Greene	Widening	$51.9M	Economic Development
SR 1 - CR 329 TO N OF CR 325 @ SR 1/US 27	Chattooga	Widening	$63.9M	Economic Development
SR 15/US 441 - NORTH CL/CLAYTON TO NC STATE LINE	Rabun	Widening	$54.5M	Economic Development
I-85 - N OF SR 11 TO SC STATE LINE	Jackson	Widening	$1.2B	Congestion Relief; Freight Movement

MAJOR MOBILITY INVESTMENT PROGRAM

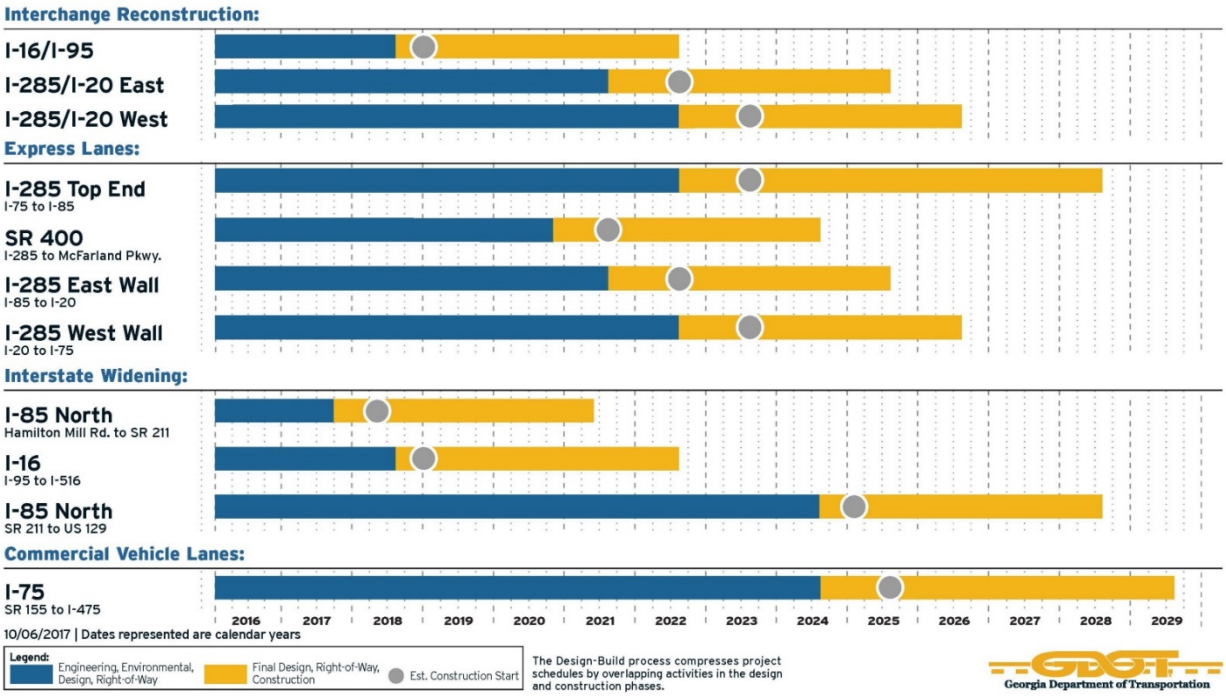
Approval of the TFA will allow the Georgia DOT to advance the Major Mobility Investment Program (MMIP), which will include 11 major mobility projects throughout the state to be completed between 2021 and 2029 to relieve traffic congestion, improve the movement of freight and enhance safety.

- The projects, which are in the Atlanta, North Georgia, Macon and Savannah areas, include three interchange reconstructions, four express lane projects, the widening of three portions of Interstate highways and the construction of commercial vehicle lanes on a portion of 1-75 between Atlanta and Macon.

- The MMIP includes four projects to expand the Georgia Express Lanes system, which will offer a choice for drivers to pay a toll to bypass congestion in the Atlanta area and will provide more reliable trips for transit, carpools and vanpools.

- When completed, the widenings of I-85 from Hamilton Mill to SR-211 and from SR-211 to US 129 in Northeastern Georgia will reduce delays by 56 percent and 69 percent respectively; and the widening of I-16 in Savannah from I-516 to I-95 will reduce delays by 32 percent.

- These projects require various forms of finance, so public-private partnership procurement will be utilized. Most all projects are Design-Build-Finance or Design-Build-Finance-Operate-Maintain. GDOT does not have sufficient funding to advance these as traditional Design-Bid-Build or Design-Build projects. Contractor availability payments will be utilized to pay for these projects.



POPULATION, ECONOMIC AND TRAVEL TRENDS IN GEORGIA

The rate of population and economic growth in Georgia have resulted in increased demands on the state's major roads and highways, leading to increased wear and tear on the transportation system. Vehicle travel in Georgia has been increasing at the second highest rate nationally since 2013.

- Georgia's population reached approximately 10.3 million residents in 2016, a 26 percent increase since 2000. Georgia's population is expected to increase by another 2.5 million people by 2040, to 12.8 million. Georgia had seven million licensed drivers in 2016.

- From 2000 to 2016, Georgia's gross domestic product, a measure of the state's economic output, increased by 24 percent, when adjusted for inflation.

- Vehicle miles traveled (VMT) in Georgia increased by 17 percent from 2000 to 2016 –from 105 billion VMT in 2000 to 123 billion VMT in 2016. The rate of vehicle travel growth in Georgia has accelerated significantly since 2013, increasing by 12 percent between 2013 and 2016, the second highest rate of growth nationally during that period.

- By 2040, vehicle travel in Georgia is projected to increase another 40 percent.

GEORGIA ROAD CONDITIONS

The additional transportation funding provided by the TFA will allow GDOT to reduce the share of state-maintained roads in poor or bad condition. However, it is not adequate to prevent the share of state roads and highways in excellent or good condition from declining.

- Additional funding provided by the TFA has allowed GDOT to increase the annual number of road miles that are resurfaced by two-and-a-half times. An average of 1,277 miles were resurfaced annually from 2011 to 2015, while an average of 3,527 miles will be resurfaced annually between 2016 and 2020.

- The share of state-maintained roads in bad or poor condition is projected to fall from 13 percent in 2016 to zero by 2019, due to accelerated maintenance and repairs provided by funds from the TFA.

- Despite additional funding, the share of state-maintained roads in excellent or good condition is projected to decline dramatically, falling from 49 percent in 2016 to just 15 percent in 2024. While the increased funding provided by the TFA has been helpful, it is not sufficient to address the rate of deterioration on Georgia's major roads and highways.

PAVEMENT CONDITION ON STATE-MAINTAINED ROADS					
Year	Excellent	Good	Fair	Poor	Bad
2014	26%	24%	22%	19%	9%
2015	28%	23%	30%	13%	6%
2016	26%	23%	38%	9%	4%
2017	25%	22%	46%	5%	2%
2018	23%	21%	53%	2%	1%
2019	20%	20%	60%	0%	0%
2020	15%	19%	66%	0%	0%
2021	11%	17%	72%	0%	0%
2022	8%	14%	78%	0%	0%
2023	6%	12%	82%	0%	0%
2024	5%	10%	86%	0%	0%

BRIDGE CONDITIONS IN GEORGIA

One-in-twenty locally and state-maintained bridges in Georgia show significant deterioration and are rated structurally deficient. This includes all bridges that are 20 feet or more in length.

- Statewide, five percent of Georgia's bridges are structurally deficient. A bridge is structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Structurally deficient bridges are often posted for lower weight or closed to traffic, restricting or redirecting large vehicles, including commercial trucks and emergency services vehicles.
- Additional funding provided by the TFA has allowed GDOT to increase by three-and-a-half times the annual number of bridges it is able to repair, reconstruct or replace. An average of 67 bridges were repaired, replaced or reconstructed each year from 2011 to 2015, while an average of 232 bridges will be repaired, replaced or reconstructed each year between 2016 and 2020.

GEORGIA TRAFFIC CONGESTION

Increasing levels of traffic congestion cause significant delays in Georgia, particularly in its larger urban areas, choking commuting and commerce. Traffic congestion robs commuters of time and money and imposes increased costs on businesses, shippers and manufacturers, which are often passed along to the consumer.

- The chart below details the number of hours lost to congestion annually for the average driver in the state's largest urban areas. It also includes the cost of congestion per motorist, in the form of lost time and wasted fuel.

Urban Area	Cost to Motorists	Hours Lost
Atlanta	$1,226	56
Augusta	$749	33
Savannah	$697	32
Macon	$372	17
Columbus	$348	16

- Increasing levels of congestion add significant costs to consumers, transportation companies, manufacturers, distributors and wholesalers, and can reduce the attractiveness of a location when a company is considering expansion or where to locate a new facility.

- The average daily commute to work for Georgia residents is 27.2 minutes, the ninth longest among all states.

TRAFFIC SAFETY AND FATALITY RATES IN GEORGIA

Improving safety features on Georgia's roads and highways would likely result in a decrease in the number of traffic fatalities and serious crashes. Traffic fatalities on Georgia's roads and highways increased by one third over the last two years.

- A total of 6,876 people were killed in Georgia traffic crashes from 2013 to 2017, an average of 1,375 fatalities per year.

- After decreasing slightly between 2013 and 2014 (from 1,179 to 1,164) the number of Georgia traffic fatalities increased by 25 percent between 2014 and 2017 (from 1,164 to 1,549).

- Georgia's overall traffic fatality rate of 1.27 fatalities per 100 million vehicle miles of travel in 2016 was higher than the national average of 1.18.

- The fatality rate on Georgia's non-interstate rural roads in 2016 was nearly two-and-a-half times higher than on all other roads in the state (2.41 fatalities per 100 million vehicle miles of travel vs. 1.01).

- The chart below details the average annual number of fatalities in the state's largest urban areas from 2014-2016.

Urban Area	Ave. Fatalities 2014-16
Atlanta	392
Augusta	83
Columbus	50
Macon	47
Savannah	61

- Roadway features that impact safety include the number of lanes, lane widths, lighting, lane markings, rumble strips, shoulders, guard rails, other shielding devices, median barriers and intersection design. The cost of serious crashes includes lost productivity, lost earnings, medical costs and emergency services.

- Several factors are associated with vehicle crashes that result in fatalities, including driver behavior, vehicle characteristics and roadway features. TRIP estimates that roadway features are likely a contributing factor in approximately one-third of fatal traffic crashes.

- Where appropriate, highway improvements can reduce traffic fatalities and crashes while improving traffic flow to help relieve congestion. Such improvements include removing or shielding obstacles; adding or improving medians; improved lighting; adding rumble strips, wider lanes, wider and paved shoulders; upgrading roads from two lanes to four lanes; and better road markings and traffic signals.

- Investments in rural traffic safety have been found to result in significant reductions in serious traffic crashes. A 2012 report by the Texas Transportation Institute (TTI) found that improvements completed recently by the Texas Department of Transportation that widened lanes, improved shoulders and made other safety improvements on 1,159 miles of rural state roadways resulted in 133 fewer fatalities on these roads in the first three years after the improvements were completed (as compared to the three years prior). TTI estimates that the improvements on these roads are likely to save 880 lives over 20 years.

FEDERAL TRANSPORTATION FUNDING IN GEORGIA

Investment in Georgia's roads, highways and bridges is funded by local, state and federal governments. The current five-year federal surface transportation program includes modest funding increases and provides states with greater funding certainty, but falls far short of providing the level of funding needed to meet the nation's highway and transit needs. The bill does not include a long-term and sustainable revenue source.

- Most federal funds for highway and transit improvements in Georgia are provided by federal highway user fees, largely an 18.4 cents-per-gallon tax on gasoline and a 24.4 cents-per-gallon tax on diesel fuel. Since 2008 revenue into the federal Highway Trust Fund has been inadequate to support legislatively set funding levels so Congress has transferred approximately $53 billion in general funds and an additional $2 billion from a related trust fund into the federal Highway Trust Fund.

- Signed into law in December 2015, the Fixing America's Surface Transportation Act (FAST Act), provides modest increases in federal highway and transit spending. The five-year bill also provides states with greater funding certainty and streamlines the federal project approval process. But, the FAST Act does not provide adequate funding to meet the nation's need for highway and transit improvements and does not include a long-term and sustainable funding source.

- President Trump released an infrastructure investment plan in February 2018 that would provide $200 billion in new federal grants and loans over 10 years to leverage $1.5 trillion in total project spending nationwide on infrastructure, including surface transportation. The Trump administration's funding proposal would rely on state and local governments to raise the additional $1.3 trillion to access the increased federal funding. Boosting federal surface transportation spending will require that Congress provide a long-term and sustainable source of funding to support the federal Highway Trust Fund.

TRANSPORTATION AND ECONOMIC GROWTH IN GEORGIA

The efficiency of Georgia's transportation system, particularly its highways, is critical to the state's economy. Businesses rely on an efficient and dependable transportation system to move products and services. A key component in business efficiency and success is the level and ease of access to customers, markets, materials and workers.

- Annually, $790 billion in goods are shipped to and from sites in Georgia, mostly by truck.

- Seventy-nine percent of the goods shipped annually to and from sites in Georgia are carried by trucks and another 12 percent are carried by courier services or multiple mode deliveries, which include trucking.

- Increasingly, companies are looking at the quality of a region's transportation system when deciding where to re-locate or expand. Regions with congested or poorly maintained roads may see businesses relocate to areas with a smoother, more efficient and more modern transportation system.

- Highway accessibility was ranked the number one site selection factor in a 2016 survey of corporate executives by Area Development Magazine. The availability of skilled labor, which is also impacted by a site's level of accessibility, rated second.

- The Federal Highway Administration estimates that each dollar spent on road, highway and bridge improvements results in an average benefit of $5.20 in the form of reduced vehicle maintenance costs, reduced delays, reduced fuel consumption, improved safety, reduced road and bridge maintenance costs and reduced emissions as a result of improved traffic flow.

Sources of information for this report include the Federal Highway Administration (FHWA), the Georgia Department of Transportation (GDOT), the American Association of State Highway and Transportation Official (AASHTO), the Bureau of Transportation Statistics (BTS), the U. S. Census Bureau, the Congressional Budget Office (CBO), the Texas Transportation Institute (TTI) and the National Highway Traffic Safety Administration (NHTSA). All data used in the report are the most recent available.

Introduction

Georgia's roads, highways and bridges form vital transportation links for the state's residents, visitors and businesses, providing daily access to homes, jobs, shopping, natural resources and recreation. Modernizing Georgia's transportation system is critical to quality of life and economic competitiveness in the Peach State.

Supporting quality of life and a robust economy in Georgia requires that the state provide a safe, efficient and well-maintained transportation system. Inadequate transportation investment, which will result in deteriorated transportation facilities and diminished access and safety, will negatively affect economic competitiveness and quality of life in Georgia.

The 2015 Transportation Funding Act (HB 170) (TFA) provided a significant boost in funds available in Georgia for the maintenance and improvement of the state's transportation system. This increased funding will allow Georgia to accelerate the repaving and maintenance of the state's roads, highways and bridges, provide additional roadway safety improvements, and fund numerous projects to relieve traffic congestion and improve the movement of goods. The funding will also advance the state's Major Mobility Investment Program. However, despite the increased funding made available by approval of the TFA, Georgia still lacks adequate funding to proceed with many transportation improvements needed to address the state's continued population growth or to address fully the state's transportation challenges.

To maintain its level of economic competitiveness and achieve further economic growth, Georgia will need to maintain and modernize its roads, highways and bridges by improving the physical condition of the transportation network and enhancing the system's ability to provide efficient, reliable and safe mobility for residents, visitors and businesses. Making needed improvements to Georgia's roads, highways, bridges and transit systems could also provide a significant boost to the state's economy by creating jobs in the short term and stimulating long-term economic growth as a result of enhanced mobility and access.

This report examines the impact of approval of the TFA in 2015, the condition, use and safety of Georgia's roads, highways and bridges, and the future transportation needs of the state. Sources of information for this report include the Georgia Department of Transportation (GDOT), the Federal Highway Administration (FHWA), the Bureau of Labor Statistics (BLS), the American Association of State Highway and Transportation Officials (AASHTO), the Bureau of Transportation Statistics (BTS), the U.S. Census Bureau, the Texas Transportation Institute (TTI), and the National Highway Traffic Safety Administration (NHTSA).

Population, Travel and Economic Trends in Georgia

Georgia residents and businesses require a high level of personal and commercial mobility. Population increases and economic growth in the state have resulted in an increase in vehicle miles of travel (VMT) and an increase in the demand for mobility . To foster quality of life and spur continued economic growth in Georgia, it will be critical that the state provide a safe and modern transportation system that can accommodate future growth in population, tourism, business, recreation and vehicle travel.

Georgia's population grew to approximately 10.3 million residents in 2016, a 26 percent increase since 2000.[1] Georgia had seven million licensed drivers in 2016.[2]

From 2000 to 2016, Georgia's gross domestic product (GDP), a measure of the state's economic output, increased by 24 percent, when adjusted for inflation. U.S. GDP increased 30 percent during this period.

From 2000 to 2016, annual VMT in Georgia increased by 17 percent, from 105 billion miles traveled annually to 123 billion miles traveled annually.[3] The rate of vehicle travel growth in Georgia has accelerated significantly since 2013, increasing by 12 percent between 2013 and 2016. This is the second highest rate of growth nationally during that period.[4]

Condition of Georgia's Roads

The life cycle of Georgia's roads is greatly affected by the state and local governments' ability to perform timely maintenance and upgrades to ensure that road and highway surfaces last as long as possible.

Additional funding provided by the TFA has allowed GDOT to increase by more than two-and-a-half times the miles of roads resurfaced annually. An average of 1,277 miles were resurfaced annually from 2011 to 2015, while an average of 3,527 miles will be resurfaced annually between 2016 and 2020.[5]

This additional funding will allow GDOT to reduce and even eliminate the share of state-maintained roads in poor or bad condition. According to GDOT, the share of state-maintained roads in bad or poor condition is projected to fall from 13 percent in 2016 to zero by 2019, due to accelerated maintenance and repairs provided by funds from the 2015 Transportation Funding Act.[6]

However, despite the additional funding, the share of state-maintained roads in excellent or good condition is projected to decline significantly, falling from 49 percent in 2016 to just 15 percent in 2024.[7] While the increased funding has been helpful, it is not sufficient to address the rate of deterioration on the transportation system.

The chart below details the share of state-maintained roads in excellent, good, fair, poor and bad condition each year from 2014 through 2024.

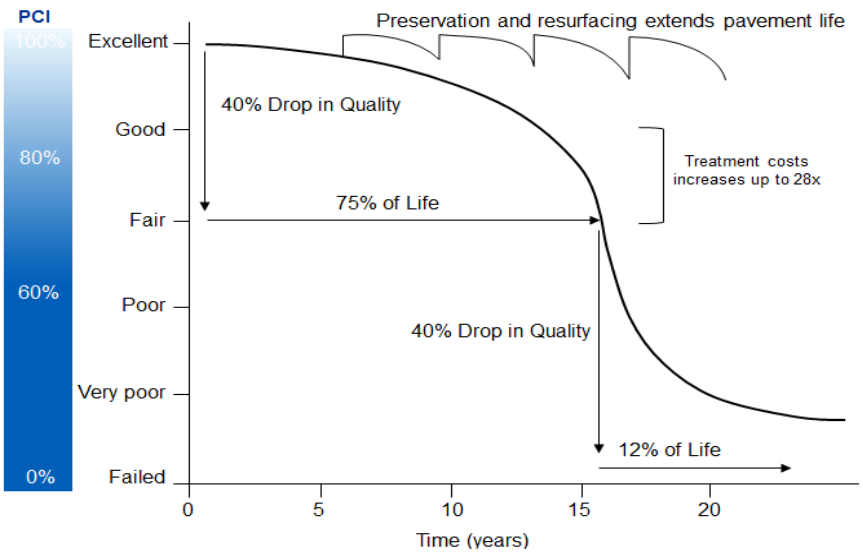
Chart 1. Share of state-maintained roads in excellent, good, fair, poor and bad condition, 2014-2024.

PAVEMENT CONDITION ON STATE-MAINTAINED ROADS					
Year	Excellent	Good	Fair	Poor	Bad
2014	26%	24%	22%	19%	9%
2015	28%	23%	30%	13%	6%
2016	26%	23%	38%	9%	4%
2017	25%	22%	46%	5%	2%
2018	23%	21%	53%	2%	1%
2019	20%	20%	60%	0%	0%
2020	15%	19%	66%	0%	0%
2021	11%	17%	72%	0%	0%
2022	8%	14%	78%	0%	0%
2023	6%	12%	82%	0%	0%
2024	5%	10%	86%	0%	0%

Source: GDOT response to TRIP survey.

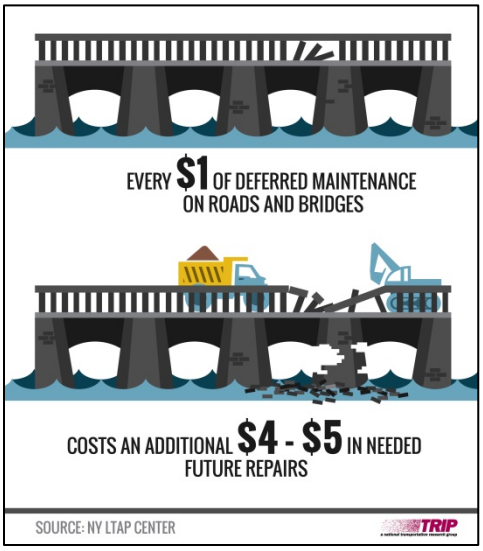
Pavement failure is caused by a combination of traffic, moisture and climate. Moisture often works its way into road surfaces and the materials that form the road's foundation. Road surfaces at intersections are even more prone to deterioration because the slow-moving or standing loads occurring at these sites subject the pavement to higher levels of stress. It is critical that roads are fixed before they require major repairs because reconstructing roads costs approximately four times more than resurfacing them.[8] As roads and highways continue to age, they will reach a point of deterioration where routine paving and maintenance will not be adequate to keep pavement surfaces in good condition and costly reconstruction of the roadway and its underlying surfaces will become necessary.

Chart 2. Pavement Condition Cycle Time with Treatment and Cost



Source: North Carolina Department of Transportation (2016). 2016 Maintenance Operations and Performance Analysis Report

Long-term repair costs increase significantly when road and bridge maintenance is deferred, as road and bridge deterioration accelerates later in the service life of a transportation facility and requires more costly repairs. A report on maintaining pavements found that every $1 of deferred maintenance on roads and bridges costs an additional $4 to $5 in needed future repairs.[9]



Bridge Conditions in Georgia

Georgia's bridges form key links in the state's highway system, providing communities and individuals access to employment, schools, shopping and medical facilities, and facilitating commerce and access for emergency vehicles.

Five percent of Georgia's locally and state maintained bridges are rated as structurally deficient.[10] A bridge is structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Bridges that are structurally deficient may be posted for lower weight limits or closed if their condition warrants such action. Deteriorated bridges can have a significant impact on daily life. Restrictions on vehicle weight may cause many vehicles – especially emergency vehicles, commercial trucks, school buses and farm equipment – to use alternate routes to avoid posted bridges. Redirected trips also lengthen travel time, waste fuel and reduce the efficiency of the local economy.

Additional funding provided by the TFA has allowed GDOT to increase the annual number of bridges it is able to repair, reconstruct or replace by approximately three-and-a-half times, from an average of 67 bridges repaired, reconstructed or replaced each year from 2011 to 2015 to an annual average of 232 bridges between 2016 and 2020.[11]

The service life of bridges can be extended by performing routine maintenance such as resurfacing decks, painting surfaces, insuring that a facility has good drainage and replacing deteriorating components. But, most bridges will eventually require more costly reconstruction or major rehabilitation to remain operable.

Traffic Congestion in Georgia

Increasing levels of traffic congestion cause significant delays in Georgia, particularly in its larger urban areas, choking commuting and commerce. Traffic congestion robs commuters of time and money and imposes increased costs on businesses, shippers and manufacturers, which are often passed along to the consumer.

The chart below details the number of hours lost to congestion annually for the average driver in the

state's largest urban areas. It also includes the cost per motorist of congestion in the form of lost time and wasted fuel.

Chart 3. Annual hours lost to congestion and congestion costs for the average driver in Georgia's largest urban areas.

Urban Area	Cost to Motorists	Hours Lost
Atlanta	$1,226	56
Augusta	$749	33
Savannah	$697	32
Macon	$372	17
Columbus	$348	16

Source: TRIP Estimate Based on Analysis of Texas Transportation Institute and Federal Highway Administration data.

Increasing levels of congestion add significant costs to consumers, transportation companies, manufacturers, distributors and wholesalers and can reduce the attractiveness of a location when a company is considering expansion or where to locate a new facility.

The average daily commute to work for Georgia residents is 27.2 minutes, the ninth longest among all states.[12]

Traffic Safety in Georgia

A total of 6,876 people were killed in Georgia traffic crashes from 2013 to 2017, an average of 1,375 fatalities per year.[13] After decreasing slightly between 2013 and 2014 (from 1,179 to 1,164) the number of Georgia traffic fatalities increased by 25 percent between 2014 and 2017 (from 1,164 to 1,549).[14]

Chart 4. Traffic Fatalities in Georgia from 2013 – 2017.

Year	Fatalities
2013	1,179
2014	1,164
2015	1,430
2016	1,554
2017	1,549
TOTAL	**6,876**

Source: National Highway Traffic Safety Administration.

Three major factors are associated with fatal vehicle crashes: driver behavior, vehicle characteristics and roadway features. It is estimated that roadway features are likely a contributing factor in approximately one-third of fatal traffic crashes. Roadway features that impact safety include the number of lanes, lane widths, lighting, lane markings, rumble strips, shoulders, guard rails, other shielding devices, median barriers and intersection design.

Georgia's overall traffic fatality rate of 1.27 fatalities per 100 million vehicle miles of travel in 2016 is higher than the national average of 1.18.[15] The traffic fatality rate on the state's rural roads is disproportionately high. The fatality rate on Georgia's non-interstate rural roads in 2016 was nearly two-and-a-half times that on all other roads in the state (2.41 fatalities per 100 million vehicle miles of travel vs. 1.01).[16]

The chart below details the average annual number of fatalities in each of the state's largest urban areas from 2013-2016.

Chart 5. Average annual fatalities in Georgia's largest urban areas 2014-2016.

Urban Area	Ave. Fatalities 2014-16
Atlanta	392
Augusta	83
Columbus	50
Macon	47
Savannah	61

Source: National Highway Traffic Safety Administration.

Improving safety on Georgia's roadways can be achieved through further improvements in vehicle safety; improvements in driver, pedestrian, and bicyclist behavior; and a variety of improvements in roadway safety features.

The severity of serious traffic crashes could be reduced through roadway improvements, where appropriate, such as adding turn lanes, removing or shielding obstacles, adding or improving medians, widening lanes, widening and paving shoulders, improving intersection layout, and providing better road markings and upgrading or installing traffic signals. Roads with poor geometry, with insufficient clear distances, without turn lanes, having inadequate shoulders for the posted speed limits, or poorly laid out intersections or interchanges, pose greater risks to motorists, pedestrians and bicyclists.

Investments in rural traffic safety have been found to result in significant reductions in serious traffic crashes. A 2012 report by TTI found that improvements completed recently by TxDOT that widened lanes, improved shoulders and made other safety improvements on 1,159 miles of rural state roadways resulted in 133 fewer fatalities on these roads in the first three years after the improvements were completed (as compared to the three years prior).[17] TTI estimates that the improvements on these roads are likely to save 880 lives over 20 years.[18]

Transportation Funding Increases in Georgia and Needed Projects

Additional transportation funding provided by the 2015 Transportation Funding Act (HB 170) will allow for the completion of numerous needed projects throughout Georgia including projects included in the Major Mobility Investment Program.

The 2015 Transportation Funding Act replaced the existing gasoline tax with an excise tax of 26 cents per gallon on gasoline and 29 cents on diesel (which will be indexed on the Consumer Price Index and Georgia CAFE standards), added a $200 fee on personal electric vehicles and $300 fee for commercial

electric vehicles, instated a $5 per night hotel room tax, and included a heavy truck impact fee of between $50 and $100 depending on the weight of the vehicle.

The legislation is expected to provide an additional $5.4 billion for transportation from 2016 to 2021, an average of approximately $900 million per year.[19] The chart below details anticipated additional funds that will be made available each year through 2021 due to the passage of the 2015 Transportation Funding Act.

Chart 6. Additional funds available due to 2015 Transportation Funding Act.

Additional Funds Available Due To 2015 Transportation Funding Act	
2016	$ 765,114,468
2017	$ 845,629,709
2018	$ 909,160,509
2019	$ 933,198,709
2020	$ 958,896,609
2021	$ 984,938,609

Source: GDOT response to TRIP survey.

Proceeds from the 2015 TFA will allow for increased funding for maintenance, preservation, reconstruction, capacity expansion and local projects. The chart below details expenditures by GDOT for maintenance, preservation, reconstruction, highway and bridge capacity expansion, and local projects from 2015 through 2021.

Chart 7. GDOT expenditures for maintenance, preservation, reconstruction, highway and bridge capacity expansion, and local projects from 2015 through 2021.

	2015	2016	2017	2018	2019	2020	2021
Maintenance	$ 229,307,807	$ 439,212,982	$ 435,507,607	$ 457,707,607	$ 407,807,607	$ 407,807,607	$ 409,557,607
Preservation	$ 149,498,149	$ 540,428,310	$ 402,757,327	$ 435,000,000	$ 445,000,000	$ 351,000,000	$ 384,533,496
Reconstruction	$ 386,008,730	$ 596,765,332	$ 768,475,712	$ 769,970,171	$ 680,834,971	$ 877,955,322	$ 537,497,117
Highway & Bridge Capacity	$ 806,645,330	$ 969,440,861	$ 871,036,192	$ 950,181,206	$1,065,279,411	$1,399,129,477	$1,129,079,630
Local Projects	$ 228,870,489	$ 258,202,963	$ 287,306,796	$ 305,015,382	$ 257,215,147	$ 310,125,453	$ 213,073,980
TOTAL EXPENDITURES	**$1,800,330,506**	**$2,804,050,449**	**$2,765,083,635**	**$2,917,874,367**	**$2,856,137,135**	**$3,346,017,859**	**$2,673,741,830**
HB 170 REVENUE	N/A	$ 765,114,468	$ 845,629,709	$ 909,160,509	$ 933,198,709	$ 958,896,609	$ 984,938,609

Source: GDOT response to TRIP survey.

The charts below detail transportation projects in the state's largest urban areas as well as statewide that will be underway by 2021, partially as a result of increased transportation funding.

Chart 8. Projects that will be underway by 2021, partially as a result of increased transportation funding.

Project Description	County/Counties	Improvement	Year	Cost	Benefit of Project
Atlanta Urban Area					
I-20 FROM COLUMBIA DR TO PANOLA RD - MOVABLE BARRIERS	DeKalb	Barriers	2020	$18.4M	Congestion Relief
I-75 NB CD SYSTEM FROM SR 331 TO I-285	Clayton	Ramp	2018	$41.8M	Congestion Relief
SR 3/US 19/US 41 FROM S OF TARA RD TO S OF SR 54	Clayton	Widening	2019	$30.4M	Congestion Relief
WEST WINDER BYP-CR 325/MATTHEWS SCHL RD TO SR 211- PH I	Barrow	Widening	2018	$38.3M	Congestion Relief, Safety
SR 316 @ SR 81, @ SR 11, & @ SR 53	Barrow	Interchanges (3)	2018	$47.0M	Congestion Relief, Safety
SR 20-SHARON CHURCH RD TO BRAND RD; 3 INTERSECTIONS	Gwinnett, Walton	Widening	2020-21	$47.6M	Congestion Relief, Safety
SR 92-SR 3/US 41 TO GLADE RD	Cobb	Widening	2019	$31.8M	Congestion Relief, Safety
SR 9-WINDWARD PKWY TO FORSYTH CO LINE	Fulton	Widening	2021	$31.5M	Congestion Relief, Safety
SR 9-FULTON CO LINE TO SR 141	Forsyth	Widening	2021	$55.8M	Congestion Relief, Safety
SR 20- I-575 TO NORTH CORNERS PKWY	Cherokee, Forsyth	Widening	2019-21	$91.0M	Congestion Relief, Safety
MLK JR DRIVE @ RICH'S PARKING LOT IN ATLANTA	Fulton	Bridges	2019	$44.0M	Replace Outdated Bridge
I-75-CHATTAHOOCHEE RVR TO ALLGOOD ROAD	Cobb	Resurfacing & Maintenance	2018	$32.0M	Preservation
I-20 FROM SR 5 TO SWEETWATER CREEK	Douglas	Resurfacing & Maintenance	2019	$31.7M	Preservation
Augusta Urban Area					
I-20 @ SAVANNAH RIVER	Richmond	Bridges	2019	$72.2M	Congestion Relief, Safety
SR 10-FORT GORDON NEW ACP/GATE 6 TO SR 223	Richmond	Widening	2018	$16.2M	Congestion Relief, Military Access
SR 4/US 25BU-SAVANNAH RIVER AT SC STATE LINE	Richmond	Bridges	2021	$16.2M	Replace Outdated Bridge
SR 388- I-20 TO SR 232	Columbia	Widening	2019	$8.1M	Congestion Relief
SR 4 -MILLEDGEVILLE RD TO GOVERNMENT ST	Richmond	Widening	2020	$5.0M	Congestion Relief
Columbus Urban Area					
SR 219 -SCHLEY CREEK NW OF COLUMBUS	Muscogee	Bridges	2020	$2.2M	Replace Outdated Bridge
SR 520/US 280 EB & WB - BAGLEY CREEK 2 MI SE OF CUSSETA	Chattahoochee	Bridges	2020	$2.3M	Replace Outdated Bridge
SR 85/US 27 ALT SB & NB - CR 1660/MILLER RD IN COLUMBUS	Muscogee	Bridges	2021	$4.8M	Replace Outdated Bridge
SR 22/US 80 - KENDALL CREEK IN COLUMBUS	Muscogee	Bridges	2020	$1.7M	Replace Outdated Bridge
SR 22/US 80 - FLATROCK CREEK IN COLUMBUS	Muscogee	Bridges	2021	$3.0M	Replace Outdated Bridge
Macon Urban Area					
I-16 EB FROM I-75 TO WALNUT CREEK - PHASE IV	Bibb	Bridges	2021	$128.7M	Bottleneck Relief; Congestion Relief
I-16 WB FROM I-75 TO WALNUT CREEK - PHASE V	Bibb	Bridges	2021	$97.2M	Bottleneck Relief; Congestion Relief
I-16 EB & WB - OCMULGEE RIVER OVERFLOW	Bibb	Bridges	2021	$10.8M	Bottleneck Relief; Congestion Relief
SR 11/SR 49 -ROCKY CRK & TOBESOFKEE CRK &OVFLW	Bibb	Bridges	2019	$16.3M	Replace Outdated Bridge
SR 11/SR 49/US 41 - 1.4 MI S OF MACON	Bibb	Bridges	2020	$3.8M	Econ. Dev.
Savannah Urban Area					
I-16 FROM I-95 TO I-516	Chatham	Widening	2018-21	$130.2M	Bottleneck & Congestion Relief
I-16 - I-95 INTERCHANGE RECONSTRUCTION	Chatham	Interchange	2018-21	$125.4M	Bottleneck & Congestion Relief
CR 787/ISLANDS EXPWY - WILMINGTON RVR/BASCULE BRIDGE	Chatham	Bridges	2018	$56.0M	Replace Outdated Bridges
JIMMY DELOACH PXWY EXT - I-16 TO SR 26/US 80	Chatham	New location roadway	2018	$26.3M	Freight Bottleneck & Congestion Relief
BRAMPTON RD FROM SR 21/SR 25 TO SR 21 SPUR	Chatham	New location roadway	2019	$43.3M	Freight Bottleneck & Congestion Relief
Other Areas in Georgia					
MCCAYSVILLE BYPASS FROM SR 5 TO TN STATE LINE	Fannin	New location roadway	2020	$31.3M	Congestion relief; Econ. Dev.
SR 5 - SR 2/BLUE RIDGE N TO PROP MCCAYSVILLE BYP NR CR 138	Fannin	Widening	2020	$61.0M	Congestion relief; Econ. Dev.
SR 133 - S OF SR 35/US 319 TO N OF CR540 HOLLY DR	Colquitt, Worth, Dougherty	Widening	2019-20	$185.7M	Econ.Dev.; Freight corridor
SR 24/US 441 - PUTNAM CO LN TO N OF CS 646/PIERCE DAIRY RD	Morgan	Widening	2021	$32.6M	Econ.Dev.; Freight corridor
SR 4/US 1- N OF WILLIAMS CK TO GREEN OAK RD	Toombs	Widening	2020-21	$145.4M	Econ.Dev.; Freight corridor
SE ROME BYP - SR 101 NE ON NEW LOC TO US 411	Floyd	Roadway Project	2019	$61.9M	Congestion relief; Econ. Dev.
EFFINGHAM PKWY- CR 156/BLUE JAY/EFFINGHAM TO SR 30/CHATHAM	Effingham	New Location Roadway	2020	$29.4M	Congestion relief; Econ. Dev.
SR 4/US 1 -N OF NIMROD RD TO LOUISVILLE BPS	Jefferson	Widening	2021	$31.1M	Econ. Dev.
SPOUT SPRINGS RD - I-985 TO UNION CIRCLE - PHASE I	Hall	Widening	2019	$39.5M	Congestion Relief
CR 274/CS 1078/LAKE PARK BELLVILLE RD - SR 7 TO I-75	Lowndes	Widening	2021	$32.3M	Congestion Relief; Econ. Dev.
SR 515/US 76 FM YOUNG HARRIS ST/UNION TO TIMBERLINE DR/TOWNS	Towns, Union	Widening	2020	$65.5M	Congestion Relief; Econ. Dev.
SR 67 FM I-16 TO STATESBORO BYPASS	Bulloch	Widening	2019	$24.2M	Congestion Relief; Econ. Dev.
SR 1/US 27/LAGRANGE FM AUBURN ST TO SR 219/MORGAN ST	Troup	Widening	2019	$10.9M	Congestion Relief

Source: GDOT response to TRIP survey.

While the increased funding will allow for the acceleration or completion of numerous needed projects, it is not sufficient to fully address the needs of the system, or to allow the state to provide many other transportation improvements that are needed to support economic growth.

The following charts detail needed projects in the state's largest urban areas and statewide that lack sufficient funding to proceed prior to 2022.

Chart 9. Needed projects that lack sufficient funding to proceed

Project Description	County	Improvement	Cost	Project Benefit
Atlanta Urban Area				
PANOLA RD @ I-20 - FAIRINGTON RD TO SNAPFINGER WOODS DR	DeKalb	Interchange	$26.7M	Ops of Inch/Mainline - RW Phase
SR 92 -NEBO RD TO PICKETTS MILL PL	Cobb, Paulding	Widening	$30.2M	Congestion Relief
I-85 - SR 74/SENOIA RD	Fulton	Interchange	$35.0M	Ops of Inch/Mainline - RW Phase
I-20 @ SR 138/SR 20 INTCH RECON & WIDENING	Rockdale	Interchange	$36.4M	Congestion Relief
SR 42 - DOWNTOWN MCDONOUGH TO SR 138	Henry	Widening	$21.9M	Congestion Relief; RW phase
WEST WINDER BYP @ SR 316 - NEW INTERCHANGE - PH III	Barrow	Interchange	$19.6M	New Location; Access to Corridor
SR 9 - N OF SR 141 TO N OF SR 20	Forsyth	Widening	$18.1M	Congestion Relief
I-285/BOULDERCREST RD INTCH	DeKalb	Interchange	$35.1M	Congestion Relief; Ops of Inch/Mainline
SR 166 - OLD LOWER RIVER ROD/DOUGLAS TO SR 70/FULTON	Douglas, Fulton	Widening	$19.1M	Congestion Relief; RW phase
SR 20 - CR 762/UNION HILL RD TO E OF CS 579/N CORNERS PKWY	Cherokee, Forsyth	Widening	$183.9M	Congestion Relief, Safety
JONESBORO RD - W OF SR 3/US 41/CLAYTON TO I-75/HENRY	Clayton, Henry	Widening	$51.7M	Congestion Relief
SR 6 - I-20 WB TO SR 6 SPUR - TRUCK FRIENDLY LANES	Cobb, Douglas	Minor Widen & Resurf.	$35.7M	Congestion Relief
SR 61 - S OF CR 467/DALLAS NEBO RD TO SR 6	Paulding	Widening	$41.0M	Congestion Relief
SR 371 - SR 9 TO CR 5/KELLY MILL RD	Forsyth	Widening	$41.0M	Congestion Relief
Augusta Urban Area				
I-20 - MCDUFFIE CO LINE TO SR 383	Columbia	Widening	$98.3M	Congestion Relief
CR 102/HEREFORD FARM ROAD FROM SR 232 TO SR 383	Columbia	Widening	$32.1M	Congestion Relief
Columbus Urban Area				
SR 520/US 280 @ CHATTAHOOCHEE RVR IN COLUMBUS	Muscogee	Bridge	$10.8M	Replace Outdated Bridge
Macon Urban Area				
I-75 - I-16 TO CR 478/PIERCE AVE - PHASE VI	Bibb	Widening	$65.0M	Bottleneck Relief; Congestion Relief
Savannah Urban Area				
SR 144 EB - S OF CR 100 TO S OF CR 154	Bryan	Widening	$14.3M	Economic Development
SR 26/US 80 @ BULL RVR & @ LAZARETTO CRK	Chatham	Bridge	$74.2M	Widen & Raise Bridge, Rd to Tybee Isl.
ISLANDS EXPWY - GEN MCINTOSH BLVD TO TRUMAN PKWY	Chatham	Widening	$30.4M	Improved Connectivity
I-16 - CS 565/POOLER PKWY TO I-95	Chatham	Widening	$14.0M	Congestion Relief; Freight Movement
Other Areas in Georgia				
I-85 - N OF SR 211 TO SR 11/US 129	Barrow	Widening	$274.7M	Congestion Relief; Freight Movement
SR 85 - S OF CR 126/BERNHARD RD TO OLD SR 92/F'VILLE	Fayette	Widening	$32.4M	Congestion Relief
SR 166 BYPASS - E OF BIG INDIAN CREEK TO CS 1158/HAYS MILL RD	Carroll	Widening	$68.6M	Congestion Relief
SR 24 FM MADISON BPS/MORGAN TO N OF APALACHEE RVR/OCONEE	Morgan, Oconee	Widening	$48.4M	Congestion relief; Econ. Dev.
SR 40 - E OF ST MARYS RIVER TRIB TO E OF CR 66/COLERAIN RD	Camden, Charlton	Widening	$41.0M	Congestion relief; Econ. Dev.
S ROME BYP/US 27 - SR 1 ALONG BOOZE MTN RD TO SR 101 @CR 96	Floyd	Roadway Project	$80.7M	Congestion relief; Econ. Dev.
SR 113/OLD ALA RD RELOC FM SR 113 -PUMPKINVINE CK- TO CR 699	Bartow	Widening	$63.6M	Congestion Relief
ROME-CARTERSVILLE DEVELOPMENT CORRIDOR	Bartow	Roadway Project	$71.9M	Congestion relief; Econ. Dev.
SR 15 - CR 67/RIDGE RD TO EAST SPARTA BYPS	Hancock, Washington	Widening	$155.7M	Economic Development
SR 44 - CR 54/LINGER LONGER RD TO E GREENSBORO BYPS	Greene	Widening	$51.9M	Economic Development
SR 1 - CR 329 TO N OF CR 325 @ SR 1/US 27	Chattooga	Widening	$63.9M	Economic Development
SR 15/US 441 - NORTH CL/CLAYTON TO NC STATE LINE	Rabun	Widening	$54.5M	Economic Development
I-85 - N OF SR 11 TO SC STATE LINE	Jackson	Widening	$1.2B	Congestion Relief; Freight Movement

Source: GDOT response to TRIP survey.

Major Mobility Investment Program

Approval of the TFA will allow GDOT to advance the Major Mobility Investment Program (MMIP), which will include 11 major mobility projects throughout the state to be completed between 2021 and 2029 to relieve traffic congestion, improve the movement of freight and enhance safety.

These projects require various forms of finance, so public-private partnership procurement will be utilized. Most all projects are Design-Build-Finance or Design-Build-Finance-Operate-Maintain. GDOT does

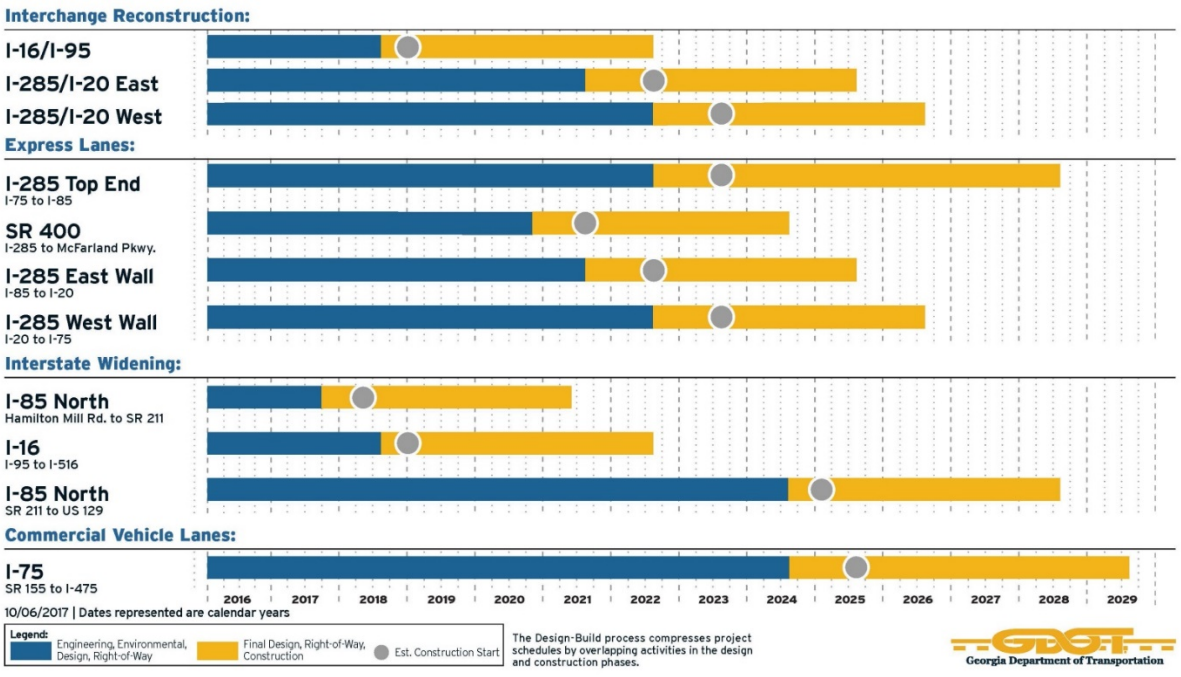
not have sufficient funding to advance these as traditional Design-Bid-Build or Design-Build projects. Contractor availability payments will be utilized to pay for these projects.[20]

The projects, which are in the Atlanta, North Georgia, Macon and Savannah areas, include three interchange reconstructions, four express lane projects, the widening of three portions of Interstate highways and the construction of commercial vehicle lanes on a portion of 1-75 between Atlanta and Macon.

The MMIP includes four projects to expand the Georgia Express Lanes system, which will offer a choice for drivers to pay a toll to bypass congestion in the Atlanta area and will provide more reliable trips for transit, carpools and vanpools.

When completed, the widenings of I-85 from Hamilton Mill to SR-211 and from SR-211 to US 129 in Northeastern Georgia will reduce delays by 56 percent and 69 percent respectively; and the widening of I-16 in Savannah from I-516 to I-95 will reduce delays by 32 percent.[21]

Chart 10. Major Mobility Investment Program



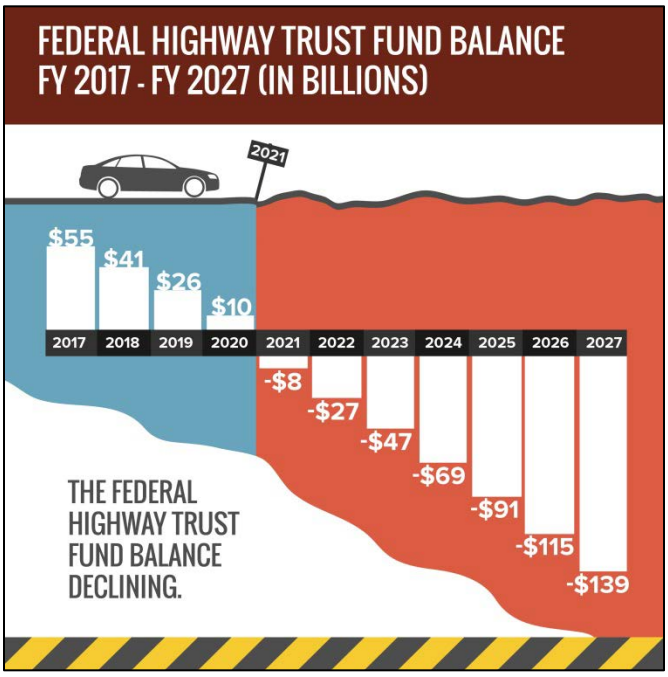
Source: GDOT

Federal Transportation Funding

Investment in Georgia's roads, highways and bridges is funded by local, state and federal governments. A lack of sufficient funding at all levels will make it difficult to adequately maintain and improve the state's existing transportation system.

The federal government is a critical source of funding for Georgia's roads, highways, bridges and transit systems and provides a significant return in road and bridge funding based on the revenue generated in the state by the federal motor fuel tax.

Most federal funds for highway and transit improvements in Georgia are provided by federal highway user fees, largely an 18.4 cents-per-gallon tax on gasoline and a 24.4 cents-per-gallon tax on diesel fuel. Since 2008 revenue into the federal Highway Trust Fund has been inadequate to support legislatively set funding levels so Congress has transferred approximately $53 billion in general funds and an additional $2 billion from a related trust fund into the federal Highway Trust Fund.[22]



Signed into law in December 2015, the Fixing America's Surface Transportation Act (FAST Act), provides modest increases in federal highway and transit spending. The five-year bill also provides states with greater funding certainty and streamlines the federal project approval process. But, the FAST Act does not provide adequate funding to meet the nation's need for highway and transit improvements and does not include a long-term and sustainable funding source.

The five-year, $305 billion FAST Act will provide a boost of approximately 15 percent in highway funding and 18 percent in transit funding over the duration of the program, which expires in 2020.[23] In addition to federal motor fuel tax revenues, the FAST Act will also be funded by $70 billion in U.S. general funds, which will rely on offsets from several unrelated federal programs including the Strategic Petroleum Reserve, the Federal Reserve and U.S. Customs.

According to the 2015 Status of the Nation's Highways, Bridges and Transit: Conditions and Performance report submitted by the United States Department of Transportation (USDOT) to Congress, the nation faces an $836 billion backlog in needed repairs and improvements to the nation's roads, highways and bridges.[24] The USDOT report found that the nation's current $105 billion investment in roads, highways and bridges by all levels of government should be increased by 35 percent to $142.5 billion annually to improve the conditions of roads, highways and bridges, relieve traffic congestion and improve traffic safety.

President Trump released an infrastructure investment plan in February 2018 that would provide $200 billion in new federal grants and loans over 10 years to leverage $1.5 trillion in total project spending nationwide on infrastructure, including surface transportation. The Trump administration's funding proposal would rely on state and local governments to raise the additional $1.3 trillion to access the increased federal funding. Boosting federal surface transportation spending will require that Congress provide a long-term and sustainable source of funding to support the federal Highway Trust Fund.

Importance of Transportation to Economic Growth

Today's culture of business demands that an area have well-maintained and efficient roads, highways and bridges if it is to remain economically competitive. Global communications and the impact of free trade in North America and elsewhere have resulted in a significant increase in freight movement, making the

quality of a region's transportation system a key component in a business's ability to compete locally, nationally and internationally.

Businesses have responded to improved communications and the need to cut costs with a variety of innovations including just-in-time delivery, increased small package delivery, demand-side inventory management and e-commerce. The result of these changes has been a significant improvement in logistics efficiency as firms move from a push-style distribution system, which relies on large-scale warehousing of materials, to a pull-style distribution system, which relies on smaller, more strategic movement of goods. These improvements have made mobile inventories the norm, resulting in the nation's trucks literally becoming rolling warehouses.

Highways are vitally important to continued economic development in Georgia, particularly to the state's manufacturing, agriculture and tourism industries. As the economy expands, creating more jobs and increasing consumer confidence, the demand for consumer and business products grows. In turn, manufacturers ship greater quantities of goods to market to meet this demand, a process that adds to truck traffic on the state's highways and major arterial roads.

Every year, $790 billion in goods are shipped to and from sites in Georgia, mostly by trucks.[25] Seventy-nine percent of the goods shipped annually to and from sites in Georgia are carried by trucks and another 12 percent are carried by courier services or multiple-mode deliveries, which include trucking.[26]

The cost of road and bridge improvements are more than offset by the reduction of user costs associated with driving on rough roads, the improvement in business productivity, the reduction in delays and the improvement in traffic safety. The Federal Highway Administration estimates that each dollar spent on road, highway and bridge improvements results in an average benefit of $5.20 in the form of reduced vehicle maintenance costs, reduced delays, reduced fuel consumption, improved safety, reduced road and bridge maintenance costs and reduced emissions as a result of improved traffic flow.[27]

Local, regional and state economic performance is improved when a region's surface transportation system is expanded or repaired. This improvement comes as a result of the initial job creation and increased employment created over the long-term because of improved access, reduced transport costs and improved safety.

Increasingly, companies are looking at the quality of a region's transportation system when deciding where to re-locate or expand. Regions with congested or poorly maintained roads may see businesses relocate to areas with a smoother, more efficient and more modern transportation system. Highway accessibility was ranked the number one site selection factor in a 2016 survey of corporate executives by Area Development Magazine. The availability of skilled labor, which is also impacted by a site's level of accessibility, rated second.[28]

Conclusion

As Georgia works to build and enhance a thriving, growing and dynamic state, it will be critical that it is able to provide a well-maintained, safe and efficient 21st century network of roads, highways, bridges and transit that can accommodate the mobility demands of a modern society.

The approval of the TFA in 2015 has allowed Georgia to move forward with numerous projects to enhance economic development opportunities in the state, relieve traffic congestion, improve safety and accelerate road and bridge repairs. But, with Georgia's vehicle miles of travel increasing at the second highest rate nationally and with the Peach State expected to be home to an additional 2.5 million residents by 2040, the state will need to make further increases in its level of transportation investment.

While the funding increase provided in 2015 has provided a significant boost to the state's ability to address its transportation needs, Georgia will need to look for further opportunities to increase its level of transportation investment from all levels of government – local, state and federal.

If Georgia is unable to maintain its recent momentum in increasing transportation investments it risks threatening the state's quality of life with a transportation system that lacks adequate resources to ensure an efficient, safe and well-maintained transportation system.

# # #

ENDNOTES

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