Georgia Statewide Transit Plan

Improving Access and Mobility through 2050

Final Report

December 2020

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GDOT Georgia Department of Transportation

Let's Ride

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List of Acronyms

AASHTO	American Association of State Highway and Transportation Officials
ACS	American Community Survey
ADA	Americans with Disabilities Act
APC	Automated Passenger Counter
APTA	American Public Transit Association
ARC	Atlanta Regional Commission
ARTP	Atlanta Regional Transit Plan
ASE	Automotive Service Excellence
ASCT	Adaptive Signal Control Technology
ATL	Atlanta-region Transit Link Authority
ATS	Athens Transit System
AVL	Automated Vehicle Locator
BRT	Bus Rapid Transit
CARTA	Chattanooga Area Regional Transportation Authority
CID	Community Improvement District
CRC	Coastal Regional Commission
CV	Connected Vehicle
DCH	Department of Community Health
DHS	Department of Human Services
EV	Electric Vehicle
FHWA	Federal Highway Administration
FAST Act	Fixing America's Surface Transportation Act
FTA	Federal Transit Administration
GCT	Gwinnett County Transit
GDOT	Georgia Department of Transportation
GDP	Gross Domestic Product
GPA	Georgia Planning Association
GPS	Global Positioning System
GRTA	Georgia Regional Transportation Agency
GTA	Georgia Transit Association
GTFS	General Transit Feed Specification
HBW	Home-Based Work
HJAIA	Hartsfield-Jackson Atlanta International Airport
HST	Human Services Transportation
HUD	Department of Housing and Urban Development
LEP	Limited English Proficiency
LRTP	Long-Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century Act
MARTA	Metropolitan Atlanta Rapid Transit Authority
MATS	Mountain Area Transportation System
MMIP	Major Mobility Investment Program
MPO	Metropolitan Planning Organization
NAICS	North American Industry Classification System
NEMT	Non-Emergency Medical Transportation
NFC	Near Field Communication
NTD	National Transit Database
OBU	On-Board Unit
OPB	Office of Planning and Budget
PASS	Passenger Service and Safety Training
PEDS	Pedestrians Educating Drivers on Safety
PIOH	Public Involvement Open House
RC	Regional Commission
RSU	Roadside Unit
RTP	Regional Transportation Plan
SAC	Stakeholder Advisory Committee
SGR	State-of-Good-Repair
SGRC	Southern Georgia Regional Commission
SOV	Single Occupancy Vehicle
SPLOST	Special-Purpose Local-Option Sales Tax
SRP	State Rail Plan
SRTA	State Road and Tollway Authority
SSC	Statewide Steering Committee
SSTP	Statewide Strategic Transportation Plan
STIP	Statewide Transportation Improvement Program
SVA	Savanah/Hilton Head International Airport
SWTP	Statewide Transportation Plan
SWTRP	Statewide Transit Plan

TAC	Technical Advisory Committee
TAM	Transit Asset Management
TCRP	Transit Cooperative Research Program
TDM	Travel Demand Model
TDP	Transit Development Plan
TERM	Transit Economic Requirements Model
TIP	Transportation Improvement Plan
TNC	Transportation Network Company
TPO	Third Party Operators
TSP	Transit Signal Priority
TSPLOST	Transportation Special Purpose Local Option Sales Tax
ULB	Useful Life Benchmark
USDOT	United States Department of Transportation
WCT	Wayne County Transit

1.0 Introduction

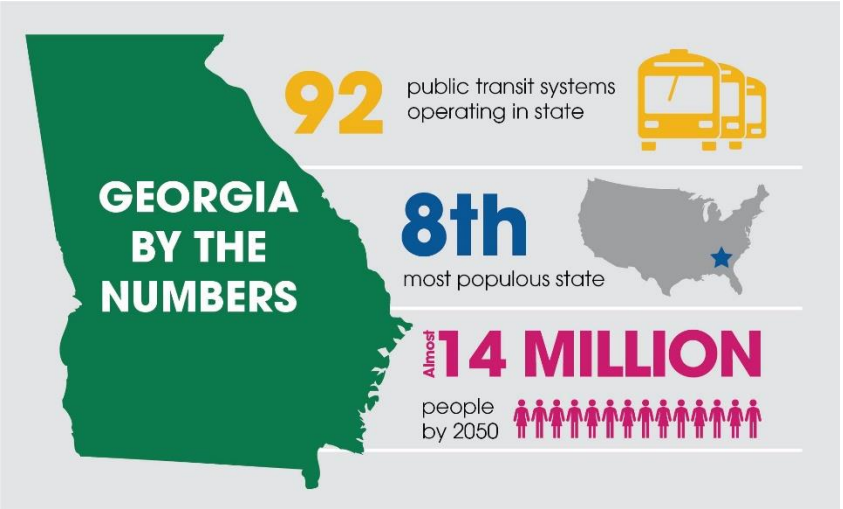
The Georgia Department of Transportation (GDOT) is continuously working to boost Georgia's competitiveness via leadership in transportation, and to deliver a multimodal transportation system focused on innovation, safety, sustainability, and mobility. GDOT's Transit Program partners with local transit providers statewide to offer operating, capital, planning, and educational training support. This Statewide Transit Plan (SWTRP) is a component of GDOT's multimodal approach to providing transportation throughout the State of Georgia.

> Georgia's transit systems provide more than 144 million passenger trips throughout the state each year, supporting economic development by connecting Georgians to jobs, healthcare, shopping and educational opportunities.

Transit is not one-size-fits-all. It comes in many different forms, serving diverse communities and rider needs across Georgia. Ninety-two (92) public transit systems currently operate across the state, providing service in rural, small urban, and large urban communities alike. These systems include demand response, vanpools, fixed route and express buses, paratransit, streetcar, ferry boat, and heavy rail transit services.

Together, Georgia's transit systems provide more than 144 million passenger trips throughout the state each year, supporting economic development by connecting Georgians to jobs, healthcare, and educational opportunities.

At over 10.6 million people, the U.S. Census Bureau ranks Georgia is the eighth-most populous state, and it continues to grow, both in terms of population and employment. By 2050, the state's population is expected to increase to nearly 15 million people. Transit already plays a key role in supporting the state's economy and mobility for all Georgians by connecting them with jobs, education, and other opportunities. In the future, transit will play an increasingly important role in serving seniors, mitigating traffic congestion, supporting economic development, and connecting Georgians to healthcare, jobs, and education.



The SWTRP will chart the future direction of transit programs through 2050 and aims to improve access and connectivity, with a particular focus on rural and small urban communities. Georgia's demographic and economic trends highlight the needs and opportunities for improving and expanding transit service in these communities.

Throughout the SWTRP's development process, technical memoranda and reports were compiled to summarize the work completed toward the final plan. These components were interconnected and included the following:

- *Existing Conditions & Future Trends Analysis Part I*
- *Existing Conditions & Future Trends Analysis Part II: Best Management Practices*
- *Existing Conditions & Future Trends Analysis Part III: Rural Transit Trip Data Analysis*
- *Transit System Profile Sheets & Performance Statistics*
- *Summary Report of Relevant Transportation Plans and Performance Measures*
- *Public and Stakeholder Involvement Summary Report*
- *Transit Needs Assessment Technical Report*
- *Strategies and Funding Scenarios Report*
- *Draft and Final SWTRP*
- *Executive Summary and Brochures*
- *Project Video*

The full contents of each technical report and memoranda is available for review on the GDOT website at http://www.dot.ga.gov/IS/Transit/TransitPlan.

1.1 Plan Purpose

The purpose of the GDOT Statewide Transit Plan (SWTRP) is to coordinate with local governments, regional commissions, metropolitan planning organizations (MPOs), and transit providers to quantify public transit needs and document strategies to ensure all Georgians have access to public transit. The SWTRP incorporates existing local and regional plans and supports GDOT's multimodal long-range planning efforts. The plan also includes clear and understandable metrics to evaluate strategies for implementing transit projects.

1.2 Federal and State Planning Requirements and Transit Programs

The GDOT SWTRP was developed in accordance with federal and state planning requirements. Per 49 USC 5304(f), each state is responsible for preparing a long-range statewide transportation plan, that provides for the development and implementation of the multimodal transportation system, including transit, highway, bicycle, pedestrian, and accessible transportation. The plan must identify how the transportation system will meet the state's economic, transportation, development, and sustainability goals – among others – for a 20+ year planning horizon.

The Federal Transit Administration (FTA) provides grants to local public transit systems, including buses, subways, light rail, commuter rail, trolleys, and ferries. Since 1964, FTA has partnered with state and local governments to create and enhance public transportation systems.

Nationwide, the FTA invests more than $11 billion annually to support and expand public transit services. FTA provides annual formula grants to transit agencies nationwide as well as discretionary funding in competitive processes.

The GDOT Transit Program is responsible for the administration and oversight of the FTA programs authorized under the FAST Act—the nation's authorization act for surface transportation planning and investment. The mission of the GDOT Transit Program is to "Identify and support cost effective, efficient, and safe transportation systems." This is accomplished through the distribution and oversight management of FTA grants.

As a primary grant recipient responsible for administering FTA funds, GDOT is responsible for developing and implementing comprehensive grant management oversight activities. These activities are designed to educate, evaluate, and ensure that all subgrantees are informed and in compliance with FTA required reporting. It must be noted that although the FTA funding regulations are sometimes similar to The Federal Highway Administration (FHWA), it is the FTA-specific rules that govern GDOT's Transit Program. FTA evaluates grantee adherence to grant administration requirements through a comprehensive oversight program and conducts periodic oversight reviews and site visits.

1.3 Locally Developed Plans

In the preparation of this report, relevant planning documents from regional and local agencies were reviewed. Reviewed plans include long range transportation plans compiled by Georgia's 16 metropolitan planning organizations; transportation or comprehensive plans for each of Georgia's 159 counties, and transit development plans prepared by regional commissions and individual transit agencies.

2.0 Public Transportation Services in Georgia

This section describes existing transit services in Georgia. It describes FTA programs and classifications and discusses the impacts of transit in Georgia. The differences between rural, urban, coordinated regional service, intercity bus, and ferry service are explained. Additional topics include infrastructure, operations, maintenance, performance, funding, and ridership characteristics.

2.1 Public Transportation Overview

Public transportation provides a crucial mobility option for Georgians across the state. Publicly funded transportation service is broadly divided into two classifications: public transit and human services transportation (HST). Though the two share a core purpose and can have similar operational characteristics, these two types of services target different populations and are funded and administered differently. Public transit provides shared vehicle service and is open to all members of the general public for any trip purpose. Approximately 88.5% of Georgians live within the service area of at least one public transit system.[1]

In Georgia's rural areas, public transit is provided by demand-response service using cutaway buses or vans. Cutaway buses are smaller than conventional buses, typically seating 15 passengers. To secure a ride, users contact a dispatcher in advance, who provides the rider with a scheduled pick up time. Service is available anywhere inside the system's coverage area, and most systems offer service to high-demand destinations in other jurisdictions, such as medical and economic centers, when practical.

More details on public transit systems in Georgia's rural areas can be found in **Section 2.2 Rural Transit**.

In the state's urban centers, public transit typically consists of fixed-route bus service. In the Atlanta area, public transit users may also take advantage of the heavy rail transit, commuter bus, streetcar, and vanpool options. Data on Georgia's urban transit systems can be found in **Section 2.3 Urban Public Transit.**

HST differs from public transit in that it is focused on meeting the specialized transportation needs of specific populations. HST programs seek to help older Americans, lower-income populations, or the disabled meet their total transportation needs, including daily commutes, medical appointments, shopping trips, or visits to senior centers. HST trips are typically provided by curb-to-curb demand-response systems and are not required to be open to the general public, unless the trip is being provided by an area's public transit system.

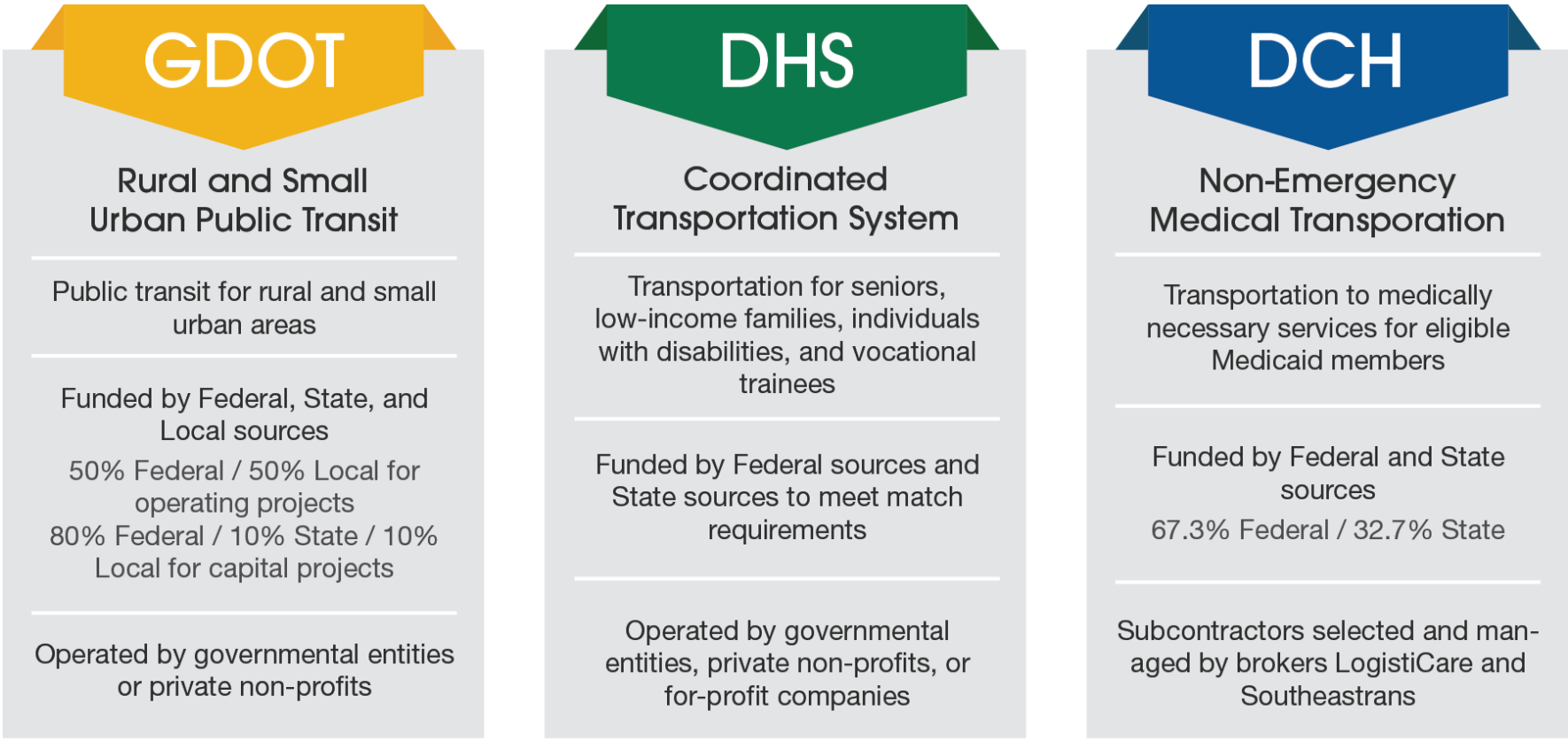
In Georgia, most regulatory authority over HST falls under the Georgia Department of Human Services (DHS). DHS contracts HST services to a combination of public agencies, non-profit groups, and for-profit companies. Due to overlapping operation characteristics in many areas, public transit and HST are often operated by a single provider, increasing efficiency for systems and patrons.

More than 88 percent of Georgians live within the service area of at least one public transit system.

Non-Emergency Medical Transportation (NEMT) is operated by Georgia Medicaid, a division of the Georgia Department of Community Health (DCH). NEMT exclusively provides medically necessary transportation to the state's Medicaid recipients. Riders arrange trips through one of two regional for-profit brokers. These brokers then determine the optimal transportation mode for the client, which can be through an independent transportation provider or a public transit system.

The differing roles and responsibilities of GDOT, DHS, and DCH are illustrated in **Figure 1.**

Figure 1. Transportation Roles and Responsibilities



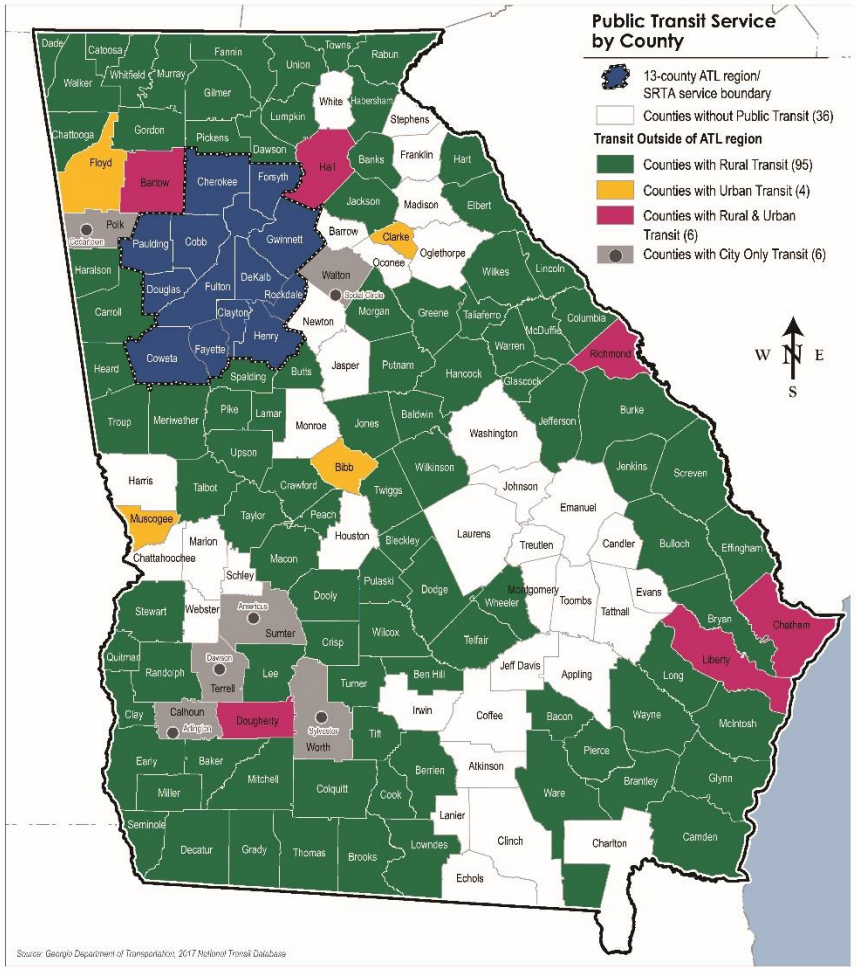
There are 92 public transit providers in the State of Georgia serving 123 of 159 counties, as shown in **Figure 2**. For purposes of this report, a county's public transit service status is classified as either Urban, Rural, both Urban and Rural, or counties without public transit. Eight counties (Bartow, Henry, Hall, Cherokee, Richmond, Chatham, Liberty, Dougherty) are served by both Urban and Rural public transit, though not necessarily by the same provider. In the Atlanta metropolitan area, the State Road and Tollway Authority (SRTA) Xpress bus service provides a regional commuter service that complements local public transit systems.

> In 2017, 1.79 million trips were provided by Rural transit systems.

Figure 2 shows the transit service by type throughout the state. Counties in white do not currently have public transit service. HST and NEMT services are available for specific purposes and for qualified riders in all counties.

In 2017, Georgia's transit agencies provided over 144 million unlinked passenger trips. An unlinked passenger trip represents each time a passenger boards a vehicle (e.g. bus, train, etc.). Of these trips, 1.79 million were provided by Rural systems, 4.6 million were in areas classified as Small Urban, and 138.1 million were in Large Urban areas.

Figure 2: Georgia Transit Service by Type



2.2 Rural Transit

Georgians are currently served by 80 systems providing Rural transit service. This demand-response transit is provided using cutaway buses or vans. Of these systems, 72 operate as individual counties, five systems operate Rural public transit serving regions or multiple jurisdictions, and three are operated by single municipalities. Twenty-six Rural systems contract their services to third party operators (TPOs), which can be non-profit organizations or for-profit companies.

Rural transit providers sometimes have the flexibility to operate outside their designated service boundary (e.g., county lines) when needed. Of Georgia's 80 Rural public transit providers, 68 have the ability to take their riders to destinations outside their boundaries when necessary and practical, such as trips to regional hospitals or activity centers.

While hours vary significantly by system, typically, service hours begin between 7:00 and 8:00 AM, and the final pickups for passengers occur between 4:00 and 5:00 PM. Most Rural public transit systems operate weekday service only. Saturday or weekend service is available in some counties, though with more limited service hours. Two providers, Clay County Transit and Wayne County Transit, offer service 24 hours per day, 7 days per week. These providers typically require more advanced scheduling for late-night trips.

> Of Georgia's 80 Rural public transit providers, 68 take their riders to destinations outside their boundaries.

Table 1 shows a regional summary of FY 2017 operating statistics for Georgia's Rural public transit providers, including total operating expenses, passenger trips, and number of vehicles, as well as the average cost per trip. These statistics are summarized at the regional level.

Table 1: Regional Rural Public Transit Operating Characteristics, 2017

	Operating Expenses	Passenger Trips	Cost per Trip	Number of Vehicles
Atlanta Region	$2,454,892	128,299	$19.13	29
Central Savannah River Area	$3,216,291	222,441	$14.46	50
Coastal Region	$4,015,735	131,308	$30.58	62
Georgia Mountains	$2,028,119	103,409	$19.61	36
Heart of Georgia Altamaha	$1,132,984	76,667	$14.78	24
Middle Georgia	$1,159,912	60,801	$19.08	22
Northeast Georgia	$1,217,869	72,744	$16.74	19
Northwest Georgia	$4,340,412	262,208	$16.55	83
River Valley	$3,171,313	131,980	$24.03	43
Southern Georgia	$2,735,779	125,799	$21.75	46
Southwest Georgia	$6,606,081	351,572	$18.79	93
Three Rivers	$1,914,152	129,984	$14.73	36
Statewide	**$33,993,539**	**1,797,212**	**$18.91**	**543**

Sources: National Transit Database, GDOT TAM Plan

Statewide, Rural transit providers completed 1.79 million trips and spent an average of $18.91 per trip. The average base fare for a Rural public transit trip is $2.59; however, systems often have tiered fare structures resulting in higher fares for longer trips or trips to certain destinations.[2]

The Southwest Georgia region saw the most Rural transit trips in 2017 with 351,572. This region is home to the state's largest rural provider, Southwest Georgia Regional Transit. Thomas County, the single-county system that delivered the most trips, is also a part of this region.

Many operational and geographic factors can affect an agency's average cost per trip. The Central Savannah River Area region provided transit services with the lowest cost per trip in 2017, at $14.46 per trip. Troup County, located in the Three Rivers region, had the state's lowest per trip cost at $6.95 per trip. Of the state's multi-county systems, the Mountain Area Transportation System (MATS), located in Northwest Georgia, had the lowest cost at $15.26 per trip.

2.3 Urban Public Transit

The State of Georgia currently has 17 Urban public transit systems, listed in **Table 2**. Fifteen of these systems offer fixed-route bus service. Bartow County offers demand-response public transit in both urban and rural parts of the county. Connect Douglas offers vanpool service and launched fixed-route bus service in June of 2019. SRTA offers commuter bus service in the Atlanta metro area; CobbLinc and Gwinnett County Transit (GTC) also offer commuter service between their respective counties and major employment centers in the Atlanta region, in addition to local fixed-route service.

MARTA operates the state's only heavy rail system and streetcar, in addition to fixed-route bus service in three counties. Chatham Area Transit operates the state's only public passenger ferry service, located in Savannah.

Figure 3: MARTA Rail Service (Urban Public Transit)

Georgia's 15 fixed-route transit providers also operate Americans with Disabilities Act (ADA)-compliant complementary paratransit service. This demand-response service provides transportation within 0.75 miles of a bus route or rail station for eligible users. Paratransit eligibility is based on an individual's ability to practically use the system, and each agency independently determines eligibility. Decisions must be submitted to the applicant in writing, and applicants must be provided an opportunity for appeal.[3]

Table 2 provides a list of Georgia's Urban public transit systems along with key operating characteristics related to operating expenses, ridership, service area population, and related efficiency ratios. The most fiscally efficient systems tend to be those that serve the largest populations, but this is not always the case. The four systems with the lowest cost per trip according to the FY 2017 data in **Table 2** are: Rome ($2.96), Columbus ($3.63), Athens ($3.95), and MARTA ($4.41). The four systems with the greatest number of trips per capita based on the population of their service area are: MARTA (64.3), Rome (30.8), Chatham Area Transit (16.6), and Athens (13.0).

The systems with the highest cost per trip tend to be ones that rely on demand-response public transit, where vehicles tend to have lower occupancy and thus higher per trip costs. Since commuter buses offer a unidirectional service at limited times of the day, costs are often higher than in traditional fixed-route service.

More detailed descriptions of each operator, ridership by mode, and vehicle inventories can be found in the *Existing Conditions and Future Trends Analysis Part I*.

2.3.1 Small Urban Agencies

Figure 4: Athens Transit (Small Urban Agency)

Public transit agencies serving Census-designated urbanized areas with populations between 50,000 and 200,000 are classified as Small Urban. Small Urban agencies in Georgia are subrecipients of GDOT and receive FTA funds through GDOT. These agencies have no limitation on the amount of their federal funding apportionment that can be used for operating expenses.

The State of Georgia currently has eight public transit agencies serving areas that are classified as Small Urban. These agencies are listed and further described in the *Existing Conditions and Future Trends Analysis Part I*.

2.3.2 Large Urban Agencies

Public transit agencies serving Census-designated urbanized areas with 200,000 or more people are classified as Large Urban under FTA guidelines. Georgia is home to nine Large Urban transit providers. These agencies receive their federal funding directly from FTA and face slightly different federal requirements. For example, Large Urban providers may not use FTA funds for operating assistance, unless that agency has fewer than 100 buses. Large Urban agencies also have more detailed reporting responsibilities to FTA.

Figure 5: CobbLinc (Large Urban Agency)

Of Georgia's nine Large Urban systems, MARTA and GRTA Xpress are state-created regional authorities with multi-county service areas, and the remaining seven are locally-operated systems that serve a single county or city. These agencies are listed in **Table 2** and further described in the *Existing Conditions and Future Trends Analysis Part I*.

Table 2: Operating Expenses and Ridership for Urban Public Transit Systems, 2017

Agency	FTA Designation	Annual Operating Expenses	Unlinked Passenger Trips	Population Served	Trips per Capita	Cost per Trip	Cost per Capita
Albany Transit System	Small Urban	$3,404,363	655,726	75,616	8.7	$5.19	$45.02
Athens Transit System	Small Urban	$6,159,165	1,560,100	119,980	13.0	$3.95	$51.33
Augusta Public Transit	Large Urban	$3.626,638	696,145	201,793	3.4	$5.21	$17.97
Bartow Transit	Small Urban	$518,913	37,241	102,623	0.4	$13.93	$5.06
Chatham Area Transit	Large Urban	$21,992,845	3,941,330	237,736	16.6	$5.58	$92.51
Cherokee Area Transportation System	Large Urban	$166,295	21,684	235,900	0.1	$7.67	$0.70
CobbLinc	Large Urban	$22,207,419	2,735,849	688,078	4.0	$8.12	$32.27
Columbus METRA	Large Urban	$4,432,811	1,219,938	230,208	5.3	$3.63	$19.26
Connect Douglas	Large Urban	$993,030	99,013	142,224	0.7	$10.03	$6.98
Gwinnett County Transit	Large Urban	$18,485,534	1,437,137	920,260	1.6	$12.86	$20.09
Hall Area Transit	Small Urban	$804,803	137,409	31,782	4.3	$5.86	$25.32
Henry County Transit	Large Urban	$1,543,234	78,360	213,869	0.4	$19.69	$7.22
Liberty Transit	Small Urban	$795,275	19,912	39,063	0.5	$39.94	$20.36
Macon-Bibb County Transit Authority	Small Urban	$6,666,030	847,984	153,691	5.5	$7.86	$43.37
MARTA	Large Urban	$557,732,552	126,428,706	1,967,468	64.3	$4.41	$283.48
Rome Transit Department	Small Urban	$3,310,405	1,118,401	36,323	30.8	$2.96	$91.14
Xpress (SRTA)	Large Urban	$28,331,195	1,626,252	1,354,871	1.2	$17.42	$20.91

Source: National Transit Database

3.0 Multimodal Connectivity

Intercity transportation, whether by bus, rail, or air, is directly complementary to public transit. Intercity bus transit in Georgia is provided by private coach companies, and GDOT provides support for capital purchases through an FTA grant program. Intercity rail service is provided by Amtrak, a government-owned, for-profit corporation. Amtrak serves five cities in Georgia and is discussed further in **Section 3.2 Passenger Rail**. Park and Ride lots, typically used by suburban commuters allow Georgian's to use their personal vehicle for part of a trip, then carpool or take transit for the rest of their trip.

The demand for increased connectivity has also driven the creation of private shuttle services, including those sponsored by employers and real estate developers, offering last-mile connections workers and patrons. This rapidly developing sector, sometimes called microtransit, is at the technological forefront of mobility solutions. Emerging technologies like app-based, on-demand transit, and autonomous shuttles are currently being piloted in the state.

3.1 Intercity Bus

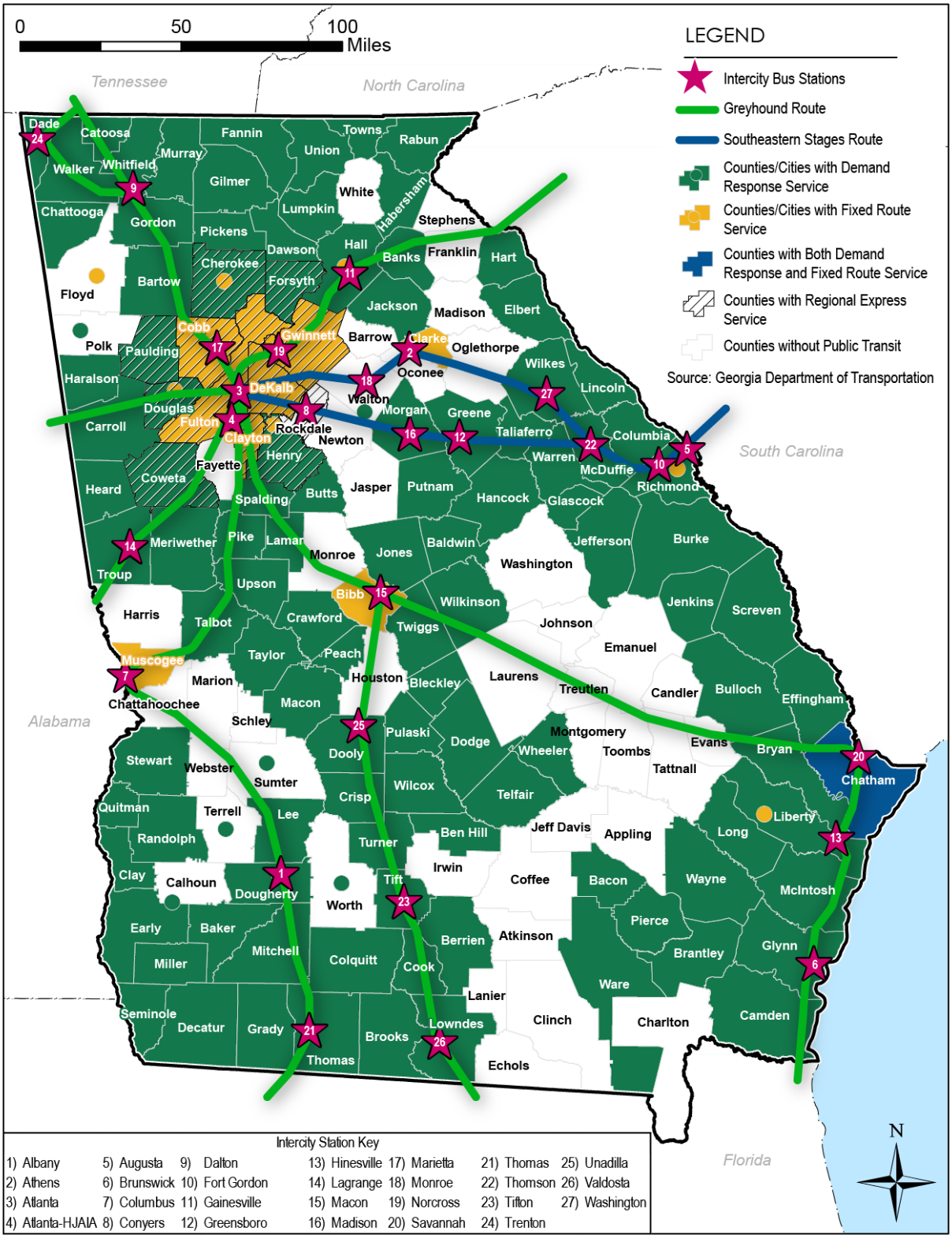
Intercity bus service provides an important transportation link for both rural and urban Georgians. GDOT administers intercity bus service through its FTA Section 5311(f) program apportionment, which allocates 15% of a state's FTA Section 5311 program funds for the development and support of intercity bus transportation.

Figure 7 shows the location of the 27 Intercity bus stops in the State of Georgia.

Of Georgia's intercity bus carriers, Greyhound provides the largest coverage area, offering service to 27 locations across Georgia. Southeastern Stages operates intercity bus service to 12 locations, mostly in northern Georgia. Southeastern Stages also provides service for Greyhound along certain routes. Megabus offers two stops in Georgia, Athens and Atlanta.

Figure 6: Greyhound/Chatham Area Transit Bus Station

Figure 7: Intercity Bus Stops in Georgia



Stops in Albany, Atlanta, Augusta, Columbus, Macon, Savanah are collocated with multimodal public transit facilities, as is the stop at Hartsfield-Jackson Atlanta International Airport.

Intercity bus stops in Athens, Marietta, and Norcross are located within 0.25 miles of a fixed-route bus stop. Demand-response public transit systems service intercity bus stops in Albany, Brunswick, Dalton, Fort Gordon, Gainesville, Greensboro, Hinesville-Fleming, LaGrange, Madison, Savannah, Thomasville, Thompson, Tifton, Trenton, Unadilla, Valdosta, and Washington. The intercity bus stops at Conyers and Monroe are not accessible by local public transit.

GDOT coordinates with Greyhound and Southeastern Stages to monitor intercity bus trends and needs. GDOT is currently coordinating with these two providers and FTA to assess intercity services and recommend future improvements.

In 2017, GDOT awarded a grant for $6.9 million to Greyhound for the purchase of sixteen 55-passenger buses and $11.0 million for the construction of a new intercity bus terminal at the Garnett MARTA station in downtown Atlanta. Greyhound has been operating out of what was intended to be a temporary station since 1996. This new downtown Atlanta station will offer improved customer facilities, as well as new bus bays and ticketing facilities. Southeastern Stages participated in a GDOT grant for $869,964 for the purchase of two 55-passenger buses.

3.2 Passenger Rail

Amtrak is the sole provider of intercity passenger rail in the state. The Crescent offers daily service between New York and New Orleans; Georgia stops include Gainesville, Toccoa, and Atlanta. The Silver Meteor and the Silver Star offer service between New York and Miami; Georgia stops include Savannah and Jesup. The Palmetto operates between New York and Savannah and offers Business Class amenities.[4]

Figure 8: Amtrak Passenger Station - Savannah, GA

Table 3 shows Amtrak's ridership statistics in Georgia over five years. In total, ridership declined 18.5% between 2014 and 2018. FY 2017 saw a minute increase (0.18%) in ridership from FY 2016, but the downward trend continued in FY 2018.

Table 3: Georgia Amtrak Ridership, 2015-2018

Station	FY2014	FY2015	FY2016	FY2017	FY2018
Atlanta	92,900	83,800	78,200	77,751	72,179
Gainesville	6,488	6,176	5,028	5,493	5,032
Jesup	10,636	10,280	10,076	9,648	9,461
Savannah	62,280	59,608	55,358	57,180	53,769
Toccoa	3,021	2,640	2,516	3,407	2,324
Total	**175,285**	**162,504**	**151,178**	**153,479**	**142,783**

Source: Amtrak Yearly Fact Sheets

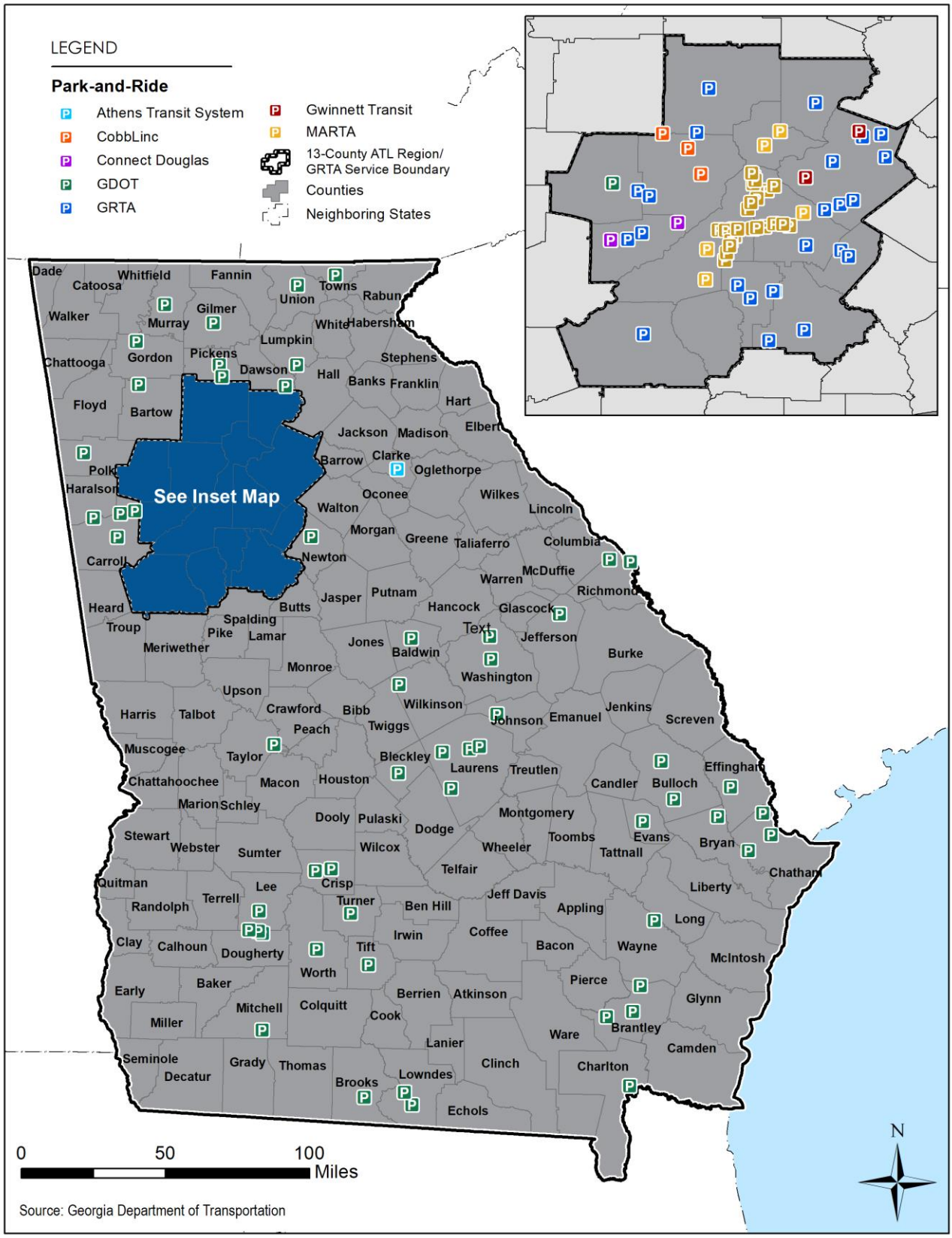
3.3 Park-and-Ride

Park and Ride lots offer Georgia commuters an additional option for transportation into metropolitan areas. These lots can be used as meeting locations for carpooling or as places for car commuters to transfer to public transit services. There are over 120 Park and Ride lots across Georgia.

Figure 9: Commuter Park & Ride Lot

GDOT operates 58 Rideshare lots throughout the state, and GRTA operates 25 in the metro Atlanta area. Local transit services also offer Park and Ride, with Athens Transit System, CobbLinc, Connect Douglas, Gwinnett County Transit, and MARTA providing dedicated parking for transit customers. **Figure 10** shows the location and provider of Park and Ride lots in Georgia. Additional information on these lots is provided in the *Existing Conditions and Future Trends Analysis Part I*.

Figure 10: Park-and-Ride Lots in Georgia



Source: Georgia Department of Transportation

GDOT Georgia Department of Transportation

3.4 Other Shared Transportation Providers

Shared-ride airport shuttles represent an additional intercity transportation mode in Georgia. These privately-operated buses offer service to-and-from Hartsfield-Jackson Atlanta International Airport (HJAIA), Savanah/Hilton Head International Airport (SVA), and other airports in Georgia. There are numerous operators, and service characteristics vary. Many pick up passengers from a central location and operate on a fixed timetable, but some offer door-to-door service. HJAIA's website provides a database of current operators and the cities they serve at http://apps.atl.com/Passenger/GroundTransportation/RegionalShuttles.aspx. Information for SVA can be found at https://savannahairport.com/airport/ground-transportation/.

Georgia businesses understand the importance of transportation in the lives of their employees and use employee shuttles to meet these needs. For example, the Coca-Cola Company, headquartered in Atlanta, offers shuttle service to their offices and other facilities in both Midtown and Downtown Atlanta via their RedBus system. This shuttle service connects with MARTA heavy rail at the Peachtree Center and Civic Center stations. Commuters can also transfer from SRTA Xpress commuter buses at the Civic Center station.

Real estate developers are also operating free shuttles as last-mile transportation, helping facilitate customer access from public transit. Atlantic Station and Ponce City Market, two major mixed-use developments in the City of Atlanta, offer free shuttles connecting to the Arts Center and North Avenue MARTA stations, respectively. Both shuttles also allow for real-time tracking through a smartphone app.

Coastal Regional Coaches has also been involved in providing employment-based transit by coordinating with major employers and community organizations in seven counties. Participating organizations include EmployAbility, the Savannah Association for the Blind, Goodwill Industries, and the United Way.[5] Coastal Regional Coaches also offers shuttles to and from Jekyll Island, Tybee Island, and St. Simon's Island, helping both employees and visitors reach these locations that may be difficult or cost-prohibitive to reach through private transportation.[6]

Assembly Yards, a sizable mixed-use development adjacent to the Doraville MARTA station, plans to operate autonomous electric shuttles to move employees, residents, and visitors around the area, as well as providing a connection to MARTA rail. As of the time of this writing, the Integral Group, the developers of Assembly Yards, have procured a Navya automated shuttle, shown in **Figure 11,** and has begun on-site testing.

Figure 11 The Navya Automated Shuttle at Assembly Yards

4.0 Plan Development Process

This section includes an overview of the SWTRP planning process, including the data inputs, input from key stakeholders, and development of the project's vision, goals, and objectives.

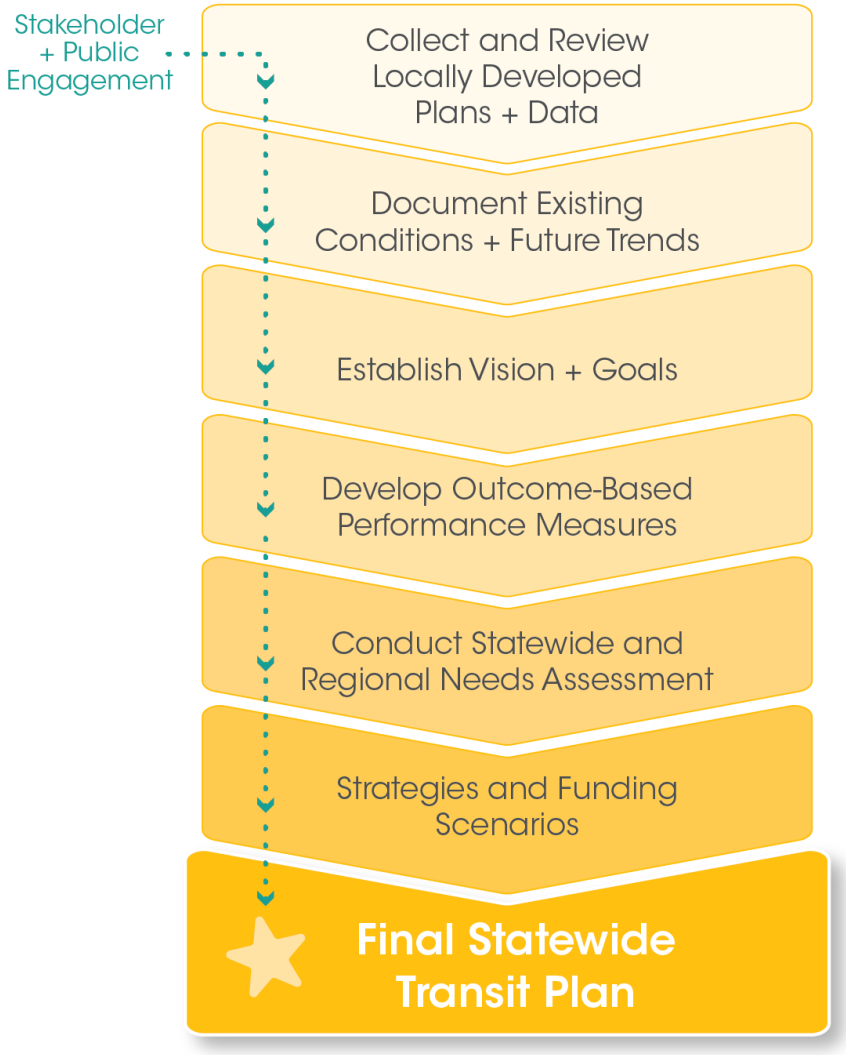
4.1 Plan Timeline

To help inform the SWTRP project scope, multiple early stakeholder engagement activities were held in late 2018, including a presentation and feedback session at the December 2018 Georgia Transit Association (GTA) conference. The official SWTRP project team kickoff was held in early January 2019, followed by a review of existing planning documents from around the state and an in-depth analysis of existing conditions.

A Statewide Steering Committee (SSC) was formed and met for the first time in early May 2019 to help set the project vision and goals. A Technical Advisory Committee (TAC) meeting in June helped to refine the project goals and objectives further. Throughout the summer and fall of 2019, GDOT and the project team held focus group meetings, interviewed key stakeholders, conducted a public survey, identified transit needs and gaps, established performance measures, and developed investment strategies. These efforts culminated in the development of the draft SWTRP, made available in March 2020.

Following the release of the draft SWTRP, virtual public information open houses (PIOH) will be held, followed by a 30-day public comment period. GDOT will release the final SWTRP in April 2020.

Figure 12: SWTRP Timeline and Components



4.2 Plan Components

The SWTRP officially kicked off in January 2019. Throughout the plan's development process, technical memoranda and reports were compiled to summarize the work completed toward the final plan. These components were interconnected and included the following:

- *Existing Conditions & Future Trends Analysis Part I*
- *Existing Conditions & Future Trends Analysis Part II: Best Management Practices*
- *Existing Conditions & Future Trends Analysis Part III: Rural Transit Trip Data Analysis*
- *Transit System Profile Sheets & Performance Statistics*
- *Summary Report of Relevant Transportation Plans and Performance Measures*
- *Public and Stakeholder Involvement Summary Report*
- *Transit Needs Assessment Technical Report*
- *Strategies and Funding Scenarios Report*
- *Draft and Final SWTRP*
- *Executive Summary and Brochures*
- *Project Video*

The content and key findings of these plan components have been summarized and are incorporated into this plan by reference. The full contents of each technical report and memoranda is available for review on the GDOT website at http://www.dot.ga.gov/IS/Transit/TransitPlan.

4.3 Planning Document Review

The foundation of this SWTRP is an extensive review of existing planning documents throughout the State of Georgia. Well over 200 local, regional, and statewide plans were reviewed, with content and common needs or themes extracted to shape the larger SWTRP. These plans include statewide transportation plans prepared by GDOT, Transit Asset Management Plans, MPO Long Range Transportation Plans (LRTPs), county comprehensive plans, and short and long-range transit service plans developed by regional commissions, urban and rural transit agencies.

> Over 200 local, regional, and statewide plans were reviewed to inform the SWTRP.

4.3.1 GDOT Plans

GDOT has several existing plans relevant to the development of the SWTRP. Some are required by federal law, whereas others, such as the Statewide Strategic Transportation Plan, were created to comply with state laws and regulations. These plans are updated on a four-year or five-year cycle to comply with federal and state law. Existing GDOT plans reviewed are listed below. A few are currently in the update process, and the SWTRP project team has coordinated with other GDOT offices to ensure cohesion between these concurrent planning efforts.

- GDOT, Rural and Human Services Transportation Plan 2.0 (2011)
- GDOT, State Rail Plan (2015)*
- GDOT, Statewide Transportation Plan (2016)*
- GDOT, Statewide Strategic Transportation Plan (2018)*

- GDOT, Statewide Transportation Improvement Plan (2018)
- GDOT, Complete Streets Design Policy (2019)

**Updates to these plans are underway at the time of this report.*

4.3.2 Transit Asset Management Plans

Federal law requires all public transit agencies operating capital assets and receiving Federal funding to prepare a Transit Asset Management (TAM) Plan every four years, documenting all public transit assets to aid in the prioritization of funding allocations. A thorough and accurate TAM plan allows an agency to focus Federal funds where they are needed most, helping maintain an overall State-of-Good-Repair (SGR) throughout public transit systems. The TAM planning process aims to define asset management policy, increase transparency in public transit, and support future system planning.

For asset management purposes, FTA divides public transit agencies into two tiers. Tier II providers are smaller agencies with reduced requirements. Tier I agencies either operate more than 100 buses or operate rail transit. All TAM plans must include an inventory of all assets (rolling stock, equipment, facilities, and infrastructure), a condition assessment of these assets, a decision support tool, and a prioritized list of investments. Tier I plans must also include a defined, executive-level TAM strategy, an implementation strategy, a list of key annual TAM activities, an identification of resources to assist in the TAM process, and an evaluation plan to help continually improve the TAM process. TAM Plans reviewed include:

- *Atlanta Regional Commission (ARC), Group Transit Asset Management Plan (2018 – 2022)*
- *Chatham Area Transit Asset Management Plan (2018)*
- *CobbLinc Transit Asset Management Plan (2018)*
- *GDOT, Group Transit Asset Management Plan (2019 – 2022)*
- *MARTA Strategic Asset Management Plan (2019)*
- *SRTA, Transit Asset Management Plan (2018)*

Compared to TAM Plans nationwide, GDOT's subrecipient agencies have above average SGR. As reported in GDOT's TAM Plan, 12.4% of rolling stock meet or exceed their useful life benchmark, meaning they're eligible for replacement due to age and mileage. FTA reports that 31% of buses and 37% of vans nationwide meets or exceeds their useful life benchmark.[7]

4.3.3 MPO Long Range Transportation Plans

The federal law that outlines the core functions of MPOs includes requirements to prepare and maintain a LRTP that supports improved mobility access for people and goods and supports quality of life.

Transit needs reported by MPOs include: limited service areas, last-mile connectivity, accommodating projected growth, and challenges related to multiple service operators.

All 16 of Georgia's MPOs have updated their LRTPs within the last five years and were reviewed for the SWTRP. These 16 LRTPs include: Albany, Athens, Atlanta, Augusta, Brunswick, Cartersville, Chattanooga, Columbus, Dalton, Gainesville, Hinesville, Macon, Rome, Savannah, Valdosta, Warner Robins.

All of Georgia's MPOs have demand-response transit providers operating within their boundaries, and 11 also have fixed-route bus service. Generally, the Georgia's MPOs identified similar challenges and needs in their LRTPs. The primary challenge, noted by 10 MPOs, was funding constraints. Nine identified challenges related to limited service areas, and six highlighted challenges related to multiple service operators. Five MPOs discussed the challenges of limited service hours. Other key challenges included first and last-mile connectivity, high operating costs, and the transition from Rural to Urban public transit service.

All 16 LRTPs identified the need for the creation or expansion of fixed-route bus services as well as a general need for public transit and multimodal transportation improvements to meet demand in their area. Additionally, all highlighted coordination with bike and pedestrian paths or general upgrades of the public transit facilities, including public transit stops.

Seven of the LRTPs noted a need to improve regional connectivity, and coordinate transportation with future land use and development. Five of the MPOs found the need to expand public transit service hours, and a need for commuter or intercity buses. Five LRTPs found increased need to serve the elderly populations, including a need for connections to healthcare services. Specific locally identified needs are discussed further in **Section 8.0.**

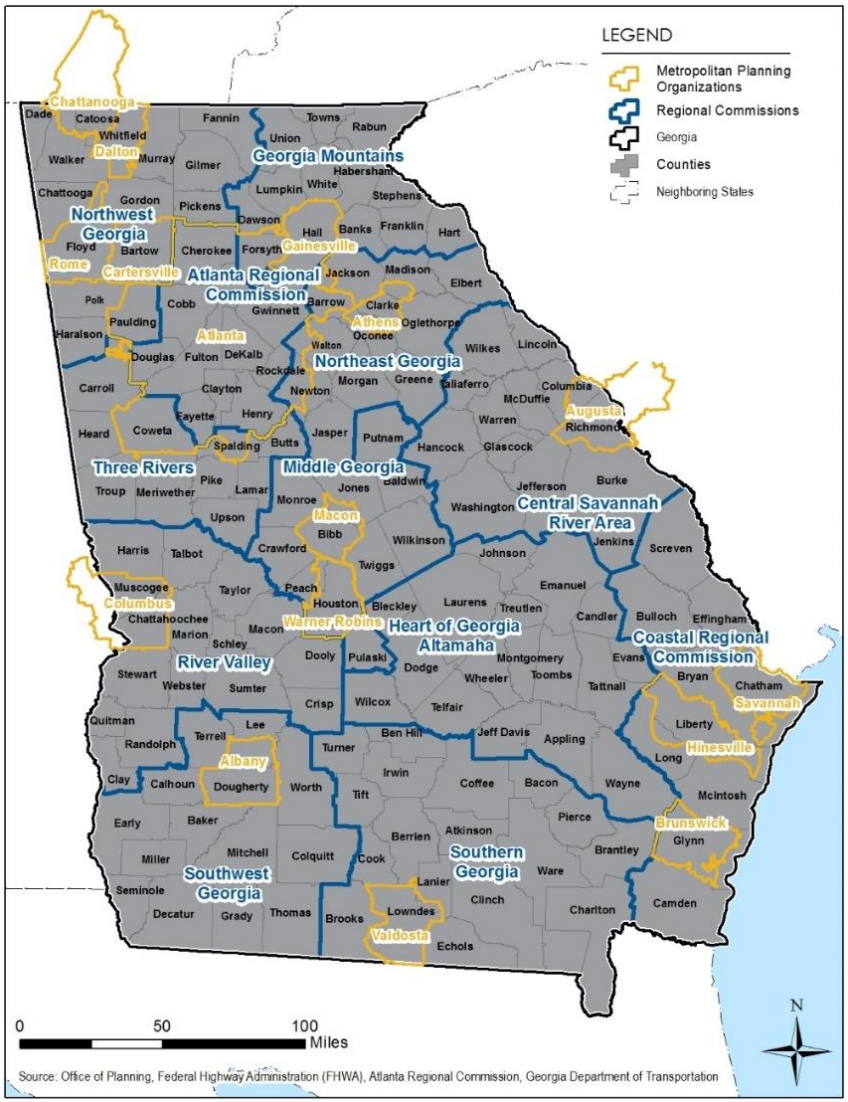
Figure 13: Priorities Identified in MPO Plans

4.3.4 Regional Commission Plans

All 12 regional commissions (RC) in Georgia have prepared a regional transportation plan or comprehensive plan containing some level of public transit analysis, although the level of detail varies among plans. Each of the RC plans were developed within the last year, and most of them are updated on an annual basis.

Georgia's 12 RCs, shown in **Figure 14,** include the following, Northwest Georgia, Georgia Mountains, Atlanta Regional Commission, Three Rivers, Northeast Georgia, Middle Georgia, Central Savannah River Area, River Valley, Heart of Georgia Altamaha, Southwest Georgia, Southern Georgia, and Coastal.

Figure 14: Georgia Regional Commission and MPO Boundaries



The plans from all 12 RCs highlight public transit's role in the region and acknowledge the need to improve transportation options. Many of the plans document that transit providers are unable to meet the demand for transit due to limited service hours, limited funding, and the lack of general transportation options in their region. Four of the plans suggest the possibility of regionally coordinated systems between counties in order to expand service areas. Additionally, three of the plans document the need to link land use planning with transportation planning in the future.

4.3.5 County Comprehensive Plans

Each of Georgia's 159 counties have adopted local comprehensive plans and/or transportation plans to serve as the guiding documents for future growth and investment. Elements and projects identified from these local plans form the basis of MPO plans, statewide plans, and local capital improvement programs. County comprehensive plans identify the strengths, weaknesses, needs, and opportunities of each county, including improvements to transit services.

Among these local plans, the most commonly identified challenge is the limitation of public transit to certain geographic areas, followed by funding constraints or a general lack of resources. Other documented challenges include: limited service hours or frequencies, high operating costs, first-and-last mile connectivity, overlapping service areas, and, in some cases, the anticipated transition of the public transit system from Rural to Urban, as defined by the FTA.

4.3.6 Transit Development Plans

GDOT encourages the preparation of a Transit Development Plan (TDP) for each existing or potential system to support effective public transit services. Typically, these plans have a ten-year planning horizon, and are to be updated every five years. TDP scopes are customized to meet the needs of each system, but they typically include an overview of an area's demographics and existing transportation network, a projection of future needs, including a budget, and a series of strategies to enhance public transit.

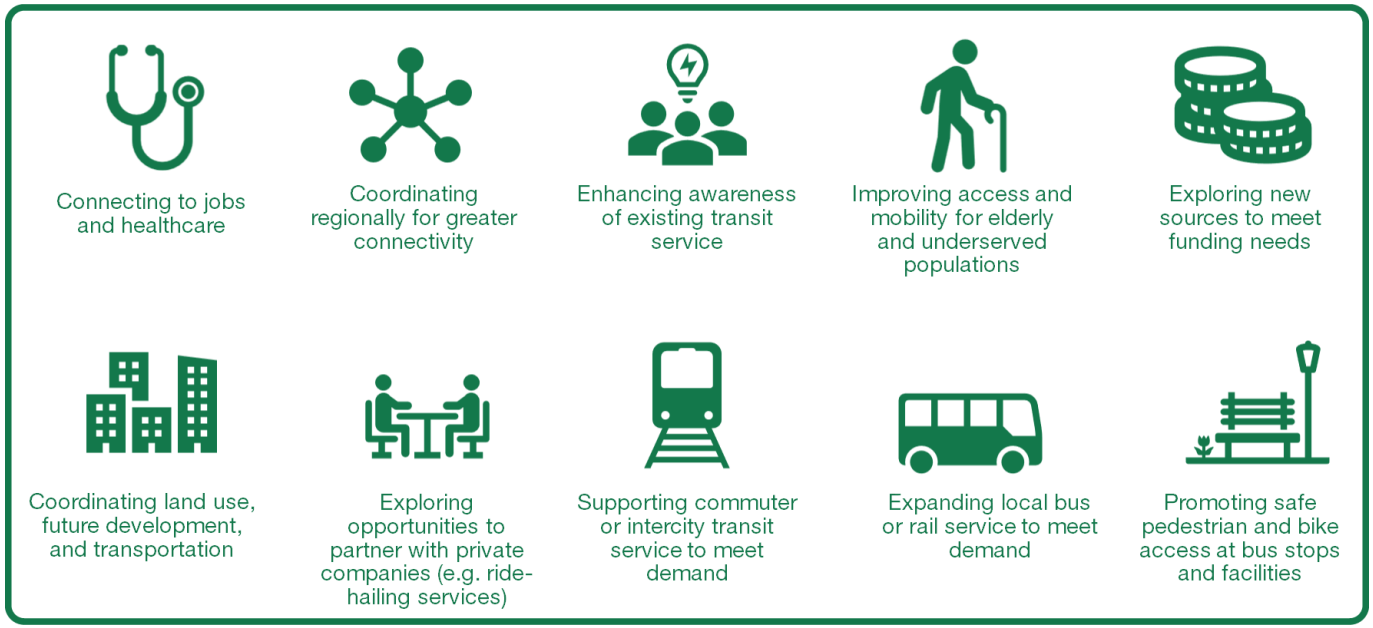
GDOT supports the use of TDPs for areas of the state that do not have public transit as a useful tool for documenting the needs, benefits, and estimated required investments associated with launching a new system.

Regional Commissions often partner with GDOT and local jurisdictions to develop TDPs in their region. More than 50 TDPs were identified and reviewed in the development of this report.

> The most common identified challenge in TDPs is limitation of public transit to certain geographic areas, followed by funding constraints

Figure 15 depicts common themes and transit needs identified throughout the planning document review. Many of the same needs were also identified in the provider questionnaire, public survey, and TAC focus groups.

Figure 15: Common Themes and Locally Identified Needs



4.4 Vision, Goals, and Supporting Objectives

During the May 2019 work-session, discussed in **Section 5.1**, the SSC developed the following vision statement to guide development of the SWTRP and future transit investments.

> *"Improve the quality of life and economic opportunities for all Georgians by supporting an innovative, connected, reliable, and accessible multimodal public transportation network."*

The vision statement synthesized critical input provided by SSC members. Corresponding goals and objectives were also developed based on input from the SSC and TAC. The goals and supporting objectives intentionally overlap as many of these topics are intertwined and are complementary of one another

Goal 1: Provide a safe and sustainable public transit network

- Reduce transit-related safety incidents and injuries
- Support the deployment of innovative technologies and infrastructure upgrades that improve safety for transit users
- Ensure security for transit riders and system assets
- Support safety through asset management planning, agency safety planning, and emergency preparedness planning
- Support transit as a method to mitigate traffic congestion and related emissions in urban areas
- Deploy environmentally sustainable transit assets

Figure 16. SWTRP Goals

Goal 2: Optimize public transit programs to best meet public transit systems' and travelers' needs

- Partner with public and private entities to further coordinate transit services at the regional and state level
- Facilitate partnerships with employers, schools, providers, and the private sector to expand the reach of transit
- Right-size vehicles and fleets to support efficient use of transit funding
- Support and maintain regional operations and assets to deliver transit efficiently
- Attract and retain a transit workforce equipped with the skills needed for an evolving transportation industry
- Leverage partnerships with local and regional planning agencies to coordinate trends, needs, and plans

Goal 3: Ensure public transit coverage across the state to support mobility and access for all

- Ensure public transit service is available to all of Georgia's 159 counties by supporting regional and multi-jurisdictional coordination
- Ensure first-and-last mile connectivity through innovative strategies, partnerships, and technologies
- Ensure access to economic opportunity for all Georgians, including underserved and rural communities
- Ensure access to healthcare, human services, and quality-of-life trips for all, including elderly and disabled populations
- Support regional and multi-jurisdictional coordination to address unmet needs
- Optimize scheduling and capacity for demand-response systems
- Optimize service hours to meet needs for all

Goal 4: Connect rural transit to regional and urban centers

- Ensure transit is able to meet travelers' needs across jurisdictional boundaries
- Develop multimodal assets to facilitate transfers and partnerships among transit providers
- Connect intercity service with local public transit systems

Goal 5: Leverage technology and innovation to support public transit ridership and performance

- Provide transit users accurate and real-time service information and updates
- Implement strategies that improve transit performance, reliability, and convenience
- Increase awareness and visibility of public transit services available

5.0 Public & Stakeholder Engagement

The project team sought input and provided opportunities to participate in the planning process from: the general public, planners, transit providers, relevant public agencies, human services transportation providers, transit workforce representatives, private providers of transportation (including intercity bus operators and employer-based commuting programs), users of public transportation, representatives of the disabled, and other interested parties.

Goals of the stakeholder and public engagement program included:

- Informing the public and stakeholders on the study process and findings;
- Soliciting input on transit needs and challenges; and
- Creating opportunities for meaningful engagement and feedback on goals and priorities for statewide transit investment through 2050.

The following stakeholder and public involvement activities were conducted:

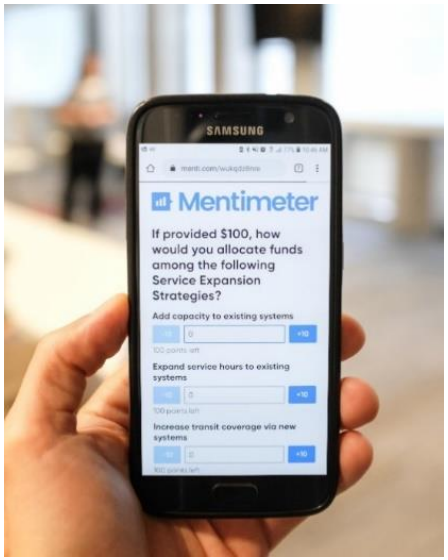
- Online presence, including project website and social media;
- Statewide Steering Committee meetings;
- Technical Advisory Committee meetings;
- TAC focus groups;
- Stakeholder interviews;
- Statewide Public Survey;
- Transit Provider Questionnaire;
- Brochures, fact sheets, and collateral materials;
- Regional and statewide event presentations; and
- Project Video.

5.1 SSC Meetings

The Statewide Steering Committee's (SSC) role was to provide strategic direction and guidance and to set the project's vision. The SSC consisted of representatives from statewide agencies and organizations with a role or interest in transit planning.

Figure 17: Statewide Steering Committee Membership

Figure 18: SSC Meeting #2, Investment Strategy Exercise



The SSC met first in early May 2019 to review existing conditions analysis and to assist in setting the project vision and goals. The meeting included a presentation, interactive polling, brainstorming sessions, and a vision and goal setting activity.

The second SSC meeting was held in October 2019. The meeting objectives included a progress update on the plan, including public and stakeholder engagement activities, performance measure development, and the initial needs assessment findings. SSC input was solicited to help prioritize potential strategies and guide the development of funding scenarios.

A final joint SSC/TAC meeting in early 202 provided an overview of the full draft SWTRP prior to public release and comment. In addition to the full SSC meetings, many committee members also individually provided data, ongoing input, and support throughout the plan's development.

5.2 TAC Meetings and Focus Groups

The Technical Advisory Committee (TAC) included transit providers, planners, and agencies with a role in transit at the local and regional level. The committee included representatives from all public transit providers in Georgia, regional commission and metropolitan planning organization (MPO) representatives, the Atlanta-region Transit Link Authority (ATL), education and healthcare providers, organizations representing minority and disadvantaged populations, and other entities with a direct interest in transit. A full list of TAC member organizations can be found in the *Public and Stakeholder Engagement Summary Report*.

The role of the TAC was to:

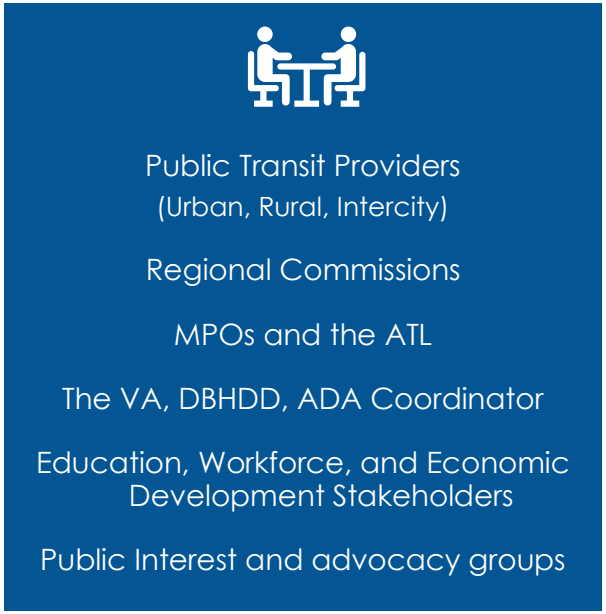
- Provide insight into the daily challenges, needs, and trends related to transit service in Georgia;
- Provide insights on planning and prioritization efforts at the local and regional levels; and
- Inform strategies of the SWTRP.

The first full TAC committee was convened in June 2019, with a focus on reviewing existing conditions analysis, as well as the project vision and initial goals developed by the SSC. The TAC was then asked to further refine the goals and develop specific supporting objectives for each.

The second TAC meeting was held in November 2019 and included a progress update on the plan, including public and stakeholder engagement activities, performance measure development, and the needs assessment findings, and draft strategies. Input was solicited from the TAC to guide the SWTRP strategies and funding scenarios.

In addition to the full TAC meetings, six separate TAC focus groups met to provide technical input on specific topics**.** In addition, many TAC members collaborated directly with the project team to participate in interviews, provide data, answer questionnaires, and otherwise provide input on the transit needs across Georgia.

Figure 19: Technical Advisory Committee Membership



5.2.1 Equity and Community Advisory Focus Group

The Equity and Community Advisory TAC Focus Group invited organizations representing Title VI populations, equity, and other community advocacy organizations to share insights and specific needs of the communities they serve. The focus group meeting was held in September 2019, at the GDOT Offices in Atlanta. Participants included:

- Center of Pan Asian Community Services
- Urban League of Greater Atlanta
- Georgia Department of Behavioral Health and Developmental Disabilities
- Statewide Independent Living Council
- Georgia Council on Aging
- Pedestrians Educating Drivers on Safety (PEDS)

Figure 20: Equity and Community Advisory Focus Meeting

Highlights from the discussion include:

- Consider the 2018 Department of Human Services (DHS) plan that includes feedback for older transportation in Georgia, as well as specific areas of concern in each of the twelve districts in the state.
- Equity groups should be involved early in the transit planning process;
- Approach limited English proficiency (LEP) populations at locations in their communities, such as faith-based community centers, general community centers, supermarkets, and Department of Housing and Urban Development (HUD) housing locations for seniors. Additionally, both daytime and evening outreach events should be considered;
- Collect demographic data and ensure language access at every step of transit planning.

5.2.2 Counties without Transit Focus Group

The Counties without Transit TAC Focus Group consisted of planning officials and county and municipal leaders of communities across Georgia currently without local transit service. The meeting was held in September 2019, at the Terminal Station in Macon, Georgia. Web conferencing was also available for remote participants.

The meeting provided an opportunity for communities that are not currently served by public transit to inform GDOT of their local needs, challenges, and potential transit opportunities. Eleven (11) jurisdictions were represented during this meeting. Several strategies emerged for the final SWTRP, including:

- Ensure needs and challenges facing rural counties are considered;
- Quantifying needs by county will help inform local leaders and elected officials considering initiating transit services;
- Create guidance for starting a small urban transit system that possibly does not include a fixed route system; and
- Connections between land use and transportation plans – roadway/sidewalk planning, comprehensive plans, and transit plans – are critical.

5.2.3 Rural Providers Focus Group

The Rural Provider TAC Focus Group consisted of all rural transit providers (Section 5311 subrecipients) statewide. The meeting was held in August 2019, as part of the annual GDOT Subrecipient Workshop at Tift College.

Figure 21: Rural Providers Focus Meeting

The meeting was an opportunity for rural providers to discuss their challenges and needs, including funding and capacity constraints, public awareness of services, planning, and workforce needs. Recommendations from participants included:

- Increased funding – both the amount of funding and diversity of sources - to be used for added capacity and meeting workforce needs;
- Changing the two-county Transportation Special Purpose Local Option Sales Tax (TSPLOST) rule to allow single-county referendums;
- Strategies to educate the public and officials on transit;
- Requirements for including transit planning components with other transportation and community planning efforts; and
- Providing guidance for regional transit planning.

5.2.4 Urban Provider Focus Group

The Urban Provider TAC Focus Group consisted of all urban transit providers (Section 5307 recipients) throughout the state. The meeting was held in August 2019, during the annual GDOT Subrecipient Workshop at Tift College. A web conferencing option was also available for remote participation.

Goals of the meeting included identifying the challenges, needs, and opportunities facing urban providers, and identifying strategies for the SWTRP. Some of the recommendations from participants included:

- Creating partnerships between transit providers and other entities, such as medical facilities for scheduling and funding;
- Partnering with other transit providers and government entities for asset sharing and/or service coordination;
- Coordinating with chambers of commerce to promote transit and ensure transit supports local workforce and development goals;
- Reducing the administrative burden on transit providers by centralizing these tasks regionally;
- Highlighting transit success stories;
- Using parking fees and local business marketing on vehicles to diversify transit funding sources;
- Implementing programs that promote ridership and positive community impacts, such as discounted fares for seniors, veterans, students, and other targeted populations;
- Educating local leaders on the benefits and range of transit service, and inviting leaders to use transit; and
- Adding more buses to meet demand, higher frequency, and geographic coverage needs.

5.2.5 Technology Focus Group

Figure 22:Technology Focus Group Meeting

All interested TAC members were invited to participate in the Technology Focus Group and offer their insights or experience with transit technologies. The focus group met in September 2019, at the Terminal Station in Macon, Georgia. A web conferencing option was also available for remote participation.

Objectives of the meeting included learning about the challenges, needs, and opportunities related to transit technologies, as well as allowing planners and providers to share their experiences with specific technology and lessons learned. Among the technologies discussed were electric and alternatively fueled transit vehicles and supporting infrastructure, transit signal priority, and General Transit Feed Specification (GTFS) data and trip planning apps. Several strategies emerged for inclusion in the SWTRP, including:

- Developing a statewide transit trip planning application;
- Support for GTFS data development;
- Creating guidance and related resources for electric bus planning, procurement, and deployment; and
- State support and assistance with transit signal priority deployments.

5.2.6 Regional Transit Planning Focus Group

The Regional Transit Planning Focus Group consisted of planning personnel representatives from each regional commission and MPO across Georgia. The focus group meeting was held in August 2019, during the annual GDOT Subrecipient Workshop at Tift College.

The meeting goals included identifying needs, challenges, and opportunities specifically related to local and regional transit planning and coordination. Several key strategies that emerged from the discussion include:

- Improving transit connections to employers, major hubs, and other trip generators;
- Better coordinating transit and transit planning with land use planning and economic development;
- Minimizing administrative costs for counties;
- Improving coordination across municipalities, counties, and regionally;
- Educating the public and local leaders as to the availability and benefits of transit service;
- Providing better transit data, data security, and reliable on-time service information; and
- Assisting new agencies in: identifying partners, public outreach and engaging new riders, assessing new technology, improving customer relationships, new apps and data analysis, coordinating with state departments, long-range planning, and better connecting with LEP communities.

5.2.7 Transit Provider Questionnaire

GDOT sought input from all public transit providers, both rural and urban, through a questionnaire. Questionnaires were collected between July 18 and August 9, 2019.

The goal of the questionnaire was to better understand the opportunities, challenges, and needs of public transit providers throughout the state and incorporate these findings into the SWTRP.

> The purchase of new vehicles was the most cited state-of-good-repair need, while the need for additional service hours was the most common service need identified

Key takeaways from the questionnaire responses are summarized below:

- The purchase of new vehicles was the most commonly cited state-of-good-repair need, followed by regular maintenance schedules and more highly trained mechanics; and

- Additional service hours, additional geographic service area coverage, additional service capacity were the most common service needs.

5.3 Stakeholder Interviews

In addition to SSC and TAC focus group meetings, sixteen (16) one-on-one and small group interviews were conducted for key stakeholders across the state. Questions were designed to gather additional insights to answers previously provided in the submission of the Transit Provider Questionnaire (when available) or through research conducted during the existing conditions analysis. The list of interviewees and dates of interviews are provided in **Table 4**.

The structure of the interviews was informal, allowing interviewees the opportunity to volunteer topics and expand on ideas. Common themes from stakeholder interviews are summarized below:

- Request for GDOT to put together information on Best Management Practices, manuals, and transit success stories from around the state;
- Transit providers that have formed partnerships have found it to be helpful. Coordinated transit in rural areas, with operations provided by the regional commission, have helped to minimize administrative burdens for county or municipal staff;
- A state mediator to help facilitate memoranda of understanding between counties would be helpful;
- Marketing transit and informing the public regarding options, as well as informing elected officials of the benefits of transit is critical. Educational and awareness campaigns for transit have helped communities to successfully establish new transit service; and
- Some operators face challenges with insurance, not allowing them to travel outside their county.

Table 4: Stakeholder Interview Schedule

Interviewee/Organization	Date
Southern Georgia Regional Commission	August 19, 2019
Carroll County/Three Rivers Regional Commission	August 20, 2019
Coastal Regional Commission/ Georgia Transit Association	August 21, 2019
Hall Area Transit	August 22, 2019
Macon Metropolitan Planning Organization	August 22, 2019
Athens Transit	September 3, 2019
Georgia Department of Community Health Georgia Department of Human Services	September 24, 2019
Macon-Bibb County Transit Authority	September 24, 2019
Georgia Municipal Association (GMA), Association County Commissioners of Georgia (ACCG)	September 20, 2019
City of Hinesville	October 1, 2019
Statewide Independent Living Council of Georgia	October 2, 2019
Georgia Department of Community Affairs	October 2, 2019
Georgia Department of Economic Development	October 7, 2019
Wayne County Transit	October 7, 2019
Georgia Department of Community Affairs	October 18, 2019
Intercity Transit: Greyhound	October 21, 2019

5.4 Public Survey

GDOT sought input from transit and non-transit riders across the state through a two-month-long public survey campaign. The public survey was available online, and via a paper form on-board rural transit vehicles. The online survey was made available at www.GDOTTransitSurvey.org. Surveys were collected between June 18 and August 16, 2019.

The online version of the public survey was translated into four languages: Spanish, Mandarin Chinese, Korean, and Vietnamese. The languages were determined based on the findings of the GDOT Title VI program for Limited English Proficiency and recommendations of the TAC. The translated versions of the survey were made available via the survey website.

SSC and TAC representatives assisted in distributing and promoting the survey throughout their networks and communities. Their assistance helped to ensure the voices of all Georgians were heard.

5.4.1 Survey Distribution

Survey promotion included distribution via email, newsletters, traditional media outlets, and social media (Facebook, Instagram, Twitter).

SSC members and TAC members were notified of the survey prior to it being posted online. A media packet was shared which included PDF flyers and posters, advertising image files suited for social media or email, and talking points. Stakeholders were asked to use these items to promote the survey on their social media channels, website, email distribution lists.

In coordination with GDOT Communications, the SWTRP team created social media posts on Facebook, Instagram, and Twitter. In addition to regular posts, the visibility of the survey was boosted through targeted Facebook ad purchases.

5.4.2 Social Media Ad Buy

Facebook ad purchases ran throughout the duration of the survey period. They included:

- **Ad Purchase #1 (Statewide):** All areas outside of Metro Atlanta
- **Ad Purchase #2 (Targeted):** Areas without transit

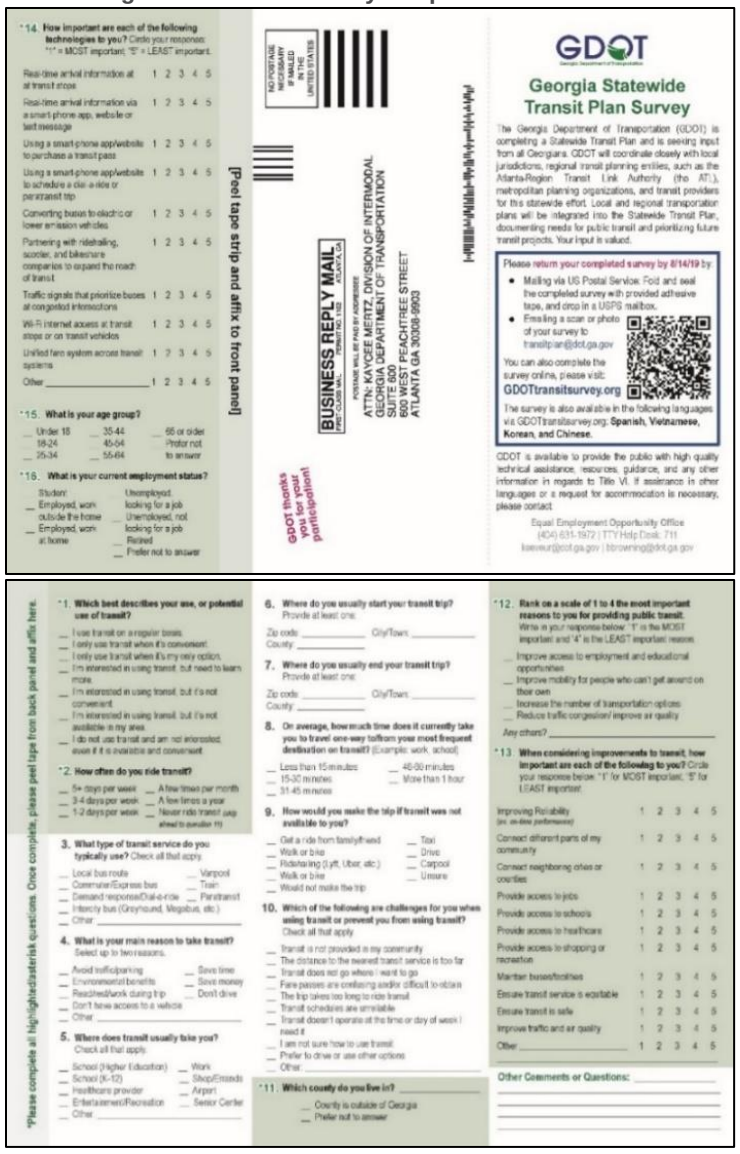
To help ensure responses were geographically distributed throughout the state, responses were analyzed as they came in. The geographic areas of the ad purchases were modified twice during the survey, and areas with high response rates were excluded from subsequent purchases. This helped to concentrate advertising efforts in underrepresented areas of the state, encouraging additional survey participation in these areas.

5.4.3 Paper Survey

Paper surveys were sent to rural transit agencies in July 2019, along with a media kit that included hard copies of flyers and promotional materials. Transit agencies were requested to place surveys and flyers aboard buses, in transit centers, and other highly visible public areas. The allotment of paper surveys provided to each agency was based on the monthly ridership counts.

The paper survey is shown in **Figure 23**. The surveys were self-sealing tri-folds, with postage paid for via a GDOT business reply mail account. Respondents were able to seal and drop their completed surveys in the mail without any postage or charge.

Figure 23. Public Survey - Paper Trifold Version



5.4.4 Survey Responses

Throughout the duration of the survey, 2,971 surveys were completed. Of these, 2,410 (81%) were completed via the online survey, and 561 (19%) were completed via a paper survey. 40% of responses were received from outside of the metropolitan Atlanta area, while 60% were from within the 13-county metro Atlanta region, roughly consistent with the population distribution of the two areas. 51% of respondents identified as infrequent and/or non-riders of transit.

Key highlights of the survey responses include:

- Outside of Metro Atlanta:
  - 42.4% of respondents are "interested in using transit, but it's not convenient or available in their area";
  - Improving access to employment and educational opportunities was identified as the most important reason to provide transit service;
- "Ensuring transit is safe" was identified as the most important consideration for transit improvements; and
- Real-time arrival information via a smartphone app, website, or text was desirable and important.

5.5 Regional and Statewide Events

The project team participated in seven regional or statewide meetings, including: 2018 & 2019 Georgia Transit Association Annual Conferences, the GDOT Subrecipient Workshop, the Georgia Association of Metropolitan Planning Organizations, Georgia Association of Regional Commissions, Metro Atlanta Transit Operating Group and the 2019 & 2020 Georgia Planning Association (GPA) Conferences.

At each of these meetings, representatives of the project team presented on the project and provided progress updates. Attendees were afforded opportunities to ask questions and provide input.

Figure 24. SWTRP Session at GPA Conference in Athens, GA

5.6 Online Presence

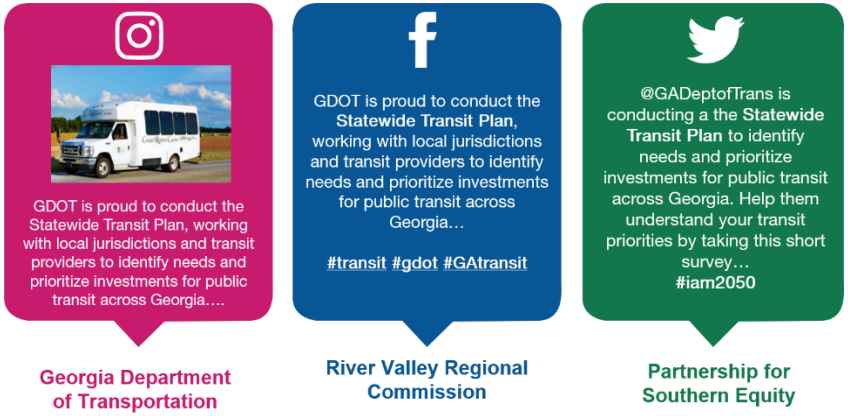
5.6.1 Project Website

A webpage (www.dot.ga.gov/IS/Transit/TransitPlan), housed on the GDOT website, was created and updated in coordination with the GDOT Office of Communications. The website serves as the primary source of online information related to the SWTRP. It houses project displays and handouts, collateral materials, meeting notifications, drafts, and final documents, and project contact information. It also linked to the public survey for the duration of the survey.

5.6.2 Social Media

The project team crafted posts for GDOT's existing social media channels on Facebook, Twitter, and Instagram. Social media posts employed the hashtag (#iam2050) to promote the SWTRP, and stakeholders and the general public were encouraged to do the same when engaging with the project online. Social media was also used as a tool for dissemination of the online survey, and to solicit input from a diverse audience.

Figure 25: Sample SWTRP Public Survey Social Media Posts



6.0 State Profile

This section provides a statewide profile of the existing conditions and future trends regarding population, demographics, employment, and travel demand.

6.1 Population Trends

The US Census Bureau estimated the State of Georgia's population to be 10.2 million in 2017. Between 2000 and 2010, Georgia's population grew 18.3%, an average rate of 1.7% annually. Growth has slowed since 2010, though Georgia's population has continued to increase by 0.74% annually, or a total of 5.3%.[8] The United States also experienced steady population growth over these same periods; however, Georgia's growth rates outpaced the national average.

While Georgia is growing overall, population trends vary at the local and regional levels with areas like metro Atlanta and the Georgia Mountains region growing faster than others, and the Heart of Georgia Altamaha region and Southwest Georgia region showing recent population decline. A full analysis of population trends by region is available in the *Existing Conditions and Future Trends Analysis Part I*.

As shown in **Table 5,** population trends were also assessed by counties with and without transit, and by areas with rural, urban, or both types of transit service. Since 2010, population growth in counties with public transit has grown 5.6%, compared to counties without public transit growing by 3.0%.

Since 2010, population growth in counties with public transit has grown 5.6 percent, compared to counties without public transit growing by 3.0 percent.

Table 5: Population Trends, 2000-2017

	Counties	Population			Percent Change	
		2000	2010	2017	2000-2010	2010-2017
Georgia	159	8,186,453	9,687,653	10,201,635	18.3%	5.3%
Counties with Urban Public Transit	10	3,538,993	4,056,163	4,362,409	14.6%	7.6%
Counties with Rural Public Transit	104	2,692,598	3,237,681	3,345,043	20.2%	3.3%
Counties with both Rural and Local Urban Public Transit	8	1,066,038	1,321,804	1,389,606	24.0%	5.1%
Counties without Local Public Transit	37	888,824	1,072,005	1,104,577	20.6%	3.0%

Source: Governor's Office of Planning and Budget, 2015 Series, 2017 Census Data Population Projections

The Governor's Office of Planning and Budget (OPB) uses US Census Bureau data to project population growth through 2050. OPB uses the standard cohort component demographic projection methodology, which relies on historical fertility, migration, and age data. Georgia's population is expected to increase by 51.8% from the 2010 Census to 2050, significantly higher than the projected national growth of 28.4% over the same period. Regional summaries of population projections are available in the *Existing Conditions and Future Trends Analysis Part I*. [9]

Georgia's elderly population (ages 60+) will grow by 175.3% from 2010 to 2050.

Table 6 depicts OPB's statewide population projections at 10-year intervals through 2050. Projections are also assessed by areas with and without transit service, as well as transit service type.

OPB projects that the counties currently served by public transit will grow by 52.2%, higher than the expected 45.2% growth by counties that do not have public transit service today.

Table 6: Population Projections, 2020-2050

	Counties	Population				Percent Change
		2020	2030	2040	2050	2010-2050
Georgia	159	10,895,213	12,173,406	13,413,400	14,709,321	51.8%
Counties with Urban Public Transit	10	4,665,560	5,234,760	5,759,708	6,258,188	54.3%
Counties with Rural Public Transit	104	2,982,101	3,208,623	3,411,860	3,635,423	12.3%
Counties with both Rural and Local Urban Public Transit	8	2,067,578	2,423,598	2,814,581	3,258,968	146.6%
Counties without Local Public Transit	37	1,179,973	1,306,425	1,427,252	1,556,743	45.2%
Source: Governor's Office of Planning and Budget, 2015 Series, 2017 Census Data Population Projections						

6.2 Employment Trends

Since 2000, overall employment has increased across Georgia as shown in **Table 7**. Between 2000 and 2010 statewide employment grew by just 0.3% annually, for a total of 3.2%. Since 2010, however, statewide employment has accelerated, growing by a total of 14.7%, or 2.0% annually. Employment in counties with public transit grew by 15.2%, and counties without public transit grew by 11.0% since 2010.

> Since 2010, employment in counties with public transit grew by 15.2 percent, and counties without public transit grew by 11.0 percent.

The Georgia Mountains region has seen the strongest employment growth since 2010, with 23.4%, followed by metro Atlanta with 18.7%.

By contrast, employment in the River Valley region grew by only 1.7% over the same period. A full analysis of employment trends by region is available in the *Existing Conditions and Future Trends Analysis Report Part I.*

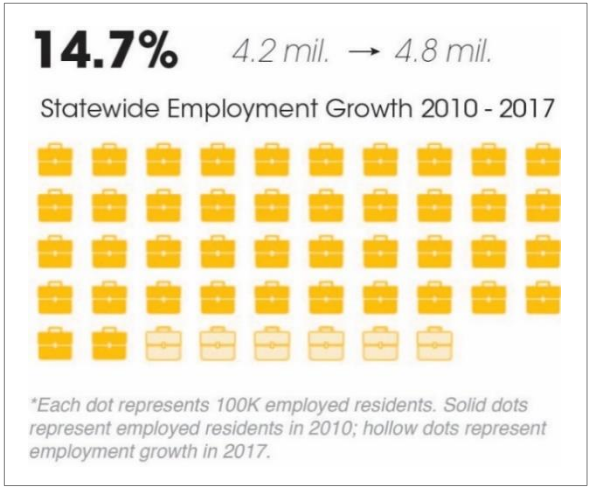


Table 7: Employment Trends, 2000-2017

	Counties	Employed Residents			Employment Growth	
		2000	2010	2017	2000-2010	2010-2017
Georgia	159	4,071,562	4,202,061	4,821,622	3.2%	17.3%
Counties with Urban Public Transit	10	1,883,453	1,876,666	2,202,085	-0.4%	13.1%
Counties with Rural Public Transit	104	1,265,880	1,317,566	1,479,392	4.1%	12.3%
Counties with both Rural and Local Urban Public Transit	8	505,247	567,345	651,150	12.3%	14.8%
Counties without Local Public Transit	37	416,982	440,484	489,000	5.6%	11.0%
Source: Georgia Labor Market Explorer - Yearly Civilian Labor Force Estimates						

6.2.1 Employment by Industry

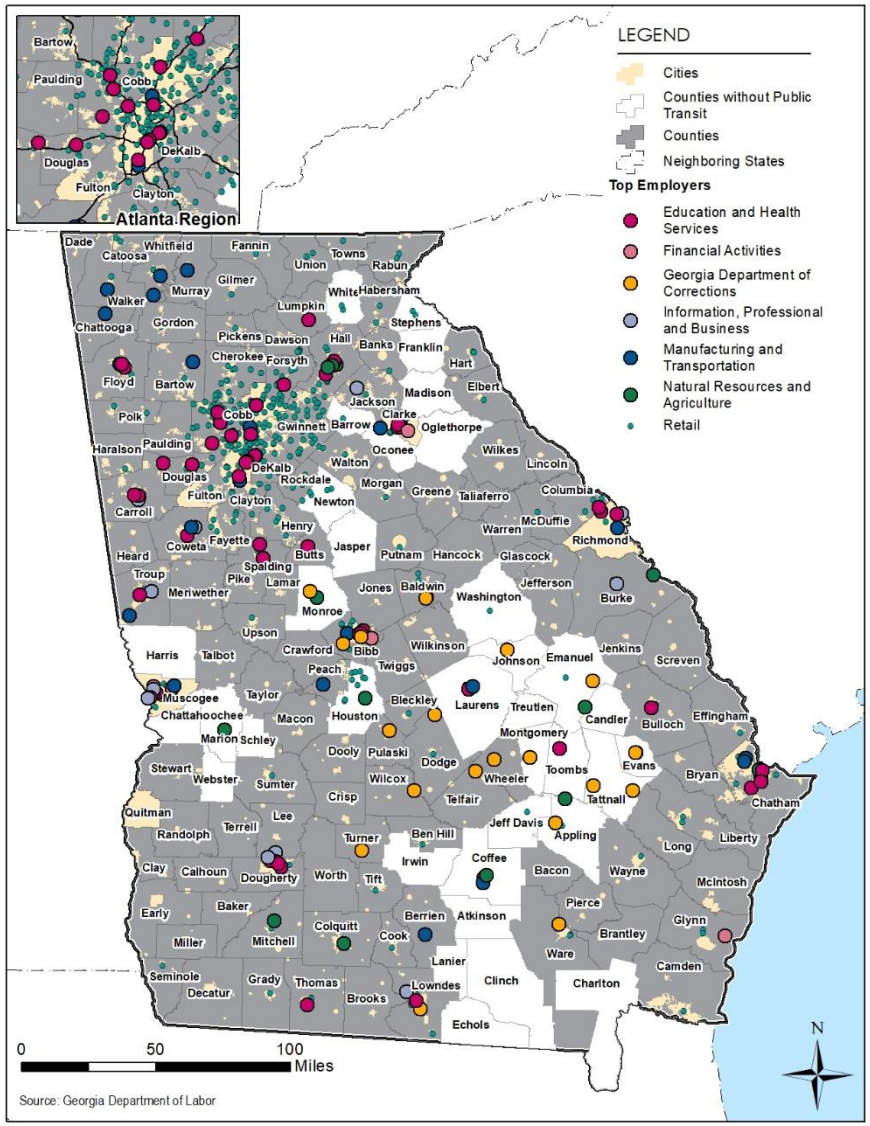
The Georgia Department of Labor tracks employment by industry across the state using the North American Industry Classification System (NAICS), a method of classifying and differentiating businesses by their process of production. As of 2017, the top three statewide industry sectors by employment are:

1. Manufacturing
2. Trade, Transportation, and Utilities
3. Government

The top industry statewide is manufacturing (NAICS supersector 30), which includes establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The second industry is trade, transportation, and utilities (NAICS supersector 40), consisting of the wholesale trade, retail trade, transportation and warehousing, and utilities industries. Government (or Public Administration) (NAICS supersector 90) consists of Federal, state, and local government agencies that administer, oversee, and manage public programs and have executive, legislative, or judicial authority over other institutions within a given area.[10]

Figure 26 shows the top private sector employers across the state. Twenty of the 37 counties without local public transit are home to at least one of the ten largest employers in their respective regions. Among many of the counties without transit, the top employers are state prisons operated by the Georgia Department of Corrections. Other top employers among counties without transit include grocery and retail stores, manufacturing, poultry/farm, and medical companies.

Figure 26: Location of Top Employers by Industry (number of employees)



6.3 Socioeconomic Conditions

Certain socioeconomic factors are known to be associated with an individual's likelihood of using or relying on transit. Federal planning requirements also require transit planners to consider the impacts of public transit service to vulnerable or disadvantaged populations. Socioeconomic conditions considered for this report include racial minority status, low-income households, limited English proficiency (LEP) populations, senior and youth populations, disability status, and zero-car households.

The size of these populations as a share of the overall state and national populations are shown in **Figure 27.** The relative geographic distribution for each of these higher transit need or higher transit propensity populations are mapped in **Figure 28** through **Figure 34**. In each of these socioeconomic category maps, counties were classified into groups based on the size of each population category as a share of the county's population.

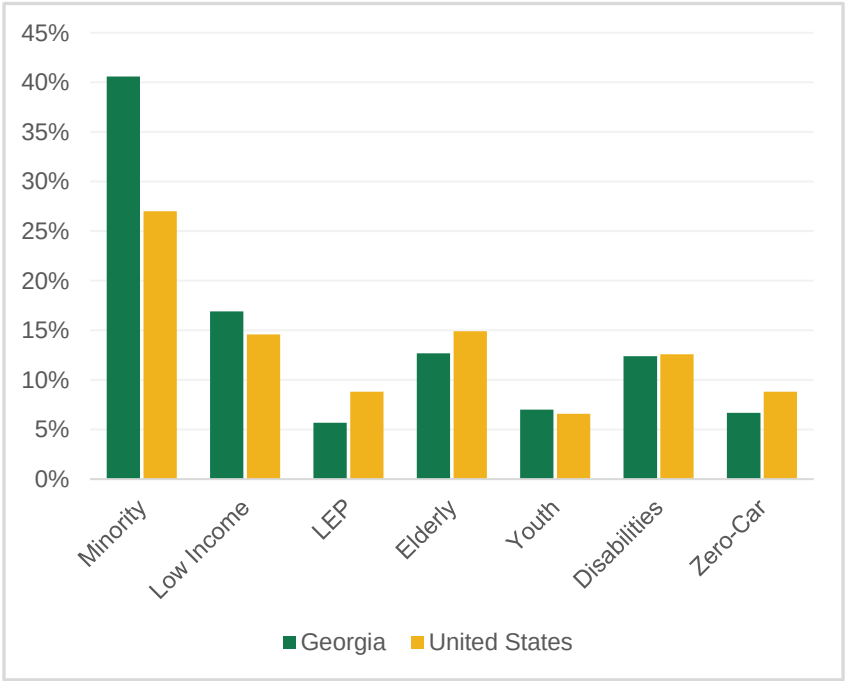
Group 1 consists of counties below the state average for each socioeconomic factor. The remaining counties are divided into groups based on the percentage of population over the state average: up to 25% greater than the statewide average (Group 2), 25 to 50% greater (Group 3) than the state average, and more than 50% higher than the statewide average (Group 4).

These groupings are displayed along with regional boundaries. The following sections also summarize socioeconomic data for counties without public transit and counties with Urban transit, Rural transit, and both Urban and Rural transit.

Figure 27 compares socioeconomic conditions in the State of Georgia against the overall U.S. in 2017. Georgia was higher in both minority and low-income populations. Georgia's 40.3% minority population was 12.7% higher than the U.S. average of 27.6%.

Also, Georgia's share of LEP and elderly populations, and zero-car households was lower than the national average. Disabled and youth populations in Georgia were consistent with national averages.

Figure 27: State and National Socioeconomic Conditions



Source: 2013-2017 American Community Survey 5-year Estimates

6.3.1 Minority Populations

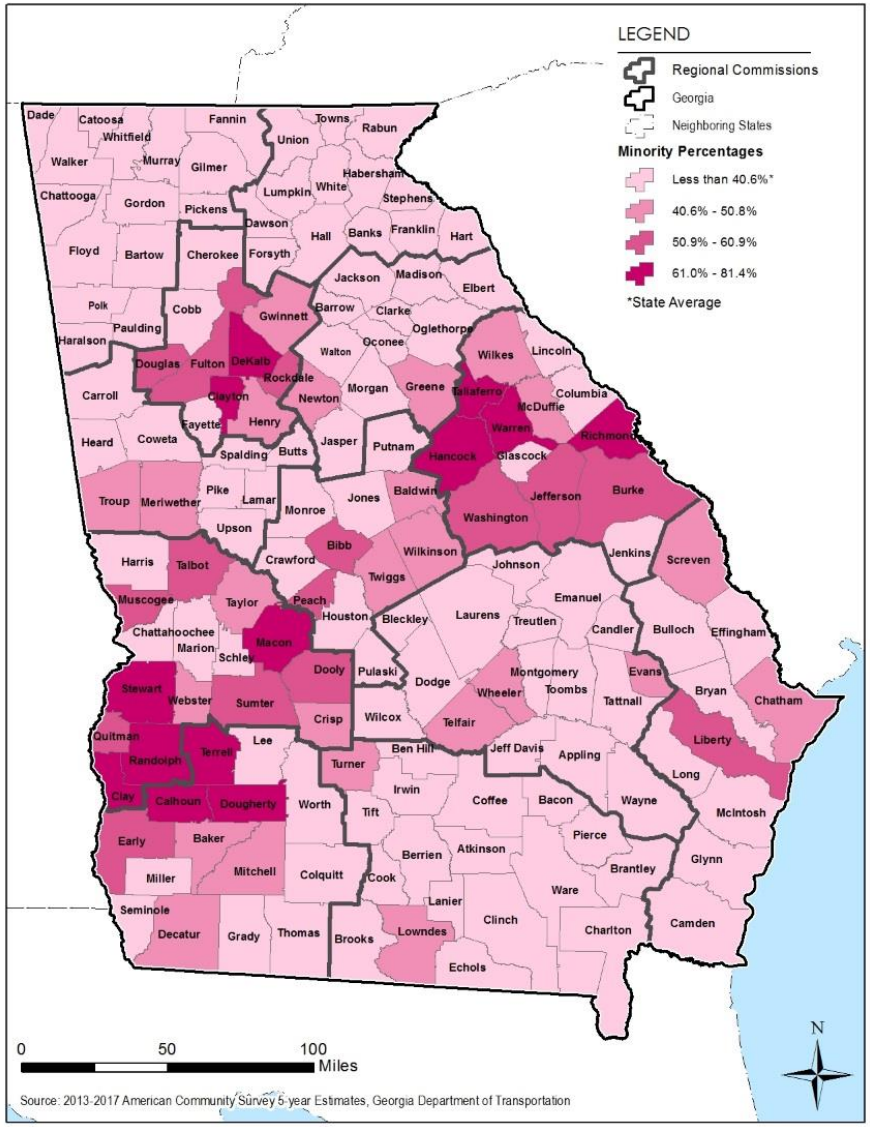
Figure 28 displays the minority population share by county. The top three regions with counties in Groups 3 and 4 are: River Valley (10 counties), the Atlanta Region (7 counties), and Central Savannah River Area (7 counties).

As shown in **Table 8**, minority populations represent an average of 41.5% of the population in counties with public transit, while they represent 33.4% of the population in counties without public transit. Counties with Urban transit have the highest relative minority population share at 53.5%, followed by counties with both Rural and Urban transit at 39.2% and counties with only Rural transit at 26.7%.

Table 8: Percent Minority for Georgia and Selected Counties

	Percent Minority
Georgia	*40.6%*
Counties with Urban Public Transit	*53.5%*
Counties with Rural Public Transit	*26.7%*
Counties with both Rural and Local Urban Public Transit	*39.2%*
Counties without Local Public Transit	*33.4%*
Source: 2013-2017 American Community Survey 5-year Estimates	

Figure 28: Minority Populations by County



6.3.2 Low-Income Populations

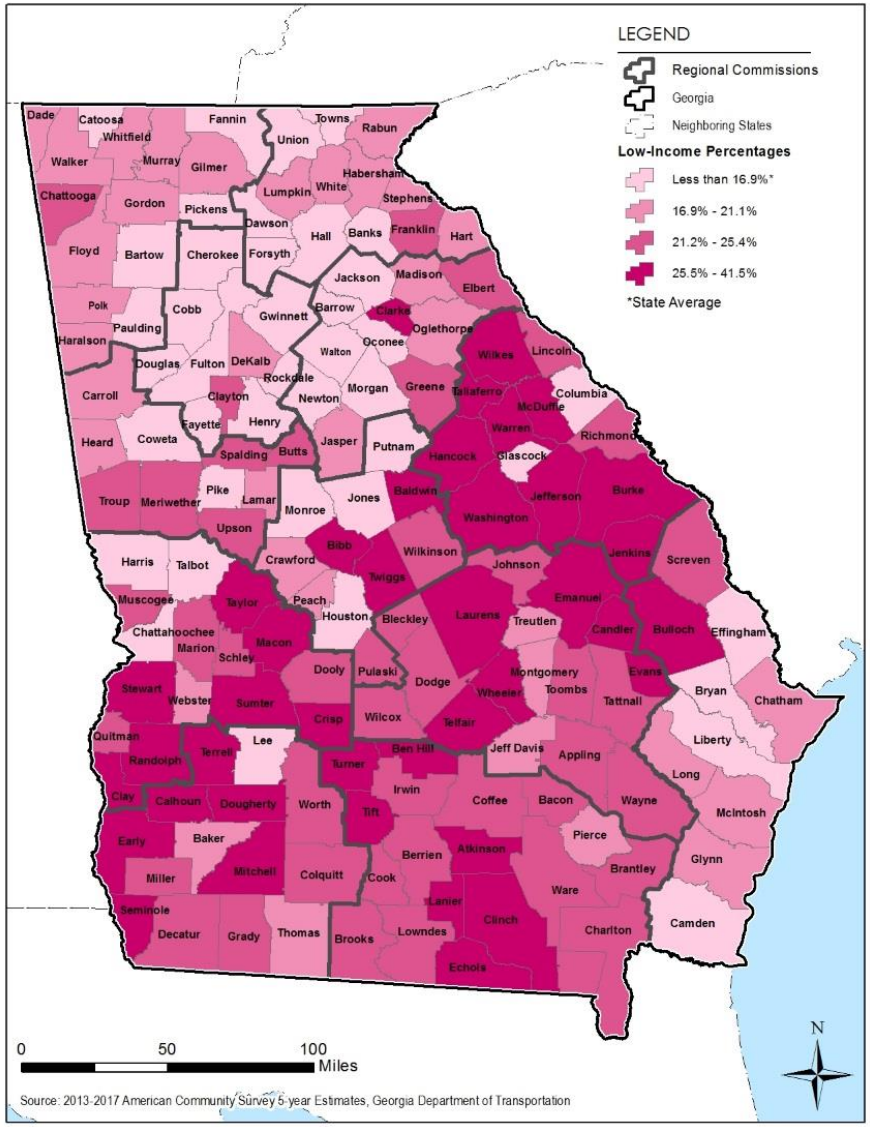
Low-income population percentages by county are shown in **Figure 29**. Low-income populations are comprised of individuals with incomes that are below the poverty line. For a Georgia family of four in 2017, this is defined as an annual income of $24,600.[11] Poverty is not isolated to any specific region in Georgia. There are counties in each region, with low-income population percentages higher than the state average of 16.9%. Generally rural counties in central and southern Georgia are more likely to have greater low-income populations.

In counties with public transit, 16.8% of their population is classified as low-income, whereas in counties without public transit, 17.5% of the population is low-income, as shown in **Table 9**. Counties with public transit have a $48,650 median income; counties without public transit have a median income of $44,135. The counties with both Rural and Urban public transit service have the highest median income at $52,240.

Table 9: Percent Low-Income for Georgia and Selected Counties

	Percent Low-Income
Georgia	16.9
Counties with Urban Public Transit	16.1%
Counties with Rural Public Transit	18.0%
Counties with both Rural and Local Urban Public Transit	16.4%
Counties without Local Public Transit	17.5%
Source: 2013-2017 American Community Survey 5-year Estimates	

Figure 29: Low-Income Populations by County



6.3.3 Limited-English Proficiency Populations

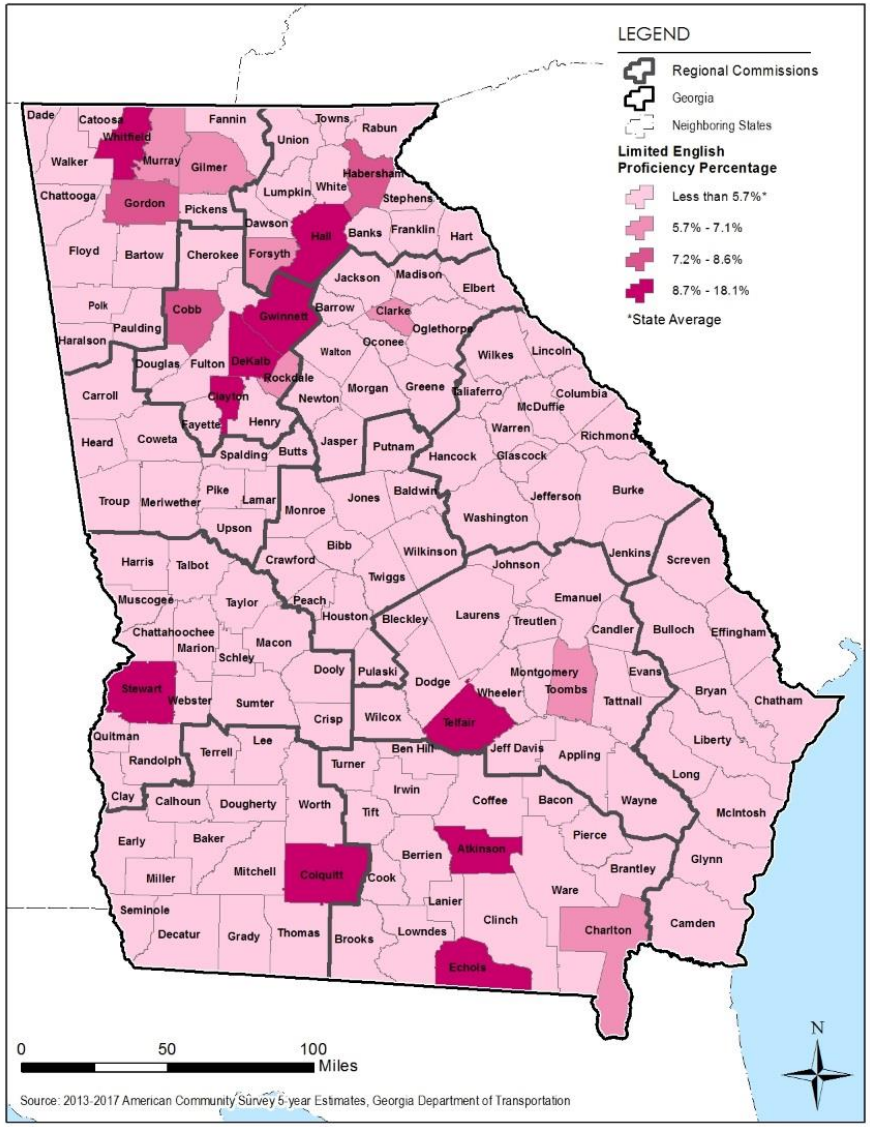
The US Census Bureau defines LEP as "individuals 5 years or older who self-identify as speaking English less than 'very well.'"[12] Statewide, 5.7% of Georgians classify themselves as LEP. After English, the most common language spoken in counties with a high LEP population is Spanish, Vietnamese, Chinese and Korean.

The distribution of LEP populations is presented in **Figure 30**. LEP populations are more concentrated in metro Atlanta and Georgia Mountains counties plus a few counties in Southern Georgia. **Table 10** indicates that counties with public transit have an average LEP percentage of 6.0%, compared to 3.4% for counties without public transit.

Table 10: Percent Limited-English Proficiency for Georgia and Selected Counties

	Percent Limited-English Proficiency
Georgia	5.7%
Counties with Urban Public Transit	8.5%
Counties with Rural Public Transit	3.3%
Counties with both Rural and Local Urban Public Transit	4.7%
Counties without Local Public Transit	3.4%
Source: 2013-2017 American Community Survey 5-year Estimates	

Figure 30: LEP Populations by County



6.3.4 Populations with a Disability

Populations with disabilities include those that are hearing, vision, cognitive, ambulatory, self-care, and independently living impaired. Over 12.4% of Georgia's population qualifies as disabled. As shown in **Figure 31,** rural areas generally have greater concentrations of disabled populations, and more specifically the more remote parts of the state have even greater concentrations.

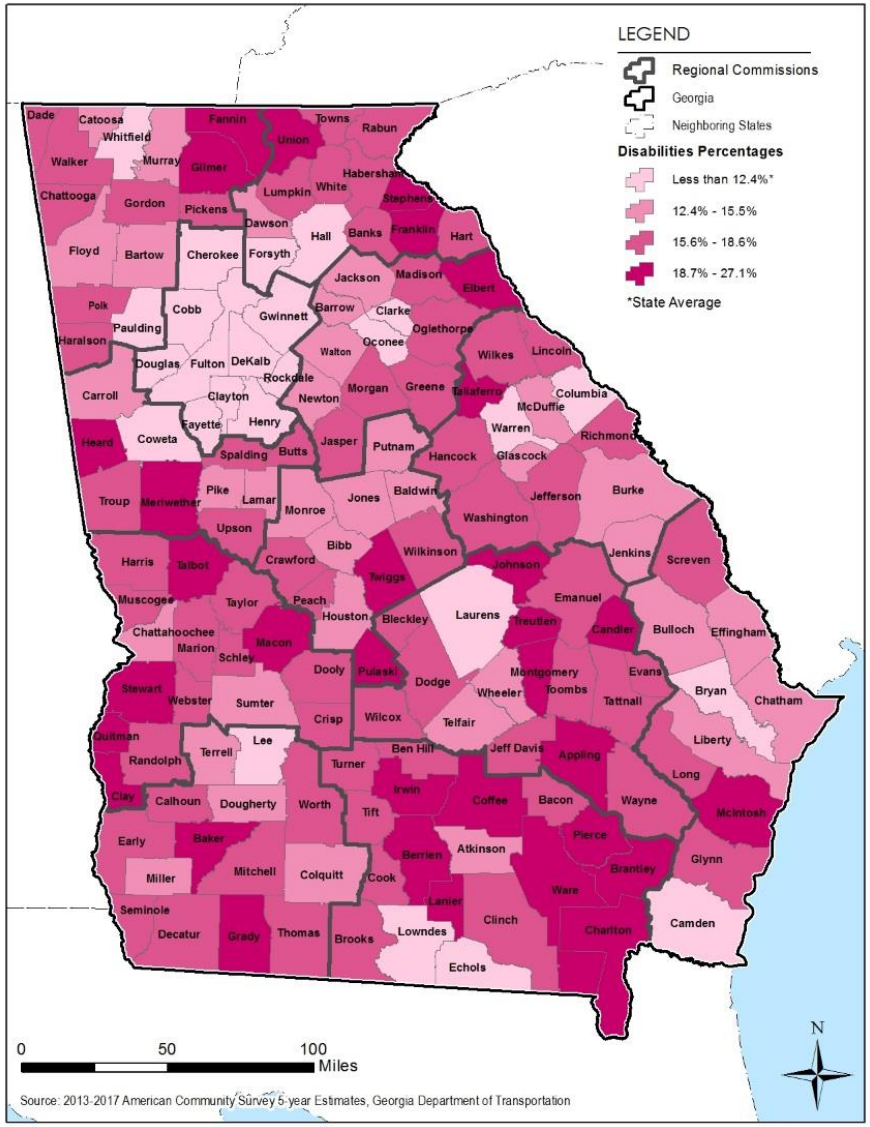
The population with disabilities in counties with public transit matches the statewide average of 12.4%. In counties without public transit, 14.5% of their population has a disability.

Counties with Rural public transit service have the highest share of their population with disabilities at 14.6%, as shown in **Table 11**. In counties with both Rural and Urban transit service, 12.7% of the population has a disability. In counties with only Urban transit service, 10.0% of the population has a disability.

Table 11: Percent Population with a Disability for Georgia and Selected Counties

	Percent Population with a Disability
Georgia	12.4%
Counties with Urban Public Transit	10.0%
Counties with Rural Public Transit	14.6%
Counties with both Rural and Local Urban Public Transit	12.7%
Counties without Local Public Transit	14.5%
Source: 2013-2017 American Community Survey 5-year Estimates	

Figure 31: Population with a Disability by County



6.3.5 Zero-Car Households

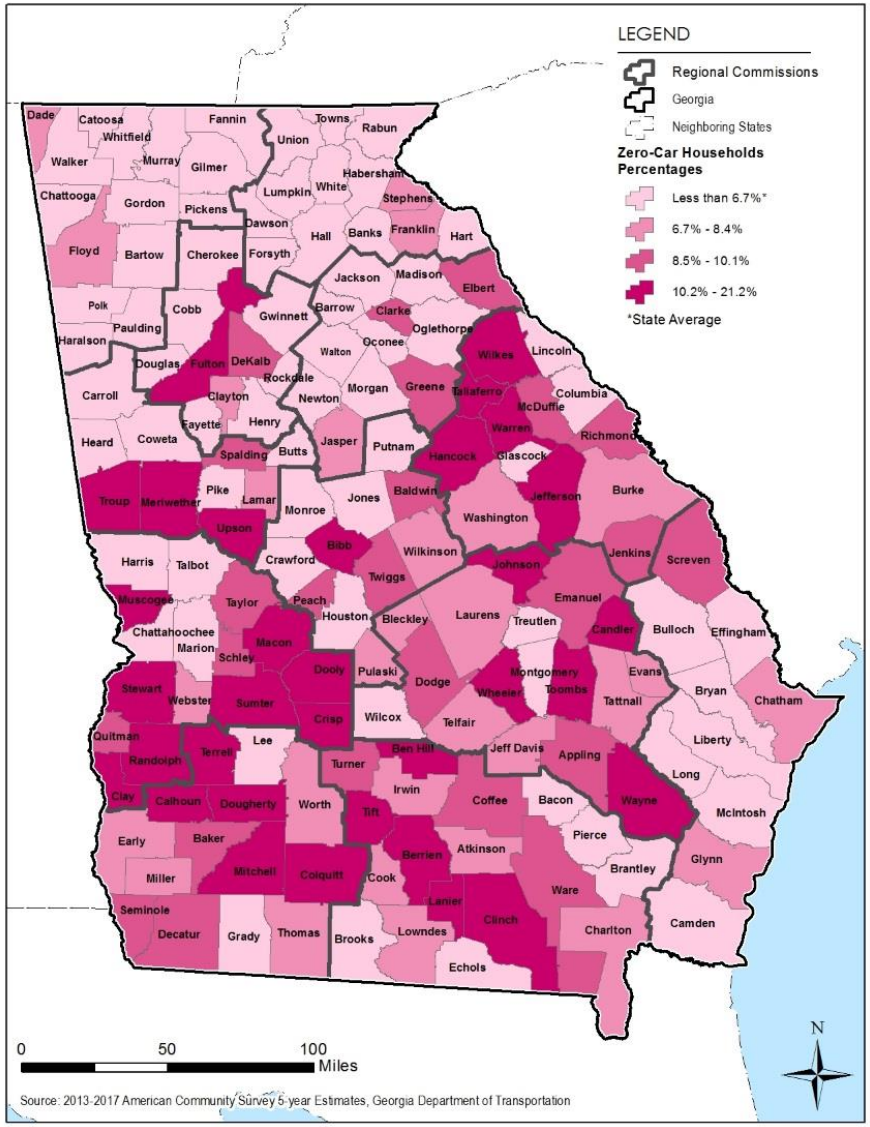
Zero-car households are defined as households in which no one has access to a personal vehicle. Statewide, 6.7% of Georgians reside in a zero-car household.[13] The highest concentrations of zero-car households, shown in **Figure 32**, are located in the River Valley region, where 12 out of 16 counties exceed the state average, with a regional average of 10.4%.

Table 12 displays that in counties with public transit, 6.9% of households are classified as zero-car, while 5.5% of households in counties without public transit are similarly classified.

Table 12: Percent Zero-Car Household for Georgia and Selected Counties

	Percent Zero-Car Households
Georgia	6.7%
Counties with Urban Public Transit	7.5%
Counties with Rural Public Transit	6.2%
Counties with both Rural and Local Urban Public Transit	6.3%
Counties without Local Public Transit	5.5%
Source: 2013-2017 American Community Survey 5-year Estimates	

Figure 32: Zero-Car Households by County



6.3.6 Elderly Populations

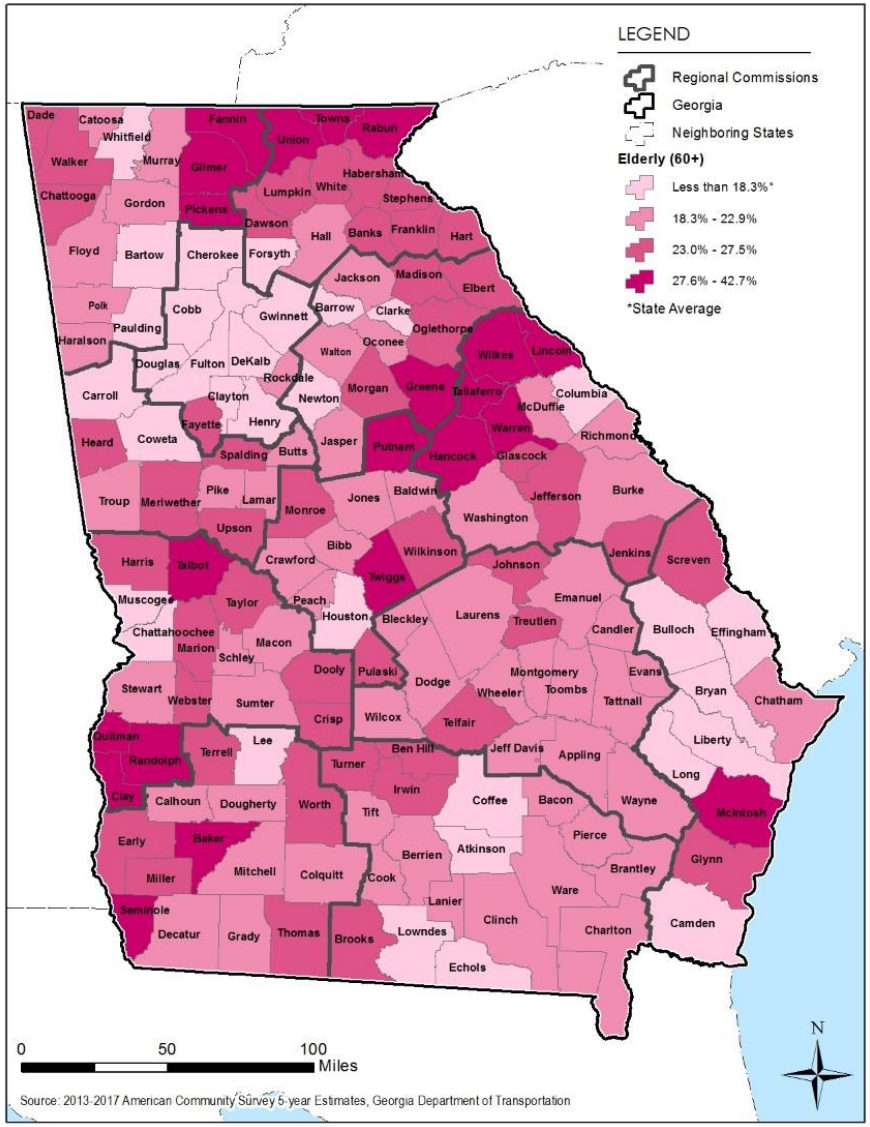
For this study, elderly people are defined as those age 60 and older. Statewide, 18.3% of the population meet this definition. The concentration of elderly populations by county is shown in **Figure 33**.

Table 13 indicates that counties without public transit have a higher share of elderly residents (20.4%) than counties with public transit (18.0%). Similarly, counties with Rural transit have a higher proportion of elderly residents (20.9%) than counties with both Rural and Urban transit (18.1%), and counties with only Urban transit (15.8%).

Table 13: Percent Elderly for Georgia and Selected Counties

	Percent Elderly
Georgia	18.3%
Counties with Urban Public Transit	15.8%
Counties with Rural Public Transit	20.9%
Counties with both Rural and Local Urban Public Transit	18.1%
Counties without Local Public Transit	20.4%
Source: 2013-2017 American Community Survey 5-year Estimates	

Figure 33: Elderly Populations by County



6.3.7 Youth Populations

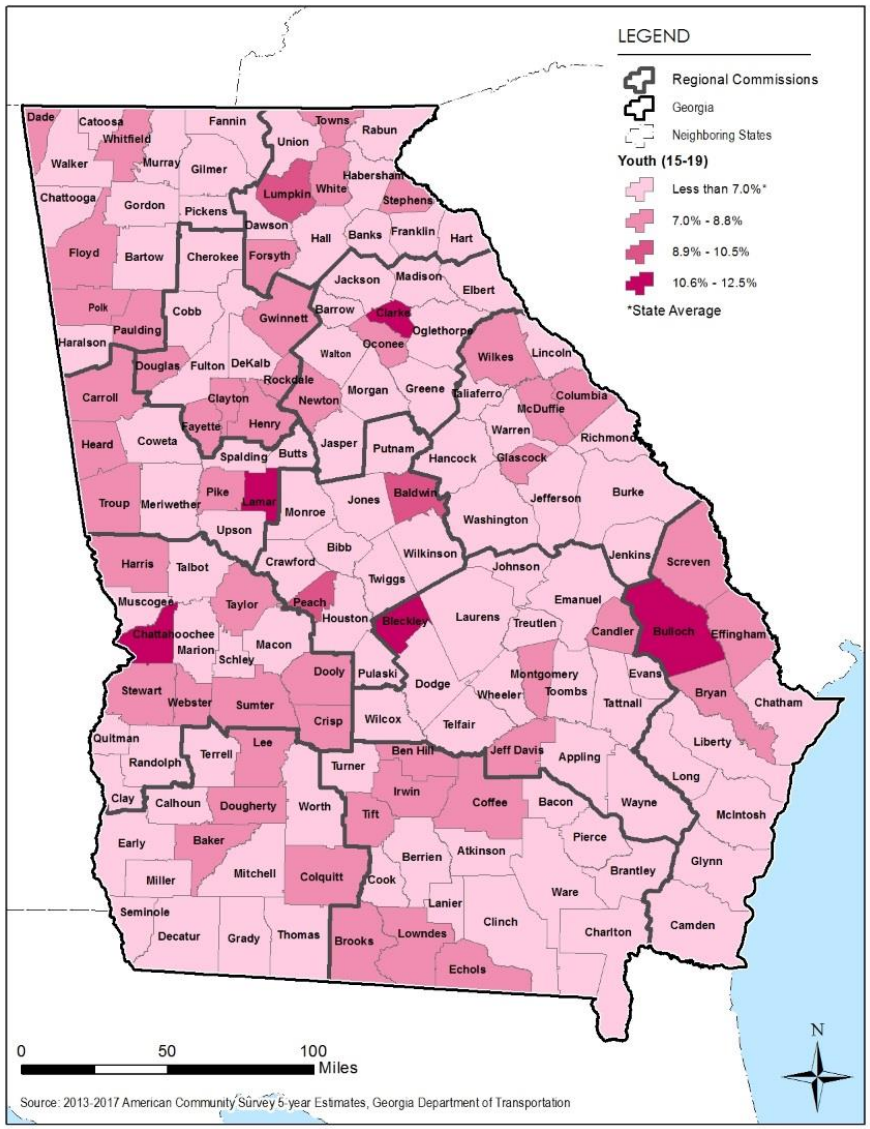
In this study, youth are classified as individuals ages 15 to 19. In total, 7.0% of Georgia's population is classified as youth. Youth populations are relatively evenly distributed throughout Georgia's regions, as shown in **Figure 34**.

Counties with public transit and counties without public transit both have youth populations of approximately 7.0%, as presented in **Table 14**. A handful of counties around the state have relatively high youth populations; however, most of those counties are also home to major colleges or universities, including Clarke County, home to the University of Georgia, and Bulloch County, home to Georgia Southern University.

Table 14: Percent Youth for Georgia and Selected Counties

	Percent Youth
Georgia	7.0%
Counties with Urban Public Transit	7.0%
Counties with Rural Public Transit	7.1%
Counties with both Rural and Local Urban Public Transit	7.1%
Counties without Local Public Transit	7.1%
Source: 2013-2017 American Community Survey 5-year Estimates	

Figure 34: Youth Populations by County



6.4 Travel Demand Trends

Research by the U.S. Department of Transportation shows that congestion costs are multifaceted, and include travel time, increased fuel consumption, and lost productivity, among others.[14] Statewide, the annual cost of congestion in Georgia tops $4.1 billion.[15] Daily Home-Based Work (HBW) trips are a key source of that congestion.

GDOT's Travel Demand Model (TDM) is a tool that approximates daily travel patterns across Georgia and is used to help plan future transportation investments to improve mobility and alleviate congestion. Using base year data, and projections for 2050, the model was used for the SWTRP to assess current and future travel patterns statewide. As a key source of congestion and indicator of potential public transit service need, Home-Based-Work trips were the focus of the analysis.

> By 2050, home-based-work trips crossing county and regional boundaries are projected to increase by 25% and 35%, respectively.

GDOT's statewide model estimates that currently, 35% of trips cross county boundaries and 9.0% of HBW trips cross regional boundaries. By 2050, the number of county-to-county HBW trips is projected to increase by 25%, while the number of region-to-region HBW trips is projected to grow at an even faster rate of 35%.

As Georgia's population continues to grow, public transit can help meet this growing travel demand, while also expanding economic opportunities. By mitigating congestion, transit service benefits transit users and non-users alike, while also expanding economic opportunities for both rural and urban populations throughout Georgia.

For these reasons, public transit is increasingly viewed as a critical link to connect businesses with both their workforce and new markets. Current and future public transit services must be equipped to help meet the demand, as trips to jobs and activity centers in Georgia often cross jurisdictional boundaries.

In comparing current trends with projections for 2050, several primary trends emerge:

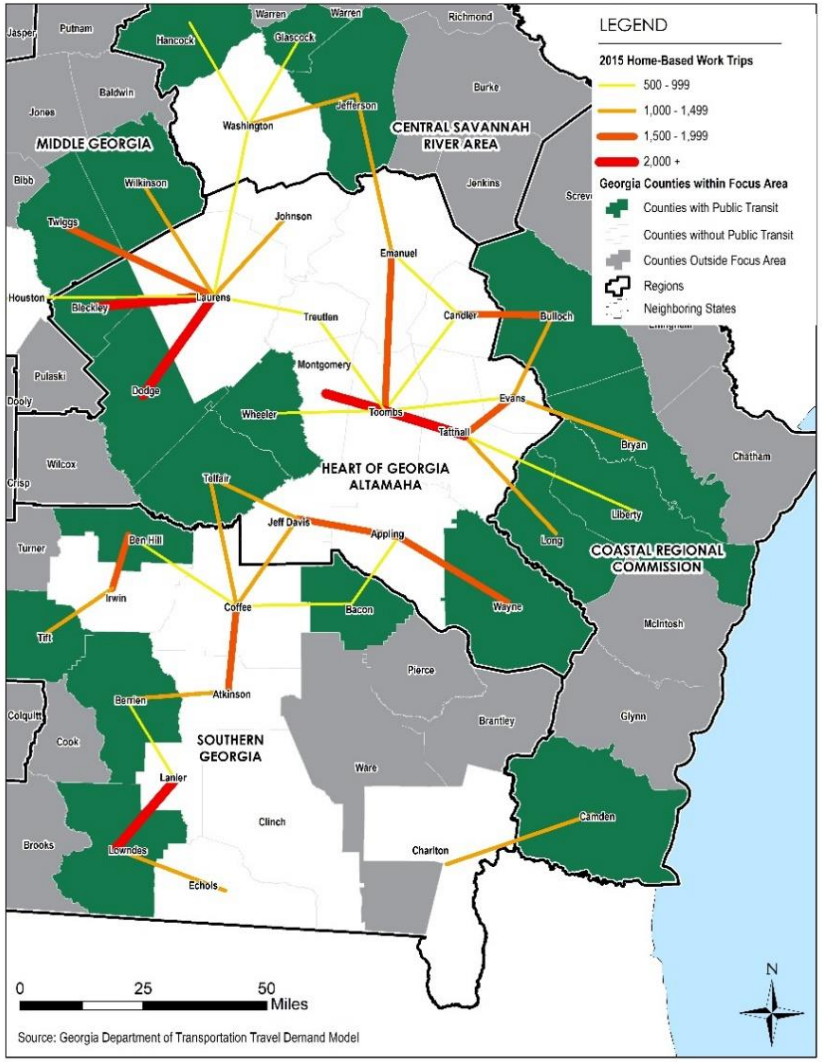
- Strong correlation between travel demand and location of the top employers presented in **Section 6.2.1** of this report, particularly in the Education and Health Services and Manufacturing and Transportation fields. Examples include: Clarke, Chatham, Laurens, and Troup Counties.
- Significant growth in travel demand between Athens-Clarke County and neighboring counties without public transit, with number of trips to and from Clarke County growing 51% between 2015 and 2050.
- By 2050, growth in travel demand between the ATL Region and adjacent counties is projected to continue, with a 98% increase in the number of trips to/from Jackson, 64% to/from Barrow, 58% to/from Bartow, 46% to/from Hall, and 44% to/from Newton.
- Increased demand for travel crossing regional boundaries, particularly among Coastal Region, Heart of Georgia Altamaha, and Southern Georgia counties. Examples include between Liberty and Tattnall counties and between Wayne and Ware counties.

Figure 35 shows a sample of 19 counties across the Southern Georgia, Heart of Georgia Altamaha, and Central Savannah River regions. 75% of county-to-county HBW trips in this sample area are projected to begin and/or end in a county without public transit. Travel demand in this area tends to reflect a decentralized pattern in which jobs and activity centers are spread across multiple counties.

Please refer to the *Existing Conditions and Future Trends Analysis Part I* for an in-depth analysis of travel demand trends, including current and future county-to-county trips, as well as specific regional results.

In addition to the GDOT TDM, a profile of rural transit travel demand was captured through an analysis of sample trip data shared by 44 rural transit providers statewide. Several trends emerged and are discussed in the next section. The trends include transit serving diverse trip purposes ranging from medical trips to shopping and entertainment, and significant demand exists for cross jurisdictional service. The full analysis is shown in the *SWTRP Existing Conditions and Future Trends Analysis Part III - Rural Transit Trip Data Analysis Report*.

Figure 35: Daily Cross Jurisdictional HBW Trips - Counties without Transit Focus Area



6.4.1 Rural Transit Trip Data Analysis

Georgia's rural transit providers utilize software systems to schedule, manage trips, and dispatch vehicles. To capture a sample set of trip data, forty-four providers volunteered to share one month (April 2019) of trip data for analysis. A system profile was created for each of the forty-four providers, including:

- Summary of key service statistics;
- Top origins and destinations;
- Heat map of origins and destinations;
- Point map of destinations outside the provider's service area;
- Pie chart of trips by funding source; and
- An analysis of local data trends.

To view the system specific profiles, please see the *SWTRP Rural Transit Trip Data Analysis Report.* Aggregated across systems, the data provided insights into how transit is used statewide and helped to inform the SWTRP.

Many rural transit providers coordinate their service with Human Services Transportation (HST) programs, as discussed in **Section 2.1**, increasing efficiency for the systems and riders. The trip data analysis showed this funding coordination and diversity of funding sources, beyond FTA public transit funding. These HST funding programs included various Department of Human Services programs, Medicaid trips, and several smaller contracts with local organizations.

Riders, Origins, and Destinations

During the sample period, vehicles averaged 2.8 passengers per trip. Riders took an average of seven round-trips (14 one-way trips) per person throughout the month. The most common origin and destination categories during the sample period were:

- Senior centers (18% of trips);
- Dialysis and renal care (6%);
- Behavioral/Mental Health (6%);
- Vocational Training (5%); and
- Retail (5%).

Funding Sources

A wide variety of funding sources were utilized by the 44 rural transit providers studied in this report during the sample period.

Figure 36: Top 10 Funding Sources, April 2019

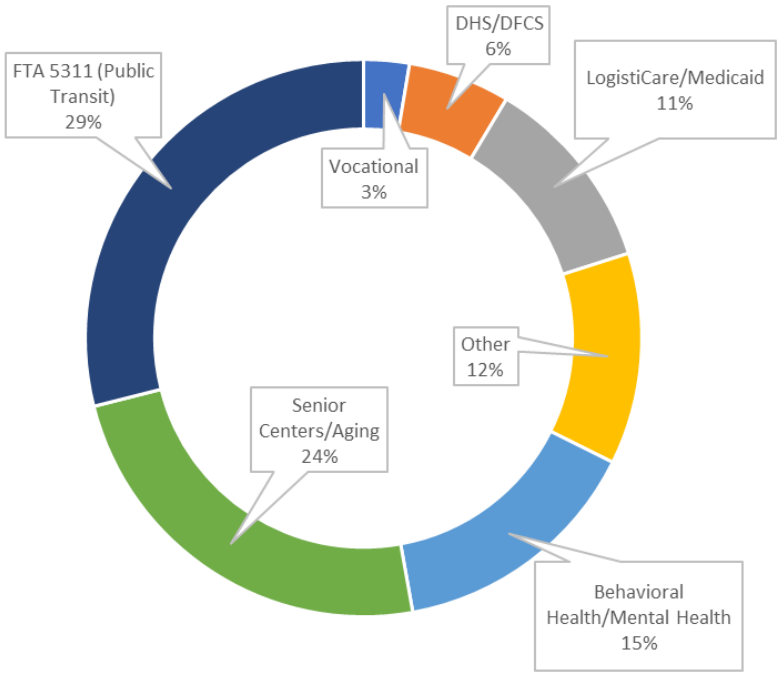


Figure 36 provides a breakdown of all rides taken by general funding categories during the month of April 2019.

During the data collection period, FTA 5311 (Public Transit) funding covered the largest share of trips at 29%. This category was followed by Senior Centers/Aging, which covered 24% of trips. The other major categories were Behavioral Health / Mental Health (15%), Other (12%), and LogistiCare / Medicaid (11%).

'Public Transit' refers to trips funded through the FTA Section 5311 Rural Transit program. The program provides capital, planning, and operating assistance to states to support public transportation in Census designated rural areas (populations of less than 50,000).

The Senior Centers/Aging category refers to trips provided for a transportation program of the Georgia Department of Human Services' (DHS) Division of Aging Services. DHS administers numerous human services transportation programs in coordination with public transit providers across Georgia.

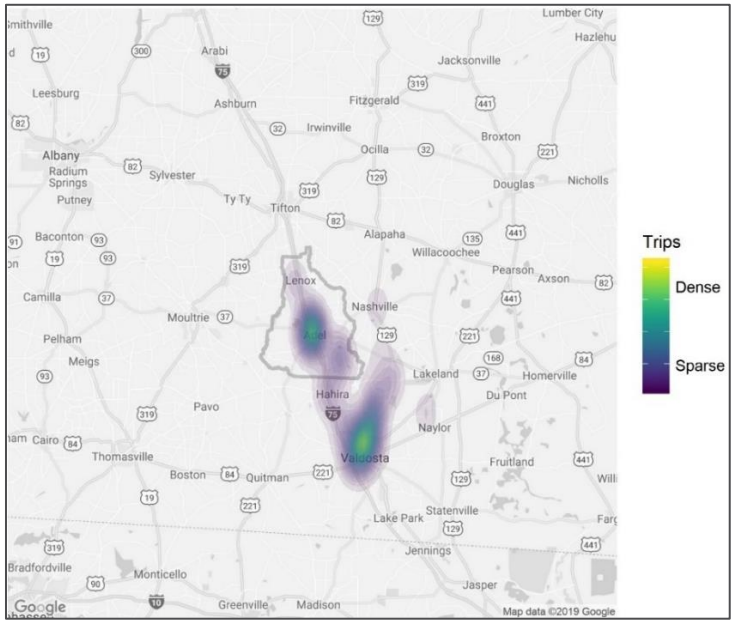
Outside Jurisdiction Trips

Among providers in relatively low-population areas, trips outside the service area were more common and made up a larger share of overall trips during the sample period. For these providers, destinations outside the service area tended to be specialized medical services that may not have been available locally, including dialysis/renal clinics, eye care, orthopedics, and physical rehabilitation centers.

For example, Cook County lies just north of neighboring Lowndes County, where the county seat of Valdosta hosts many trip destinations for nearby transit agencies. During the sample period, 34% of the 1,720 trips provided by Cook County Transit System occurred outside the jurisdiction. All these trips were to destinations in Lowndes County, including several community facilities and educational institutions in Valdosta.

Figure 37 displays a heat map of trip origins and destinations for Cook County Transit during the sample period. The service area of Cook County is outlined in gray.

Figure 37: Example Transit Trip Origins and Destinations Map



These findings demonstrate the both the importance of rural transit service, and the need for cross jurisdictional service. Riders rely on rural transit service, and Georgia's rural transit systems are helping those riders engage in their communities. They are providing service to healthcare, job training, and enabling riders to participate in the local economy.

To fully realize these benefits, rural transit providers, particularly in relatively low-population areas, need to cross jurisdictional boundaries to provide access to critical services and destinations that may not be available within their core service area.

6.5 Emerging Transit Trends and Practices

As stated in GDOT's Statewide Strategic Transportation Plan (SSTP), "Georgia's transportation system drives Georgia's economy, the success of our communities, and our quality of life. Continued investment in improving transportation and mobility within the State is essential to improving and maintaining Georgia's economic standing and retaining our high quality of life."[16]

Investing in transportation, and public transit in particular, could provide potentially numerous economic benefits, both by directly creating and sustaining jobs and through the multiplier effects of opening access to new markets and improving the productivity of individuals and businesses. Large employers increasingly want to locate in areas with transit access for their employees and customers.

Large employers increasingly want to locate in areas with transit access for their employees and customers.

Research shows that additional investment in public transportation provides both short term stimulus and long-term economic productivity impacts. A report by the Economic Development Research Group and the American Public Transportation Association shows that over a 20-year period, every $1 billion invested in public transit results in nearly $4 billion in additional gross domestic product (GDP) and 50,000 jobs. These benefits include the positive productivity effects of transit, including household savings, reduced congestion costs, and improved employer labor access.[17]

As shown in **Section 6.3 Socioeconomic Conditions**, low-income, disabled, or elderly individuals, particularly in rural areas of Georgia, are less likely to have reliable access to a personal vehicle or other mode of transportation, impacting their access to healthcare, jobs, and education or workforce development opportunities. Public transit operators provide that critical access in rural areas across the state, assisting riders and boosting the local economy in the process.

Figure 38. Wheelchair Lift Equipped Cutaway Bus

Those transit operators are facing many demographic, economic, and technological trends impacting their systems and future service needs. With Georgia's steadily growing population, following the 2020 Census, several areas of the state currently classified as Rural may be re-classified by FTA as eligible for Small or Large Urban programs. Each area impacted will need to decide to apply for funding and operate Urban transit service, and then manage the transition between programs.

A separate research effort is underway to examine the impacts of urbanization on rural and urban transit formula funding and GDOT is actively working with providers in urbanizing areas to assist with the challenges they face.

Where transportation options are limited, some employers are pursuing alternative options for their workforce. For example, Coastal Regional Commission (CRC), which provides regional rural demand-response transit service across 10 counties and 35 municipalities, also has contracts with three private businesses on Jekyll Island.[18] CRC shuttles workers from mainland Georgia to their places of employment on the island, reducing congestion on the island and providing businesses with access to a quality, reliable workforce.[19]

Rapid technological advances are also impacting longstanding transportation systems, infrastructure, and service models. Many of the most touted advances improve safety, including automated braking and collision-detection-and-avoidance systems. Others, like Global Positioning Systems (GPS) and automated vehicle locators (AVLs), have improved trip planning, routing, and dispatch systems.

Advances in communications and connected vehicle technology enable more efficient and reliable public transit service through traffic signal coordination and preemption for public transit vehicles. Improvements in battery technology allow for low-emission, hybrid and fully battery-electric buses. These emerging technological trends present new challenges and opportunities for public transit providers as they work to incorporate the technology into their systems.

6.5.1 Best Practices

As a component of the SWTRP stakeholder engagement process (described in **Section 5.0**), the SWTRP project team conducted one-on-one interviews with representatives from several transit agencies and stakeholder groups from across Georgia. Each interviewee was selected to gather information and input regarding organizational or operational characteristics that could benefit other agencies. The identified “best management practices” were detailed in the *SWTRP Best Management Practices Report* and are summarized in the sections below.

6.5.1.1 *Cost Effective Service*

Cost-effectiveness is a perpetual concern for transit systems, especially in small urban and rural areas where populations are more dispersed and trips distances may be longer. While cost-effectiveness can be driven through budget controls, statewide data shows that increasing ridership is a more effective approach, while also furthering the mission of local transit agencies. By making sure operational characteristics such as service hours conform to the needs of all potential riders, not just medical trips, transit agencies can increase ridership and efficiencies.

Wayne County Transit (WCT) provides an example of how a rural transit agency can provide wide service hours while maximizing cost-effectiveness. WCT provides demand-response transit 24-hours a day, 7 days a week. These hours allow WCT to serve the entire community, including workers with off-peak hours. These employment trips are a major share of ridership for WCT. Costs are controlled by requiring advanced booking for late night trips, saving on labor costs through flexible scheduling.

6.5.1.2 *Private Sector Coordination*

Employers in Georgia understand the importance of transportation to their employees. There is increasing interest in transit from the business community, and Georgia transit agencies are taking efforts to coordinate with employers.

The Coastal Regional Commission (CRC) has been successful in providing shuttle service for several large regional employers, including transit for service employees to the hotels, shops, and restaurants on Jekyll Island. These contracted routes provide steady income into the system and benefit the economic health of the region but come with some operational caveats. FTA regulations do not allow the use of Federally-funded vehicles for charter service, so agencies must use vehicles procured with local funds. CRC has had success acquiring used vehicles to provide these services.

6.5.1.3 *Marketing*

Public transit systems in rural and small urban areas may not have the visibility of larger systems. Marketing programs can help raise awareness among the public as to the services offered in their community. GDOT surveyed over 2,000 public transit riders during the creation of the Statewide Transit Plan. 506 respondents said their primary reason for not taking transit is that service is not available in their community, even though 86% of these people live in communities with public transit systems. Marketing programs can help reach these potential customers while building support in the greater community.

The Tift Lift is an example of a service that has used marketing and branding to boost its local profile. Vehicle wraps, along with matching flyers and brochures, create a crisp, unified look that catches the eye and public attention, allowing each vehicle to function as a “rolling billboard” for the transit services offered.

Figure 39: Tift Lift Vehicle with System Branding

FTA’s National Rural Transit Assistance Program provides a Marketing Toolkit to rural transit operators. This online collection of templates, graphics, stock photos, and statistics can help rural agencies create their own branding and marketing programs without substantial fiscal investment.

6.5.1.4 *Regional Coordination*

Demand-response transit services are a crucial transportation lifeline for many residents in Georgia’s rural communities. The destinations riders need to access may lie in different counties. Regionally coordinated transit service can provide improved mobility for rural Georgians while also allowing for economies of scale that transit systems in smaller counties may not be able to achieve.

Five regional rural transit services currently operate in Georgia. Mountain Area Transportation System serves three counties in the Georgia Mountains region. The Lower Chattahoochee Regional Transportation Authority provides demand-response service in three counties in Georgia's River Valley region. Three Rivers Regional Commission Finally, Southwest Georgia and Coastal Georgia are both serviced by regional transit systems operated by their respective regional commissions.

Southern Georgia Regional Commission (SGRC) is currently studying the feasibility of launching its own regional rural public transit system. SGRC already has experience operating its area's Human Services Transportation system and adding rural public transit to its portfolio of services would bring additional value to the people of the region while easing the administrative burden that providing transit can place on the individual counties. Coordination activities between the Regional Commission and its constituent counties are on-going, with both groups working to organize the potential system in a way that benefits all parties and stakeholders.

6.5.1.5 *Educational Coordination*

Coordination between Georgia's post-secondary institutions and transit agencies can offer opportunities for both parties. Transit agencies can increase their ridership base and students and faculty benefit from a new mobility option. Coordination helps universities and colleges extend the range of their own transit systems and can also help to reduce the amount of land dedicated to parking. Transit agencies leverage coordination to gain a new ridership base and a dedicated income stream.

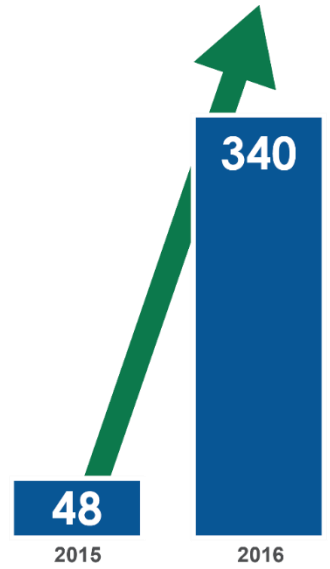
For example, Hall County Transit currently provides service to students through a contract with three area institutions. Macon-Bibb Transit Authority operates a route from the campus of Mercer University to downtown Macon, providing students with a safe and accessible route to restaurants and entertainment destinations. Athens Transit System (ATS) coordinates extensively with the University of Georgia. The University's transit system contracts with ATS to provide rides at no cost to students and staff. UGA also reports their ridership to FTA, allowing ATS to leverage additional Federal funds through student ridership.

6.5.1.6 *Fare-Free Transit for Youth and Seniors*

Providing fare-free transit for certain segments of the population, such as youth and seniors, can be an effective investment in the livelihoods of age cohorts that often face mobility challenges.

The ATS instituted a fare-free program for youth, seniors, and those with disabilities. This program has led to ridership increases in these demographic categories, especially among youth riders, with ATS staff reporting an 800% increase in youth riders. Providing this service results in a minor loss of revenue for the system, but ATS and the County Commission view this as a small cost compared to the positive effects such a service has in the lives of its users and the community as a whole.

Figure 40: ATS Daily Youth Ridership After Switch to Fare-Free



6.5.1.7 *Intercity Bus Coordination*

Figure 41: Terminal Station - Macon, GA

Co-locating public transit intercity bus stations with intercity bus lines such as Greyhound and Southeastern Stages provides riders with greater mobility options. Greyhound, the nation's largest intercity bus company, has identified these intermodal hubs as their optimal station location, and several cities in Georgia have such facilities in operation.

Albany, Augusta, Macon, and Savannah all have intercity bus stations located at major transfer points on their fixed-route bus network. Albany is currently moving forward on construction of a new multimodal hub to further improve the rider experience. Macon recently completed a restoration of the historic downtown train station, converting the facility into a fixed-route and intercity bus hub. Users gain the convenience of easy transfers between the systems and benefit from the site's walkability and direct access to the amenities of downtown Macon.

Greyhound's Downtown Atlanta station is located across the street from the Garnett MARTA rail station, providing intercity bus riders with convenient access to the entire MARTA system. Greyhound is in the process of replacing this facility with a new station, which will improve operational efficiency and provide customers with new and improved waiting areas, restrooms, and other amenities.

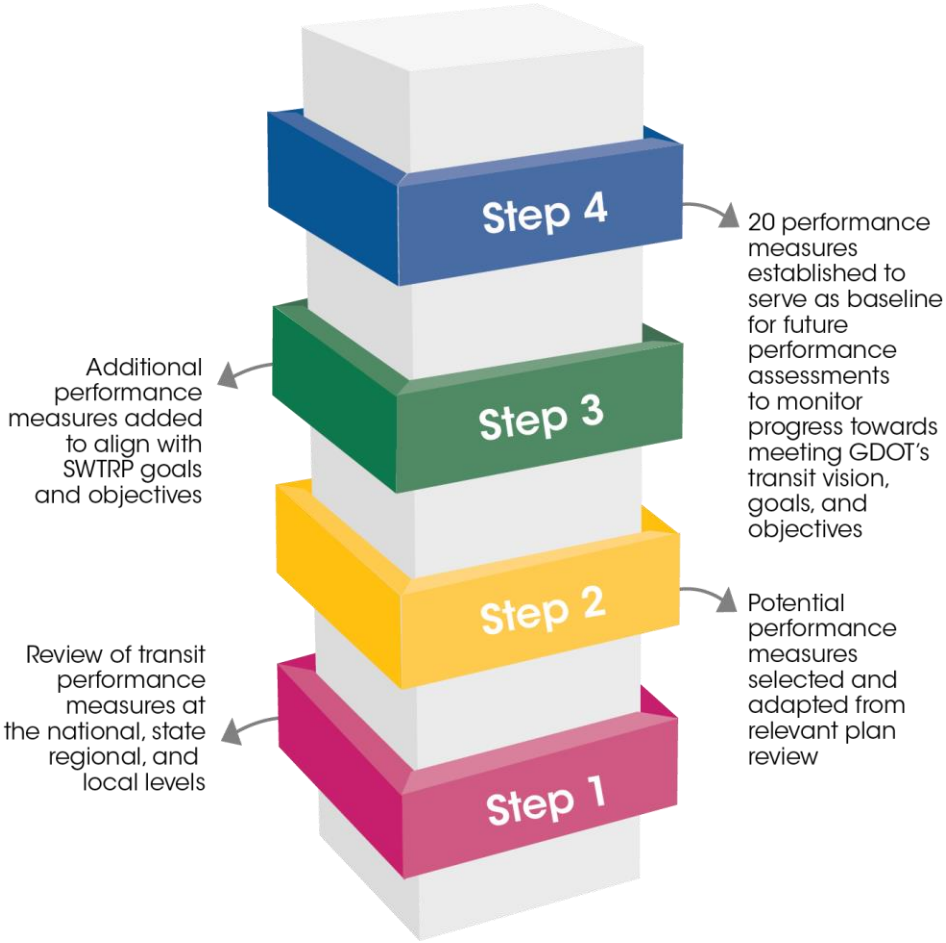
7.0 Performance Measures

Performance measures are criteria or metrics used to evaluate progress towards achieving goals and objectives in the performance-based planning process.

The GDOT SWTRP process for selecting performance measures began with a thorough review of transit performance measures at the national, state, regional, and local levels, as described in **Section 4.3**. Potential performance measures were selected and adapted from the relevant plan review, and additional performance measures were added to align specifically with the SWTRP goals and objectives specified in **Section 4.4**. Additional details and information on this process can be found in the *SWTRP Summary Report of Relevant Transportation Plans and Performance Measures.*

The GDOT SWTRP Performance Measures and related goals are listed in **Figure 42** and described in more detail below.

Figure 42: Process for Establishing Performance Measures



7.1 Performance Measure Descriptions

1. Number of counties served by transit

The number of Georgia counties served by some form of public transit provides a high-level overview of coverage throughout the state, by geographic area. This measure also represents the number of local governments that have prioritized transit in their county.

2. Percent of population served; percent of elderly and disabled population served

The percent of Georgia's population served indicates how well the existing transit system serves the state's population, regardless of location within the state. The percent of elderly and disabled population served is useful in understanding how well the transit system serves populations more likely to depend on transit for their transportation needs.

Population served is not a measure of transit users; rather, it indicates the population for whom transit service is available. The entire population of counties currently with a county-wide system is considered served by transit. In areas with city-only systems, the city population is considered served by transit.

3. Number and percent of rural regional or multicounty system assets out of all rural transit assets;

Number and percent of counties served by rural regional or multicounty systems out of all counties;

Number and percent of trips served by rural regional or multicounty systems out of all rural transit trips

The number and percent of assets, counties, and trips served by rural regional or multicounty systems are indicators of connectivity and partnerships among jurisdictions. As the demand for cross-jurisdictional transportation continues to grow, such regional or multijurisdictional systems may facilitate better connected, convenient, and user-friendly service for riders.

4. Number and percent of counties served by rural public transit and DHS coordinated systems out of all counties;

Number and percent of trips served by rural public transit and DHS coordinated systems out of all rural transit trips

Public transit and Department of Human Services (DHS) coordinated systems expand the reach of individual agencies, thereby increasing access and convenience for transit users. Coordination with DHS and other forms of human service transportation can also result in cost savings and other efficiencies for transit providers. The number and percent of counties served indicate the geographic extent of these coordinated systems.

5. Number of Rural transit providers that cross service area boundaries

Rural transit providers sometimes have the flexibility to operate outside their designated service boundary (e.g., county line) when needed. Providing such cross-boundary or jurisdictional service can improve rider accessibility to destinations or services not available in their local area. This measure is a tally of all rural systems that report the ability to cross service boundaries when needed and practical.

6. Number of multimodal transit centers

Multimodal transit centers offer connections between systems, service types, and modes, thereby improving access, connectivity, and mobility options for riders. This measure is a tally of multimodal facilities at which a passenger can switch between transit modes.

7. Number of park and ride lots and total parking capacity

Park and Ride lots can improve access to transit in suburban and lower density areas. The lot capacity (total parking spaces) indicates the number of potential transit (or carpool) riders.

8. Number and percent of intercity bus stops with local transit service out of all intercity bus stops

Co-locating local transit service at intercity bus stops offers travelers additional accessibility and improves connectivity of the overall transit network. This measure tallies the number Georgia's intercity bus stops paired with local fixed route transit service.

9. Number of managed lane miles and dedicated transit facility miles

Managed lanes limit vehicle eligibility based on tolling, occupancy, or vehicle-type. In Georgia, transit vehicles are allowed in all of the state's existing managed lanes for free, improving transit travel time and reliability. Dedicated transit facility miles offer similar benefits by separating transit from (non-transit) roadway congestion.

10. Percent of transit fleet that is no emission or renewable fuel vehicle out of all public transit vehicles

No emission vehicles improve air quality, benefiting the environment and public health. They can also reduce system operating costs. This measure is a share of public transit vehicles operating in the state that are electric vehicles or fuel cell vehicles out of all public transit vehicles in the state.

11. Injuries and fatalities per 100,000 transit vehicle revenue miles

Rates of injuries and fatalities are essential safety indicators. This is a measure of injury and fatality rates per 100,000 transit vehicle miles, as reported to the NTD.

12. Number of counties with TDPs, and the number of TDPs updated within the last 5 years

Transit Development Plans (TDPs) document transit needs and opportunities as well as inform future transit system investments. GDOT encourages each agency to prepare a TDP to support effective public transit. Typically, these strategic plans have a ten-year planning horizon, and are to be updated every five years. TDPs can cover a single county or a multi-county area.

This measure is a tally of the number of Georgia counties that have completed a TDP, and the number of TDPs completed in the previous 5 years.

13. Number and percent of agencies with GTFS data and/or provided that data to third-party platform out of all transit agencies

General Transit Feed Specification (GTFS) is a standardized format for transit schedules and route mapping information. GTFS data is a prerequisite for transit app development and accurate trip planning service. Accurate and publicly available GTFS data can facilitate better awareness and usability of transit service for the public. Similarly, uploading GTFS files to an open source or third-party platform can help ensure transit is presented as a modal option to the traveling public.

This is a measure of Georgia transit providers that have compiled GTFS data for their systems, and those that uploaded the data into an open source or third-party platform for trip planning purposes.

14. Number and percent of agencies with website, or with a smart phone application out of all transit agencies

Transit provider websites and smart phone applications improve access to transit information, increasing awareness and knowledge of the system.

15. Per capita expenditures on transit operations

Per capita expenditures indicate the relationship between cost and use of the transit system and overall transit cost effectiveness. The measure is the total operation expenses for all transit agencies in the state, divided by the total population served by transit.

16. Number of revenue service hours

A system's operating service hours are indicative of the ridership demographics or markets it can serve. For example, systems operating in the early morning or overnight hours can meet the needs of early or late shift workers. Similarly, systems with more vehicles operating simultaneously can serve more riders.

This measure is a sum of all revenue vehicle service hours annually. It is a high level a high-level representation of the total size and scale of Georgia's transit services.

17. Trips per service hour

Trips per service hours measures the overall frequency of the transit system. This performance measure represents the total number of unlinked passenger trips divided by the total number of (revenue) service hours.

18. Percent of revenue vehicles (rolling stock) within an asset class that have either met or exceeded their ULB

This category comprises vehicles used in revenue service for public transportation. Rolling stock that has either met or exceeded their Useful Life Benchmark (ULB). ULB represents the expected lifecycle of a capital asset given its operating environment and characteristics. Meeting or exceeding ULB indicates that an asset may need repairs or replacement soon that would remove it from providing public transportation. This measurement currently includes the 92 providers participating in the GDOT Group TAM Plan.

19. Percent of non-revenue service vehicles (equipment) that have either met or exceeded their ULB

Non-revenue service vehicles or equipment with an acquisition value over $50,000 are included in this measure. Equipment that has either met or exceeded their ULB is an indicator of large capital costs that may impact the provider. This measurement currently includes the 92 providers participating in the GDOT Group TAM Plan.

20. Percent of facilities within an asset class that are rated below condition 3.0 on the Transit Economic Requirements Model (TERM) scale

The asset inventory contains a listing of all facilities that support the provision of public transportation, including administrative, maintenance, parking, and passenger facilities. As these items are rated below condition 3.0 on the TERM Scale, it will affect the provider's ability to provide public transportation. This measurement currently includes the 92 providers participating in the GDOT Group TAM Plan.

7.2 Performance Assessment

The data sources of performance measures vary. They typically include state, local, and regional plans or reports, federal databases, such as the National Transit Database (NTD), or information that individual agencies compile, called in-house data.

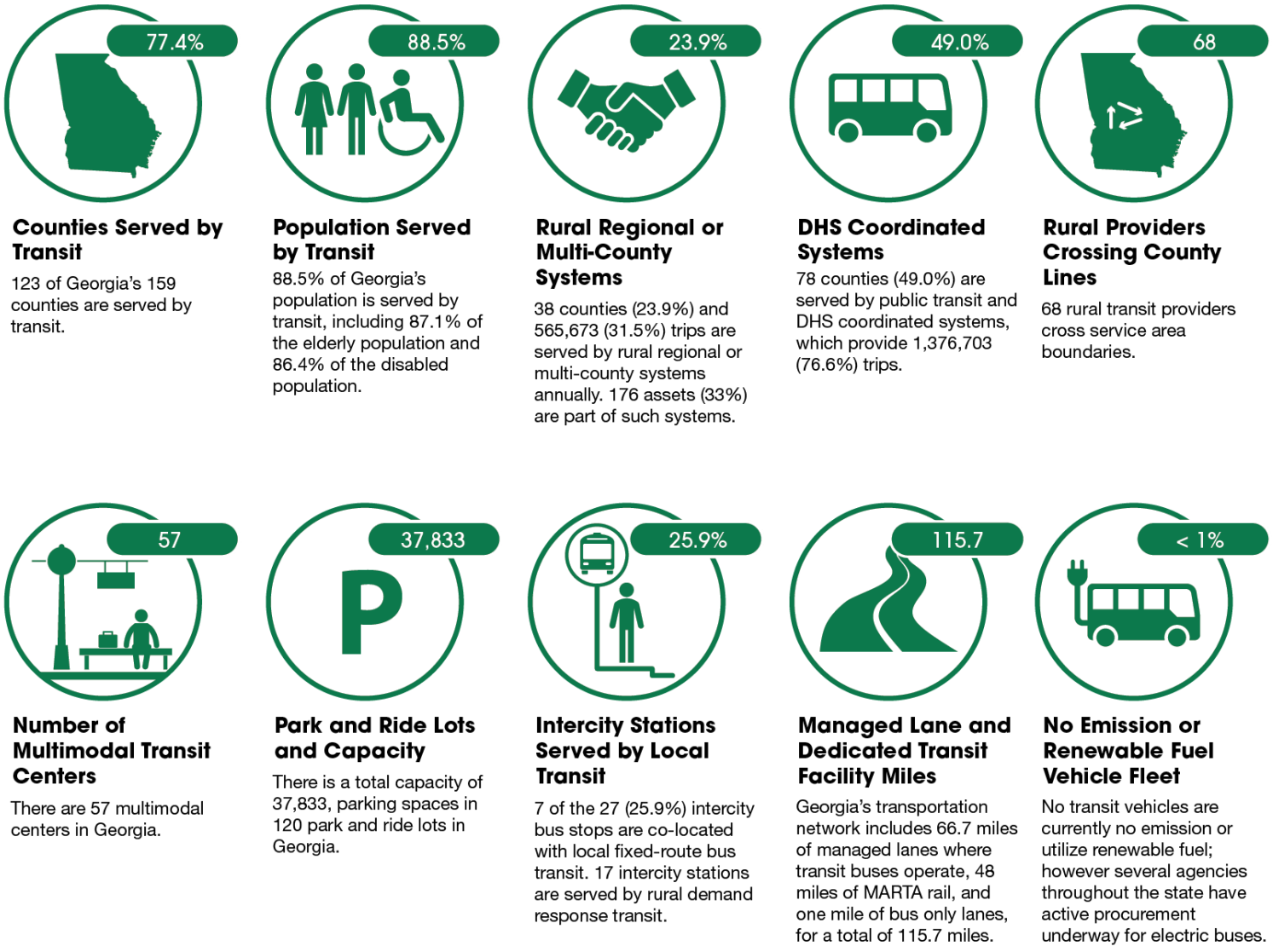
The performance measures established as part of the SWTRP will serve as the baseline for future performance assessments to monitor progress toward meeting GDOT's transit vision, goals, and objectives.

For a full description of the performance measures, statewide results, as well as a breakdown of the data for the area of Georgia outside the 13-county Atlanta-region Transit Link Authority (ATL) jurisdiction, please see the full *SWTRP Summary Report of Relevant Transportation Plans and Performance Measures*.

Figure 43: Performance Assessment Data Sources

Figure 44 shows a summary of the most recently available or baseline performance data for each measure.

Figure 44: SWTRP Performance Measures



Injuries and Fatalities Per 100,000 Miles

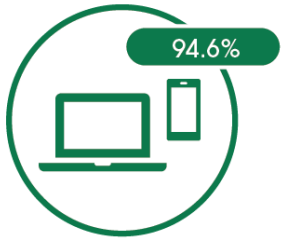
In 2017, there were 0.3344 injuries or fatalities for every 100,000 transit vehicle revenue miles traved. Of those, 0.33 were injuries and 0.0044 were fatalities.

Transit Development Plans Updated Within 5 Years

48 counties (30.2%) have a Transit Development Plan (TDP) updated within the past 5 years, while 73 counties (45.9%) have a TDP.

Agencies with GTFS Data and/or Provided Data to Third-party Platforms

4 agencies (5.4%) currently have General Transit Feed Specification (GTFS) data and/or provide that data to third-party platforms.



Agencies with Website and/or Smartphone App

87 agencies (94.6%) have a website, and four (4.4%) have an app.

Per Capita Transit Operating Expenditures

The statewide average per capita expenditure on transit is $64.99.

Revenue Service Hours

The total number of revenue service hours in 2017 was 5,613,221.

Trips Per Service Hour

The average number of trips per (revenue) service hour is 25.8.

Revenue Vehicles Meeting or Exceeding ULB

12.4% of revenue vehicles (rolling stock) have either met or exceeded their useful life benchmark (ULB).

Non-Revenue Vehicles Meeting or Exceeding ULB

42.6% of non-revenue service vehicles (equipment) have met or exceeded their useful life benchmark (ULB).

Facilities Rated Below Condition 3.0 on TERM Scale

8.4% of facilities are rated below condition 3.0 on the Transit Economic Requirements Model (TERM) scale.

8.0 Needs and Gaps Assessment

Transit needs come in many different forms. This section includes an overview of the different types of transit needs, methods for assessing those needs, and high-level findings. Conclusions are also summarized for rural transit, urban transit, and communities currently without transit services.

For the full and detailed transit needs assessment analysis, please refer to the *SWTRP Transit Needs Assessment Summary Report*. That report includes findings at the state level, the regional level, and at the individual county or transit system level.

8.1 Inputs

The SWTRP documents needs using both quantifiable data, as well as input and feedback from transit providers, riders, and other stakeholder entities.

For the SWTRP, transit needs were identified through:

- A review of locally prepared existing planning documents (local transit development plans (TDPs), long range transportation plans (LRTPs), comprehensive plans, regional commission plans, etc.);
- A Transit Provider Questionnaire;
- Technical Advisory Committee (TAC) Focus Group meetings and stakeholder interviews;
- Quantitative assessments of rural transit demand and commuter transit demand;
- Geographic assessments by overlaying transit propensity data with maps of transit service areas and activity centers; and
- A Public Survey.

The quantitative assessment methods are a resource for individual counties and service providers to define the potential gap between current services and the potential need, both now and future. The SWTRP also incorporates quantified needs identified by local planning documents and agencies, as they are best equipped to understand the specific needs of their communities.

8.2 Community-Identified and Geographic Needs

8.2.1 Planning Document Review

A total of 56 TDPs from across Georgia were identified and reviewed. These TDPs include both regional and single-county service areas, both urban and rural transit systems, as well as counties that currently do not have public transit. The TDPs vary in terms of detail, methodology, and date of preparation. Most TDPs (33) were written in 2016 or later, but some date back as far as 2007.

Most, but not all the plans provide some method for quantifying service needs in the planning area. Methodology outlined in the *Transit Cooperative Research Program (TCRP) Report 161: Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation,* is the most commonly used for quantifying transit needs. Many local plans also use demographic data to locate transit-dependent populations within service areas and identify service needs.

Other planning documents reviewed include county comprehensive plans, MPO long range transportation plans, transit or transportation plans, transit feasibility studies, transit asset management plans, and comprehensive transportation plans. Descriptions of these plans and the needs identified are provided in **Section 4.3** of this report. Any relevant transit needs provided from these other plans were added to this discussion where there was not a local TDP, or where the needs from these other plans supported or supplemented those provided from the TDP.

Commonly expressed needs in the TDPs and other planning documents include:

- Expansion of rural transit to serve Georgians residing in counties without public transit;
- Replacement of vehicles and facilities that are past their useful life;
- Enhancing rural transit providers' operational capacity to meet current and projected increase in demand;
- New urban transit services in Brunswick, Cartersville, Dalton, Warner Robins, Valdosta, and Georgia portions of the Chattanooga urbanized area, where urban service does not exist;
- Transit-supportive park-and-ride facilities along key interstate routes into larger urbanized areas, such as Atlanta, Augusta, Brunswick, and Macon;
- Service for clusters in the Atlanta region that are not served by transit.
- Expanding fleets with new vehicles and replacing existing vehicles past State-of-Good Repair;
- Regional coordination to accommodate cross-county employment commutes that are not currently served;
- Coordination with other modes and operators, such as intercity services (e.g., Amtrak, Greyhound) and established high capacity services (e.g., MARTA);
- More and better outreach, marketing, and awareness of transit services; and
- Improvements to bicycle and pedestrian infrastructure and connections with transit.

Shown earlier in **Section 4.3**, **Figure 15** depicts many of the common themes and transit needs identified in the local planning document review. Many of the same needs were also identified in the Provider Questionnaire, Public Survey, and TAC focus groups.

8.2.2 Transit Provider Questionnaire

The SWTRP Transit Provider Questionnaire was conducted in the summer of 2019 with input sought from all of Georgia's 92 providers. Questions covered the following topics: planning priorities, service hours, future needs, State-of-Good-Repair, and meeting rider expectations. Many providers submitted written details in the free-response questions, allowing specific insights into provider needs across the state.

As identified by the Provider Questionnaire, respondents' top service needs, in order of priority, include: additional service hours, additional geographic service coverage, and additional service capacity. These responses align with the pattern of limited hours and geographic coverage being major reasons for rural transit trip denials.

Fifty-two percent (52%) of respondents included a description of a specific service need. Nearly all providers' descriptions were variations on common themes best represented by the following direct quotes from Provider Questionnaires:

- "Increasing demand, frequency, coverage or service area expansion, will require (additional) dedicated operating funds…."
- "Population is very sparsely distributed over a wide area."

- "We simply need the political support to move forward with adding more routes, buses, and coverage area."
- "Recruiting personnel with transit expertise is difficult due to limits on ability to pay market wages needed to attract qualified candidates. Retaining qualified personnel has proved difficult. Our experienced staff often leave the area to pursue more lucrative opportunities in larger cities."

Several providers also mentioned that urbanization has been particularly challenging for Section 5311 rural transit programs. Specifically, there are small urbanized areas that are surrounded by rural areas, thus reducing the amount of Section 5311 funding these counties can receive for rural transit. Yet these rural systems are still faced with dispersed populations in need of service.

Thirty-six percent (36%) of respondents identified the transit workforce as a top administrative challenge, including attracting, training and/or retaining qualified personnel. Their top transit workforce training needs include: Passenger Service and Safety (PASS) training, enhanced compliance regulations training, and additional training on FTA/GDOT contracts and processes. Some also mentioned a need for training and reporting to be available online. Several providers identified a need for additional and continuous training for serving riders with special needs. Others indicated a desire for drivers to learn preventative maintenance.

In terms of meeting rider needs, forty-eight percent (48%) of respondents reported that providing more frequent or higher capacity service was a challenge, and thirty-two percent (32%) reported challenges with garnering public support for transit.

Most providers identified their State-of-Good-Repair needs as new vehicle purchases, regular maintenance schedules, and recruiting highly trained mechanics.

8.2.3 TAC Focus Groups and Interviews

GDOT convened a series of six Technical Advisory Committee (TAC) focus group meetings with specific subgroups of the committee to capture the challenges and needs of each group. These meetings included separate sessions for both rural and urban transit providers, regional commission and metropolitan planning organization (MPO) planners, a focus group on transit technologies, a session for communities without transit, and a Transit Equity and Community Advisory focus group with community advocates.

Needs identified during these sessions largely mirrored the needs identified in planning documents and the Provider Questionnaire responses, including the need for more transit coverage and operating hours, transit that serves workforce, healthcare, education, and disadvantaged populations. More specific needs identified by TAC focus groups were previously described in **Section 5.2**.

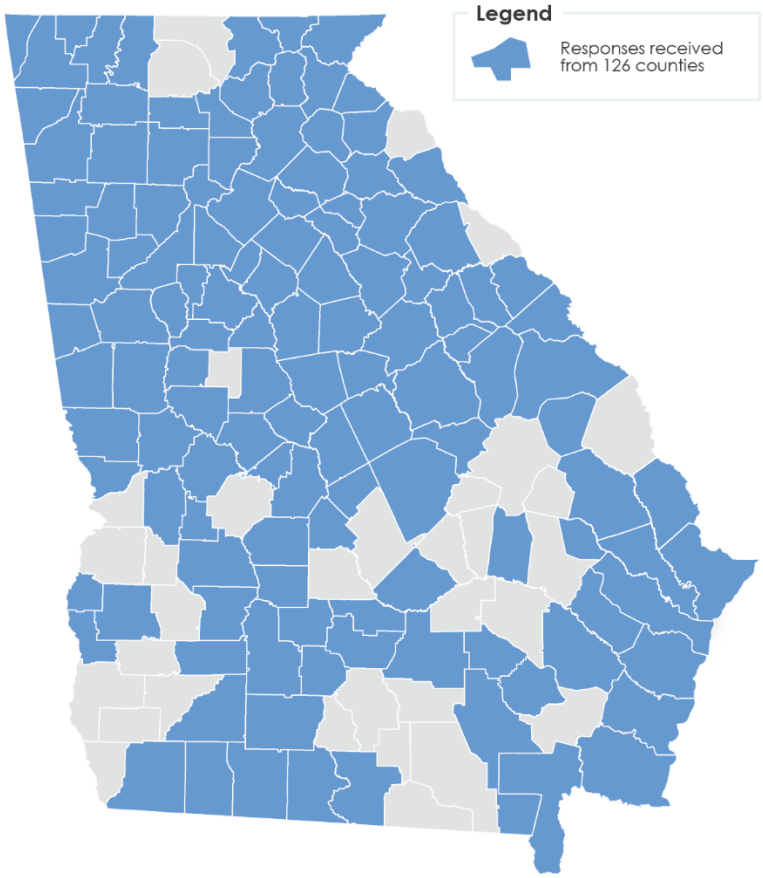
8.2.4 Public Survey

The SWTRP Public Survey was distributed throughout the state to engage both transit riders and non-riders and to better understand how and for what purpose riders use transit services statewide. Survey objectives included assessing the public's priorities for transit and gaining an awareness of issues and barriers to the public's use of transit statewide.

The SWTRP Public Survey garnered 2,971 responses from every region in the state.

The survey effort reached a wide and diverse range of geography and perspectives. Of the 159 counties in Georgia, 79% or 126 counties, were represented with at least one survey response.

Figure 45: Map of SWTRP Public Survey Responses



The most commonly identified challenge to using transit is that 'Transit does not go where I want to go,' selected by fifty-three percent (53%) of respondents. The next most common challenge is 'The distance to the nearest transit service is too far', selected by forty-one percent (41%) of respondents. Both of these responses indicate a need to better link population centers to key destinations such as major employers, medical centers, and schools.

> The most common identified challenge to using transit is that "Transit does not go where I want to go."

A summary of top needs identified in the Public Survey include:

- Transit service that better connects residences with major destinations, activity and job centers;
- Faster or more efficient transit trips;
- More reliable transit schedules; and
- Continued investment in transit safety.

8.2.5 Higher Transit Propensity Geographic Analysis

The transit propensity approach is based on a widely used and well-documented methodology employed by locally developed transit plans in Georgia and across the country. The method employs socioeconomic data available from the U.S. Census American Community Survey (ACS) 5-year estimates to identify transit-dependent and higher transit propensity populations at the census tract level. These populations are weighted and summed by tract to identify areas of relative transit need.

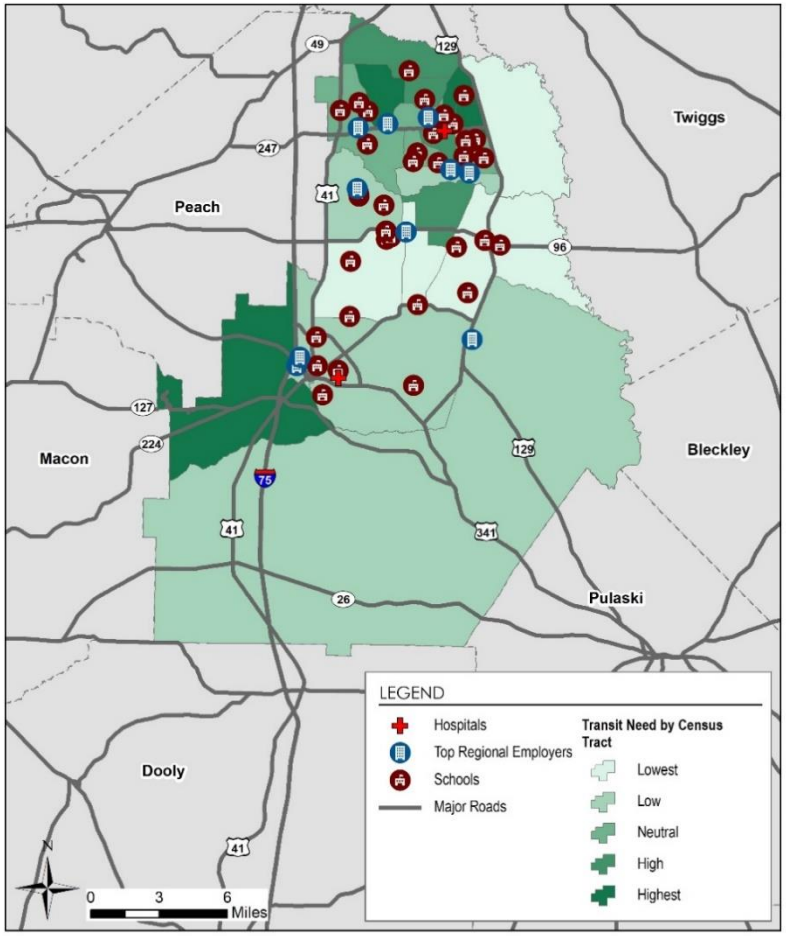
For each transit service area or county currently without transit, a geographic analysis was conducted to illustrate local areas of relative transit need. The maps show areas of relative transit propensity or need based on an analysis of the following demographic categories:

- Individuals residing in zero-vehicle households
- Individuals at or below the poverty line (low-income)
- Individuals with limited English proficiency (LEP population)
- Minority population (all ethnicities and races with the exception of non-Hispanic White)
- Individuals with disabilities
- Senior, or elderly population (60 years or older)
- Youth population (ages 15 to 19)

Using these socioeconomic factors, each census tract's transit propensity is shown, relative to the other census tracts throughout the county or transit service area. Hospitals, schools, and top regional employers are also shown on the maps to depict local activity centers or trip generators. **Figure 46** shows an example - Houston County. The darker census tracts are home to relatively higher transit need populations.

The detailed geographic analysis for each region, existing system, and county without transit can be found in the *SWTRP Needs Assessment Summary Report*.

Figure 46: Example Transit Needs Map



Transit Propensity per Capita by Census Tract in Houston County
(Summer 2019)

8.3 Rural Transit Needs

8.3.1 Rural Quantitative Methods

The SWTRP Quantitative Assessment is designed to estimate the rural transit forecasted trip demand in each rural transit service area and each county currently without transit service. Rural demand is quantified in terms of the number of trips needed to serve a population, with operating and capital costs that correspond to the number of trips.

Forecasted trip demand was estimated using two methods detailed in the Transit Research Board's Transit Cooperative Research Program (TCRP) *Report 161: Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation*, (*TCRP Report 161)*. These two calculations together present a range of rural forecasted trip demand.

The first method known as the Mobility Gap Method, typically yields the larger trip estimates produced in this report and are referred to as the "higher range estimates." The mobility gap is defined as the difference in number of trips taken by individuals with access to a personal vehicle as compared to individuals without access to a personal vehicle. ACS data on zero vehicle households are used as inputs.

The second method is referred to as the Non-Program Demand Method, typically yields the lower trip estimates produced in this report and are referred to as the "lower range estimates. The non-program demand method is specifically designed to estimate trip demand for general public transit service, not trips for various human services transportation programs, which are often coordinated with rural public transit.

TCRP developed this method following a thorough analysis of NTD data, and workshops with rural transit providers. The method accounts for and individually weights certain demographic factors of the transit service area's population that are strong indicators of transit demand, including population age 60+, mobility limited population, and individuals without access to a personal vehicle.

Forecasted trip demand results for both methods are presented in the SWTRP, providing a higher range (mobility gap) and lower range (non-program demand) value for consideration. County-level population projections, provided by the Governor's Office of Planning and Budget, were used to project forecasted trip demand. Average operating and capital unit costs, based on FY2017 NTD data, were used to estimate the investment required for delivering additional transit trips to meet the estimated demand.

The specific formulas and system level results for these methods are included in the *SWTRP Transit Needs Assessment Summary Report*.

8.3.2 Statewide Quantified Forecasted Trip Demand

As shown in **Table 15**, based on 2017 population data, the estimated statewide rural transit forecasted trip demand ranges from 3,341,761 to 7,635,729 annual trips. Statewide, Georgia's 80 rural transit agencies provided a combined 1,797,212 trips in 2017 in the 112 counties with rural public transit services. Georgia currently meets 54% of its lower range demand and 24% of its higher range demand.

Nationwide, 25 states currently meet or exceed their lower range demand and 15 states meet or exceed their higher range demand. Compared to other states, Georgia places 40th and 42nd respectively for the two demand calculations.

Unlike Georgia, rural transit providers in many other states offer rural fixed-route and deviated fixed-route transit in addition to demand response transit, helping to meet their rural trip demand.

Limiting the analysis to only demand response trips (the type of rural service available in Georgia), Georgia places 23rd and 30th in the nationwide rankings.

> Up to **5.8 million** rural trips per year across Georgia currently go unmet. Addressing this demand requires a one-time capital investment of **$24.1 million** + annual capital and operational investment of **$158.8 million**.

Georgia's 80 rural transit agencies reported a combined $34.0 million in operating costs and $8.4 million in capital costs to provide nearly 1.8 million trips in 2017.

To address the current unmet rural trip demand both in counties with rural transit and counties without local public transit, an initial one-time capital investment of $12.8 million to $24.1 million is needed to expand the existing vehicle fleets by 235 to 444 vehicles, as well as $36.9 million to $115.6 million in additional annual operating funds to provide the service. Sustaining the expanded fleet and meeting forecasted trip demand will require sustained annual capital funding of $8.4 million to $10.6 million per year, and $65.8 million to $148.2 million per year in operating funding.

The State of Georgia as a whole is expected to grow by approximately 32.7% between 2017 and 2050. Similarly, rural transit demand in the state is projected to grow, ranging from 4,859,827 to 8,613,553 annual trips in 2050. Annual-required capital investment is expected to grow to a range of $14.8 million to $16.5 million, while annual-required operational investment is expected to grow to a range of $95.2 million to $166.2 million in 2050.

Table 15: Rural Transit Trip Demand Estimates - Statewide

	Existing (2017)	Future (2050)
Existing Trips Provided	1,797,212	N/A
Rural Transit Demand		
Total Rural Trip Demand	3,341,761 – 7,635,729	4,859,827 – 8,613,553
Unmet Rural Trip Demand	1,544,549 – 5,838,517	N/A
Additional Investment Required to Meet Rural Transit Demand		
Additional Vehicles – One-Time Fleet Expansion Purchase	$12.8 M – $24.1 M	N/A
Additional Operating Demand from Current Operations	$36.9 M – $115.6 M	N/A
Total Investment Required to Meet Rural Transit Demand		
Total Annual Demand	$74.1 M – $158.8 M	$110.1 M – $182.7 M
Capital Demand	$8.4 M – $10.6 M	$14.8 M – $16.5 M
Operating Demand	$65.8 M – $148.2 M	$95.2 M – $166.2 M

8.3.3 Quantified Trip Demand - Counties with Current Rural Public Transit Service

As shown in **Table 16**, based on 2017 population data, the estimated statewide rural transit trip demand in counties that offer rural demand-response services ranges from 2,639,892 to 6,087,275 annual trips. Statewide, Georgia's rural transit agencies provided a combined 1,797,212 trips in 2017. These agencies reported a combined $34.0 million in operating costs and $8.4 million in capital costs to provide these trips in 2017.

Up to **70 percent** of annual rural trip demand currently goes unmet in counties with rural transit services.

To address the current unmet rural forecasted trip demand, an initial one-time capital investment of $5.4 million to $13.4 million is needed to expand the existing vehicle fleets by 101 to 248 vehicles, as well as $23.7 million to $86.5 million in additional annual operating funds to provide the service. Sustaining the expanded fleet and meeting forecasted trip demand will require sustained annual capital funding of $6.9 million to $8.5 million per year, and $52.5 million to $119.1 million per year in operating funding.

The State of Georgia as a whole is expected to grow by approximately 32.7% between 2017 and 2050. Similarly, rural transit demand in counties not currently offering rural transit services is projected to grow, ranging from 3,808,283 to 6,844,155 annual trips in 2050. Annual-required capital investment is expected to grow to a range of $11.9 million to $13.1 million, while annual-required operational investment is expected to grow to a range of $75.4 million to $132.9 million in 2050.

Table 16: Rural Transit Trip Demand Estimates - Counties with Rural Transit Service

	Existing (2017)	Future (2050)
Existing Trips Provided	1,797,212	N/A
Rural Transit Demand		
Total Rural Trip Demand	2,639,892 – 6,087,275	3,808,283 – 6,844,155
Unmet Rural Trip Demand	842,680 – 4,290,063	N/A
Additional Investment to Meet Rural Transit Demand		
Additional Vehicles – One-Time Fleet Expansion Purchase	$5.4 M – $13.4 M	N/A
Additional Operating Demand from Current Operations	$23.7 M – $86.5 M	N/A
Total Investment to Meet Rural Transit Demand		
Total Annual Demand	$59.5 M – $127.6 M	$87.3 M – $146.0 M
Capital Demand	$6.9 M – $8.5 M	$11.9 M – $13.1 M
Operating Demand	$52.5 M – $119.1 M	$75.4 M – $132.9 M

8.3.4 Quantified Trip Demand - Rural Counties without Public Transit Service

A total of 37 counties in Georgia lack local public transit services. Public transit service is currently not available in any form in 36 Georgia counties (shown previously in **Section 2.1**).

These counties are predominately located in the Heart of Georgia Altamaha, Southern Georgia, Northeast Georgia, and River Valley regions of the state. One additional county, Rockdale County, is served by SRTA Xpress commuter bus service but not served by local public transit.

As shown in **Table 17**, based on 2017 population data, the estimated statewide rural transit demand in the 37 counties not currently offering local public transit services ranges from 701,869 to 1,548,455 annual trips.

Table 17: Rural Transit Trip Demand Estimates - Counties without Transit Service

	Existing (2017)	Future (2050)
Rural Transit Demand		
Total Rural Trip Demand	701,869 – 1,548,455	1,051,544 – 1,769,398
Investment to Meet Rural Transit Demand		
Vehicles – One-Time Fleet Expansion Purchase	$7.4 M – $10.7 M	N/A
Total Annual Demand	$14.7 M – $31.3 M	$22.8 M – $36.7 M
Capital Demand	$1.4 M – $2.1 M	$3.0 M – $3.4 M
Operating Demand	$13.2 M – $29.1 M	$19.8 M - $33.3 M

To address the current unmet rural forecasted trip demand, an initial one-time capital investment of $7.4 million to $10.7 million is needed to buy vehicle fleets (134 to 196 vehicles) for all rural areas currently without local public transit. Sustaining the new vehicle fleets and meeting forecasted trip demand will require sustained annual capital funding of approximately $1.4 million to $2.1 million per year, and $13.2 million to $29.1 million per year in operating funding.

Based on population growth projections through 2050, rural transit demand in these counties is projected to grow to a range of 1,051,544 to 1,769,398 annual trips. By 2050, annual capital needs are expected to grow accordingly to a range of $3.0 million to $3.4 million, while annual operational needs are expected to grow to a range of $19.8 million to $33.3 million.

Up to **1.5 million** rural transit trips currently go unmet in 37 counties currently without local public transit.

8.3.5 Summary of Identified Rural Transit Needs

Rural transit systems and counties without transit have needs beyond trip numbers. These needs were identified through feedback from the Transit Provider Questionnaire, local plans, and TAC input. These additional needs include service enhancements, supportive infrastructure, and administrative guidance and related support, and are described below:

Establishment of rural transit services is needed in 37 counties currently without local public transit offerings.

- These counties are heavily concentrated in the Heart of Georgia Altamaha, Southern Georgia, and Northeast Georgia Regions, in largely rural areas of the state. The following provides the number of counties without transit services by region:
  - Heart of Georgia Altamaha – 11
  - Southern Georgia – 7
  - Northeast Georgia – 6
  - River Valley – 4
  - Georgia Mountains – 4

    - Middle Georgia – 2
    - Central Savannah River – 1
    - Atlanta – 2
- Initiating service to fill Geographical gaps will require technical and funding assistance, and/or the expansion of existing systems into unserved regions.
- Local communities need adequate capital resources to procure needed vehicles, equipment and facilities, based on identified demand.
- Local communities and providers also need adequate operating budgets to ensure long-term success and existence of new systems.
- Technical and budgetary support is needed to train and retain administrative, operating, and maintenance staff.

Additional, sustainable, and diversified funding opportunities are needed to mitigate currently limited resources and address unmet trip demand.

- Rural transit providers stated they are challenged with the need to expand services to more areas of their community, extend service hours, and offer better frequency or capacity in their service to meet rider needs.
- There is a mobility gap across the state and particularly in rural areas of the state. Rural transit agencies cover broad areas with low residential and employment densities, and myriad rider needs. It is a challenge for many rural providers to identify adequate funding to meet their riders' needs.
- Additional and sustainable funding is needed for expansion of rural services; to increase capacity and hours of service; to train and retain quality staff; and to maintain/replace vehicles and facilities.

Transit service needs are regional and multi-jurisdictional.

- Feedback from localities and transit providers recognizes that commuting or medical trips are usually not made within a single county; yet most of Georgia's rural transit systems are single-county, making it difficult for riders to navigate and for agencies to pool resources to provide more efficient cross jurisdictional services.
- Regional coordination or implementation of regional systems is needed to connect areas of high travel demand with surrounding communities.
- There is a particular need to coordinate with regional employers to provide linkages with the workforce in surrounding communities.
- Counties exploring new service need to coordinate with adjacent counties, particularly where there is significant travel demand between counties.
- Counties and new providers need to identify regional workforce transit demand and link regional employers with outer or surrounding counties where employees may be concentrated.
- Pilot projects, intercounty commuter services, and regional employer shuttles between adjacent counties could be potential first steps to meet regional transit need that exists.
- There is also a need to reduce administrative burdens; regional systems can centralize administrative tasks and reduce related operational costs.

Partnerships are needed to optimize service to meet rider needs.

- Many stakeholders identified a mismatch between transit operating hours and workforce hours. In many industries, night and weekend work is standard. Extended operating hours are needed to make transit a viable mode for workers.

- Providers need to partner and coordinate with medical facilities, employers and other institutions, for scheduling and funding of services, and to improve service opportunities.
- Coordination with employer and institutional schedules can help optimize operating hours to meet commuter transit demand.
- Many providers are interested in asset sharing partnerships between other providers, and with other public or private entities. Such interagency partnerships for facilities and services may result in cost sharing opportunities.

Rural transit systems would benefit from enhanced administrative guidance, training, and technical assistance.

- GDOT already provides numerous annual trainings, guidance, and technical assistance to rural providers. Many providers identified a need for additional or enhanced trainings that could minimize burdens on local entities, specifically with regard to:
  - Maintenance staff training to ensure SGR and preventative maintenance for facilities and vehicles.
  - Administrative training to ensure compliance with state and federal requirements and funding administration and reimbursements.
  - Technical assistance for operations, scheduling and dispatching software to increase efficiency of services and increase reliability of service schedules.
- Many providers in urbanizing areas need guidance and assistance to prepare for a transition from Rural to Urban transit programs, or the Small to Large Urban program.

Increased public education and awareness of available rural transit services is needed.

- Numerous local planning documents and stakeholders identified the need to improve public perception and awareness of transit, potentially through educational campaigns highlighting the safety and benefits of transit.
- Strong marketing and educational campaigns needed to launch new rural transit services.
- Engaging with local leaders and the community can help highlight the widespread benefits of transit services, including safety, congestion mitigation, affordability, and diversity of communities served
- Providers identified a need to quantify and promote potential workforce and economic benefits of transit at local, regional, and state levels; inform elected leaders on the costs and range of benefits transit provides.
- There is a need for state, regional, and local entities to highlight rural transit success stories and facilitate positive community relationships and involvement.
- Providers need to collaborate with schools, employers, medical centers, senior centers, etc. to increase awareness of transit services and promote ridership.
- Many providers are interested in programs that offer free or reduced rides for seniors, students, veterans, and other populations as a means to encourage increased ridership and build positive community relationships.
- Marketing tools and website templates are needed for many providers with limited technical capabilities.

Enhanced pedestrian, bicycle, and multimodal transit accessibility is needed.

- Many local and regional plans or stakeholders identified the need for transit connections with bicycle and pedestrian facilities, and intercity or passenger rail services to help increase transit access.

- Local planners identified a need to encourage development that includes pedestrian and bicycle infrastructure and amenities, particularly where existing or future transit service is planned or anticipated; land use planning, zoning and building codes are needed to support pedestrian and bicycle accommodations in new developments.
- Transit services and connecting infrastructure need to be fully ADA compliant and accessible to all users, regardless of age or physical abilities.

Local transit planning assistance is needed.

- Most of Georgia's rural counties do not have a recent TDP prepared to identify local needs and required investment.
- Many stakeholders identified the need for state or regional level assistance for local communities to quantify the transit needs in their community.
- Improved coordination between transit planning and regional or local land use planning could promote better linkages between transit service and future growth and development areas.

Funding and/or training is needed for new software and technology that improves transit operations and rider experiences.

- There is significant interest in rider amenities and the implementation of a trip planning application.
- Many providers need on-board security video systems.

8.4 Urban Transit Forecasts

Urban public transit services are provided by 17 agencies in Georgia serving diverse urbanized areas throughout the state. Unlike rural demand response systems, urban transit service is typically provided via fixed-route services (bus or rail), and needs are quantified in terms of levels of capital and operating investment rather than individual trips. Many urban agencies have published TDPs or other planning documents that outline proposed capital and operational improvements to their respective systems. The required investments to implement those improvements were incorporated into this report.

8.4.1 Commuter Transit Demand Forecasts

In addition to locally identified projects that urban agencies have published in previous TDPs or other planning documents, seven cross-county commuter transit services were quantified as part of the *SWTRP Needs Assessment Report* to capture areas with high numbers of daily work trips between residential and jobs centers throughout the state. Those seven cross-county pairs are:

- Columbia to Richmond
- Bibb to Houston and Houston to Bibb
- Effingham to Chatham
- Chatham to Bryan
- Newton to Rockdale
- Barrow to Gwinnett
- Hall to Gwinnett

Each cross-county pair yielded very high commuter transit demand to operate at morning and afternoon peak hours. Annual capital and operating investment required to implement five new services serving them were estimated as part of the investments presented in this plan.

8.4.2 Locally Identified Projects

The Atlanta-Region Transit Link Authority (ATL) is responsible for developing and regularly updating a transit plan for the 13-county Metro-Atlanta region. Transit projects must be included in the plan to be eligible for federal funds, state bond funding, and Transit Special Local Option Sales Tax (TSPLOSTs) funds. In 2019, agencies within the ATL's jurisdiction submitted 192 such projects for inclusion in the ATL Regional Transit Plan (ARTP). Transit Asset Management (TAM) Plans further identify comprehensive SGR needs for agencies within the ATL. The SWTRP incorporates the ARTP by reference and includes the expected investment levels of included projects in the overall statewide needs. TAM Plan-derived SGR needs for the ATL region are included within the statewide needs. All other investment estimates and needs for strategies included in this report are applicable to only rural transit providers and urban agencies outside the ATL region.

Outside the ATL region, published Transit Development Plans (TDPs), feasibility studies, other transportation plans, and stakeholder input inform the capital and operational demands and investment level estimates. Where available, locally-developed and project-specific investment levels are included for each strategy. Where local estimates are not available, GDOT developed estimates to implement each strategy outside the ATL region.

Six jurisdictions currently not offering urban transit services have conducted feasibility studies aiming to introduce urban fixed-route transit service to their communities: Brunswick, Cartersville, Griffin, Dalton, Valdosta, and Warner Robins. At the time of this report, Forsyth County is initiating planning work for urban service as well.

In addition to capital and operational investments associated with urban transit services, some agencies have also laid out SGR investments, generally in their Transit Asset Management (TAM) Plans, which focus on maintenance, rehabilitation, and replacement of existing assets. In general, locally identified investments tended to vary between reviewed plans by assumed timeline; in other words, some plans cited investments on a per-year basis, while others cited investments over a time period of five years, ten years, 20 years, and so on. Because of this, all investments reported in this section are calculated as per-year averages.

For this report, urban transit forecasts have been summarized separately between the 13-county ATL region and the remainder of the state. Outside the ATL region, the urban transit forecasts identified at the time of this writing include an average of $244.6 million in annual service expansion needs, $17.4 million in in annual enhancement needs.

Within the ATL region, urban transit forecast identified include an average of $763.2 million in annual service expansion, and $425.8 million in service enhancement needs, including $285.8 million in SGR needs identified in TAM plans available at the time of writing.

In total, there is a locally identified investment requirement of $1 billion in annual service expansion funding, and $443.2 million investment in annual service enhancement funding is forecasted for urban transit systems statewide.

In terms of operating and capital expenses reported in the *SWTRP Transit Needs Assessment Report*, outside the ATL region, urban systems have identified an average of $170 million in annual capital investments, $74 million in annual operating investments, and $17 million in state-of-good-repair needs. Within the ATL region, there is an average of $627 million in annual capital investments, $277 million in operating investments, and $286 million in state-of-good-repair investments. In total, urban systems have identified an average of $796 million in annual capital investments, $351 million in annual operating investments, and $303 million in annual SGR investments. These figures are summarized in **Figure 47**.

Figure 47: Locally Identified Urban Transit Funding Forecasts

8.4.3 Summary of Urban Transit Plans

Statewide, the various needs of Urban providers are summarized below:

Additional, sustainable, and diversified funding opportunities are needed to maintain and improve existing service level and launch new urban systems.

- Urban transit providers stated they are challenged with the need to expand services to new areas, extend service hours, and improve the capacity or frequency of service.
- There is a need for additional and sustainable operating, capital, and SGR funding to meet rider needs.
- Many providers find it challenging to retain their transit workforce, particularly drivers and maintenance staff who can seek higher pay in the private sector. These providers identified a need for additional budget to better train and retain quality administrative, operating, and maintenance personnel.

Regional transit service and strategic connections are needed.

- Approximately one third of daily commute trips cross county lines. Areas with high cross county commuter trips present an opportunity for regional commuter transit service, and connections between multiple providers to ease transfers for riders.
- Urban connections are needed between demand-response or fixed route bus services with higher capacity and intercity bus and passenger rail services.
- Improved planning support is needed for intercity bus and passenger rail infrastructure and transit services at the local, regional and state levels.
- Evaluations of regional and on-demand commuter services are needed.

- Many areas have a need for planning and quantifying the investment required for regional transit services that meet the workforce needs of urban to rural commuters.
- Some areas need an evaluation of additional park and ride lots and services into larger urbanized areas from outer commuter sheds.

Implementation of fixed-route service is needed in several urbanized areas where urban service has not yet been established.

- Several urbanized areas, such as Brunswick, Cartersville, Dalton, Warner Robins, Valdosta, and the outer Chattanooga area in Georgia, have the demand and need for fixed route service.
- State or regional technical and financial assistance is needed to help plan and implement new smaller urban fixed route systems.
- State or regional assistance to help aid and train demand-response providers in transitioning to fixed route service.
- State or regional assistance is needed in the transition from Small to Large Urban providers, where applicable.

There is a need for enhanced outreach and marketing efforts to increase awareness of urban transit services.

- Improving public awareness is needed with regard to the widespread benefits of transit, including safety, congestion mitigation, affordability, and diversity of communities served.
- Agencies can work with schools, employers, medical centers, senior centers, and others to increase awareness of transit services, promote ridership, and build positive community relationships.
- Support for transit may improve by highlighting the positive potential workforce and economic impacts of transit at local, regional, and state levels.
- Programs that offer free or reduced rides for seniors, students and other segments of the population may encourage increased ridership, result in positive community benefits and relationships.

9.0 Transit Funding Options

This section presents the universe of potential funding sources available at the federal, state, and local levels. Existing funding sources within Georgia are discussed below, as well as transit funding sources utilized in other states reported by American Association of State Highway Transportation Officials (AASHTO).

9.1 Existing Transit Funding and Sources in Georgia

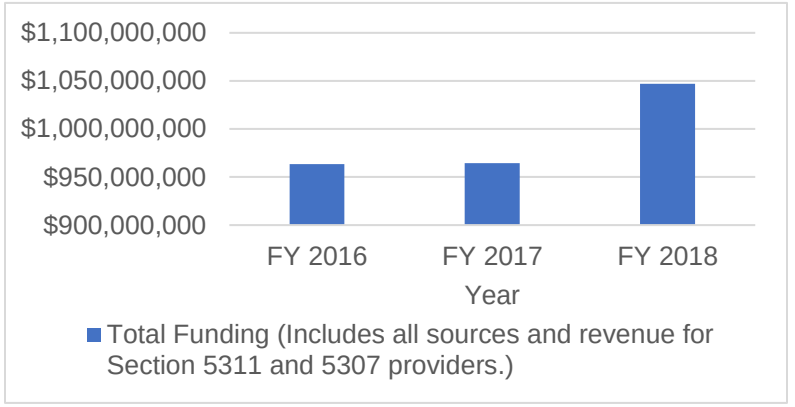
Existing federal, state, and local level funding sources currently eligible to be used for transit projects in Georgia are listed in **Figure 49** and include the following types of funding:

- Federal Transit Administration (FTA) competitive grants;
- FTA formula funds;
- Federal flexible funding formula programs;
- Other federal competitive grants;
- State funds; and
- Local and regional funds and programs, including Community Improvement Districts (CIDs) and the potential for matching public private partnerships.

Historically, transit systems in the State of Georgia have primarily relied on federal formula and competitive grants, local contributions, taxes and fees, and fares or other revenue streams (e.g., advertising) for funding. Cumulatively, these sources provide approximately $1.05 billion annually for public transit services across the state, including $936 million within the ATL region, and $111 million outside the ATL region, and $38.4 million for rural providers.

Figure 48 illustrates transit funding levels across Georgia for FY 2016 through FY 2018. 5.9% of all Georgia's transit funding comes from state dollars. At $6.36 annually, Georgia's state transit funding per capita ranks 29th among all states.

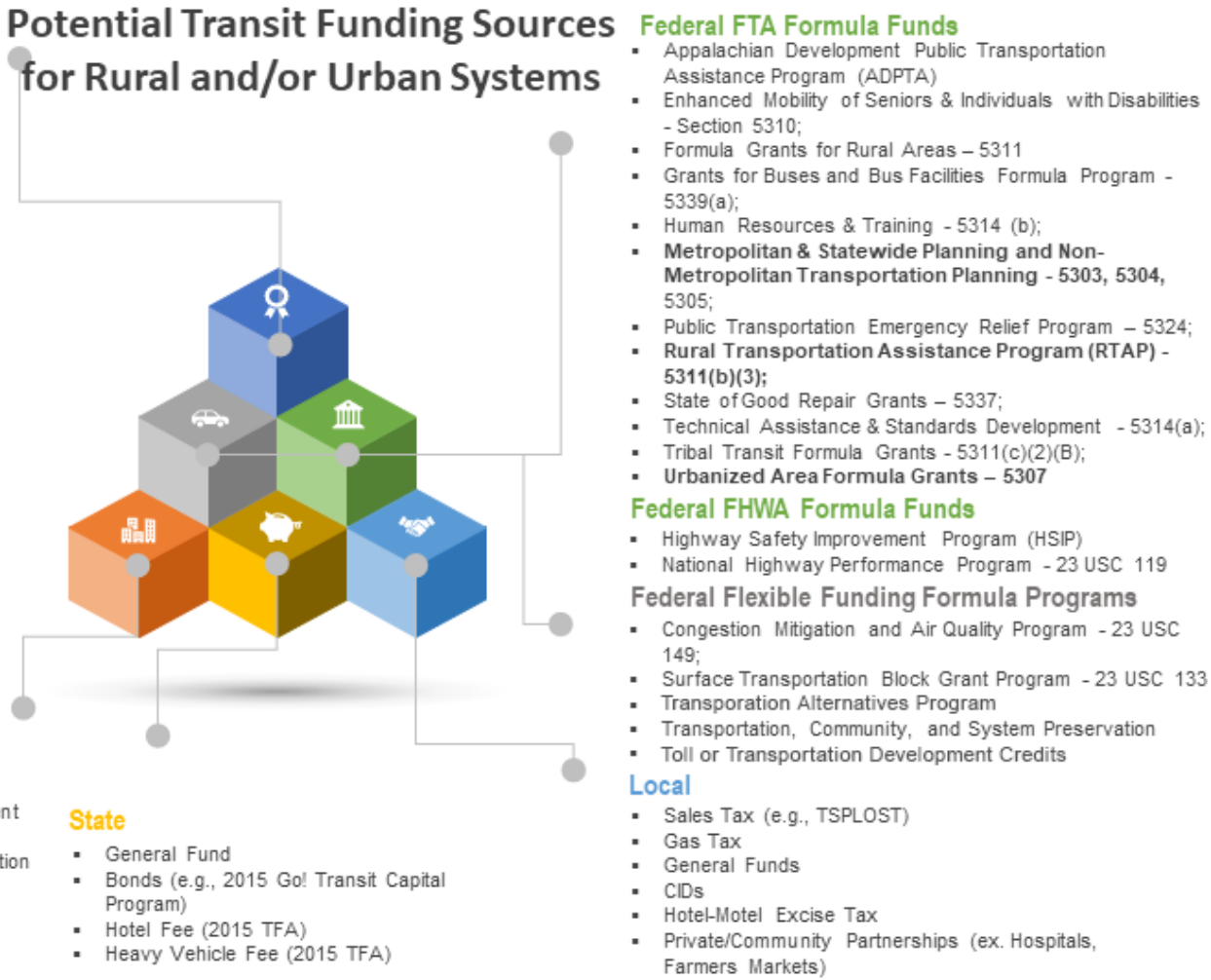
Figure 48: Historical Transit Funding Levels in Georgia[20]



Current and recent state funding sources for transit in Georgia include general funds and the $75 million in General Obligation bond funds designated by the Georgia General Assembly for the Go! Transit Capital Program. Administered by the State Road and Tollway Authority (SRTA), this competitive funding program was designed to address some of the critical capital-related public transportation needs throughout the state. The program was open to existing public transportation operators as well as local, regional, and state governmental units, including CID's. Grants were awarded in June 2016 to 11 transit capital projects across the state, with project investment levels ranging from $400,000 for a park-and-ride lot redesign and upgrades to $30 million for audio visual information system upgrades at MARTA's 38 rail stations.[21]

GDOT's annual state funding for transit is approximately $3 million per year and came from the state's general fund, rather than from a dedicated, transit-specific funding source.

Figure 49: Potential Grant Opportunities for Transit in Georgia



Additionally, the state's 2015 Transportation Funding Act included a $5 per night hotel fee and special fees on heavy vehicles, both of which must be used for transportation purposes, which can include transit.[22] [23] [24]

Further details on state transit funding, including eligibility of sources to be used for transit capital and/or operating expenses, is provided in the *SWTRP Strategies and Funding Scenarios Technical Report*.

9.1.1 Local Funding Sources & Opportunities

Local sources of transit funding in Georgia primarily include local sales taxes or Transportation Special Local Option Sales Taxes (TSPLOSTs), local gas taxes, and city or county general funds.[25] Community Improvement District (CID) funding, hotel/motel excise tax, and public private partnerships are additional potential local sources of funding and resources for transit.

According to AASHTO's *Survey of State Funding for Public Transportation – Final Report 2019, Based on FY 2017 Data*, of state reporting on local funding sources for transit, city and county general fund allocation were the most frequently reported local funding source, used in at least 28 states. 18 state DOTs reported that local sales taxes were used to fund transit, while 17 indicated local property taxes and 11 mentioned other local sources such as local gas taxes, rental car fees, and income taxes.

9.2 State Transit Funding Sources Utilized in Other States

According to a 2019 report by the American Association of State Highway Transportation Officials (AASHTO), all but four states provide some amount of state funding for public transportation. The following are the most common major sources for overall state transit funding:

- General funds;
- Bond proceeds;
- Gas tax;
- State transportation fund;
- Vehicle registration / license / title;
- General sales tax;
- Trust fund;
- Motor vehicle / rental car sales tax; and
- Lottery.

The following are additional but less commonly used transit funding sources in other states:

- Rideshare Tax / Surcharge;
- Toll Revenue;
- Corporate Franchise Tax / Fee;
- Corporate Income Taxes;
- Casino Taxes; and
- Congestion Pricing.

Further detail on each source listed is provided in the *SWTRP Strategies and Funding Scenarios Technical Report*.

10.0 Strategies

This section identifies and describes strategies to address Georgia's transit needs and gaps, categorizing them into three areas. Planning-level annual investment levels are included for each strategy along with the numerous benefits of implementation. For consistency, all investments are presented as initial annual amounts. The strategies address specific needs identified in the *SWTRP Transit Needs Assessment* and were developed through extensive stakeholder input.

Outside the ATL region, published TDPs, feasibility studies, other transportation plans, and stakeholder input inform the capital and operational needs and investment estimates. Where available, locally developed and project-specific investment estimates are included for each strategy. Where local estimates are not available, GDOT developed estimates to implement each strategy outside the ATL region.

Inside the ATL region, projects identified in the ARTP are included by reference and the investment level of each are captured within **Section 10.2.2.4**. TAM Plan-derived SGR needs for the ATL region are included within **Section 10.3.2.1**. All other investment levels for strategies included in this report are applicable to only rural transit providers or urban agencies outside the ATL region.

A total of 35 strategies are included and placed into three overarching categories: Administrative Tools and Guidance, Transit Service Expansion, and Transit Service Enhancements. The three strategy categories are described as follows:

- **Administrative Tools and Guidance** strategies assist with planning support, transit program delivery support, transit workforce development, and new programs to improve mobility and support reliable rural transit service statewide.
- **Transit Service Expansion** strategies increase service coverage through the implementation of new transit services. These include adding additional routes, coordination between adjacent service, formation of regional systems, additional vehicles, expanded hours of service, and higher service frequencies.
- **Transit Service Enhancement** strategies improve the rider experience by enhancing transit system safety, ease-of-use, efficiency and reliability, and pedestrian and bicycle connections.

Many of the individual strategies could fit under multiple categories. For simplicity, each strategy is listed under just one overarching SWTRP category.

Similarly, common themes for improving transit span multiple overlapping categories and multiple strategies, including:

- Regionalization;
- Coordination and Mobility Management;
- Service Efficiency;
- Adding Capacity;
- New Services;
- Maintaining State-of-Good-Repair; and
- Transit Technology and Innovation.

Regionalization of transit planning and service delivery can both improve service for riders and realize efficiencies for providers. Travel demand is not bound by county or city lines, yet individual transit system service boundaries often are, limiting the ability of transit to meet the day-to-day transportation needs of many Georgians. Regional transit better connects both rural and urban riders with surrounding job centers, healthcare, and educational opportunities. Potential efficiencies from collaboration or regionalization of neighboring providers can include shared fleets, driver and mechanic sharing, centralized scheduling and dispatching, and consolidated administrative tasks.

Numerous strategies, spanning each of the three categories, address various stages of transit regionalization. These strategies include regional TDPs, a state mobility management program, a mechanic and driver sharing program, shared stops or facilities, regional fleets and dispatching, and a statewide trip planning app.

The theme of coordination and mobility management is closely related but extends beyond the provision of transit service to include collaboration with intercity services, human services transportation, healthcare providers, major employers, educational institutions, and other key stakeholders. A mobility management program and similar efforts will facilitate coordination among modes and providers, allowing Georgians to better travel between different communities and within them.

Improving service efficiency is about doing more with less. Fiscal constraints prevent all needs from being met, so implementing policies and best practices that improve transit service efficiency will allow providers to maximize their system's limited resources. Maintaining SGR, optimizing routes, coordinating service and co-locating stops with neighboring providers, right-sizing fleets, and matching service hours with major employers are strategies to improve transit service efficiency.

Adding capacity, particularly for rural providers, is a primary strategy to address unmet transit need. There is demand for transit across Georgia that is going unmet due to a lack of capacity from transit providers. Vehicle and staffing limitations mean that rural transit trip schedules are fully booked a week or more in advance. Urban fixed route systems do not have the resources to run higher frequency service that meets rider needs. Adding capacity to the rural fleet will allow unmet trips to be completed, while additional urban capacity will facilitate higher route frequencies and more convenient service.

New services go hand in hand with adding capacity and regionalization. 37 counties currently lack local public transit service, and six cities have planned, but not yet implemented urban service. Initiating rural transit service in all unserved counties, and urban transit in unserved cities will ensure that all Georgians reside within a transit service area. Further, many areas of the state need commuter transit service to facilitate daily cross-jurisdictional travel between suburban and rural areas and urban centers. Each of these new transit services could be achieved through regionalizing existing systems and adding capacity, or by standing up new regional providers.

Maintaining the existing transit service, fleet, and assets is critical to expanding service and capacity. Vehicles and facilities must be maintained within SGR to ensure safe and efficient operations. As services expand, those assets must also be maintained if they are to meet the ongoing needs of riders.

Interwoven with each of these themes are transit technologies and innovation. Transit signal priority, automated stop announcements, real-time vehicle tracking, mobile apps, asset management software, zero-emission electric buses, and mobile fares are all examples of innovative technologies that exist today and can be deployed to enhance safety, improve reliability and the rider experience, regionalize service, and make transit more accessible to all Georgians.

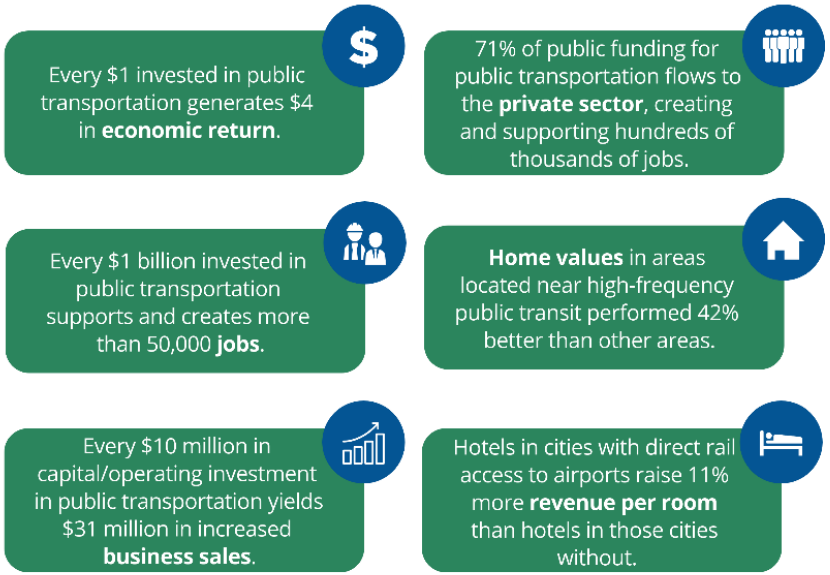
While these technologies are ever-evolving, with new or enhanced products coming out every year, providers should not hesitate to delay in deploying the best available technologies available today. The promised future development of revolutionary technologies, such as automated vehicles, is often used as an excuse for inaction or delayed transit investment.

Transit providers should not substitute meeting the transportation needs of their communities today for the promise of technologies still under development. Instead, they should invest in proven technologies that meet their riders' needs, while also keeping an eye to the future. Generally, open standards, interoperable systems, and built-in upgrade capabilities can help future-proof technology investments, fostering competition among suppliers and allowing individual components to be upgraded with new innovations over time.

Implementation of the strategies included in this report will achieve the SWTRP vision statement, to "*Improve quality of life and economic opportunities for all Georgians by supporting an innovative, connected, reliable, and accessible multimodal public transportation network*." The collective economic benefits could far exceed the level of investment required for implementation.

The American Public Transit Association (APTA) has calculated the potential economic impacts, or return on investment, of investing in public transportation. They find that for every $1 million invested generates $4 million in economic return, including 50 jobs and $3.1 million in increased local business sales.[26] APTA's findings are summarized in **Figure 50**. Based on these general guidelines, the potential economic impacts were calculated for the SWTRP's Transit Expansion and Transit Enhancement strategies.

Figure 50: Transit Return on Investment



Further detail on the strategies, specific needs addressed, and specific methods for estimating required investment for implementation can be found in the *SWTRP Strategies and Funding Scenarios Technical Report*.

10.1 Administrative Tools and Guidance Strategies

Administrative Tools and Guidance strategies are those that assist in planning, policies, marketing, employee training and retention, funding, data analysis, and providing guidance and assistance for specific transit technology integration such as General Transit Feed Specifications and on-board units. These 15 strategies are expected to require a total annual investment of $3.3 million, collectively accounting for under one percent of the total annual investment needed across all three strategy categories.

This lower required investment results in easier implementation, making these strategies attainable in the short-term.

It is anticipated that Administrative Tools and Guidance would be made available to all transit agencies across the state but would primarily be utilized by GDOT to assist counties with rural transit, small urbanized areas, and counties without public transit. Other agencies such as existing providers, regional commissions, and MPOs could assist in administering these strategies, particularly for counties without public transit.

As shown in **Figure 51**, these 15 strategies are categorized into the following four subsets:

- Planning Support;
- Program Delivery Support;
- Transit Workforce Development; and
- New Programs.

Figure 51: Administrative Tools & Guidance Strategies

10.1.1 Planning Support

Within the Planning Support category, strategies and investment levels are shown in **Figure 52** and discussed below:

Figure 52: Planning Support Strategies

10.1.1.1 *Develop Transit Development Plan Guidance and Regional TDPs*

Transit Development Plans (TDPs) support the development and provision of effective public transit service in both rural and urban communities. The *SWTRP Needs Assessment Report* determined that most of Georgia's rural counties do not have a recent TDP prepared and that many parts of the state would benefit from additional local transit planning assistance and increased options for coordinated regional transportation.

A guidance document or handbook for TDP development will support effective transit planning by providing agencies and communities with an outline to follow, core components, and considerations for TDP development, as well as best practices and other supportive tools. The implementation of GDOT-hosted training sessions and webinars will be used to guide transit providers and planners through the TDP development process.

Typically, TDPs are strategic plans with a ten-year planning horizon, and are updated on a five-year cycle. TDP scopes can be customized to meet the needs of each system, but they usually include an overview of an area's demographics and existing transportation network, a projection of future needs, including a budget, and a series of strategies to enhance public transit.

Single county TDPs are the norm in Georgia. Though not required, GDOT currently supports TDP development through policy and planning grants and encourages updates to TDPs every 5 years. These TDPs serve as the backbone of transit planning by providing strategic planning support for service and capital investments that meets the provider and community goals.

Moving from single-county to regional TDPs allows counties and their respective Regional Commissions to pool resources and manpower, creating plans at a level large enough to consider regional needs and travel patterns, but still granular enough to focus on local transportation issues and concerns. Planning and coordination among systems within a region helps to ensure that transportation needs are met while promoting accountable and transparent decision making. GDOT will support the development of regional TDPs to facilitate more efficient and effective cross-jurisdictional transit service. Development of regional TDPs should be considered the first step toward regionalizing transit service in Georgia, as discussed in **Section 10.2.3.1**.

The required investment to create and annually update a Regional Transit Development Plan Policies and Guidance Manual is estimated at $45,000. Additionally, the required investment for developing regional TDPs is estimated at $250,000 each. Three regional TDPs are to be developed annually, ensuring all regions of Georgia will have an updated TDP every 5 years.

10.1.1.2 *Develop Fleet Right-Sizing Guidance*

The development of fleet right-sizing guidance will support providers in planning transit vehicle purchases and optimizing their services. Fleet right-sizing is the process of adjusting the size, extent, function, and composition of existing or planned transit assets and services in response to changing needs over time.[27] Transit agencies find it challenging to meet ridership demands with limited funding. Ensuring that the proper number and type of vehicles are in use can help to address some capacity issues while preserving financial sustainability.

Right-sizing opportunities may exist for systems or routes with persistent over or under capacity issues. Depending on the circumstances, higher or lower capacity vehicles may be more appropriate to meet a system's needs. The development of guidance, training, and other support for appropriately sizing vehicles and overall fleets can help ensure transit systems operate as efficiently as possible.

The required investment to develop and update a fleet right-sizing guidance document is estimated at $36,000.

10.1.1.3 *Enhance Guidance for New Transit Providers*

Starting a new transit service from the ground up presents many challenges, including identifying funding, service planning, vehicle purchases, and service implementation. The development of a guidance document specifically tailored for initiating new transit service will assist unserved communities, many of which have limited local transit expertise, to overcome those challenges. This new service guidebook will be developed in addition to and in coordination with the TDP guidance (**Section 10.1.1.1**) and the technical assistance GDOT already provides communities interested in initiating transit service,

The new service guidebook will provide assistance to communities without transit service in identifying transit needs, creating a capital and operations plan, identifying available funding sources, and applicable state and federal compliance issues.

The required investment to develop and update enhanced guidance documents for initiating new transit service is estimated at $90,000.

10.1.1.4 *Develop Guidance for Urbanizing Systems*

Due to urbanization in communities across Georgia, it is anticipated that following the 2020 Census Georgia's overall apportionment of the FTA's Section 5311 Rural Transit program funds will decline, and that several transit providers may need to transition from the FTA's Section 5311 Rural Transit program to the Section 5307 Urban Transit program. Additionally, urban systems may transition from the Small to Large Urban funding and compliance requirements.

The transition between programs has complicated funding and compliance implications for transit providers (discussed further in the *SWTRP Existing Conditions and Future Trends Analysis Report - Part I*). Development of administrative and guidance resources for urbanizing communities will help support affected agencies, easing the administrative burdens associated with unfamiliar compliance requirements and reducing the likelihood of service disruption to customers.

GDOT's current research indicates that statewide, Section 5311 apportionments may decline by up to $5.3 million, and that seven rural communities currently eligible for Section 5311 Rural Transit funding may be reclassified under Section 5307 Large Urban Transit funding.[28] If these projections are realized, there may be a future need for state-level financial support to offset reductions in federal rural transit funds and assist with transitions from rural to urban transit services.

At the time of this writing, there is still significant uncertainty as to the outcome of the 2020 Census results, and how FTA funding will be impacted in future years. GDOT will continue to monitor urbanization trends, as well as potential regulatory and legislative changes that could affect funding allocations for Georgia.

The required investment to develop guidance and technical assistance for transitioning systems is estimated at $75,000.

10.1.1.5 *Enhance Support for Pursuing Competitive Grants*

Competitive Federal grants are a major source of funding for local transit agencies, and providers seek to maximize these opportunities when they are available. Though, federal grant applications are complex and require local matching funds. When a competitive grant opportunity becomes available, it is often challenging for providers to compile all application components, and seek approval for the local matching funds from their county board or local governing authority, before the application deadline.

GDOT currently provides rural and small urban operators technical assistance in pursuing competitive grants, and has had success winning awards for GDOT subrecipients. Enhancing current assistance for transit providers in pursuing competitive grants, and managing the grants awarded, will allow Georgia's providers to implement locally identified projects faster and at a lower local cost by leveraging federal funds.

The *SWTRP Strategies and Funding Scenarios* technical report contains a description of all relevant local, state, and federal funding opportunities, including several discretionary grant programs administered by USDOT (listed in **Section 9.0**).

GDOT will work to hold regular webinars with detailed information on existing and anticipated funding resources, which includes federal FTA competitive grants, other federal competitive grants, federal FTA formula funds, federal flexible funding formula programs, state, and local funding.

The Department will also proactively work with providers to identify potential funding sources for each of their locally identified and planned projects and initiate the application process before a federal grant opportunity becomes available.

To further assist providers in pursuing competitive federal funding, GDOT will create a five-year pilot program designed to reduce the local funding share, and allow Georgia's providers additional time to seek local approval for expending funds. Under the pilot program, a $5 million pool of state funding would be set aside to help pursue competitive federal transit grants.

Funding from the pool would be eligible to commit as the local matching share for federal grant applications, essentially serving as a line of credit for Georgia's transit providers. This will allow providers to meet tight application deadlines, while they continue to seek official funding approval from their local board or governing body. Providers would need to reimburse the funding pool for the local share of any grants awarded.

Accounting for the additional staff time required of GDOT personnel, the approximate required investment to enhance technical and administrative support for pursuing federal grants is $60,000 annually, the equivalent of one full-time employee.

10.1.2 Transit Program Delivery Support

The Transit Program Delivery Support category of strategies and estimated investment required for each are shown in **Figure 53** and discussed below:

Figure 53: Transit Program Delivery Support Strategies

10.1.2.1 *Enhance Grant Administration and Reimbursement Guidance*

GDOT currently provides support and assistance to its subrecipients, including assistance with grant administration and funding reimbursements. Department staff also review the reimbursement process and provide updates at GDOT's annual Subrecipient Workshop. The reimbursement process is complicated, and many providers indicated a need for additional guidance and support.

Developing and regularly updating a Grant Administration and Reimbursement Guidance Manual and corresponding web video training program will further enhance the support GDOT provides. The guidance manual and web videos will provide step-by-step instructions to subrecipients for funding reimbursements, serving as a convenient resource for transit providers.

The required investment to develop a guidance manual and instructional web videos, including periodic updates, is estimated at $45,000.

10.1.2.2 *Develop Transit Technologies Guidance and Enhance Coordination*

Connected vehicle (CV) and other transit technologies are rapidly evolving, with new products or enhanced features and functionality routinely released. These technologies (discussed further in **Section 10.1.2.2**) offer many potential transit benefits, including safety, on-time performance, and more.

Implementing technologies like transit signal priority requires the installation of road-side units (RSUs) at traffic signals, as well as on-board units (OBUs) on each transit vehicle. It can be challenging for transit providers to keep pace with technology development, evaluate the technologies best for their agency, coordinate with other agencies (i.e., traffic signal operators), and ensure their transit workforce is adequately trained to use the new technologies.

To better prepare Georgia's transit agencies for the latest transit and CV technologies, GDOT will develop and routinely update guidance materials for evaluating transit technologies. The Department will also proactively work with providers around the state to inform them of available technologies, coordinate implementation, and adequately train provider personnel.

GDOT is already working with rural transit providers to implement and train their staff on a new trip scheduling and dispatching system, including teaching drivers how to use on-board tablets. Further, the software for all of the state's approximately 6,000 traffic signals owned by GDOT are transit signal priority capable. RSUs have been installed at more than 50 intersections in metro-Atlanta, with additional installations planned. GDOT will coordinate with interested transit providers statewide to implement transit signal priority (discussed further in **Section 10.3.1.3**) and related technologies.

As technologies continue to develop, there will be additional opportunities for GDOT-led trainings and guidance throughout the state. GDOT will work with providers to identify their interest in various technologies, and help coordinate trainings and implementation as needed.

The required investment to develop and update technology guidance materials and training manuals statewide is estimated at $140,000 annually. Approximately 50 training events will be held each year, with a total estimated investment of $100,000. This assumes one training event per quarter in each of Georgia's 12 regions.

The total required investment for this strategy is estimated at $240,000 annually.

10.1.2.3 *Develop Fare Policy Toolkit*

Each transit provider has the ability to set their own fare policy. Fares can be a single flat fare for all riders and trips, a variable fare by distance or destination, or include discounts for certain ridership groups (i.e., seniors, students, individuals with disabilities, etc.). Providers must take many factors into account when setting their fares, including the needs of the community, ridership projections, and system finances. Fare adjustments

can help providers achieve certain goals, such as increased ridership or revenue.

The development of fare policy toolkit and associated training will support transit service providers in understanding issues associated with various fare policies, including discounted fares, pricing strategies, payment options, the costs and benefits of collection methods, fare equity issues, outreach methods, and coordination of fares among multiple providers. The toolkit will be developed based on national best practices and input from Georgia's transit providers.

The required investment to develop and update a fare policy toolkit is estimated at $45,000.

10.1.2.4 *Provide Marketing Support and Toolkit*

In many parts of Georgia, particularly rural areas, the availability of local transit service is often not widely known. Further, misconceptions exist about transit being a mobility and accessibility service for all Georgians. There is a need for improved public awareness of the benefits of transit and the diverse populations it serves.

The use of messaging, marketing, and information campaigns will improve the public's understanding of public transportation and its benefits to the entire community. GDOT is working with local providers to develop marketing plans and toolkits for their agencies, including social media and graphical support, to help enhance providers' on-line presence. As part of the SWTRP, GDOT developed individual profile sheets for each transit agency in the state, highlighting service hours and areas, fares, contact information, and key operating statistics.

The profiles are available at the following website (http://www.dot.ga.gov/IS/Transit/TransitPlan) and are meant to serve as a tool to inform potential riders of available services.

GDOT will also work to develop a transit website template for providers to better inform their community of services offered and how to ride. The template will meet FTA guidelines, including Title VI information. Public transportation is a customer-driven industry, communications should be clear and widely available to riders. Websites and social media can be convenient outlets for real-time service updates and transit information, improving public relations, customer engagement, and branding.

The required investment for developing and updating a transit marketing plan for the state is estimated at $57,500, based on a review of public transit agency marketing plans. Statewide website and social media support are estimated at an additional $45,000 annually.

The total required investment for this strategy is estimated at $102,500 annually.

10.1.2.5 *Support GTFS Data Development*

General Transit Feed Specification (GTFS) is a data format that allows public transit agencies to publish their route and service data in a manner that can be consumed by a wide variety of software applications.

Uses of GTFS data in both rural and urban areas include trip planning and maps, data visualization, timetables, accessibility, and real-time transit information. In many cases, the GTFS data is posted on third-party trip planning websites such as Google Transit. GTFS data is most widely useful when datasets are consistent among agencies.

Many larger transit agencies internally develop GTFS data, which is technically complex and requires ongoing maintenance with route or service changes. Providing agencies with support and technical assistance in GTFS data development and maintenance will help to ensure consistency among systems and facilitate the development of trip planning applications for all of Georgia's providers (see **Section 10.3.3.1**). Such applications will also facilitate rider transfers between providers at shared facilities.

The required investment to support the development and maintenance of a GTFS dataset for the ten urban systems outside Metro-Atlanta is estimated at $5,000 per agency, "ranging from $950 for simplest networks to $9,400 for the agency with the most complex network."[29]The total annual required investment for this strategy is estimated at $50,000, covering data development and maintenance support for ten agencies per year.

10.1.2.6 *Support NTD Data Development*

The National Transit Database (NTD) supports local, state, and regional planning through analysis of financial, operations, and asset conditions of transit systems in the United States.[30] Each urban agency is responsible for reporting their service data annually. The data is complex and can be difficult to compile and submit in the required format.

Providing technical assistance and support for NTD resources to Georgia's seven small urban providers will alleviate some of the local reporting burdens and allow providers to focus on service delivery. The support provided may include technical assistance and small-urban forums to discuss common data issues. GDOT already provides NTD reporting for rural agencies.

The annual required investment for additional GDOT staff to assist seven small urban providers with NTD reporting is estimated at $30,000.

10.1.3 Transit Workforce Development

The Transit Workforce Development category of strategies and estimated investment required for each are shown in **Figure 54** and discussed below:

Figure 54: Transit Workforce Strategies

10.1.3.1 *Enhance Bus Driver and Mechanic Training Programs*

Hiring, training, and retaining employees can be a major challenge for transit operators. Training is a major time and fiscal investment, and transit agencies often face competition from private logistics companies and other public agencies, which can make retaining skilled drivers and mechanics difficult.

The SWTRP public involvement process revealed a number of areas where GDOT can expand upon existing offerings to help agencies to enhance bus driver and mechanic training. Areas identified for more and enhanced training offerings include:

- Provide GDOT-led trainings for drivers;
- Training kits (e.g., videos, handouts, workbooks, readings); and
- Financial support for degree or certification programs (paired with transit employment commitments).

GDOT currently offers its subrecipient agencies multiple training programs each year, though the trainings are generally focused on administrative needs. Driver and mechanic training is typically handled by local agencies and can be a burden for smaller providers. GDOT will expand its training offerings to include support for drivers and mechanics.

For drivers, GDOT will facilitate quarterly Passenger Assistance Safety and Sensitivity (PASS) training in each region of the state, as well as trainings on safety protocols, and how to use on vehicle software (OBU tablets). Offering trainings once per quarter in all 12 regions will make them more accessible to the transit workforce across the state, and help ensure bus drivers are up-to-date on the latest regulations, safety, passenger assistance, and technology applications.

Corresponding training kits will include training videos, workbooks, reading guides, and tests. These kits would be made available online as reference material, and utilized during training sessions.

In addition to GDOT led trainings, providing financial assistance for mechanic certification or degree programs will help ensure providers can hire and retain qualified workers. Similar to many tuition reimbursement programs, utilizing GDOT financial assistance for certification or degree programs would be dependent upon a commitment to work for a transit agency for a set amount of time after the certification or degree is received.

GDOT will initiate a pilot program under which $40,000 annually will be made available to support transit mechanic training. Funds will be made available on a competitive basis, with applicants from rural communities, areas with mechanic shortage, and long-term commitments to working for a transit agency given priority.

Applicants receiving support for their mechanic training will be required to work for a transit agency for at least the amount of time specified in their application or reimburse their Department for their training support.

Approximately 50 training events will be held each year with a total estimated investment of $100,000. This assumes one training event per quarter in each of Georgia's 12 regions. The anticipated required investment for developing each of the three proposed training toolkits is approximately $6,900, for a total investment of $20,700. This would be an annual investment to update each training kit and make them available to all providers. Up to $40,000 will be made available annually to support transit mechanic training on a competitive basis.

The required investment for this strategy is estimated at $160,700 annually.

10.1.3.2 *Implement Best Practices for Scheduling, Dispatching, and Asset Management Technologies*

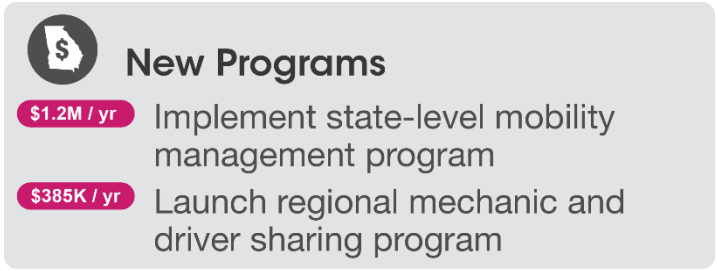
Training materials and best practices information for scheduling and dispatching, and asset management is currently available through GDOT. Some of GDOT's subrecipients do not utilize these resources. Fully implementing and utilizing available scheduling and dispatching technologies (provided by GDOT) can realize operational efficiencies for providers. Further, recognized best practices for asset management, such as implementing routine vehicle maintenance schedules, can improve SGR, system reliability, and the lifespan of vehicles.

This strategy is not expected to require additional investment. Transit agencies should work with GDOT staff to review best practices and implement those strategies using existing labor and materials.

10.1.4 New Programs

The New Programs category of strategies and estimated investment required for each are shown in **Figure 55** and discussed below:

Figure 55: New Programs Strategies



10.1.4.1 *Implement State-Level Mobility Management Program*

A Mobility Management Program provides regional coordination among transit agencies, employers, healthcare providers, and educational institutions, with the goal of linking community members with available transportation services. Mobility managers will provide guidance, planning assistance, and other resources to transit providers as needed. They will also work with employers on Transportation Demand Management (TDM) initiatives. Outside Metro-Atlanta, there will be one Mobility Manager per Regional Commission, for 11 managers total.

A statewide Mobility Management program is estimated to require an investment of $1.1 million annually. An additional annual investment of $100,000 could fund 50 TDM training events; providing at least one training event per quarter in each of Georgia's regions. Therefore, the total required investment for this strategy is estimated at $1.2 million annually.

10.1.4.2 *Launch Regional Mechanic and Driver Sharing Pilot Program*

Transit agencies often face high employee turnover. Jobs in the private sector among commercial drivers and mechanics typically offer more competitive wages compared to public transit agencies. Many smaller providers do not have substitutes readily available if there is a vacancy or an employee cannot work due to illness. A shared mechanic and driver pilot program would help staff agencies facing temporary labor shortages by assigning substitute drivers when regular employees either go on leave or vacate a position.

This program would ensure temporary labor shortages do not negatively affect reliability and consistency in transit service. A total annual investment of approximately $384,800 could employ five full-time mechanics and five full-time drivers.

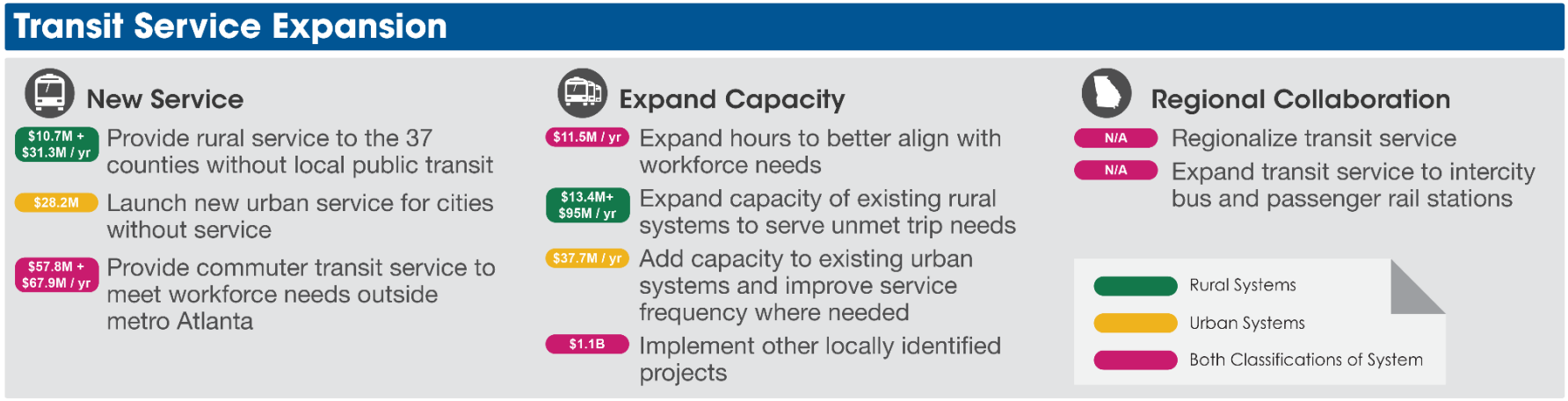
10.2 Transit Service Expansion Strategies

Transit Service Expansion strategies increase transit coverage through the implementation of new routes or services. These include adding additional routes, coordination between adjacent service, formation of regional systems, additional vehicles, expanded hours of service, and higher service frequencies. The expansion strategies were developed through extensive stakeholder engagement, as well as a review of locally developed plans.

The required investment to fully implement all of the nine strategies identified is estimated at $1.2 billion annually, including $415.5 million outside the ATL. Rural transit expansions account for $172.7 million of the statewide estimate.

The responses to the SWTRP Provider Questionnaire indicated the service expansion needs in order of priority as hours of service, geographic coverage, and capacity. Service expansion opportunities in **Figure 56** includes a description of each strategy with the estimated annual investment required to implement each strategy listed alongside.

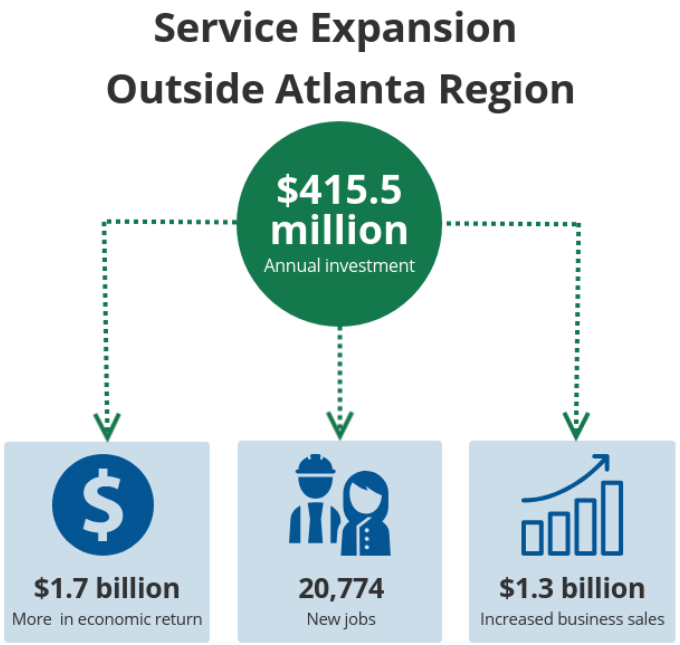
Figure 56: Transit Expansion Strategies



Using metrics from APTA, the potential statewide economic impacts of investing $1.2 billion in transit service expansion include $4.7 billion in economic return, 58,934 jobs, and $3.7 billion in increased business sales.

Figure 57 illustrates the potential economic impacts of the $415.5 million targeted at service expansions for rural providers and urban systems located outside the Atlanta region.

Figure 57: Service Expansion Potential Economic Impacts - Outside the Atlanta Region

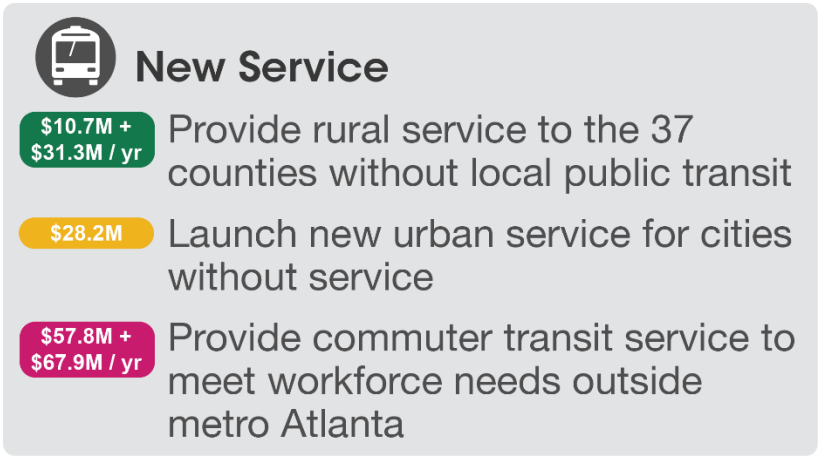


Further detail on each Transit Service Expansion strategy is provided in the following sections.

10.2.1 New Service

The New Service category of strategies and estimated investment required for each are shown in **Figure 58** and discussed below:

Figure 58: New Service Strategies



10.2.1.1 *Rural Service to the 37 Counties without Local Public Transit*

Implementing rural transit service in the 37 Georgia counties currently without local public transit will help ensure all Georgians have access to public transportation. Each of the counties currently without transit contains rural areas with significant unmet transit forecasted trip demand, as previously quantified in **Section 8.3.4**.

Many of the unserved counties are heavily concentrated in the Heart of Georgia Altamaha, Southern Georgia, Northeast Georgia, and River Valley regions of the state. Regional transit service, as described and recommended in **Section 10.2.3.1**, would be a cost-effective and rider focused means of providing transit to these unserved communities. Regional service could be established in multiple ways, including through a new provider, expanding the service areas of existing neighboring systems, or through partnerships between existing providers to create consolidated regional rural transit providers.

The expansion of rural transit service to the 37 unserved counties should incorporate partnerships with medical, educational, and job training facilities, as well as the business community.

As presented in the *SWTRP Transit Needs Assessment Report*, an initial one-time capital investment of $10.7 million is needed to purchase transit fleets (196 vehicles) for the 37 counties without local public transit to address the current higher range unmet rural forecasted trip demand of 1.8 million annual trips. Sustaining the new vehicle fleets and meeting forecasted trip demand will require approximately $2.1 million per year in annual capital funding and $29.1 million per year in operating funding for a total of approximately $31.3 million per year.

By 2050, the annual capital investment requirements are expected to grow to $3.4 million, while annual operational investment requirements are expected to grow to $33.3 million.

10.2.1.2 *Launch New Urban Service for Cities without Service*

Six urbanized areas in Georgia currently do not have urban transit systems but have locally identified a need for it. These areas include Brunswick, Cartersville, Griffin, Dalton, Warner Robins, and Valdosta. Locally developed plans identify their transit needs and proposed urban transit services for each city. Launching urban transit service and implementing the local transit plans for all six areas will provide transit to a combined population of approximately a half-million people, helping ensure the communities' public transportation needs are met.

Locally identified public transit needs in Brunswick, Cartersville, Griffin, Dalton, Warner Robins, and Valdosta. The services outlined in the locally developed transit plans are designed to connect riders to healthcare, employment, educational, and other economic opportunities.

Investment levels for this strategy were compiled locally by MPOs, governments, or existing rural transit agencies, and documented in the *SWTRP Transit Needs Assessment Report*. To establish urban transit systems in six urbanized areas currently without transit service, the total annual investment is estimated at $28.2 million.

10.2.1.3 *Provide Commuter Transit Service to Meet Workforce Needs Outside Metro Atlanta*

Providing commuter services to more areas across the state will better connect rural communities and their workforces to job centers.

The *SWTRP Transit Needs Assessment Report* estimated the top areas of demand for county-to-county commuter trips statewide. Seven county pairs outside the ATL district were identified as having significant demand for new commuter transit service:

- Columbia and Richmond
- Hall and Gwinnett
- Effingham to Chatham
- Chatham to Bryan
- Bibb and Houston
- Barrow and Gwinnett
- Newton and Rockdale

SRTA Xpress operates 27 commuter routes in 12 metro Atlanta counties, connecting riders to job centers and other local transit providers. Park and ride facilities in more rural and suburban communities allow riders to catch an Xpress bus to the urban core in the morning, then make the reverse commute in the evening. The proposed new commuter service in areas outside Metro Atlanta would operate similar to the SRTA Xpress system. Mobility Managers, as discussed in **Section 10.1.4.1**, will undertake TDM outreach and education with local employers to promote the service and educate riders on how it can be used.

Commuter services can also be achieved through vanpools, which provide transportation to a group of individuals traveling directly between their homes and a regular destination within the same geographical area. Vanpool differs from carpool in that they are publicly sponsored.

Prior to implementing new commuter service, a feasibility study for each county pair will determine routes, park-and-ride locations, and types of vehicles to be used.

In addition to the top county pair commutes listed above, Athens has identified the need for commuter services to Atlanta, and Chattanooga Area Regional Transportation Authority (CARTA) also locally identified and documented the need for new commuter services. While based outside of Georgia, CARTA currently has routes that extend up to the Georgia state line and has identified the need for a commuter route connecting Chattanooga with Ringgold, Georgia.

Specific investment levels for new commuter transit will vary by location. Planning-level estimates for each of the seven-county pairs include:

- $250,000 for a feasibility study and route planning;
- Construction of park and ride lots requiring an investment of $8,200 per parking space;
- Over-the-road commuter coaches at $562,000 each (feasibility studies will determine appropriate vehicle size for each system);
- Ongoing capital investment of up to $441,718 per year to maintain SGR of the coaches; and
- Ongoing operating investment of up to $5.1 million per year.

Based on ridership estimates documented in the *SWTRP Needs Assessment Technical Report,* to implement the seven recommended commuter transit services not already locally identified, an initial one-time investment of $57.8 million is needed to plan routes, purchase over-the-road transit vehicles, and construct park-and-rides to provide the service. Sustaining the new vehicle fleets and meeting forecasted trip demand will require sustained annual capital funding of approximately $2.4 million per year, and $27.0 million per year in operating funding. By 2050, annual capital investment is expected to increase slightly to $2.5 million, while annual operational investment is expected to grow modestly to $29.4 million.

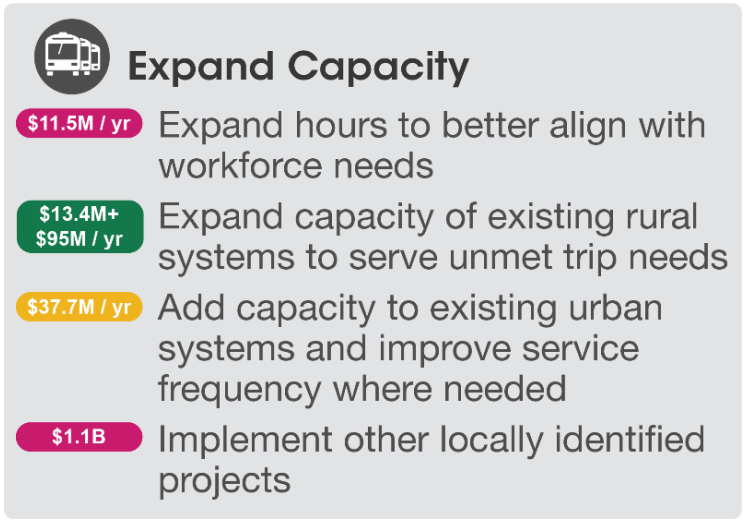
CARTA identified the need for a commuter route into Georgia and estimated their approximate investment required to implement at $24 million annually. Athens-Clarke identified the need for commuter service to Atlanta with an estimated annual investment of $14.7 million.

The total required annual investment for this strategy is estimated at $67.9 million annually.

10.2.2 Expand Capacity

The Expand Capacity category of strategies and the estimated investment required for each are shown in **Figure 59** and discussed below:

Figure 59: Expand Capacity Strategies



10.2.2.1 *Expand Hours of Service to Better Align with Workforce Needs*

Providing longer transit service hours will help account for and meet the transportation needs of early morning and late-night shift workers.

Typically, Georgia's rural transit providers offer service hours beginning between 7:00 and 8:00 AM and the final pickups for passengers occur between 4:00 and 5:00 PM. Most rural systems operate weekday service only. Nine rural systems offer Saturday service while two offer service 24 hours per day, 7 days per week. Evening and weekend trips must be scheduled and confirmed several days in advance to ensure driver availability.

Outside Metro-Atlanta, service hours for urban providers vary more significantly, and can vary further by route within each system. Only three offer late night and early morning service.

Extending service hours by 20% would better meet the transportation needs early morning and late shift workers by allowing all operators to begin providing service between 5:00 and 6:00 AM, and ending service after 11:00 PM. It is expected that early-morning and late-night service would be less robust than during peak periods of the day. Such service schedules should be coordinated with major employers, as discussed in **Section 10.1.4.1**. Extended service hours would also assist other ridership segments, such as those needing access to early morning healthcare appointments and those attending night school.

Expanding service hours will require additional staff time and additional operational investment.

Based on Georgia's average rural transit vehicle operating costs, increasing revenue hours by 20% for all rural providers would require an investment of approximately $6.8 million annually. For urban systems outside the ATL region, eight agencies currently do not provide both early morning and late-night service. The required investment for increasing revenue hours for those eight agencies by 20% is estimated at $4.7 million.

The total required investment for this strategy is estimated at $11.5 million annually.

10.2.2.2 *Expand Capacity of Existing Rural Systems to Serve Unmet Forecasted Trip Demand*

Within the service boundaries of Georgia's current rural transit providers, there is a total need for approximately 6.1 million trips annually. As previously shown in **Section 8.3.3**, Georgia's current rural transit systems provide approximately 1.8 million trips annually, meaning there is an unmet rural transit trip demand of 5.2 million trips each year. Expanding the capacity of existing rural systems will allow them to improve mobility, accessibility, and economic opportunities for rural communities across the state, and fully deliver on the unmet trip demand quantified in the *SWTRP Transit Needs Assessment Report*.

Capacity expansion can include adding vehicles, hours of service, and enhancing operational staff. The expansions should also be paired with several of the administrative tools, guidance, and best practices described in **Section 10.1**, including marketing support and mobility management, to ensure riders are aware of the services offered and that those services are coordinated for efficient operations. The transit workforce will also need to implement best practices for scheduling and dispatching, and asset management to ensure the expanded fleets are maintained in a state-of-good-repair.

To address the 5.2 million trips currently going unmet in areas with existing rural service, an initial one-time capital investment of $13.4 million is needed to expand the existing vehicle fleets by 248 vehicles, as well as $86.5 million in additional annual operating funds to provide the service. Sustaining the expanded fleet and meeting forecasted unmet trip demand will require sustained annual capital funding of $8.5 million. Therefore, the total required investment for this strategy is estimated at $95 million annually.

By 2050, required annual capital investments to meet unmet forecasted trip demand are expected to grow to $13.1 million, while required annual operational investments are expected to grow to $99.7 million.

10.2.2.3 *Add Capacity to Existing Urban Systems and Improve Service Frequency Where Needed*

Similar to rural systems, many urban transit providers are constrained in their ability to fully meet transit ridership needs. Adding capacity to existing urban systems will allow providers to better meet the needs of their communities.

For fixed route providers, there are multiple ways in which capacity can be constrained, and multiple avenues to expand capacity. can be expanded to better accommodate peak ridership on popular routes. Additional vehicles can improve service frequency, increasing capacity and reducing wait time for riders. New or extended routes into unserved areas will also add capacity to a system and better meet rider demand and needs.

Providers with capacity constraints should document the need as part of the TDP process (**Section 10.1.1.1**) and follow best practices for fleet procurement and right-sizing (**Section 10.1.1.2**).

Given urban population projections in Georgia, to keep pace with population growth and improve capacity and frequency, the urban transit fleet outside Atlanta needs to expand by approximately 5%, or 14 buses, each year. Initial capital investment levels are estimated at $7.1 million, with $2.7 million in annual operating and maintenance funds for a total annual required investment of $9.8 million.

In addition, Albany Transit, CARTA, and Macon-Bibb County Transit Authority have each identified specific projects to add capacity or improve service frequency for their systems. The total annual required investment for these projects is estimated at $27.9 million. Descriptions of each project can be found in the *SWTRP Transit Needs Assessment Report*.

The total required investment to implement this strategy is estimated at $37.7 million annually.

10.2.2.4 *Implement Other Locally Identified Projects*

Many projects identified in locally developed plans do not fit neatly within just one strategy category of this report. Local and regional plans recommend various multi-faceted projects to expand and enhance service to meet the needs of their community.

Within this report, such projects and the required investment levels for each are captured in this section. All expansion and enhancement projects included in the ARTP are captured in this section. When summarizing investment levels for the SWTRP, ATL region projects are split between enhancement and expansion as defined in the ARTP, while the investment levels for projects outside Atlanta are split: 70% of the investments are classified as Service Expansion; 30% are allocated to the Service Enhancements category.

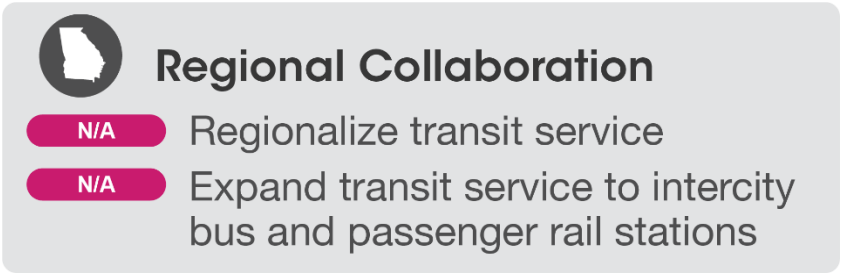
The projects identified under this strategy include both urban and rural systems. A full list of all locally identified projects can be found in the *SWTRP Transit Needs Assessment Report*.

Statewide, the total required investment to implement locally identified projects as described in this section is estimated at $1.1 billion. Outside Metro-Atlanta, the total required investment is estimated at $205.7 million annually, including $39.7 million annually in rural areas. In this report, $144.0 million (70%) of the investments outside the ATL region are categorized as Service Expansion, while $61.7 million (30%) are categorized as Service Enhancement.

10.2.3 Regional Collaboration

The Regional Collaboration category of strategies and the estimated investment required for each are shown in **Figure 60** and discussed below:

Figure 60: Regional Collaboration Strategies



10.2.3.1 *Regionalize Transit Service*

Regional and multi-county systems offer many efficiencies over single county systems, including ease of use for riders and the centralization of administrative tasks. Regionalizing existing county systems could provide seamless mobility for customers needing services in nearby counties while also likely reducing operating and maintenance costs to the transit providers involved.

Regionalization of service can be achieved in many ways, and will take multiple steps to plan and implement. This report includes numerous strategies to assist at various points in the regionalization process, from planning to consolidation and implementation. Similarly, examples of regionalization and the benefits it provides are demonstrated around the state.

The first step toward regional rural service is the development of regional TDPs (discussed in **Section 10.1.1.1**). Southern Georgia Regional Commission recently completed a regional TDP to consolidate existing providers and expand service to the unserved communities. Coordination among stakeholders is critical, and Mobility Managers (discussed in **Section 10.1.4.1**) or regional commission planning staff can play an integral role. Funding and fare policies will also need to be set and coordinated among existing systems (discussed in **Sections 10.1.2.3** and **10.3.2.3**).

For riders, regional service means convenience and access to more destinations. Creating connections between neighboring systems is an interim step toward regional systems. This can include shared stops for neighboring agencies and trip transfers at coordinating locations for demand response systems. A statewide trip planning app and website (discussed in **Section 10.3.3.1**) can help facilitate these connections and regional service by linking riders with providers for trips across existing service areas. It will also facilitate backend coordination of fare payments and rider transfers between systems. For rural systems, GDOT is implementing scheduling and dispatching software and a trip planning app that will enable such backend coordination among providers.

Consolidating vehicle fleets, maintenance facilities, dispatching services, and transit workforces can realize operational efficiencies through economies of scale and more optimal use of resources. A consolidated regional ridership pool and regional dispatching service (discussed in **Section 10.3.2.5**) will expand opportunities for shared rides, increasing the number of passengers served per vehicle trip. A larger regional vehicle fleet can better meet variable transit demand, and overcome unforeseen mechanical issues when compared to a single county fleet. Similarly, consolidated regional transit workforce or shared staffing (discussed in **Sections 10.1.4.2)** means that a larger pool of drivers and mechanics can be called upon to cover vacancies or temporary staffing shortages.

By reducing the overall number of transit providers, administrative and reporting responsibilities can also be centralized under consolidated regional entities, reducing the overall administrative and compliance burdens. Currently, Coastal Regional Commission, Southwest Georgia Regional Commission, Three Rivers Regional Commission, Lower Chattahoochee Regional Transit Authority, and Mountain Area Transit System provide regional rural transit services and realize these operational efficiencies.

No additional investment is expected with regionalization. The initial required investments for implementing regional service will vary depending on the size of the region and existing services in place. After implementation, cost efficiencies are expected to be realized compared to multiple single-county systems.

10.2.3.2 *Expand Transit Service to Intercity Bus and Passenger Rail Stations*

Georgia has 27 intercity bus stops and five Amtrak passenger rail stations. Only five intercity bus stops are not collocated with a transit stop or within a rural transit service area. Two are located in communities without any transit service, while the other three are located within a quarter-mile of local transit.

Only one Amtrak station is located in a community without local transit service. Three are collocated with fixed-route or rural service while one is within a quarter-mile of a transit line.

Linking local public transit service with all intercity bus and passenger rail stations facilitates easier cross-jurisdictional travel and, in doing so, can promote tourism and other economic development opportunities. Such connections can be established by moving current stops or extending local transit service to an existing intercity bus or passenger rail station. The construction of multimodal facilities is another option for collocating local transit with intercity services.

There is no additional investment expected with this strategy. It is assumed that future transit expansions (discussed in **Sections 10.2.1.1** and **10.2.1.2**) will be coordinated to serve intercity bus and rail stations. There is a negligible cost associated with re-routing existing transit service less than a quarter mile to be co-located with intercity bus and rail station.

10.3 Transit Service Enhancement Strategies

Transit Service Enhancement strategies include the eleven strategies listed in **Figure 61**. Transit service enhancements improve the rider experience by enhancing transit system safety, ease-of-use, efficiency and reliability, SGR, pedestrian and bicycle connections, and other improvements that are not explicitly expanding transit service.

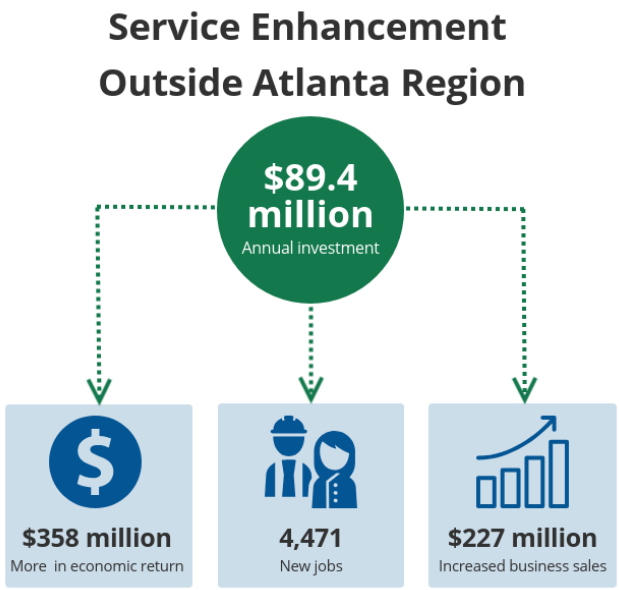
The Service Enhancement strategies were developed through extensive stakeholder engagement, as well as a review of locally developed plans. The overall required investment to fully implement the eleven Service Enhancement Strategies is estimated at $515.5 million per year, including $89.4 million outside the ATL region. Rural transit enhancements account for $23.9 million of the statewide estimate.

Figure 61: Transit Service Enhancement Strategies

Using metrics from APTA, the potential statewide economic impacts of fully implementing all Service Enhancement Strategies, include $2.1 billion in economic return, 25,773 jobs, and $1.6 billion in increased business sales.

Figure 62 illustrates the potential economic impacts from the $89.4 million in transit service enhancements targeted at rural providers and urban systems located outside the Atlanta region.

Figure 62: Service Enhancement Potential Economic Impacts - Outside the Atlanta Region



Further detail on each service enhancement strategy is provided in the following sections.

10.3.1 Transit Vehicle Technologies

The Transit Vehicle Technologies category of strategies and the required investment estimated for each are shown in **Figure 63** and discussed below:

Figure 63: Transit Vehicle Technologies Strategies

10.3.1.1 *Implement Interoperable Automatic Vehicle Locator and Automatic Passenger Counter Systems*

Automatic Vehicle Location (AVL) is a means for automatically determining and transmitting the geographic location of a vehicle. Automatic Passenger Counters (APC) count the number of passengers that board or disembark at every stop. When paired together, these systems can assist transit agencies with service planning and route optimization by providing data on the ridership for each stop.

APCs allow providers to more accurately track ridership, a key system performance measure and required NTD data point. AVLs allow systems to better monitor on-time performance and can help providers target areas of delay.

Vehicle location data, from one or more vehicles, may also be collected by a vehicle tracking system to manage the vehicle fleet or publicly share real-time vehicle location information with riders via an app (discussed in **Section 10.1.2.5**). Ridership and performance data collected by the combination of APCs and AVLs can support the development of TDPs (discussed in **Section 10.1.1.1**).

AVLs also enable automatic stop announcements, improving the user experience, assisting the visually impaired, and improving safety by allowing the driver to focus on the road instead of stop announcements. All existing rural systems utilizing the GDOT procured QRyde scheduling and dispatching software have AVLs installed via on-board tablets. Most urban providers also have AVL equipped vehicles.

AVL systems are priced at approximately $2,480 per vehicle while APCs are priced at approximately $7,200 per vehicle. Outside the ATL, to equip Georgia's fixed-route fleet currently without these systems, there is a need for 12 AVLs and APCs per year. An annual investment of $116,160 would meet this need.[31] Albany Transit has also identified a project to equip its vehicles with AVLs and other technologies at an annual investment level of $200,000.

The total required investment to implement this strategy is estimated at $316,160 annually.

10.3.1.2 *Implement Fleet-Wide On-Board Security Features, Including Cameras*

Providing on-board surveillance equipment, including cameras to all transit vehicles, will improve safety and perception of safety for transit riders and operators. Cameras help to deter crime and allow providers to review any incidents, determine causes, and improve practices and procedures moving forward. While new buses now typically come with cameras already installed, approximately 25% of the rural fleet does not currently have cameras.

The price for providing on-board surveillance equipment to one transit vehicle is $9,700. Based on this figure, $281,300 is needed annually to equip 29 rural vehicles per year. This will allow rural vehicles currently without cameras to be equipped within 5 years (the useful life benchmark of a cutaway bus).

10.3.1.3 *Leverage Signal Technology to Improve Transit Operations*

Transit Signal Priority (TSP) is a technology that reduces the delay to transit vehicles at signalized intersections. Implementing TSP along fixed-route transit lines will improve on-time performance and reliability of service.

Where implemented, buses equipped with TSP technology wirelessly communicate with upcoming traffic signals. The signals can then temporarily extend a green phase to allow the bus to clear the intersection. By reducing the number of red lights buses encounter, TSP facilitates faster and more reliable transit service.

To work, compatible TSP technology must be installed at each traffic signal, called road-side units (RSUs), and on each bus, called on-board units (OBUs). The traffic signals must also utilize software that is compatible with TSP operations. RSUs have non-transit related capabilities and benefits as well, including signal preemption for emergency vehicles, safety applications, and intelligent signal timing to improve traffic flow and reduce congestion.

Of the approximately 10,000 signalized intersections in Georgia, approximately 6,000 are owned by GDOT. All 6,000 of GDOT's intersections utilize software that is TSP capable. GDOT has deployed RSUs at 54 signalized intersections in Metro-Atlanta and will deploy over 1,000 more in the coming years. Given the numerous benefits of RSUs well beyond their transit applications, it is expected that statewide coverage will ultimately be achieved. Installation of OBUs on all newly procured transit buses, which have a useful life of 10 or more years, will help ensure transit providers future-proof their fleets and can utilize TSP as RSUs are deployed to more areas of the state.

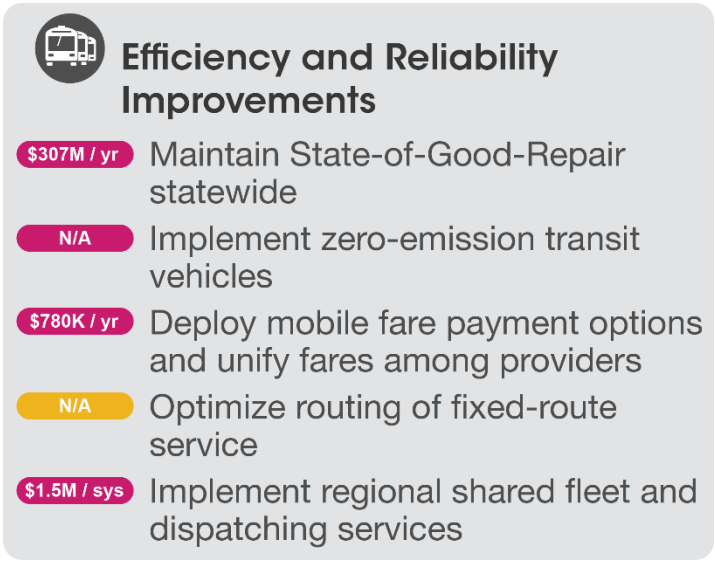
RSUs are priced at approximately $10,000 each, while OBUs are priced at approximately $5,000 each, including software, updates, and maintenance. As Georgia's existing bus fleet is replaced, new buses should come equipped with OBUs installed. This will ensure that as more RSUs are deployed around the state for safety, traffic improvements, and other CV projects, Georgia's transit vehicle fleet will be ready to capitalize on the upgraded infrastructure utilize TSP.

Typically, transit buses have a useful life of approximately 10 years. If 10% of the vehicle fleet is replaced each year, the annual required investment to equip new vehicles outside the ATL with RSUs is estimated at $135,000 annually.

10.3.2 Efficiency and Reliability Improvements

The Efficiency and Reliability Improvements category of strategies and the required investment for each are shown in **Figure 64** and discussed below:

Figure 64: Efficiency and Reliability Strategies



10.3.2.1 *Maintain State-of-Good-Repair Statewide*

The FTA establishes State-of-Good-Repair (SGR) performance measures for capital assets and requires agencies to set performance targets for each of these measures. For transit vehicles and equipment, SGR performance is measured by comparing a vehicle's age to its Useful Life Benchmark (ULB). FTA provides a ULB for each class of transit vehicle (e.g., city bus, cutaway bus). Facilities are ranked on a scale of excellent condition to critically damaged.

Achieving and preserving SGR will ensure transit assets are maintained to the pre-determined standard for operating quality and within the ULB, as set by the FTA and outlined in each agency's Transit Asset Management Plan (TAM). This helps to minimize any unexpected mechanical issues, allowing transit systems to operate more reliably with few service disruptions.

SGR investments for all existing urban and rural systems are documented in six TAM Plans statewide. Based on these TAM Plans, a total annual investment of approximately $306.5 million is required to maintain SGR, including $285.7 million within the ATL region and $20.8 million for rural systems and systems located outside the ATL region.

10.3.2.2 *Implement Zero-Emission Transit Vehicles*

As Georgia's existing transit vehicles reach the end of their useful life, providers should consider zero-emission vehicles for replacements. The purchase and implementation of electric or other alternatively fueled zero-emission transit vehicles will improve sustainability and lower the required investments needed to operate and maintain Georgia's transit fleet.

Transitioning from conventionally powered vehicles to battery-electric is becoming increasingly cost-effective as the price of batteries continues to decline, and their range continues to increase. While electric vehicles (EV) still have a higher up-front purchase price, they have lower operating and maintenance costs than conventionally powered transit buses.

Electric motors have significantly fewer moving parts than conventional engines, reducing overall maintenance costs. Compared to diesel or other fossil fuels, the price of electricity is stable and not prone to short-term market swings. This provides battery electric fleet managers long term predictability with their energy costs and budgets. Further, in terms of energy use per mile traveled, the cost of electricity is significantly lower than diesel or compressed natural gas (CNG).

The U.S. Department of Energy's GREET Model simulates energy use, emissions, and other costs for different modes of transportation and vehicles.[32] Utilizing current energy rates in Georgia, the lifecycle fueling costs of battery electric transit buses are projected to be approximately $300,000 lower than diesel or CNG bus. Even when accounting for the higher purchase price of the vehicle, the total cost of owning and operating a battery electric bus is projected to be over $100,000 less than diesel or CNG powered bus.

In addition to lifecycle cost savings, zero-emission vehicles provide other benefits where deployed. EVs produce less vibration and noise, improving rider experience and reducing noise pollution in the community. Zero tailpipe emissions improve air quality and can be particularly beneficial in an urban core. As Georgia's electricity generation continues to transition toward cleaner, renewable, and lower emission energy sources, electric buses deployed today will become more sustainable throughout their operating life.

Zero-emission transit vehicle implementation is not without its challenges. Higher up-front costs can be a burden for some providers. Charging infrastructure must be installed, and maintenance staff must be trained for electric motors or other types of powertrains. Routes must also be considered to ensure the vehicles will have sufficient range for a full day of operations.

Resources are available to assist in overcoming these challenges. FTA's Low or No Emission Vehicle Program provides financial support for planning, vehicle purchases, supporting infrastructure, and deployments. GDOT successfully partnered with Macon-Bibb County Transit Authority to win a Low-No Grant for two electric buses, which will begin providing service in 2020. Other Georgia providers, including MARTA, have also recently won Low-No grants for deploying electric buses.

Georgia Power works with interested transit agencies to advise and install supporting electric infrastructure. Support for mechanics to work with EVs could be provided through the GDOT led mechanic training enhancements discussed in **Section 10.1.3.1**. The Georgia-based non-profit, Center for Transportation and the Environment, develops transition plans and route modeling capabilities to assist transit providers in transitioning their vehicle fleets and deploying zero-emission vehicles in the most effective manner.

Electric buses currently have higher up-front purchase costs than conventional buses but lower lifecycle costs. Given the projected lifecycle cost savings of battery electric buses, no additional annual recurring investments are associated with this strategy.

10.3.2.3 *Deploy Mobile Fare Payment Options & Unified Fares Among Providers*

The deployment of mobile fare payment options, paired with the longer-term pursuance of unified fares among providers, will improve convenience for riders and facilitate cross-jurisdictional service.

Mobile fare payment systems allow passengers to purchase transit tickets through smart devices. Unlike traditional fare cards, mobile fare payment systems are typically account based and tied to a single user (the owner of the smart device).

Some Georgia providers have already, or are actively implementing mobile fare payment systems, including Macon-Bibb County Transit Authority and MARTA. More traditional payment systems are still available for riders who do not have smart phones.

Unified fare systems would require planning and coordination among providers and would simplify transit use across the state. Regional pilots may allow testing of unified fares with incremental expansions across the state. Mobile fare payments are implementable by individual systems in the near-term, and will help facilitate the unification of fares. Specifically, riders transferring from system to system will no longer need to purchase and load separate fare cards from each provider. They will simply download an app, electronically purchase a fare, and ride. Their user accounts will be able to transfer from provider to provider.

The scheduling and dispatch software GDOT has already procured and is implementing for rural transit providers incorporates mobile payment functionality. The required investment to implement mobile fare payment systems for urban systems outside Atlanta will vary by provider.

Utilizing the Macon-Bibb County Transit Authority's mobile fare payment system as an example, and scaling based on fleet size, similarly equipping all urban systems outside the ATL will require investment of approximately $779,805 annually for five years. Implementing unified fares would be achieved through administrative coordination and planning processes.

10.3.2.4 *Optimize Routing of Fixed-Route Service*

Transportation conditions change over time; new development, changing travel patterns, and infrastructure investments can impact operations and ridership along existing transit routes and create transit demand in unserved areas. As part of the routine TDP process (discussed in **Section 10.1.1.1**) transit systems should regularly reexamine and evaluate their services, then seek ways to improve or optimize service. Implementing these strategies will enhance fixed-route service efficiency and reliability.

Optimization of fixed-route service can broadly refer to routing buses on major corridors, utilizing managed or dedicated transit lanes, reducing the number of turns, and minimizing unnecessary route redundancy. Dedicated lanes refer to travel lanes dedicated specifically to transit vehicles, separating transit vehicles from other traffic and congestion. Similarly, managed lanes limit congestion by allow only vehicles meeting defined criteria (i.e. high-occupancy, transit, or toll paying vehicles) to use the lanes. In Georgia, transit vehicles can travel in GDOT's managed Express Lanes, which cover more than 66 miles and are being expanded. Queue jumping lanes are a shorter type of dedicated transit facilities that give buses priority position at a signalized intersection, improving service reliability by allowing vehicles to enter and exit traffic flow easily.

In addition to dedicated transit infrastructure, service can be optimized by routing buses along TSP enabled corridors (discussed in **Section 10.3.1.3**), and by limiting the number of turning movements required.

Optimization of transit stops refers to eliminating or consolidating low-ridership stops, or relocating stops to more convenient and in-demand locations. Providers can partner with employers or other external stakeholders to ensure stops and service are optimized for rider needs. Such strategies can improve routing efficiency and ease-of-use for riders.

The required investment associated with route optimization will vary significantly by route and provider. Certain optimization strategies will reduce costs by improving efficiency. Others could be accomplished via a simple restriping, while some may require more comprehensive infrastructure improvements. Providers should identify and document the investment levels of any optimization strategies as part of their TDP development and update process.

10.3.2.5 *Implement Regional Shared Fleet and Dispatching Services*

As discussed in **Section 10.2.3.1**, regionalizing transit service is a multi-step process that will offer efficiencies for providers and convenience for riders. Implementing shared and regional fleets is one step in that process. Neighboring systems may enter into agreements to share their existing transit fleets as needed. This could be as simple as loaning a bus to another system to cover a temporary vehicle shortage, or full fleet consolidation, with consolidated maintenance and dispatching.

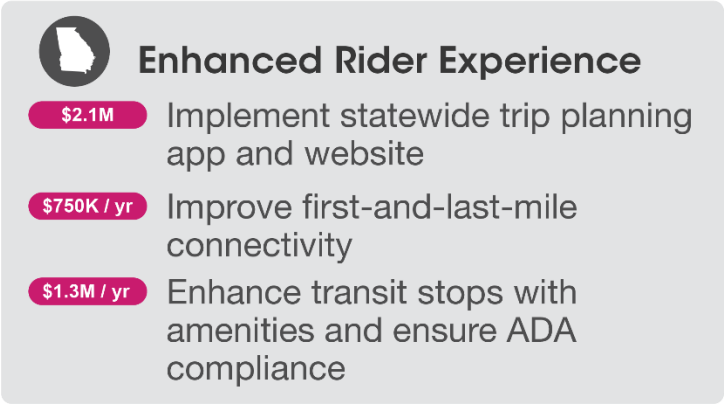
Similarly, consolidating separate call centers into one shared regional call center can offer efficiencies for dispatching vehicles, and convenience for riders. Providers are better able to dispatch vehicles where they are needed the most. Riders only need to contact one call center to take transit throughout their regions. Existing examples include the Coastal Regional Commission (CRC), which provides rural services to all counties in the region, and Three Rivers Regional Transit, which serves six counties.

The required investment to implement a regional call center is estimated at $1.5 million per facility, based on review of example projects to consolidate separate call centers into one regional call center.[33] Individual investment levels will vary depending on size and number of systems. The regionalization of fleets is expected to realize cost savings over time.

10.3.3 Enhance Rider Experience

The Enhance Rider Experience category of strategies and the required investment for each are shown in **Figure 65** and discussed below:

Figure 65: Enhance Rider Experience Strategies



10.3.3.1 *Implement Statewide Trip Planning App and Website*

Trip planning services provide a platform for passengers to plan their transit trips in advance. Currently, transit trip planners are mostly online platforms available on the web or personal devices that are based off General Transit Feed Specification (GTFS) data.

As discussed in **Section 10.1.2.5**, the development and maintenance of GTFS data for all Georgia providers will be required for a statewide app. The ATL is currently working with Metro-Atlanta providers to develop consistent GTFS data feeds, and is pursuing funding for the implementation of a trip planning app for the ATL region.

A statewide trip planning app would build off of the ATL's ongoing efforts. Such an app, integrated with all providers' GTFS feeds, as well as the rural transit scheduling and dispatching services and coordinated HST services, could allow for seamless cross-jurisdictional trip planning as well as booking of rural and paratransit services. An app that is integrated with rural transit scheduling and dispatching software will help to reduce advance booking times by automatically assigning riders to the optimal vehicle for their trip.

Based on a review of similar trip planning applications, the required investment to implement one statewide trip planning service is estimated at $2.1 million.

10.3.3.2 *Improve First-and-Last-Mile Connectivity*

Improving first-and-last-mile connections to transit through pedestrian and bike infrastructure upgrades can increase the accessibility of transit for all users and make it a more viable modal option. Improvements such as new or rehabilitated ADA-compliant sidewalks, ramps, and crossings, as well as bike lanes, bike racks, and other similar infrastructure increases transit access for everyone, particularly people with physical disabilities and those traveling by bicycle or by foot.

Partnerships with employers, public and private institutions, and Transportation Network Companies (TNCs) or micro-mobility providers can also improve transit connectivity. Examples include employer-sponsored vanpools (such as the shuttle to Jekyll Island provided by the Coastal Regional Commission), and implementation of drop-off zones for TNCs or shuttle services to major employers. Transit providers should utilize existing staff and resources to coordinate partnerships and work out agreements which are beneficial to riders but do not result in a cost burden to the agency.

Most agencies and municipalities do not have sidewalk conditions data available. Where sidewalk need data is available, localities should work to install or repair sidewalks along transit routes. Specific project investment levels will vary. Where sidewalk condition data is not available, agencies should initiate sidewalk needs assessment along transit routes and document specific needs and estimated investment levels in their local and regional TDPs and other transportation plans.

To evaluate sidewalk needs, including ADA evaluations of transit stops, ramps, curb cuts, and crosswalks, along the approximately 2,500 miles of bus routes outside the ATL region, the required investment is estimated at $750,000 annually for the next five years.

10.3.3.3 *Enhance Transit Stops with Amenities and Ensure ADA Compliance*

Enhancing transit stops with amenities improves safety, comfort, accessibility, and transit usability for riders. Installation of shelters, signage, and a bench improve safety by improving visibility of the stop to drivers. Shelters improve usability and comfort in all-weather environments, while concrete pads and benches improve accessibility, particularly for seniors and those with disabilities. Trash receptacles at stops help to prevent litter.

In addition to the built infrastructure, transit vehicles should also be ADA compliant, ensuring transit service is available to all riders. Vehicles equipped with wheelchair lifts are particularly important for making transit accessible to all. Automated stop announcements (discussed in **Section 10.3.1.1**) are also critical to meeting the needs of the visually impaired.

Specific investment levels will vary depending on each stop's existing infrastructure. Covering all stops outside Atlanta by 2050 would require enhancing 242 stops per year. Investment in each stop is estimated at $3,725 including a concrete pad, bench, sign pole, and trash bin. The total annual investment for 242 bus stop enhancements is estimated at $901,000.[34]

Augusta-Richmond has locally identified the need for stop enhancements along two routes at an estimated annual investment of $49,000. Chatham also has a locally identified project with an annual need of $249,688.

In addition, approximately 12% of the rural fleet is currently not wheelchair lift-equipped. Lifts are approximately $5,000 each. An investment of approximately $100,000 annually could equip the full rural fleet with wheelchair lifts within five years.

The total required investment for this strategy is estimated at $1.3 million annually.

11.0 Investment Scenarios

This section outlines how the potential funding scenarios were developed, what they include, their investment levels or gaps, and overall return on investment for each scenario.

11.1 Historical Transit Funding Levels in Georgia

Historically, transit systems in the State of Georgia have primarily relied on federal formula and competitive grants, local contributions, taxes and fees, and fares or other revenue streams (e.g., advertising) for funding. Cumulatively, these sources provide approximately $1.05 billion annually for public transit services across the state, including $936 million within the ATL region, and $111 million outside the ATL region, and $38.4 million for rural providers.

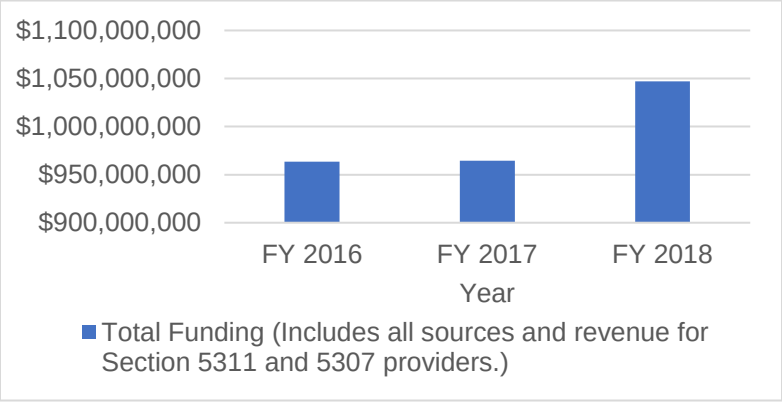


Figure 66: Historical Transit Funding Levels in Georgia[35]

Figure 66 illustrates transit funding levels across Georgia for FY 2016 through FY 2018.

11.2 Economic Benefits of Investing in Transit

Public transportation provides numerous economic opportunities, as outlined by the American Public Transportation Association (APTA) in **Figure 67**.[36]

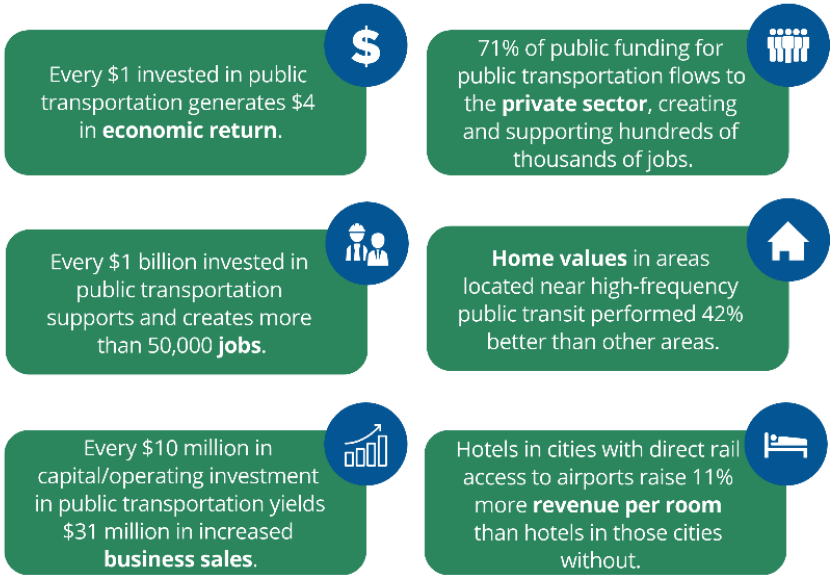


Figure 67: APTA's Transit Return on Investment

11.3 Investment Scenarios

The strategies identified in each of the three categories detailed in **Section 10** (Administrative Tools and Guidance, Service Expansion, and Service Enhancements) were used to build four potential investment scenarios. The scenarios range from the Baseline, or current funding situation, to a High-level scenario which involves investment in all statewide transit strategies. The Low and Mid-level scenarios represent situations in which incremental investments are used to address some of the strategies.

Input on investment priorities from the TAC and SSC participants directly influenced the mix of strategies applied to each investment scenario. The SWTRP investment scenarios are intended to be used for informational purposes, to demonstrate what could be achieved with various levels of new investment. Ultimately, the specific enhancement and expansion strategies included in each scenario would require support from individual providers. The four scenarios are described below and shown in **Figure 68.**

- **Baseline:** Assumes current investment levels;
- **Low-Level Scenario:** Maintains our current transit system and applies the Administrative Tools & Guidance Scenarios + SGR in rural areas + rural service expansion to the 37 counties currently without local transit service;
- **Mid-Level Scenario:** Low-Level Scenario + Urban SGR + Rural and Urban Service Enhancements + Rural Service Expansion + a portion of Urban Service Expansion (30%) including cities currently without transit; and
- **High-Level Scenario:** Invests in all identified strategies.

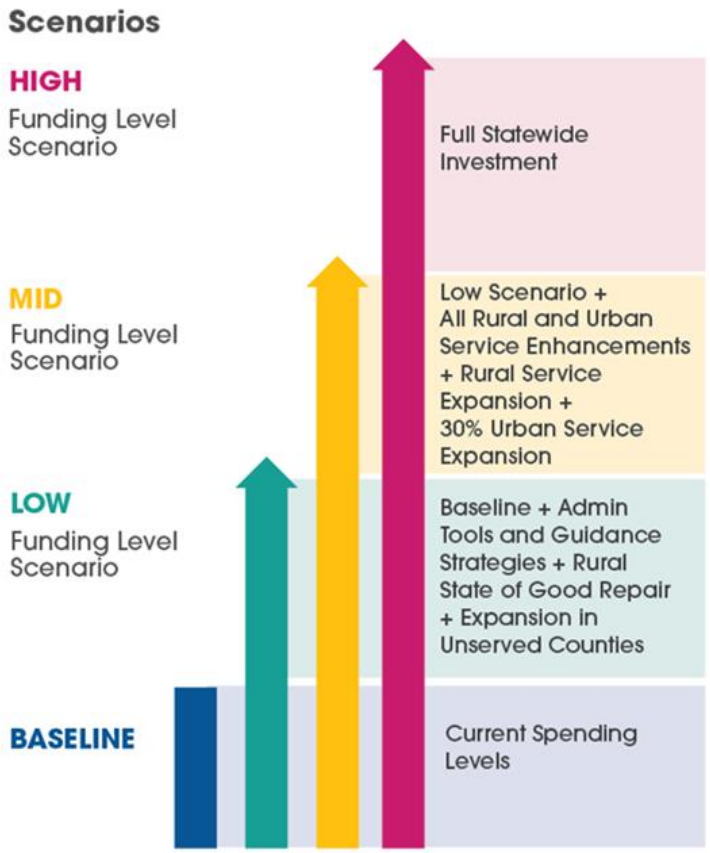


Figure 68: Investment Level Scenario Descriptions

Scenarios were calculated statewide with specific summaries for impacts to rural providers and agencies outside the ATL region.

Each investment level scenario is described in further detail below, including the cost, investment levels or gaps, and the overall return on investment are included.

11.3.1 Baseline Level Scenario

Description: The Baseline represents a "No Build" scenario where no new services or improvements are implemented beyond current transit operations. Current funding levels do not fully cover the cost to maintain SGR for many systems. Rising labor and inflationary costs are expected to reduce future purchasing power of the existing level of annual funding. Therefore, maintaining current funding levels into the future would likely result in service cuts due to lack of funding. Service levels would likely decline as would the benefits of existing transit service.

Currently, the baseline annual funding level is estimated to generate an annual $4.3 billion in economic return, 53,000 jobs, and $3.3 billion in business sales. As the value of that baseline funding amount decreases over time with inflation and rising costs, the level of transit service provided is expected to decline along with the value of these benefits.

Scenario Funding Level: The Baseline scenario is based on current spending levels. The total continued investment to implement this scenario is $1.05 billion per year. This amount represents the combined FY 2018 funding level for all of Georgia's rural and urban public transit systems, including $936 million within the ATL, and $111 million for providers outside the ATL. **Table 18** illustrates the funding breakdown by source.

The Baseline scenario includes no additional funding and assumes current transit investment levels are maintained.

Table 18: FY 2018 Funding of Public Transit in Georgia

Funding Source	FY 2018
Federal	$180 million
State	$27 million
Local	$113 million
Taxes and Fees by Transit Agencies	$505 million
Fares and Other Directly Generated Revenue	$223 million
Total	**$1,047 million**

11.3.2 Low-Level Scenario

Description: The Low-Level Scenario maintains the current baseline funding level for transit systems in Georgia and adds additional resources to expand rural service into the 37 counties currently without local public transit, address SGR needs outside the ATL, and implement the 15 Administrative Tools and Guidance strategies.

Implementation of these strategies would ensure full rural transit service coverage statewide and that transit assets outside the ATL are maintained fully within the SGR. The 15 Administrative Tools and Guidance strategies will provide agencies with planning support, transit program delivery support, transit workforce development, and new programs to support mobility management and reliable service.

The strategies included in the Low-Level Scenario are illustrated in **Figure 69.**

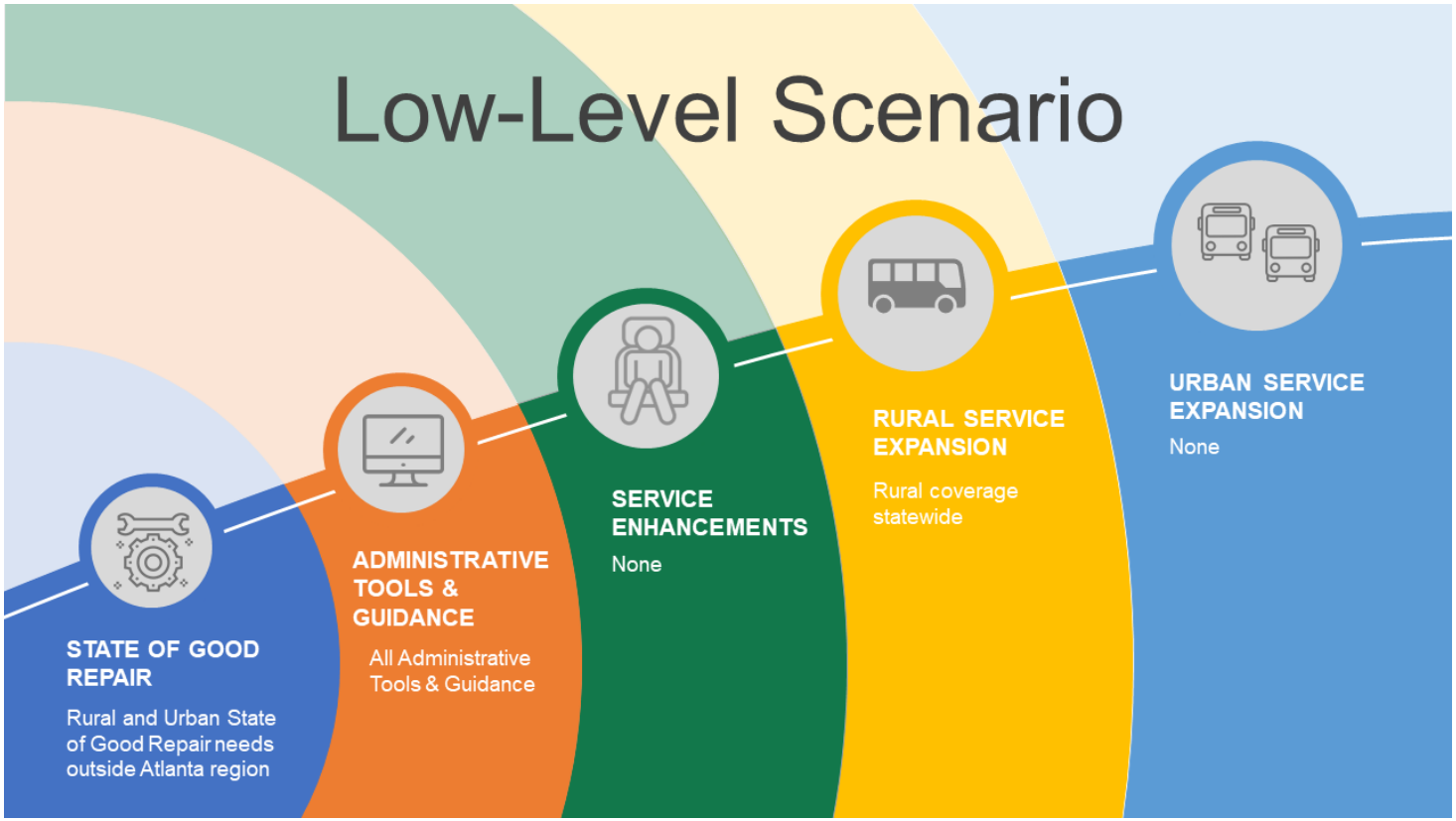


Figure 69. Low-Level Scenario

Scenario Investment Level: The total statewide investment needed for the Low-Level Scenario is $1.1 billion per year. This includes just over $1 billion for baseline operations and an additional $55.4 million to implement the strategies. Strategies implemented under this scenario include $3.3 million in Administrative Tools and Guidance, $3.9 million in Rural SGR, and $31.3 million for rural service expansion.

The Low-Level Scenario is projected to cost $55.4 million more than the Baseline scenario.

Potential Economic Benefits: As referenced in **Section 10.0 - Strategies**, the American Public Transit Association (APTA) calculates that every $1 million invested in public transit generates $4 million in economic return, including 50 jobs and $3.1 million in increased local business sales.[37]

Using these guidelines, the level of additional annual investment presented in the Low-Level scenario could see potential benefits of $208.3 million more in economic return, 2,604 new jobs, and $161.4 million in increased business sales statewide, as illustrated in Figure 70. Low-Level Scenario Return on Investment - Statewide**Figure 70.**

Due to the emphasis on rural enhancement and expansion in this scenario, virtually all of these benefits would be felt outside the Atlanta region, including $207.3 million more in economic return, 2,591 new jobs, and $160.6 million in increased business cells, as shown in **Figure 71**.

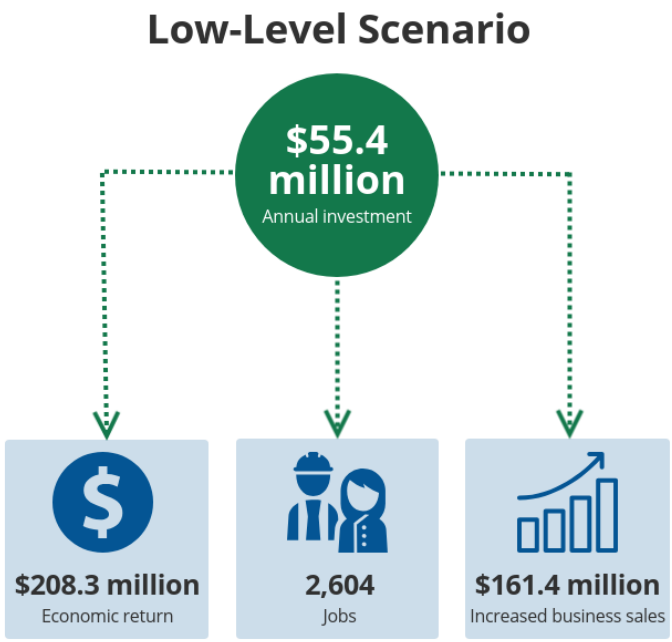


Figure 70. Low-Level Scenario Return on Investment - Statewide

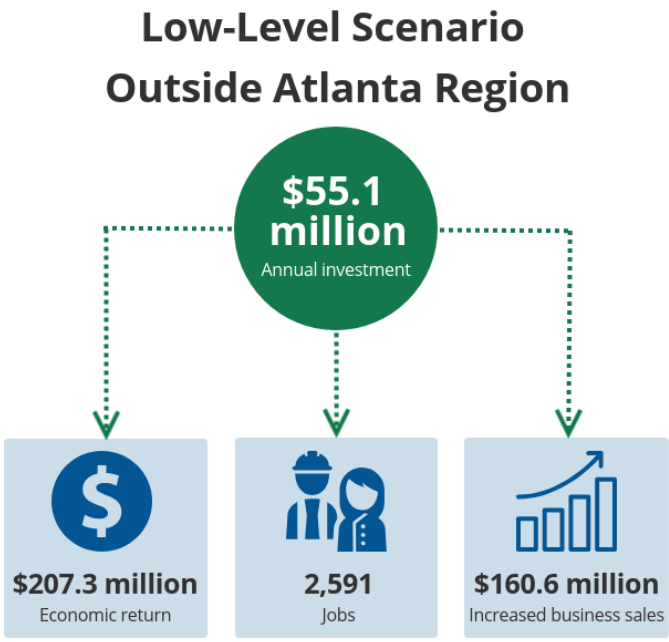


Figure 71: Low-Level Scenario Return on Investment - Outside Atlanta Region

Performance Measures Impacts:

- Increase trips for employment and education purposes;
- Statewide rural transit service coverage;
- Increase population served (including elderly and disabled, and full rural population);
- Increase rural regional or multicounty system assets;
- Increase DHS coordinated systems;
- Decrease injuries and fatalities;
- Increase counties with Transit Development Plans;
- Increase public-private partnerships;
- Increase agencies with GTFS or Google transit data; and
- Increase agencies with websites and apps.

11.3.3 Mid-Level Scenario

Description: The Mid-Level Scenario includes the Low-Level Scenario plus implementation of all service enhancement strategies, all rural service expansion strategies, and 30% of urban service expansion strategies. This will ensure rural transit service is expanded to statewide coverage and meets the full trip demand.

The total statewide investment needed for the Mid-Level Scenario is $2.1 billion per year, this includes just over $1 billion for baseline operations and an additional $993.3 million to implement the strategies. $338.3 million of this is from investments outside the ATL region. This is illustrated in **Figure 72.**

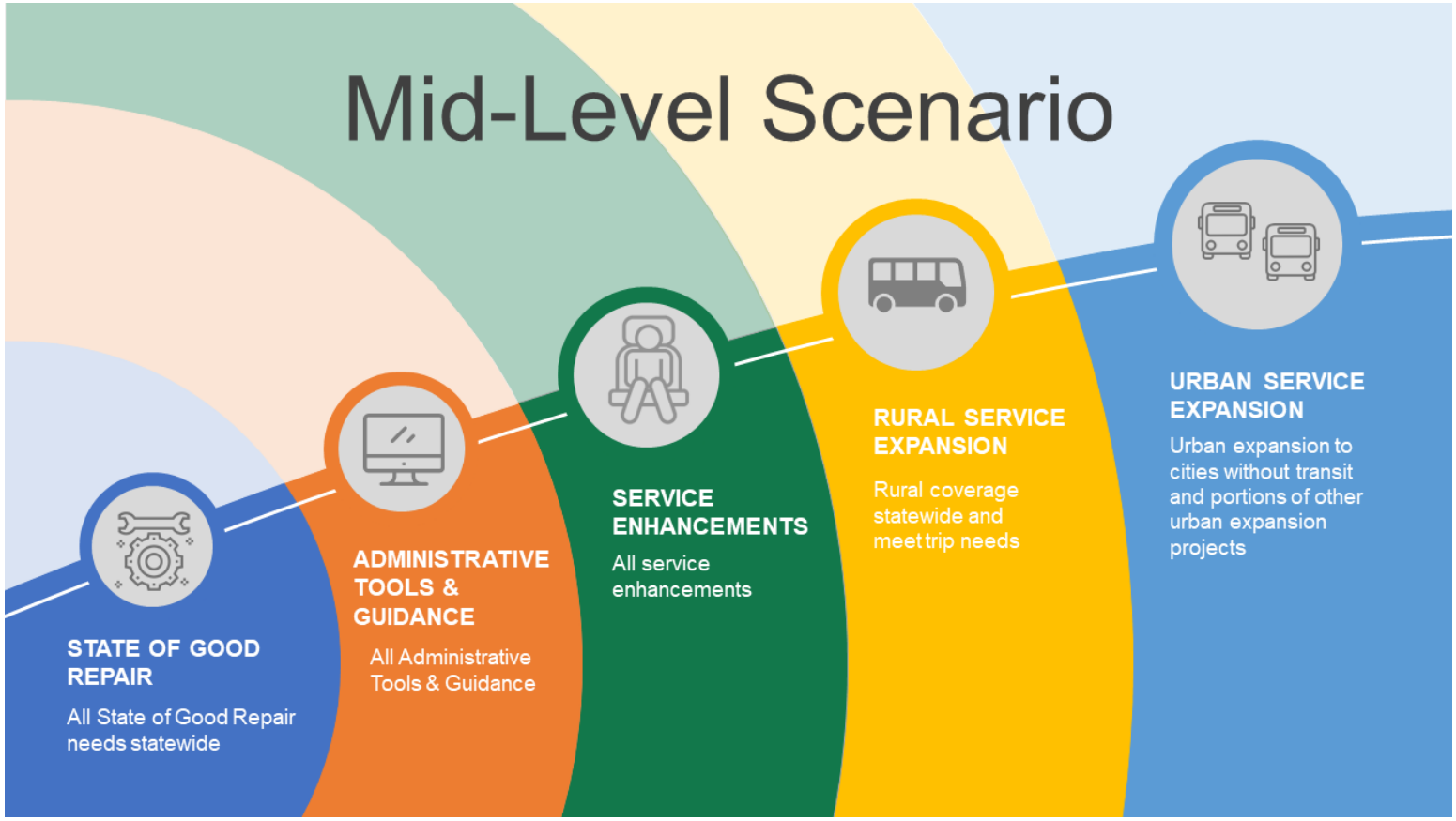


Figure 72: Mid-Level Scenario

The 30% of the urban service expansion strategies implemented would include the six cities currently without service, ensuring transit coverage statewide. This would require an investment of $28.2 million. The remaining expansion strategies would be selected based on the needs and at the discretion of local agencies, whose priorities will vary. This scenario will also all of the urban service enhancement strategies listed in **Section 10.3**.

Scenario Investment Level: In addition to baseline funding, the total estimated investment for this scenario is $993.3 million, which assumes $3.3 million in administrative tools, $515.5 million in service enhancements, $172.7 million in rural service expansion and $301.8 million in urban service expansion. The Mid-Level Scenario is estimated to cost approximately $993.3 million annually above the Baseline Scenario ($1 billion). $338.3 million of this estimated investment is outside the Atlanta region.

Potential Economic Benefits:

The American Public Transit Association (APTA) calculates that every $1 million invested in public transit generates $4 million in economic return, including 50 jobs and $3.1 million in increased local business sales.[38]

Potential economic impacts associated with this level of additional annual investment in transit include $4.1 billion more in economic return, 49,498 new jobs, and $3.1 billion in increased business sales, as illustrated in **Figure 73**. **Figure 74** demonstrates the same impacts outside Atlanta.

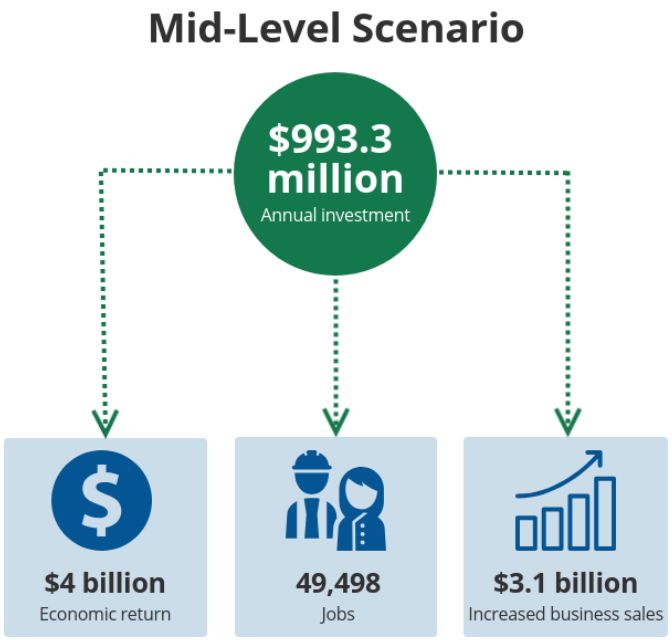


Figure 73: Mid-Level Scenario Return on Investment - Statewide

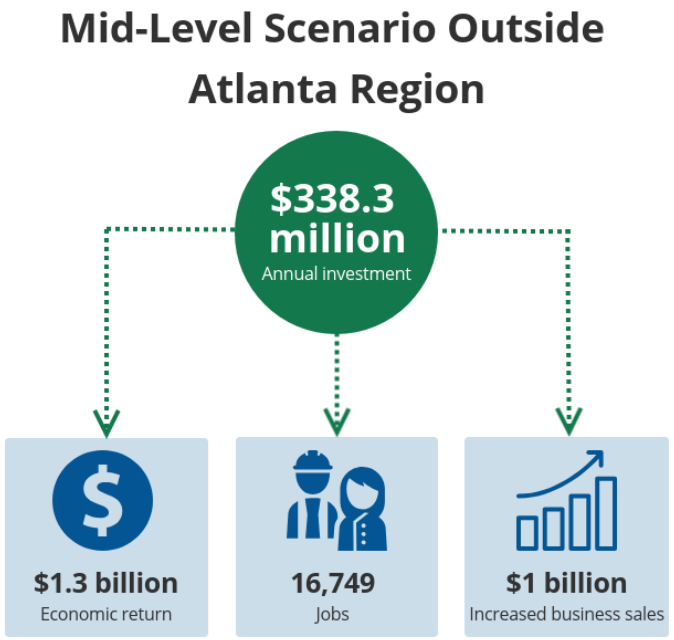


Figure 74: Mid-Level Scenario Return on Investment - Outside Atlanta Region

Performance Measures Impacts:

- Statewide transit service coverage, including rural and urban systems;
- All Georgians served by transit (including elderly and disabled, and full rural population);
- Fully coordinate transit with HST;
- Increase rural transit providers that cross-service area boundaries;
- Increase multimodal transit centers;
- Increase park and ride lots and total capacity;
- Increase intercity bus stops with local transit service;
- Expand low/no emission vehicle fleet;
- Decrease injuries and fatalities;
- Regional Transit Development Plans statewide;
- Increase trips for employment and education purposes;
- All providers with GTFS or Google transit data; and
- Websites and/or app for all providers.

11.3.4 High-Level Scenario

Description: The High-Level Scenario includes all strategies for all categories statewide.

Under this scenario, all identified transit demands are addressed throughout the state, as shown in **Figure 75**.

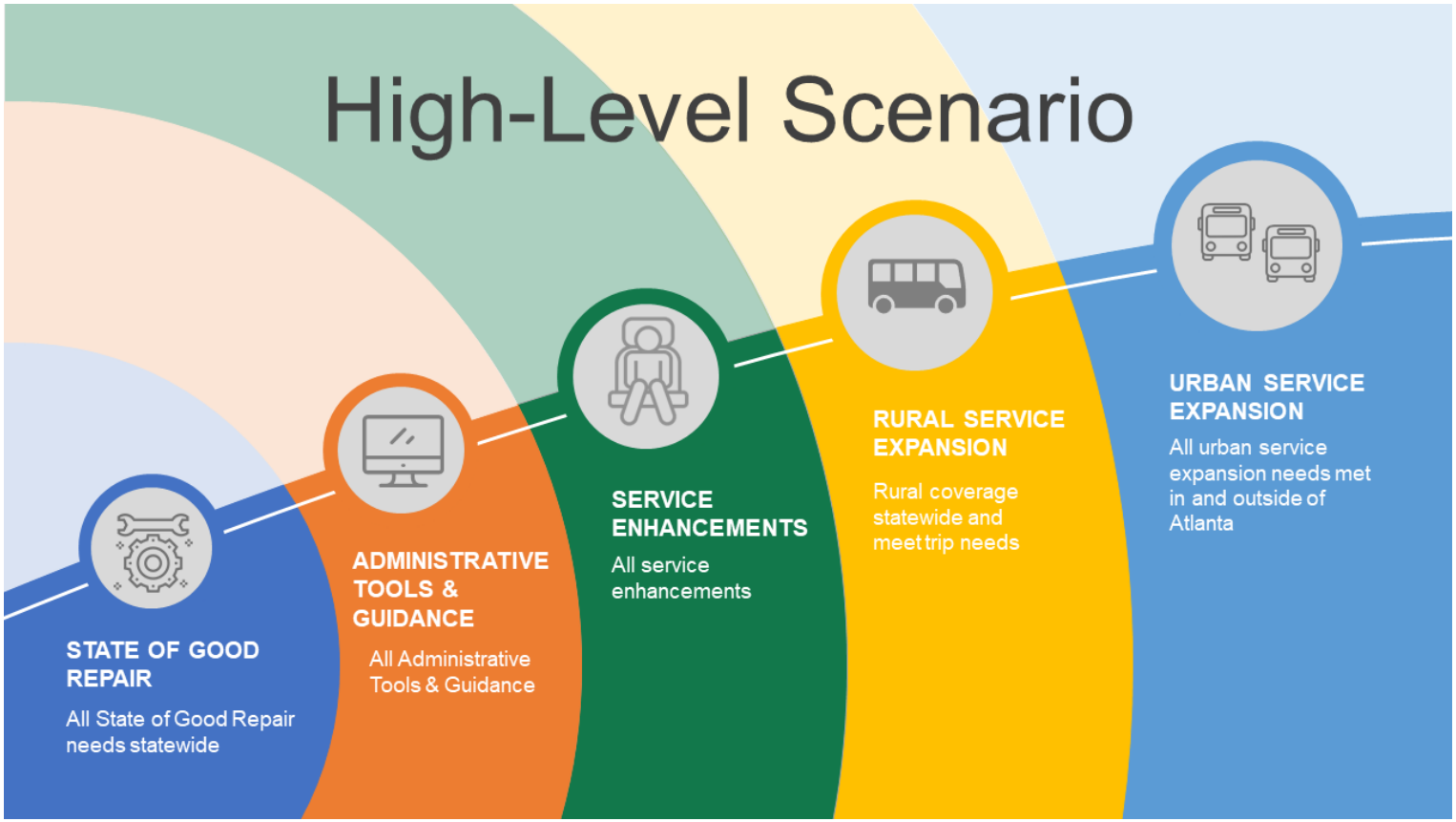


Figure 75: High-Level Scenario

Scenario Investment Level: This scenario represents a total statewide investment level of over $2.7 billion per year, including just over $1 billion in baseline funding and $1.7 billion in additional implementation strategies.

This scenario assumes all strategies identified in this plan: $3.3 million in Administrative Tools and Guidance, $515.5 million in Service Enhancements, $172.7 million in Rural Expansion, and $1 billion in Urban Expansion.

This High-Level Scenario is estimated to cost approximately $1.7 billion above the Baseline amount of just over $1 billion. Of that amount, $508.2 million is from investment strategies outside the ATL region.

Potential Economic Benefits:

The American Public Transit Association (APTA) calculates that every $1 million invested in public transit generates $4 million in economic return, including 50 jobs and $3.1 million in increased local business sales.[39]

Economic impacts associated with this level of additional annual investment in transit include $6.8 billion more in economic return, 84,707 new jobs, and $5.3 billion in increased business sales, as illustrated in **Figure 76**. The benefits for outside Atlanta are shown in **Figure 77**.

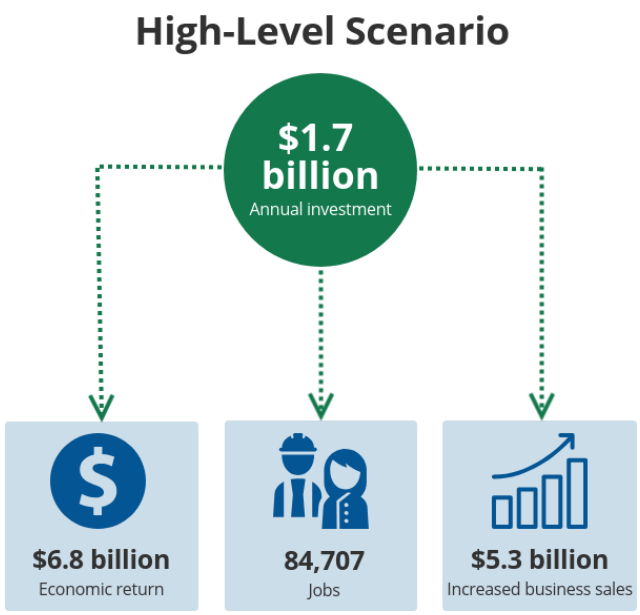


Figure 76: High-Level Scenario Return on Investment - Statewide

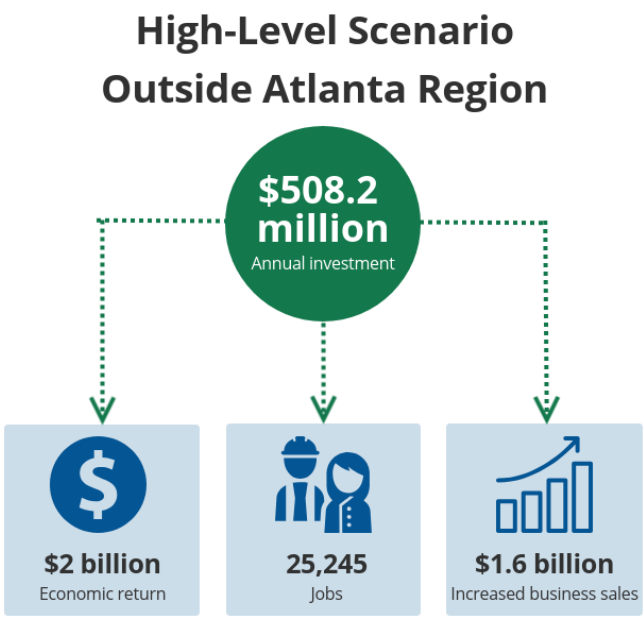


Figure 77: High-Level Scenario Return on Investment - Outside Atlanta Region

Performance Measures Impacts:

- Statewide transit service coverage, including rural and urban systems;
- All Georgians served by transit (including elderly and disabled, and full rural population);
- Increase rural regional or multicounty system assets;
- Fully coordinated DHS and transit systems;
- All rural transit providers deliver cross-jurisdictional service;
- Increase multimodal transit centers;
- Increase park and ride lots and total capacity;
- Increase intercity bus stops with local transit service;
- Increase dedicated transit facilities;
- Expanded low/no emission vehicle fleet;
- Decrease injuries and fatalities;
- Statewide coverage for Regional Transit Development Plans;
- Increase public-private partnerships;
- Increase trips for employment and education purposes;
- All providers have GTFS data available to third parties; and
- Websites and apps for all providers.

11.4 Investment Scenarios Summary

A comparison of each scenario's total required investment and benefits can be found in **Figure 78** for both the entire state and the portion outside the 13-county ATL region.

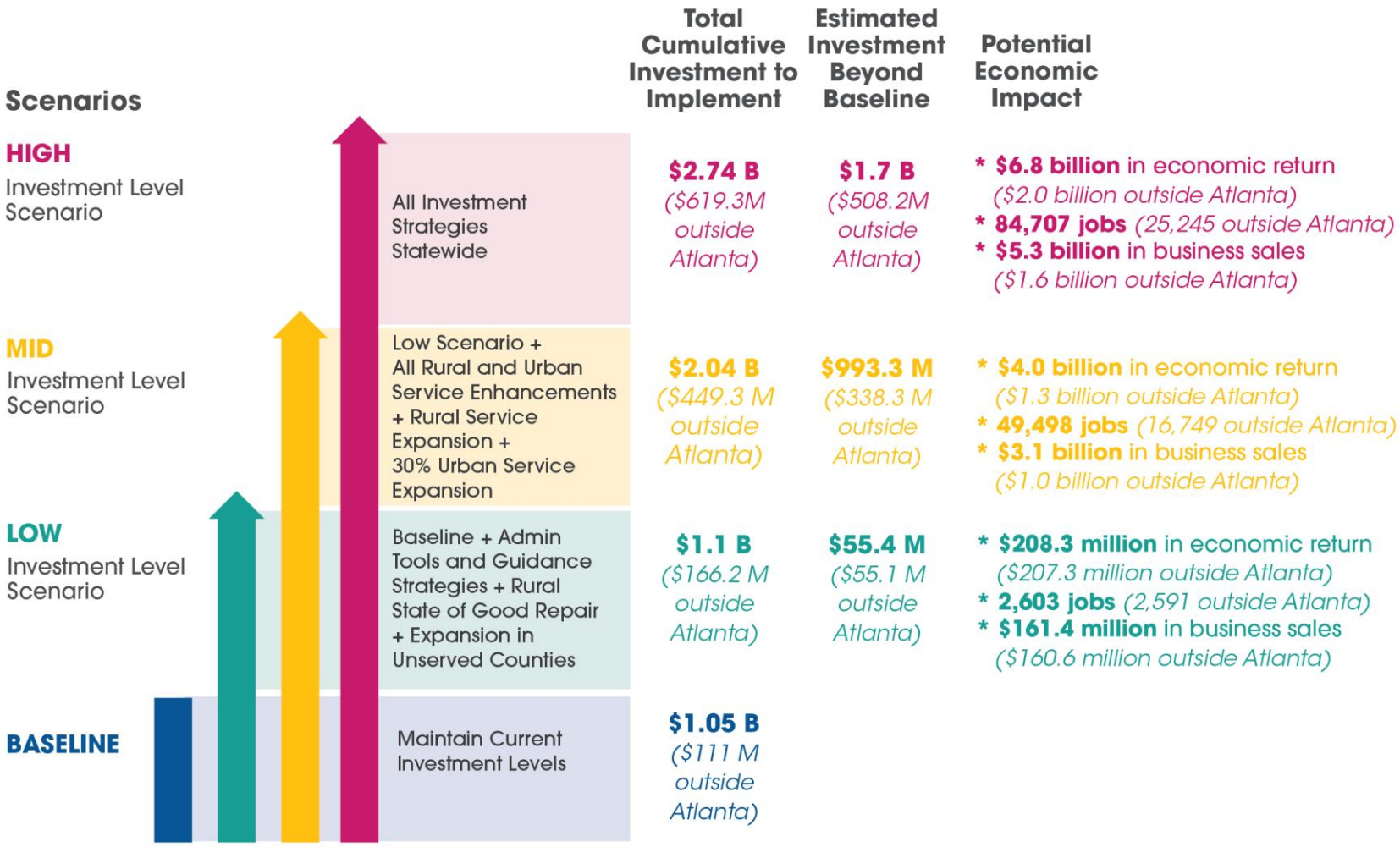


Figure 78. Summary of Investment Scenario Results

11.5 Implementation

Currently, public transit systems in Georgia receive a total of $1.05 billion annually, including $936 million within the ATL region, and $111 million outside the ATL region. Rural providers combined receive $38.4 million. The breakdown of statewide funding by source is shown in **Table 19.** This funding supports transit service in 123 counties, providing nearly 145 million trips annually. It is estimated that the existing or baseline investment in transit services supports $4.3 billion in economic returns, over 53,000 jobs, and $3.3 billion in business sales annually.

Table 19: FY 2018 Funding of Public Transit in Georgia

Funding Source	FY 2018
Federal	$180 million
State	$27 million
Local	$113 million
Taxes and Fees by Transit Agencies	$505 million
Fares and Other Directly Generated Revenue	$223 million
Total	**$1,047 million**

If funding is held steady, inflation and related rising investment requirements will decrease the value of current funding levels, eroding the ability of transit agencies to maintain their existing level of service.

The strategies presented in this plan represent a variety of opportunities and methods to enhance and expand Georgia's existing transit services, improving the quality of life and economic opportunities for all Georgians.

If fully implemented, all strategies, paired with existing services and funding, would total nearly $2.8 billion per year, which represents an additional $1.7 billion beyond today's baseline funding.

> A total of nearly $2.8 billion per year is needed to implement the Statewide Transit Plan's strategies, which represents an additional $1.7 billion beyond current funding levels.

As shown in **Table 20,** the investment levels to implement strategies are estimated at $3.3 million for Administrative Tools and Guidance, $515 million for Service Enhancements, $172.7 million in Rural Expansion, and $1 billion in Urban Expansion. Outside the Atlanta region, an investment of $508.2 million annually is required to implement all strategies.

Table 20: Annual Investment Levels to Implement All Strategies

Strategy Category	Annual Investment Statewide	Annual Investment Outside the ATL
Administrative Tools & Guidance	$3.3M	$3.3M
Service Expansion - Rural	$172.7M	$172.7M
Service Expansion - Urban	$1B	$242.8M
Service Enhancement - Rural	$23.9M	$23.6M
Service Enhancement - Urban	$491.6M	$65.8M
Total	**$1.7B**	**$508.2M**

The potential economic impacts associated with this level of statewide investment is estimated to include $6.8 billion more in economic return, creating or supporting 84,707 jobs, and $5.3 billion in increased business sales.

11.5.1 Near-Term Improvements

Full implementation of all SWTRP strategies will take time and a significant investment. Strategies were reviewed based on implementation timeframe and overall investment levels, potential for improving SWTRP performance measures, and alignment with addressing the needs and priorities of Georgia's transit providers and riders. Though some may take longer to fully implement, the strategies listed below were identified as actionable within the next five years and having a high impact with regard to service improvements and needs addressed. Several of these have lower levels of required investment as well as scalable improvements.

Administrative Tools and Guidance:

- Implement State-Level Mobility Management Program;
- Develop Transit Development Plan (TDP) Guidance and Regional TDPs; and
- Support General Transit Feed Specification (GTFS) Data Development.

Service Expansion:

- Expand Hours to Better Align with Workforce Needs
- Expand Rural Service to the 37 Counties without Local Public Transit, with emphasis on regional expansion, starting with regions where local planning and support exists;
- Launch Urban Service for Cities without Service, starting with cities where local planning and support exists; and
- Expand Capacity of Existing Rural Systems to Serve Unmet Trip Demand.

Service Enhancement:

- Implement Automatic Vehicle Locators (AVL) and Automatic Passenger Counter (APC) Systems;
- Implement Statewide Trip Planning App and Website;
- Enhance Transit Stops with Amenities and Ensure ADA Compliance.

Implementation of the strategies listed above can all begin immediately and result in significantly improved transit performance in Georgia and better meeting statewide needs. These selected strategies complement each other and support expanding transit coverage, regional coordination, and transit technology deployment. Expansion and Enhancement strategies will require local or regional project sponsors.

A statewide mobility management program will enhance existing regional and HST coordination, better connecting riders with employers, healthcare, and educational opportunities. Based in every region of the state, mobility managers will work with providers to identify local solutions and most effectively use Georgia's existing transit infrastructure and services.

The development of TDP guidance and Regional TDPs will lay the groundwork for expanded service coverage into the 37 counties currently without local public transit. Regional TDPs will also complement the work of mobility managers by optimizing routes, facilitating more efficient and effective cross-jurisdictional transit service, connecting riders to jobs, health care, and activity centers, and promoting transit services within a community.

Launching urban service to cities without transit and delivering rural transit to counties currently without local transit can be accomplished by expanding the service areas of existing providers, or through the creation of new transit systems. Locally developed regional TDPs will guide those decisions. For example, a ready-to-be-implemented regional TDP for Southern Georgia outlines a regional transit system that would consolidate existing single county providers and expand services into unserved communities. Once implemented, this regional system would significantly increase both the population and number of counties served by transit.

Similarly, the cities of Valdosta and Brunswick have completed TDPs and are actively working with GDOT to initiate urban transit service within their communities. Incremental transit expansions would follow the development of new TDPs. Each expansion helping to ensure coverage for all of Georgia's 159 counties and address the state's unmet transit needs.

Adding capacity to existing rural systems will also go a long way toward addressing Georgia's unmet trip demand. Many rural providers currently do not have the capacity to meet trip demand, particularly during peak periods. Riders often have to schedule trips days in advance to secure a seat. Expanding vehicle fleets, adding drivers, and providing operational resources will help close the gap in unmet transit trips and reduce the wait period required for booking a trip. Capacity expansion will occur incrementally, allowing operators to adjust their operating practices and improve their services year over year.

Similarly, expanding operating hours for existing providers will make transit a more viable transportation option for Georgia's workforce, particularly early and late-shift workers. Rural transit providers typically offer service beginning between 7:00 and 8:00 AM with final pickups for passengers occurring between 4:00 and 5:00 PM. Outside the ATL, only three urban providers offer both early morning and late-night service.

Extending all revenue service hours by 20% will allow all operators to begin providing service between 5:00 and 6:00 AM and ending service after 11:00 PM. Extended service hours will also assist other ridership segments, such as those needing access to early morning healthcare appointments and students attending night school. This strategy could be implemented with existing vehicle fleets, and would help to further close the gap in unmet trip demand.

As transit services expand and serve larger populations, it will be critical for those services to be ADA compliant and accessible for all potential riders. This means equipping all rural vehicles with wheelchair lifts, and enhancing fixed route transit stops with amenities, including a concrete pad, bench and signage.

Such amenities can be particularly beneficial for the elderly and mobility impaired while making transit more inviting for all riders. Benches and signage also make transit stops more visible to passing motorist, improving safety for all road users.

Implementation of certain transit technologies will further enhance or complement rider amenities, transit usability, and more effective transit planning. Alone, APCs track ridership and can help keep accurate passenger counts, including during times of emergency when fares may be waived, or riders board vehicles from multiple doors.

Paired together with AVLs, APCs provide ridership data for every fixed-route transit stop. Such detailed ridership data facilitates route optimization and informs other enhancements, such as routes needing frequency improvements, extended service hours, or stops where benches are most needed.

AVLs offer additional benefits, including facilitating automated stop announcements, improving the user experience, assisting the visually impaired, and improving safety by allowing the driver to focus on the road. AVLs also enable real time fleet tracking, data which providers use to produce real-time GTFS data feeds.

GTFS data allows public transit agencies to publish their route and service information in a manner that can be consumed by a wide variety of software applications. However, GTFS data can be difficult to develop and maintain. Providing GTFS support to urban providers will help ensure all of Georgia providers produce accurate and consistent information that can be incorporated into trip planning applications and websites. Real-time GTFS data from AVLs will allow riders to see precisely when the next bus will arrive, making transit more convenient and easier to ride.

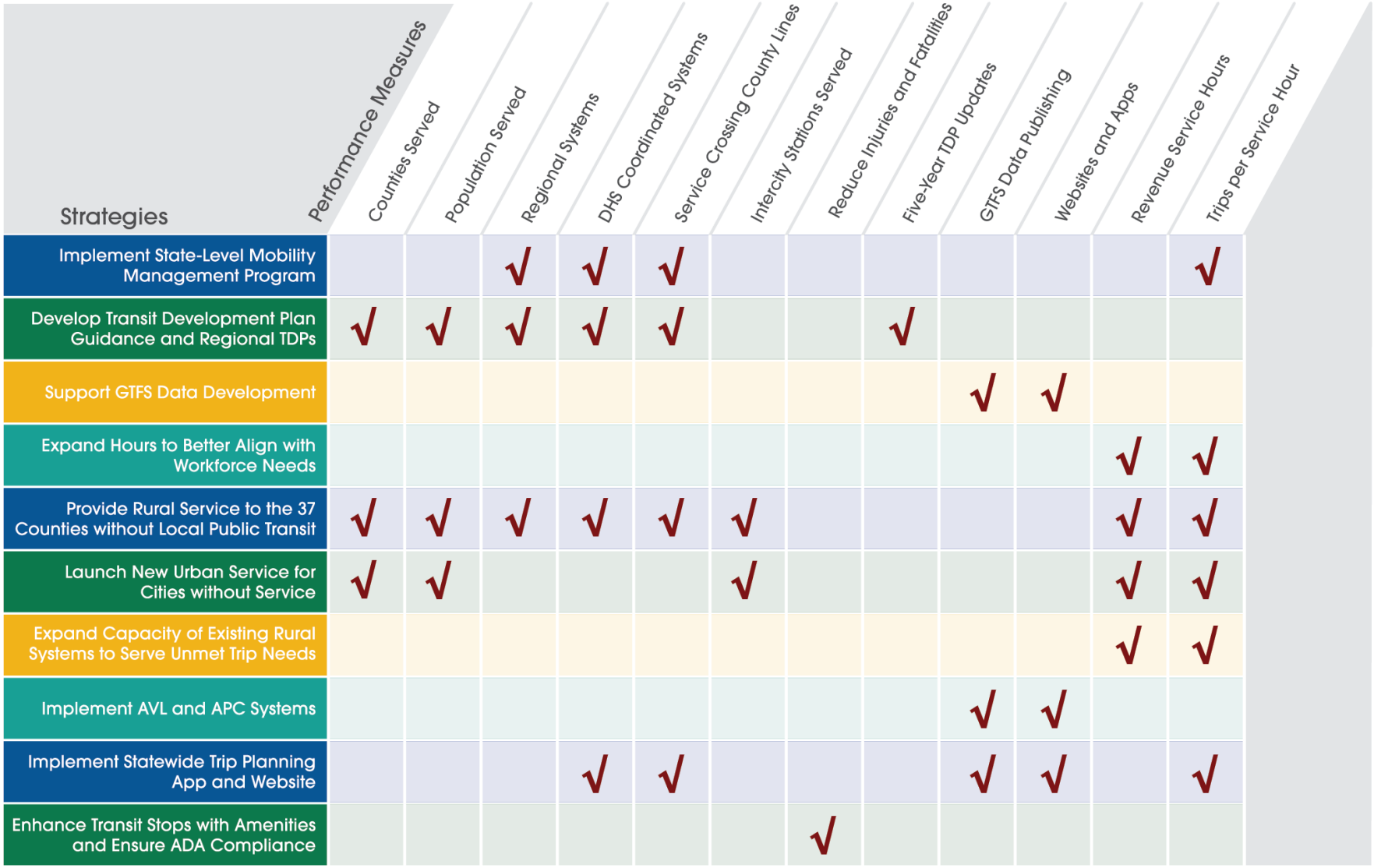
The development of a statewide trip planning app will further complement or support each of the other near-term strategies. Mobility managers will use it to better connect riders with providers. Cross jurisdictional travelers will more easily plan trips and make connections between systems. An app will also make it easier to inform and attract new riders, including in rural communities with new or expanded service offerings.

Fully implementing all of these near-term strategies would require an investment of approximately $171.6 million annually.

Although the largest investments are adding capacity to existing rural systems and expanding coverage to counties and cities without transit, these large-investment strategies will all be implemented incrementally, with investment amounts ramping up over time. The remaining strategies will require an annual investment of just $17.2 million.

As shown in **Figure 79**, these strategies will improve 12 of the SWTRP's performance measures, discussed in **Section 7.0**.

Figure 79: Performance Measures Improved by Near-Term Strategies



11.5.2 Full Implementation

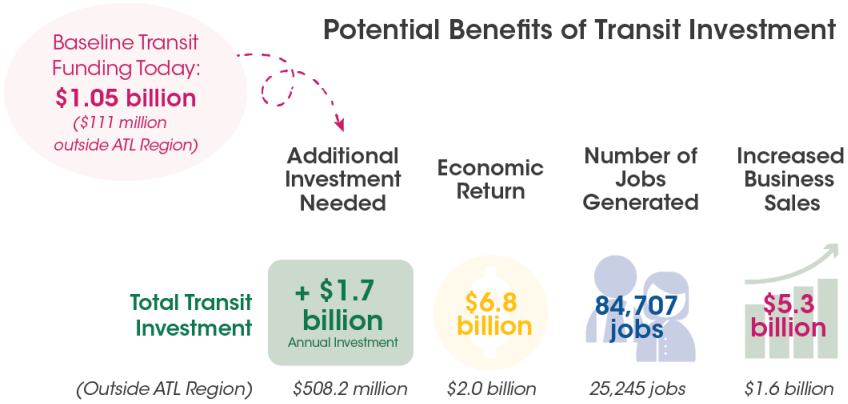
The SWTRP's planning horizon is 2050, and full implementation of all strategies will take time, but could result in significant economic benefits, and accessibility and mobility improvements for all Georgians. The potential economic impacts anticipated from implementation are shown in **Figure 80** and include more than 25,000 jobs and $2.0 billion in economic returns outside the Atlanta region.

In terms of the transit metrics identified in **Section 7.2 Performance Assessment,** full implementation of the strategies will ensure all 159 counties, and Georgia's full population, are served by transit, which is a significant increase from the 123 counties and 88% of the population served today.

The rural transit geographic service expansions paired with adding capacity to existing rural systems will ensure that the 5.8 million rural trips currently going unmet will be delivered. Similarly, adding capacity and increasing service frequency for urban systems will make transit a more viable transportation option for potential riders. Adding capacity with electric buses will lower both emissions and required operating investments while also improving sustainability.

Additional multimodal facilities and coordination among providers will improve transit accessibility and make it easier for users to transfer between routes, systems, and intercity providers. The implementation of innovative transit technologies, and the expansion of managed lanes and dedicated transit facilities will improve the efficiency and reliability of transit services and help to alleviate congestion.

Figure 80. Potential Economic Impacts - Full Strategy Implementation



The development and implementation of regional TDPs will result in enhanced regional coordination and can be a first step in developing regional service. Longer-term, consolidation of single-county providers by regional providers can expand coverage, increase mobility options, and improve operating efficiencies.

Incremental steps toward regional service include coordination among stakeholders, shared fleets and dispatching, cross-jurisdictional connections between providers, and unifying fares and payment systems. Mobility Managers and regional commission planning staff will play an integral role in regionalization of service.

Extended service hours and more providers crossing county or jurisdictional lines will similarly make transit a more viable option for working individuals, and it will better connect rural communities with healthcare and job centers, improving economic opportunities for rural and urban communities alike.

Websites, improved marketing, and communication for all providers statewide will better educate the public on transit services available in their communities. Additionally, GTFS data development and a statewide trip planning app will make it easier for riders to use transit for their everyday transportation needs.

Finally, investing a more highly trained transit workforce, and fully meeting the State-of-Good-Repair will help to ensure safety, reduce injuries and fatalities, and enhance overall system reliability.

Today, Georgians across the state depend on transit to get to their jobs, access healthcare, and education, participate in the economy, and to get out and active in the community. More expansive and enhanced service is needed, as many still do not have access to these opportunities. Implementing the strategies identified in this Statewide Transit Plan will close that gap. It will improve the quality of life and economic opportunities for all Georgians by supporting an innovative, connected, reliable, and accessible multimodal public transportation network.

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