



Toombs County Long Range Transportation Plan



PREPARED FOR



Georgia Department of
Transportation



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1. INTRODUCTION

1.1. PLAN BACKGROUND AND OBJECTIVE

The Georgia Department of Transportation (GDOT) in partnership with Toombs County, and working with the cities of Lyons, Vidalia, and Santa Claus, developed the *Toombs County Long Range Transportation Plan*. Referred to the “Transportation Plan” or “Plan”, it assessed transportation needs and possible improvements that support the continued safe and efficient movement of people and goods through the year 2050.

This Plan studied the multi-modal transportation system that includes roads, bridges, freight, rail, airports, and bike/pedestrian facilities. It used that information to identify and recommend prioritized improvement projects. Using recommendations of previously-completed plans, it provides a suggested path of transportation programs and policies supporting the transportation needs of citizens and businesses.

To develop this Plan, current conditions for each of the transportation modes, as well as existing roadway operations, land use, and maintenance needs were evaluated throughout Toombs County. Upon evaluating these conditions, this Plan will provide a future needs assessment for each of these categories. As part of this effort, a travel demand model was developed for this Plan. The travel demand model represents the transportation network within the County and assists with the analysis of existing and future travel demand and traffic conditions. Additionally, a comprehensive and interactive public involvement program was conducted to establish plan goals and objectives, identify issues and opportunities, and to identify potential improvements to the Toombs County transportation network. This process ensured that not only were transportation improvements coordinated with the leadership of Toombs County and its cities but individual citizens and interested groups were afforded the opportunity to provide their input. Goals and objectives were coordinated with local comprehensive planning efforts in the County and cities, to ensure consistency between planning efforts and to best represent the long-term vision for the community.

Ultimately, study efforts have produced a comprehensive transportation planning document that, if implemented, will help to guide the efficient movement of people and goods within and through the study area through the study horizon year. Successful implementation depends upon local efforts to move forward with plan recommendations by pursuing projects, policies, and funding sources that will help to achieve the goals and objectives identified as a part of the plan development process. Implementation is discussed in this document so that this Plan serves as a tool for guiding local transportation decision-making as development pressures increase throughout the County.

1.2. STUDY AREA

Toombs County is located in southeastern Georgia and is surrounded by Treutlen, Emanuel, Candler, Tattnall, Appling, Jeff Davis and Montgomery Counties. Its area is 367 square miles, and population is 27,160.¹ The County’s three cities are Lyons, Vidalia and Santa Claus.

The County is a rural and progressive community located just south of Interstate 16 interchanges along US Route 1 and State Route (SR) 297. Its advantageous location is about equidistant between the metropolitan areas of Augusta, Macon and Savannah. The County is best known for its Vidalia Onions, one of several varieties of sweet onion grown in Georgia. Vidalia Onions were named by the Official State Vegetable of Georgia in 1990. Agriculture and forestry remain integral components of the local economy

¹ 2013-2017 American Community Survey 5-Year Estimates, U.S. Census Bureau
<https://data.census.gov/cedsci/>

and continue to diversify as well, which provides a scenic landscape and a natural quality of life in the community.

The County is included in the Heart of Georgia Altamaha Regional Commission (HOGARC) and actively participates in planning efforts conducted by the Regional Commission. The HOGARC is the designated regional planning agency for 17 counties in south central and southeast Georgia. The HOGARC provides comprehensive planning services for the area and partners with member counties in the areas of comprehensive planning, community and economic development, historic preservation, local government administration and management, aging services, workforce investment, geospatial information services and transportation. Toombs County is now the third most populous county in the Region as a thriving regional trade, job, healthcare, and service center. The study area is displayed in Figure 1-1 on the next page.

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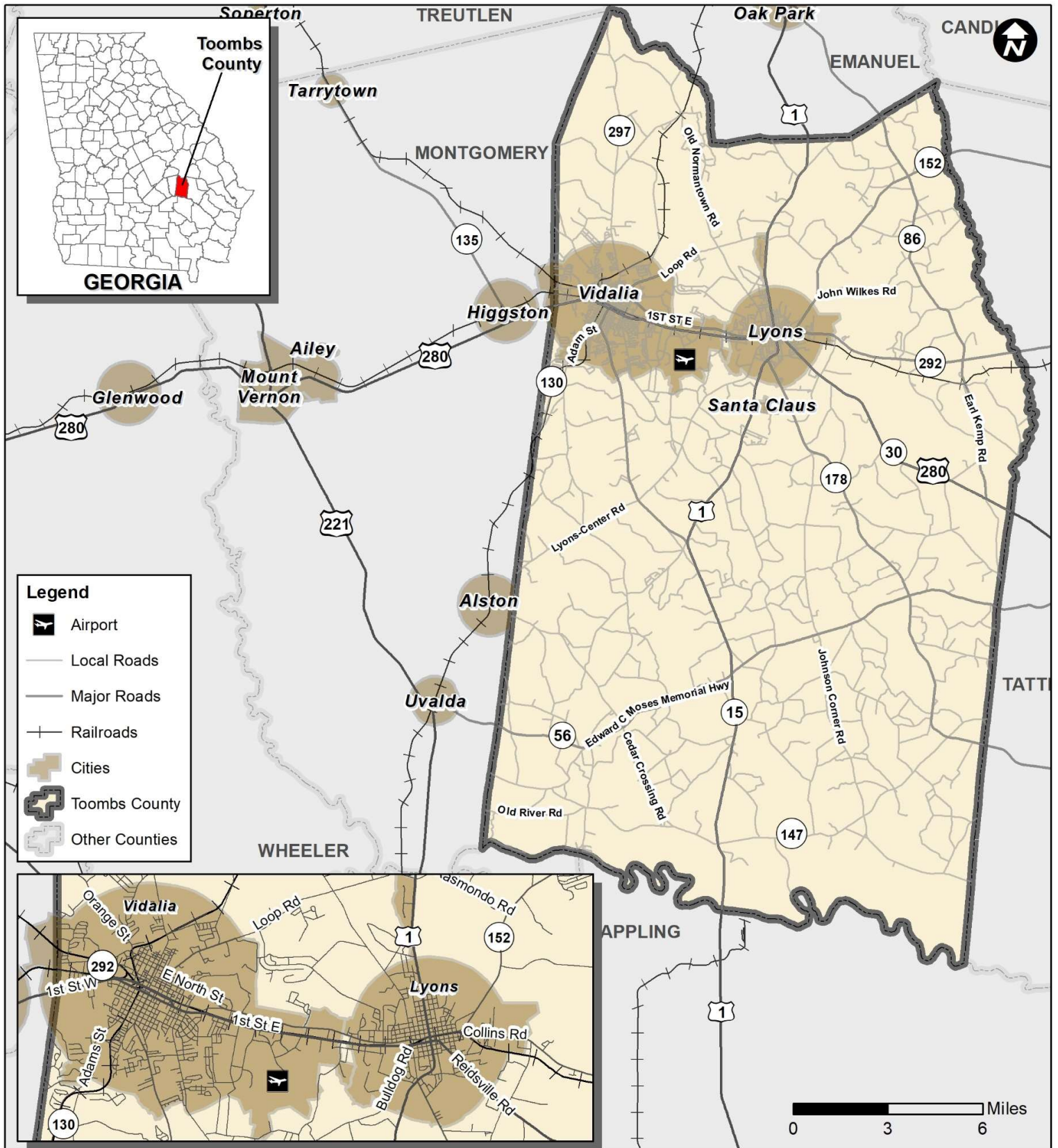
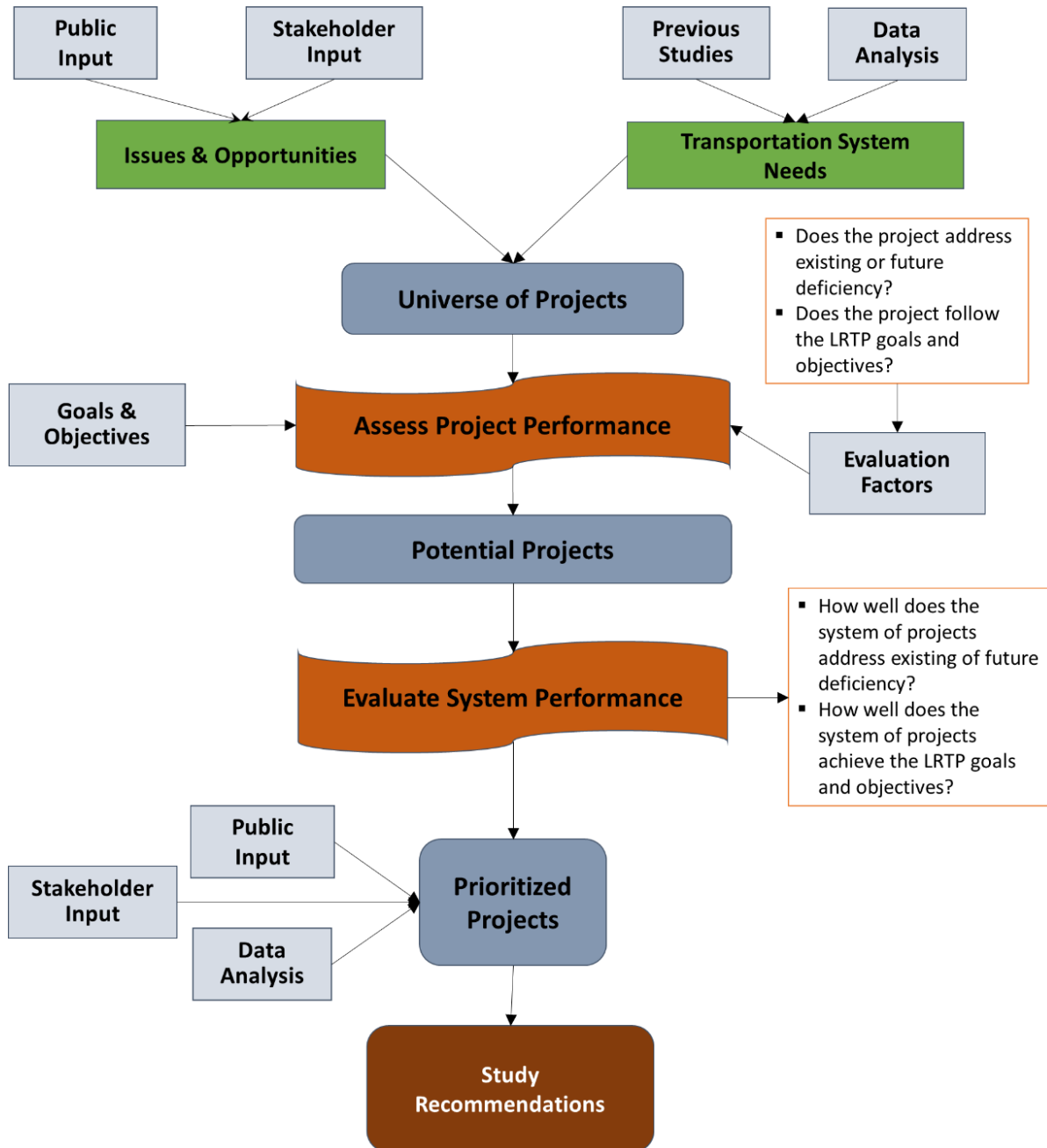


Figure 1-1 Study Area

1.3. STUDY PROCESS

In order to identify needs and develop recommendations for Toombs County, a process was employed that combined both quantitative and qualitative analyses, guided by input from key stakeholders and the public. Figure 1-2 outlines the process employed in the development of a long-range transportation plan for Toombs County.

Figure 1-2: Study Process



The development process for this transportation plan follows the guidelines prescribed by federal legislation, known as Fixing American's Surface Transportation Act (FAST Act), for long-range transportation plans (LRTP). This process establishes a performance-based framework for transportation planning and decision-making.

LRTPs are required to have a planning horizon of 20 years or more. Toombs County LRTP's horizon year is 2050, which is consistent with Georgia's 2050 Statewide Transportation Plan (SWTP) and Statewide Strategic Transportation Plan (SSTP). Detailed information for all analysis elements is provided in the following sections. It is within this framework that the existing conditions data was identified for collection, analyzed, and summarized as baseline conditions for the transportation system within the county. Data collection sources are documented in Appendix A. Evaluation criteria were established to assess the existing and future transportation network. Deficiencies and operating conditions were then documented and ultimately used to develop the recommended improvements for the Transportation Plan.

2. PLANNING CONTEXT

2.1. DEMOGRAPHIC OVERVIEW

The demographic overview of the County documents the historic population growth, future population projections, aging population, environmental justice population, existing employment base and future employment projections.

2.1.1. Existing Population

A review of U.S. Census data shows that Toombs County experienced stable population growth since the year 1980. According to the most recent U.S. Census data available, Toombs County’s 2017 population was 27,160 and total households was 10,521. Table 2-1 presents selected demographic data and illustrates the characteristics of the population, households and other socioeconomic factors in Toombs County according to the U.S. Census Bureau’s 2013-2017 American Community Survey (ACS) 5-Year Estimates. Figure 2-1 represent the 2017 Toombs County population density.

Table 2-1: General Demographic Characteristics

Demographic	2017
Total Population	27,160
Median Age	36.1
Total Households	10,521
Average Household Size	2.54
Owner-Occupied Housing Unit rate	60.6%
Percent in Labor force (age 16+)	57.2%
Percent High School Graduate or Higher	80.6%

Source: U.S. Census Bureau, 2013-2017 ACS 5-Year Estimates

Approximately 56 percent of Toombs County’s population lives in three cities: Vidalia, Lyons and Santa Claus. Table 2-2 shows the rural and urban population breakdown for the year 2017. Given the dispersed population distribution in the County, a regional approach to providing transportation services throughout the County is necessary.

Table 2-2: Area Population

Location	2017
Vidalia	10,603
Lyons	4,341
Santa Claus	182
Unincorporated	12,034

Source: US Census Bureau, 2013-2017 ACS 5-Year Estimates

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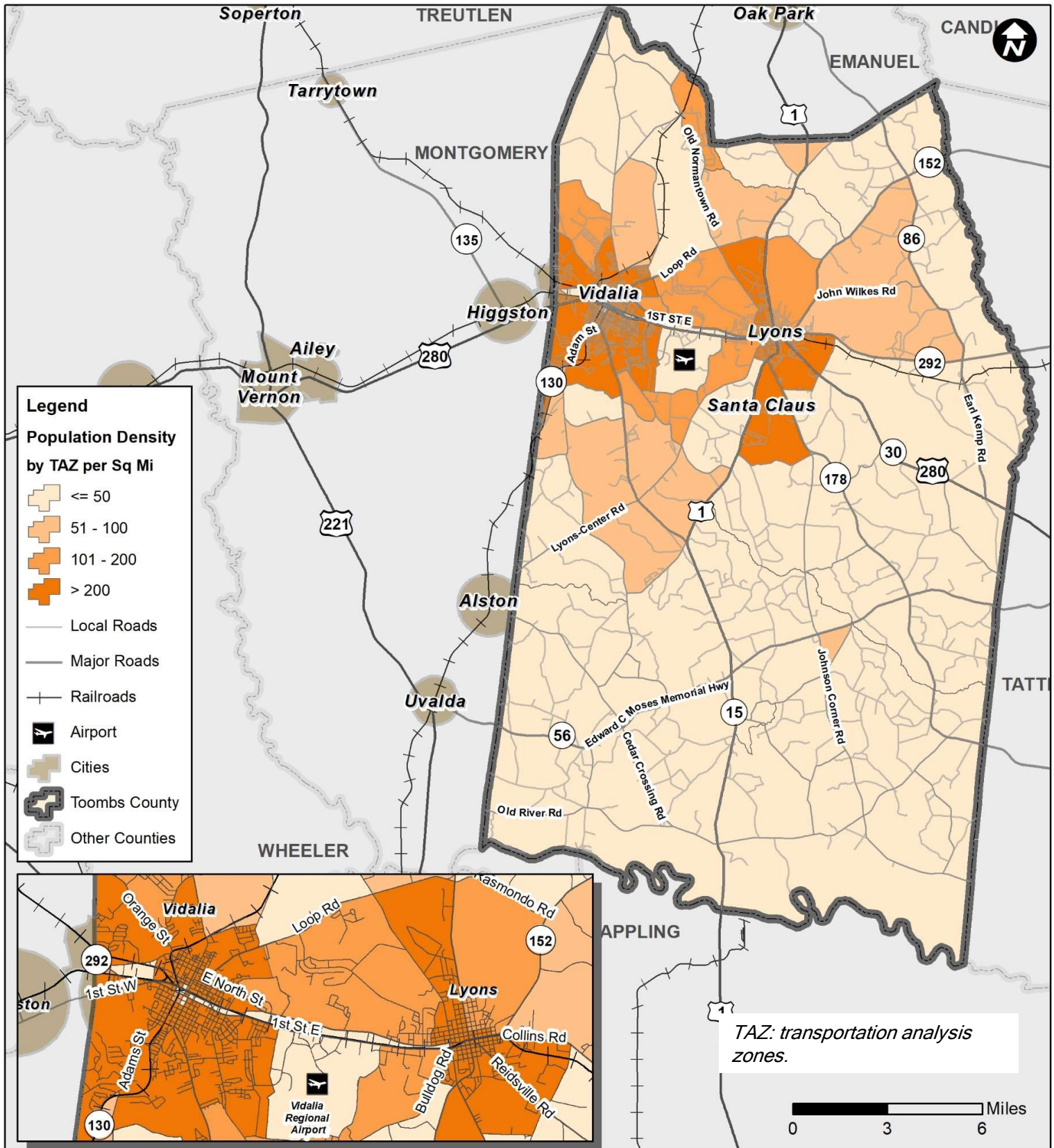


Figure 2-1 Toombs County 2017 Population

Data Source: 2013-2017 ACS 5-Year Estimates

2.1.2. Historic Population Growth

According to the U.S. Census data, Toombs County has experienced a 20 percent increase in total population between 1980 and 2010, which is less than the statewide rate of 77 percent over the same time period. Table 2-3 illustrates the growth trends from 1980 to 2010 for both Toombs County and the State of Georgia. Information in Table 2-3 shows that between 1980 and 2017, Toombs County’s population grew at an average annual rate of 0.5 percent, lower than the annual average increase for Georgia (1.6 percent).

Table 2-3: Historical Population Growth

Area	1980	1990	2000	2010	2017	Total Growth (1980-2010)	Average Annual Growth (1980-2010)
Toombs County	22,592	24,072	26,067	27,223	27,160	20%	0.5%
Georgia	5,463,105	6,478,216	8,186,453	9,687,653	10,201,635	77%	1.6%

Source: Population by Counties in Georgia by Decennial Census, <https://www.census.gov/population/cencounts/ga190090.txt>, 2013-2017 ACS 5-year Estimates

2.1.3. Future Population Growth

Toombs County population projections were collected and evaluated from various sources, including the 2014 Toombs County Joint Comprehensive Plan, the Governor’s Office of Planning and Budget (OPB) and the GDOT population forecasting data developed by Regional Economics Models, Inc (REMI) for the South Georgia Region.

The Governor’s Office of Planning and Budget (OPB) develops state and county population projections for planning on statewide infrastructure including transportation, public buildings and water. The most recent projections shown in Table 2-4 provide annual population projections for the years 2018 through 2050, and in five-year increments for 2025 through 2050, for Toombs County.

Table 2-4: Population Projections

	2018	2019	2020	2025	2030	2040	2045	2050
Population	28,399	28,601	28,802	29,757	30,555	31,673	32,099	32,497
Annual Growth Rate		0.71%	0.70%	0.65%	0.53%	0.36%	0.27%	0.25%

Source: Governor’s Office of Planning and Budget

2.2. ENVIRONMENTAL JUSTICE

Environmental Justice (EJ) Executive Order (EO) 12898 defines EJ populations as persons belonging to any of the following groups:

- Black
- Hispanic
- Asian American
- American Indian or Alaska Native or
- Low-Income – a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines.

Environmental justice is intended to acknowledge minority and low-income populations that have been historically underrepresented in the transportation planning process and ensure that these group are not disproportionately impacted as a result of transportation improvement recommendations.

The intent of an EJ analysis is to locate these populations and to involve them early and continuously through the decision-making process, as well as to assess if there would be a disproportionate impact on traditionally underrepresented communities. The following sections document the location of minority and low-income populations.

2.2.1. Minority Populations

The minority populations in Toombs County were identified and analyzed using the data from the U.S. Census Bureau's 2013-2017 ACS 5-Year Estimates. This data was reviewed by Census block groups and illustrates higher density concentrations of minorities, (greater than 25 percent of total in each block group), which are located close to the cities of Lyons and Vidalia. The area covering the southern half of the County exhibits the least diversified population, with less than 10 percent minorities. The average percent of Black, Hispanic, and Asian America are 25.4 percent, 11.6 percent and 0.9 percent, respectively. The American Indian or Alaska Native and other non-white population is approximately 1.6 percent. Accordingly, the average total minority population by block group in Toombs County is 39.5 percent, which is close to the statewide average of 40.3 percent. The minority population in Toombs County is presented in Figure 2-2 as a percentage of the County population.

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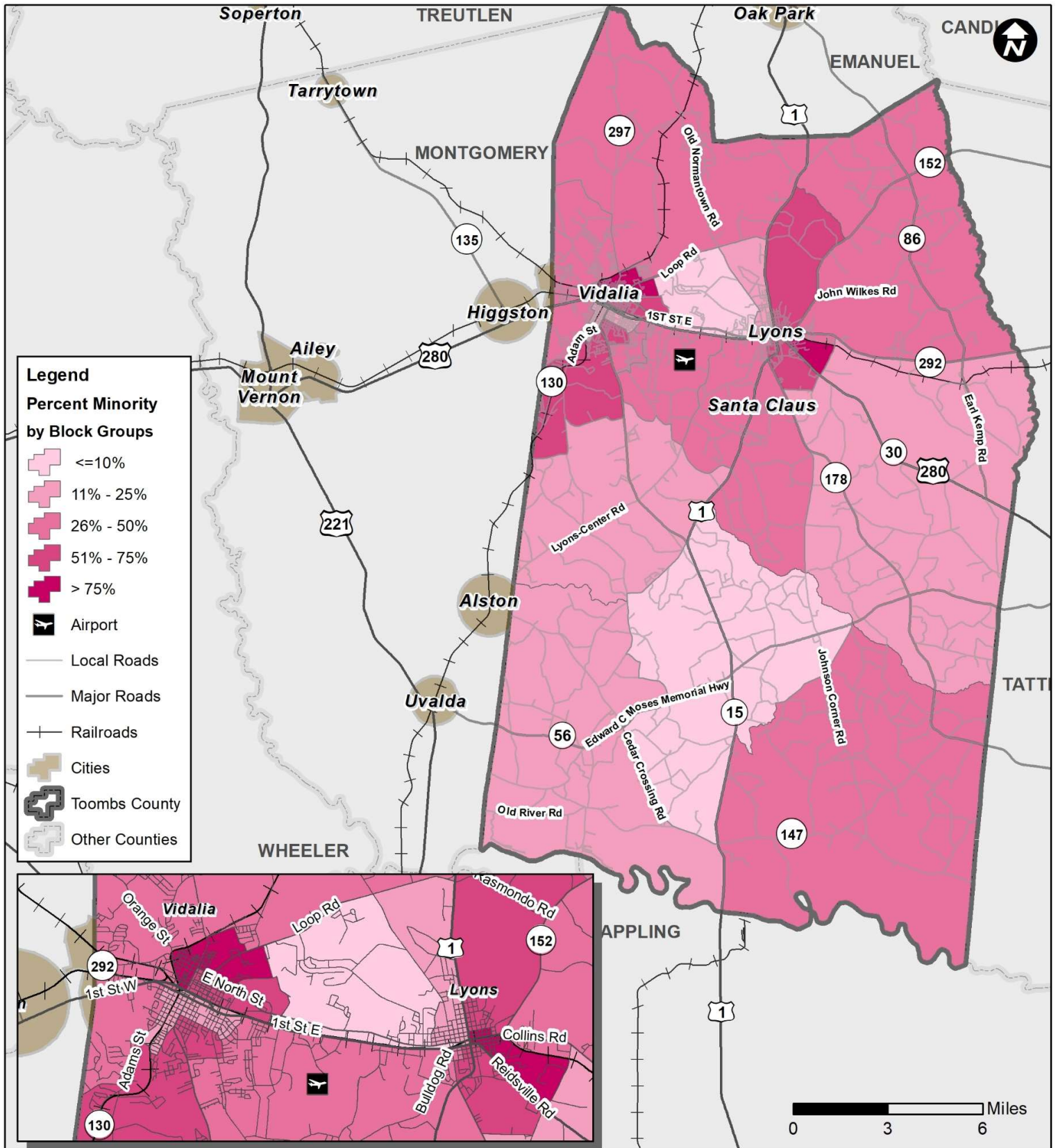


Figure 2-2 Minority Population

Data Source: 2013-2017 ACS 5-Year Estimates

2.2.2. Low-Income Populations

The second component of Environmental Justice analysis, poverty level, was also analyzed using the 2010 Census data and 2013-2017 ACS 5-Year Estimates. The average number of individuals below the poverty line in Toombs County is 24.4 percent, which is higher than the statewide average of 16.9 percent².

According to the 2013-2017 ACS 5-Year Estimates, median household income in Toombs County in 2017 was \$35,750, about two-thirds of the amount in Georgia of \$52,977. The Toombs County per capita income in 2017 was \$21,039. The medium household income distribution in Toombs County are displayed in Figure 2-3.

These EJ areas were included in the analysis to ensure that transportation improvements would benefit and not disproportionately impact these areas in a negative manner.

² *How the Census Bureau Measures Poverty, U.S. Census Bureau, Accessed July 2019*
<https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>

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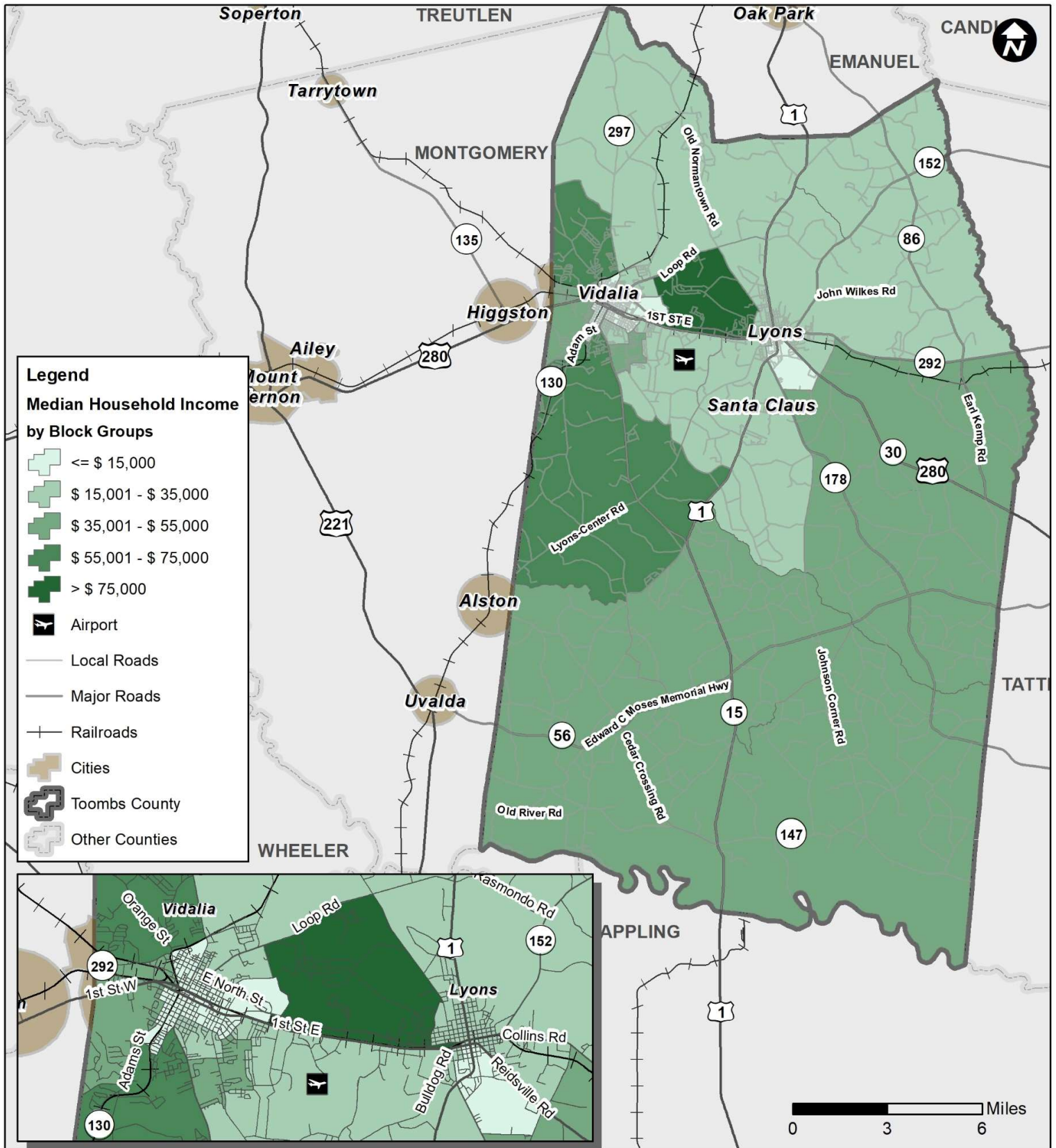


Figure 2-3 Median Household Income by Block Groups *Data Source: 2013-2017 ACS 5-Year Estimates*

2.3. EMPLOYMENT DATA

The review of Toombs County employment data identified existing industry types, major employers, employment density, and historical trends. The number, industry type, and location of jobs have a direct implication on the types of transportation facilities needed by business operators and employees in an area. Table 2-5 lists the distribution of existing employment by sector within Toombs County.

Table 2-5: Existing Employment by Sector (2017)

Sector	Toombs County Employees	Percent of Total Employees
Agriculture, forestry, fishing, hunting and mining	749	7.1%
Construction	983	9.3%
Manufacturing	1,102	10.4%
Wholesale trade	330	3.1%
Retail trade	1,284	12.1%
Transportation and warehousing, and utilities	885	8.4%
Information	71	0.7%
Finance and insurance, real estate, rental and leasing	296	2.8%
Professional, scientific, and technical services	622	5.9%
Educational services, health care and social assistance	2,172	20.5%
Arts, entertainment and recreation, and accommodation and food services	547	5.2%
Other services, except public administration	700	6.6%
Public administration	833	7.9%
Total	10,574	100%

Source: U.S. Census Bureau, 2013-2017 ACS 5-Year Estimates

In Toombs County, educational services, health care and social assistance jobs make up the largest sector, accounting for 20.5 percent of total employment. Retail trade are the second largest sector, accounting for 12.1 percent of total employment. The other three significant sectors are manufacturing, construction and public administration.

Using the Georgia Department of Labor 2018 annual average employment data, the top ten largest employers in Toombs County are provided below:

1. Chicken of the Sea International
2. Department of Transportation
3. Meadows Regional Medical Center, Inc
4. Remedy Intelligent Staffing, Inc
5. Saldgado Harvesting, LLC
6. Selecsource Staffing Services
7. Southeastern Technical College

8. Trane U.S., Inc
9. Tumi, Inc
10. Walmart

Employment density is presented in Figure 2-4 . Employment is concentrated in the Vidalia-Lyons corridor, as well as north of Lyons.

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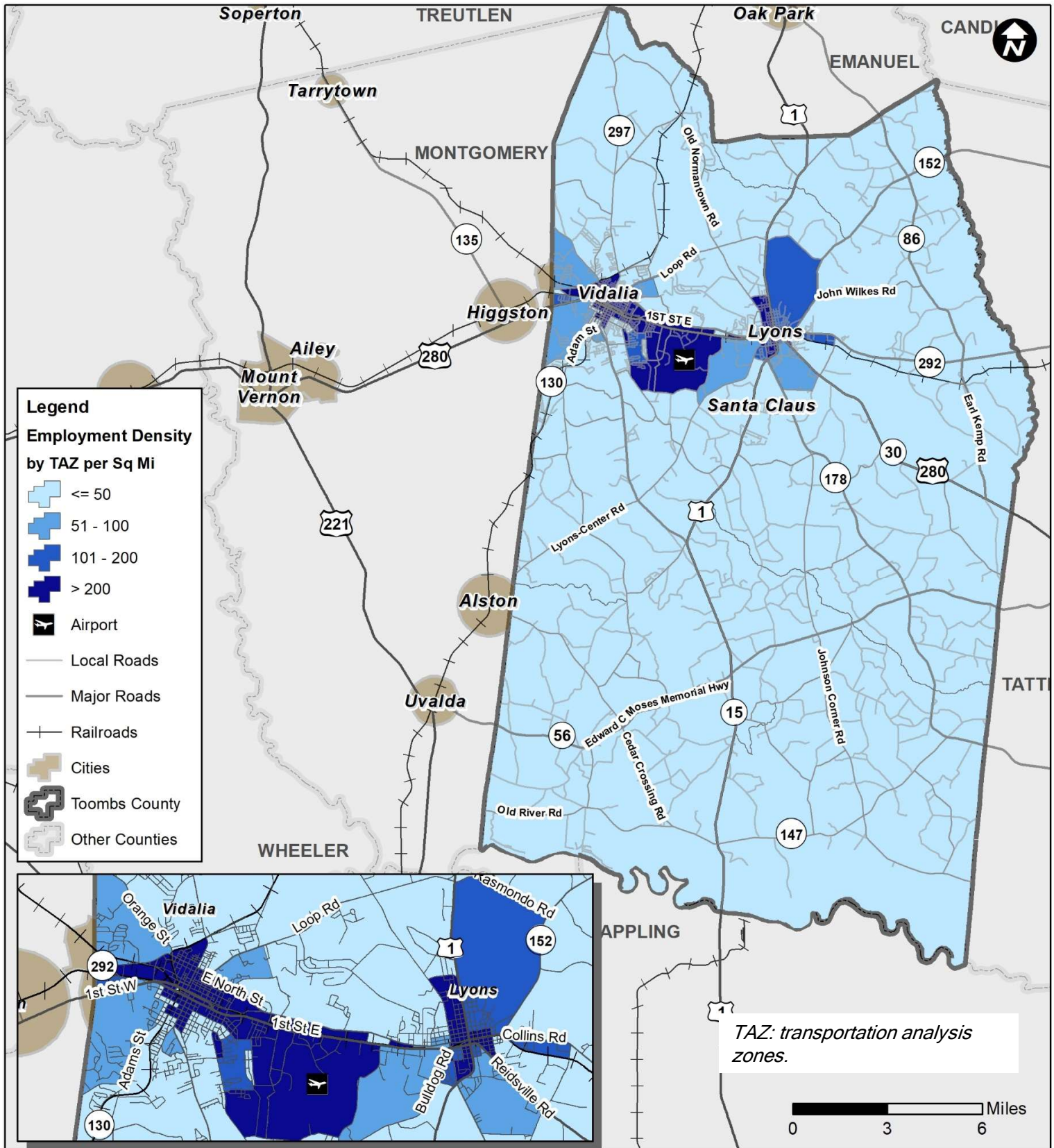
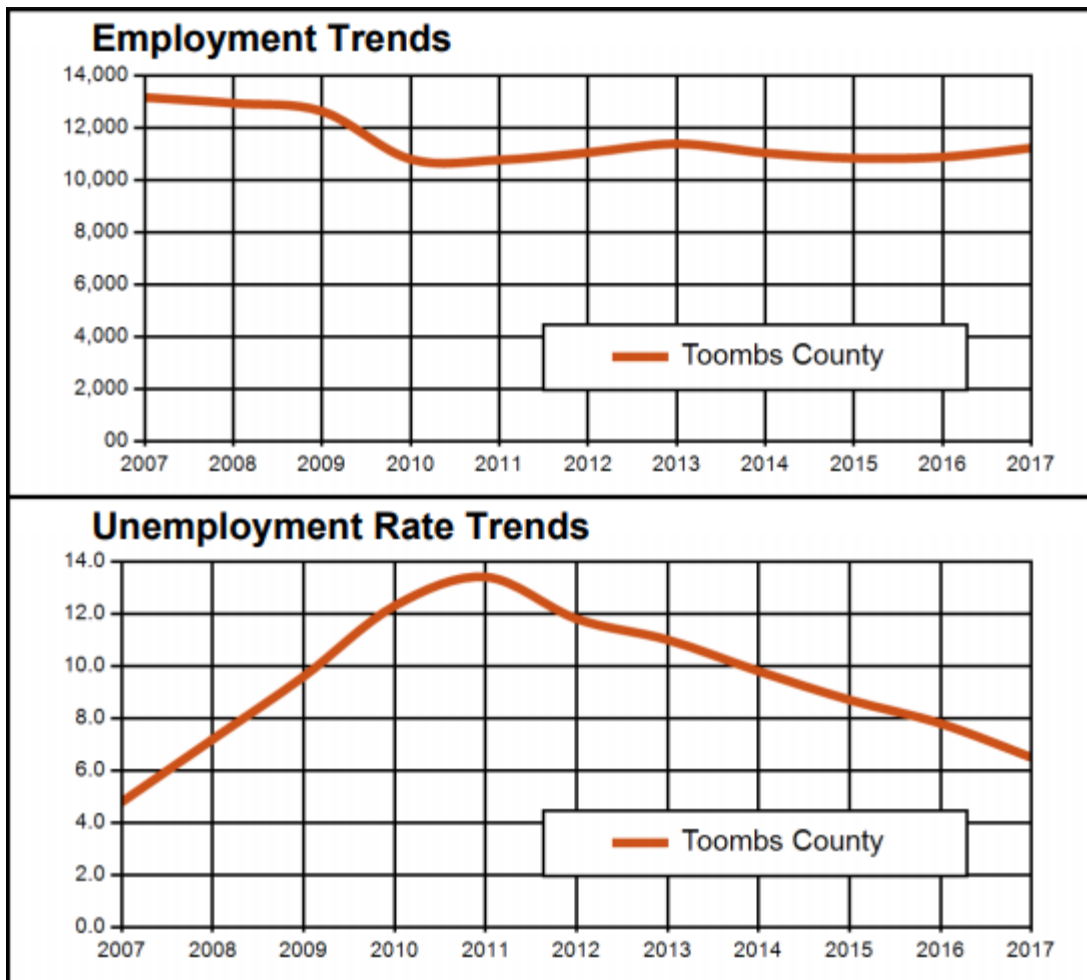


Figure 2-4 Employment Density

Data Source: 2013-2017 ACS 5-Year Estimates

Figure 2-5 shows trends in total employment along with unemployment within the County. Employment has remained fairly constant since 2010. Toombs County's unemployment rate in 2017 was 6.5 percent, higher than statewide average of 4.7 percent.

Figure 2-5: Employment and Unemployment Trends



Data Source: Georgia Department of Labor Area Labor Profile, 2018

2.4. TRAVEL PATTERNS

The distribution of population and employment discussed in the previous sections commute patterns. Based on 2013-2017 ACS 5-Year Estimates, 92.7 percent of workers rely on roadway-based transportation for commute trips, either by driving alone (78.4 percent) or carpooling (14.3 percent). Workers in Toombs County who bike, walk, commute by other means, or work at home comprise about 7 percent of total workers. Table 2-6 illustrates the breakdown in commuting patterns and characteristics by mode for Toombs County and the State of Georgia.

Table 2-6: Commute Behavior by Transportation Mode in Toombs County (2017)

Work Commute	Toombs County Percentage	Georgia Percentage
Total Surveyed Workers (Age 16+)	100%	100%
Drove Alone	78.4%	79.5%
Carpooled	14.3%	10%
Public transportation (excluding taxicab)	0.6%	2.1%
Walked	1.7%	1.5%
Bicycle	0.6%	0.2%
Taxicab, motorcycle, or other means	2.1%	1.4%
Worked at home	2.3%	5.2%
Mean travel time to work (minutes)	19.4	28

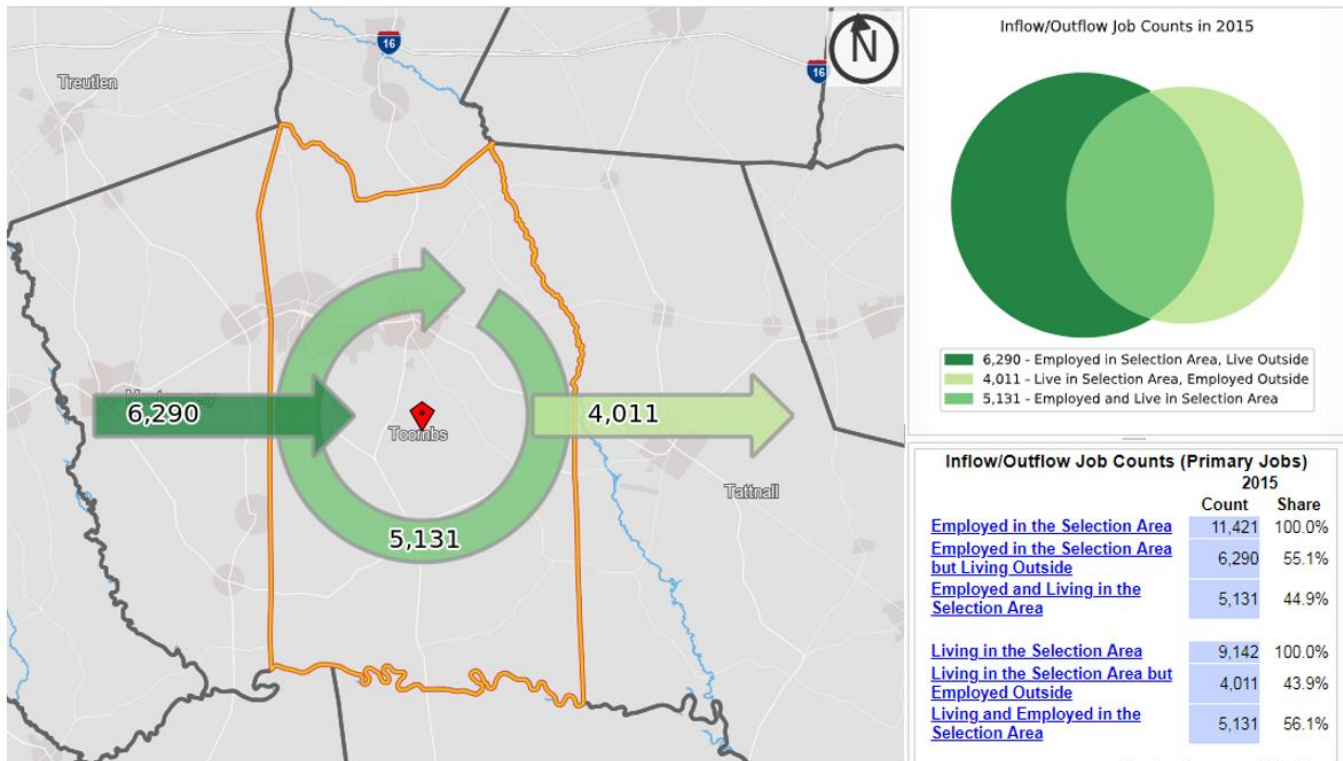
Source: U.S. Census Bureau, 2013-2017 ACS 5-Year Estimates

Toombs County corresponds closely to the statewide averages for various modes of travel. The percentage of individuals who carpoled (14.3 percent) and those who used taxicabs, motorcycle or other means (2.1 percent) are higher than the statewide percentages (10 percent and 1.4 percent, respectively). However, the percentage of individuals who worked at home (2.3 percent) is lower than the statewide average (5.2 percent). The mean travel time to work in Toombs County (19.4 minutes) is almost 10 minutes lower than the statewide average (28 minutes).

The commuting patterns of employed residents of Toombs County are relevant to the *Transportation Plan* development. According to the U.S. Census Bureau’s 2013-2017 ACS 5-Year Estimates, out of all employed residents of Toombs County, 74.3 percent traveled within the County for work. Approximately 4.9 percent of residents travel to Appling County for work, 4.7 percent to Montgomery County, 3.7 percent to Tattnall County, and 2.1 percent to Chatham County. The remaining 10.3 percent of residents travel either to other counties within the state or out of state. Since the majority of employed residents travel within the County for work, this could indicate a need to improve the transportation system connecting residential areas with employment centers within the County.

Travel patterns can also be understood by conducting inflow-outflow analysis. Figure 2-6 shows the results of the analysis using the US Census Bureau’s Longitudinal Employer-Household Dynamics (LEHD) OnTheMap tool. On the whole, more workers from outside Toombs County work within the county than Toombs County residents leave the county for work. A large number live and work within the county.

Figure 2-6: Inflow/Outflow Analysis



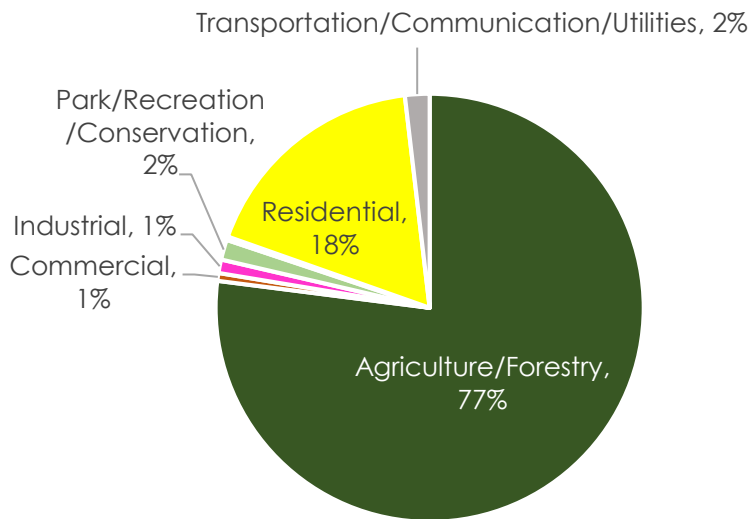
Source: US Census LEHD OnTheMap for Toombs County 2015

2.5. LAND USE AND DEVELOPMENT

2.5.1. Existing Land Use

Existing land use data provided by HOGARC³ is reviewed by study team. Figure 2-7 shows the percent of each land use type in Toombs County. Figure 2-8 illustrate the existing land use within the County. Most of the existing land use in Toombs County is comprised of forestry and agriculture, which combined account for nearly 78 percent of all its land area. Residential use is scattered throughout the County, with the largest concentrations located near the population centers of Santa Claus, Lyons and Vidalia. Almost 18 percent of all land use within the County is comprised of residential use. Most of the County's industrial land use is located between Lyons and Vidalia.

Figure 2-7: Existing Land Use Distribution



Source: Heart of Georgia Altamaha RC

³ GIS shapefile data received from HOGARC in March 2019

Toombs County Long Range Transportation Plan

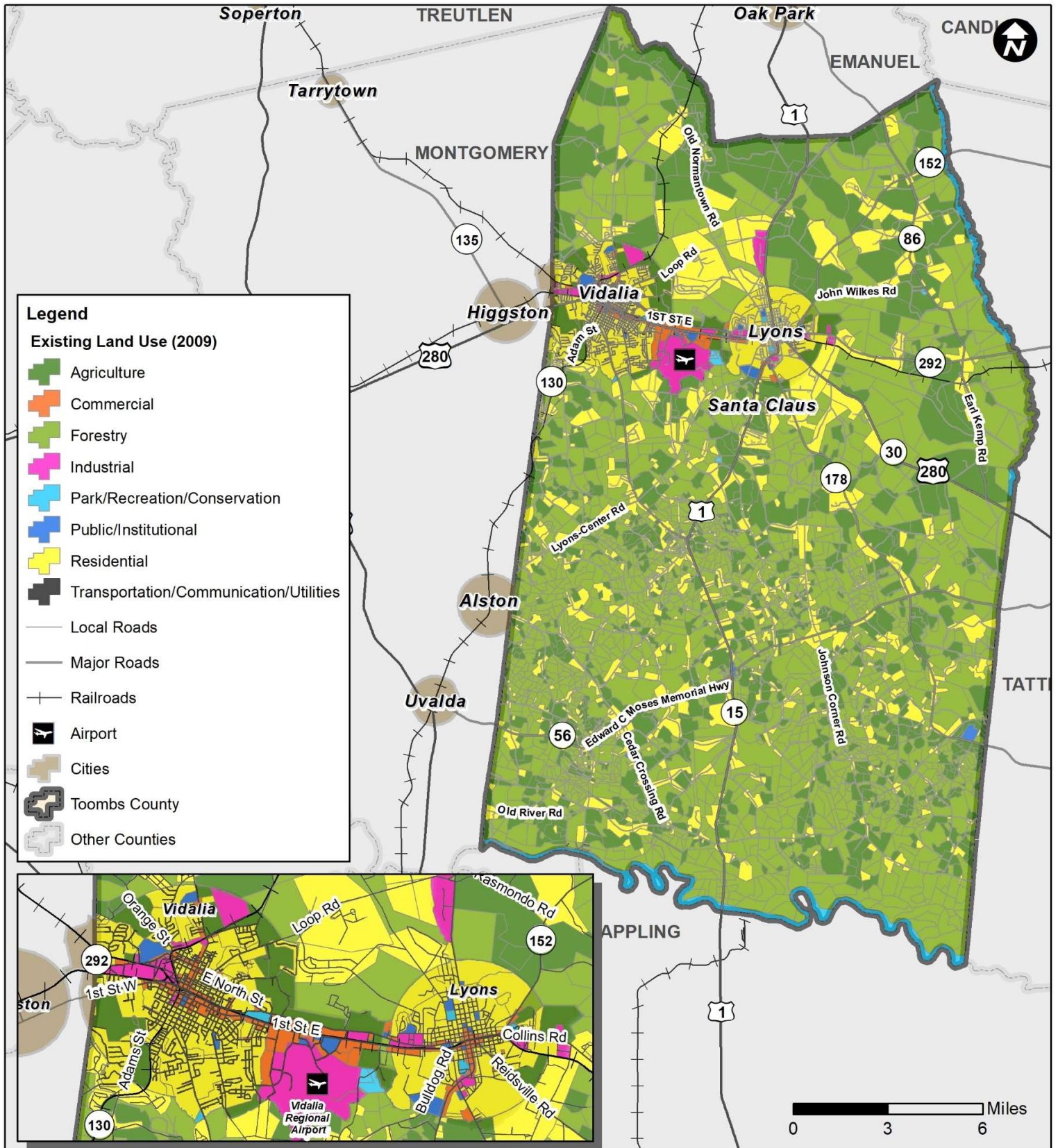


Figure 2-8 Existing Land Use Map

Data Source: Heart of Georgia Altamaha RC

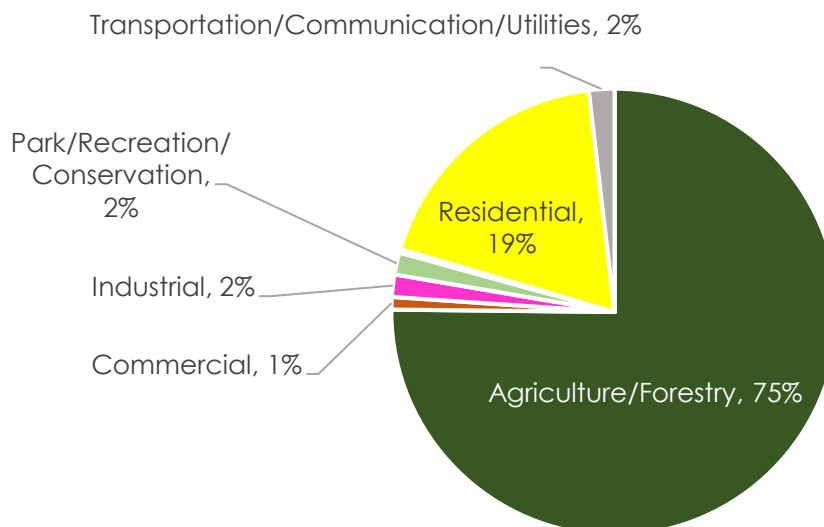
2.5.2. Future Land Use

The Toombs County Joint Comprehensive Plan identified development concepts to guide future land use development across the County. The County's land use goals are listed below:

- Address growth management/compatible development
- Implement/enforce subdivision
- Maintain open spaces/agriculture/forestry uses/rural character/quality of life
- Encourage/protect utilization/access/tourism for natural/cultural resources
- Encourage infill development
- Improve community appearance/aesthetics
- Seek compatible development/utilization

The distribution of future land uses is presented in Figure 2-9. The future land use map is shown in Figure 2-10. Future land use in Toombs County will be influenced by the expanding need for residential development near the population centers of Vidalia and Lyons. It is anticipated that the County will experience population growth in these areas, and it will be important for County planners to accommodate this anticipated growth by increasing residential development. Also, more industrial land use is anticipated in the northern half of the County.

Figure 2-9: Future Land Use Distribution



Data Source: Heart of Georgia Altamaha RC

Toombs County Long Range Transportation Plan

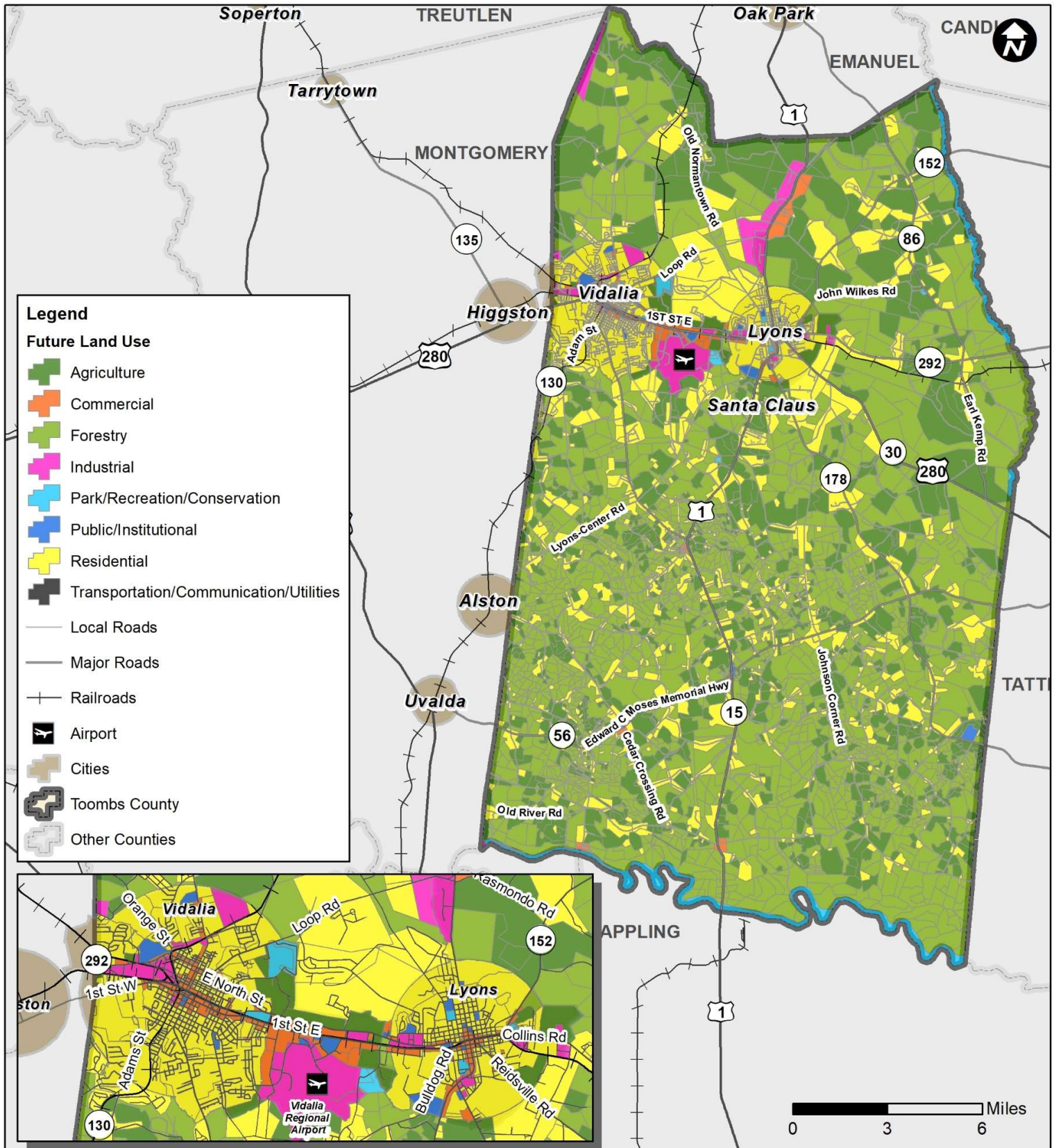


Figure 2-10 Future Land Use Map

Data Source: Heart of Georgia Altamaha RC

2.6. NATURAL, HISTORICAL AND COMMUNITY RESOURCES

Environmentally sensitive areas, historic and natural resources, and community facilities should be examined to ensure that those areas are not adversely impacted by any future transportation improvements.

2.6.1. Historic Resources/Structures

Toombs County has protected multiple historical properties within the County. There are nine historic properties located within Toombs County, all of which are in Vidalia and Lyons. One of these properties is a National Historic District, located in Vidalia’s commercial district. Table 2-7 lists all properties that are on the National Register of Historic Places.

Table 2-7: Sites on the National Register of Historic Places

Historic Place	Location
Crawford W. Brazell House	Vidalia
Citizens Bank of Vidalia	Vidalia
Missouri and Robert Garbutt House	Vidalia
Leader-Rosansky House	Lyons
Lyons Woman’s Club House	Lyons
McLemore-Sharpe Farmstead	Vidalia
Peterson-Wilbanks House	Vidalia
Jim Smith House	Vidalia
Vidalia Commercial Historic District	Vidalia

2.6.2. Community Facilities

It is important to provide efficient connections between key community facilities. Therefore, one component of the Plan is to understand where these resources are located and to evaluate community access to these vital facilities. Community facilities include schools, recreational areas, park and community-identified special places. Figure 2-11 shows the locations of these facilities. Table 2-8 lists all public schools in Toombs County.

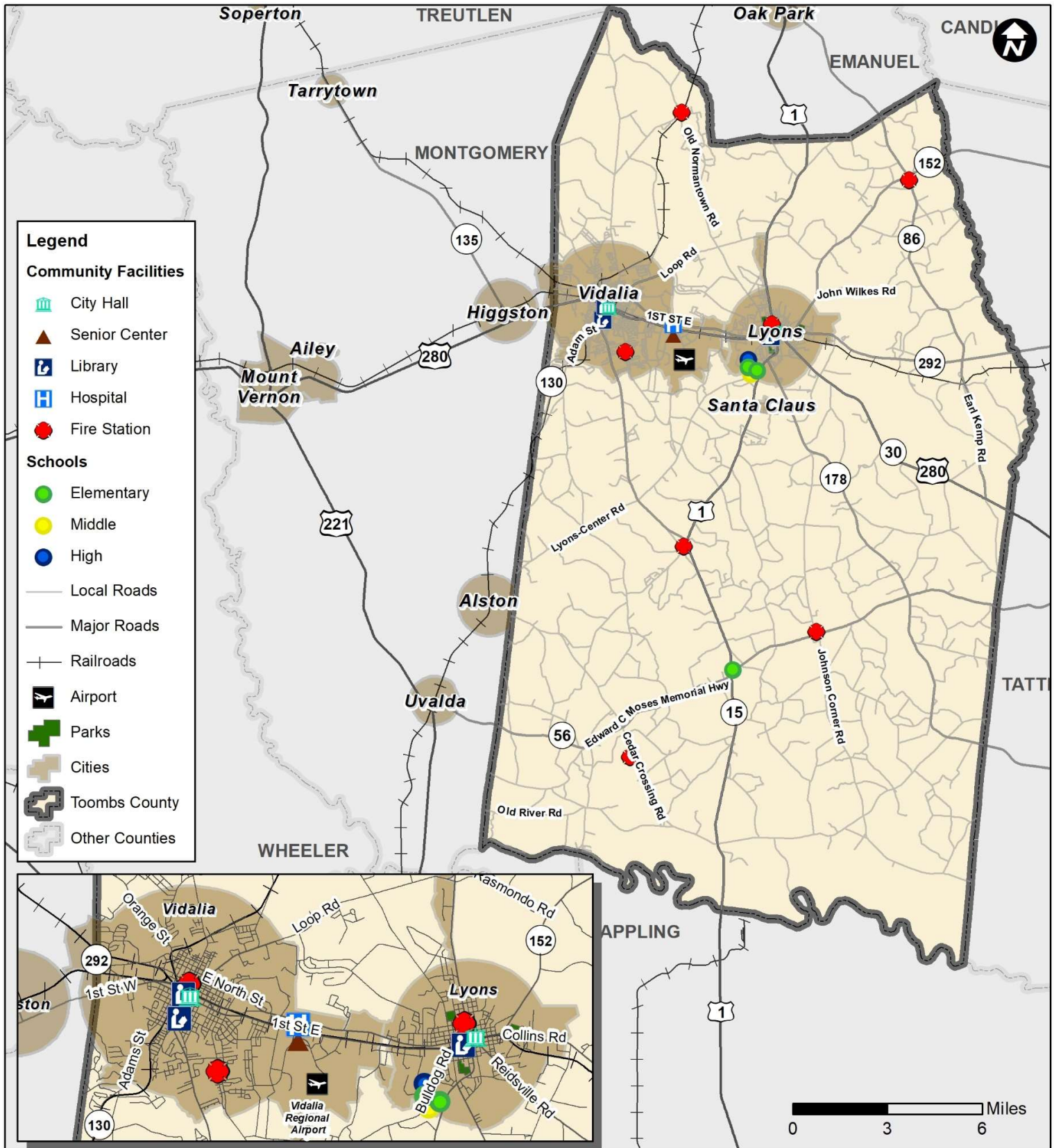
Table 2-8: Public Schools

Public Schools	Location
Toombs County High School	Lyons
Toombs County Middle School	Lyons
Lyons Upper Elementary School	Lyons
Toombs Central Elementary School	Lyons
Lyons Primary School	Lyons

2.6.3. Natural Resources

The Ochoopee River is the County’s northeast border, and the Altamaha River is the County’s southern border. Figure 2-12 identifies wetlands throughout Toombs County.

Toombs County Long Range Transportation Plan



Data Source: Toombs County Commission & Google Earth

Figure 2-11 Community Facilities

Toombs County Long Range Transportation Plan

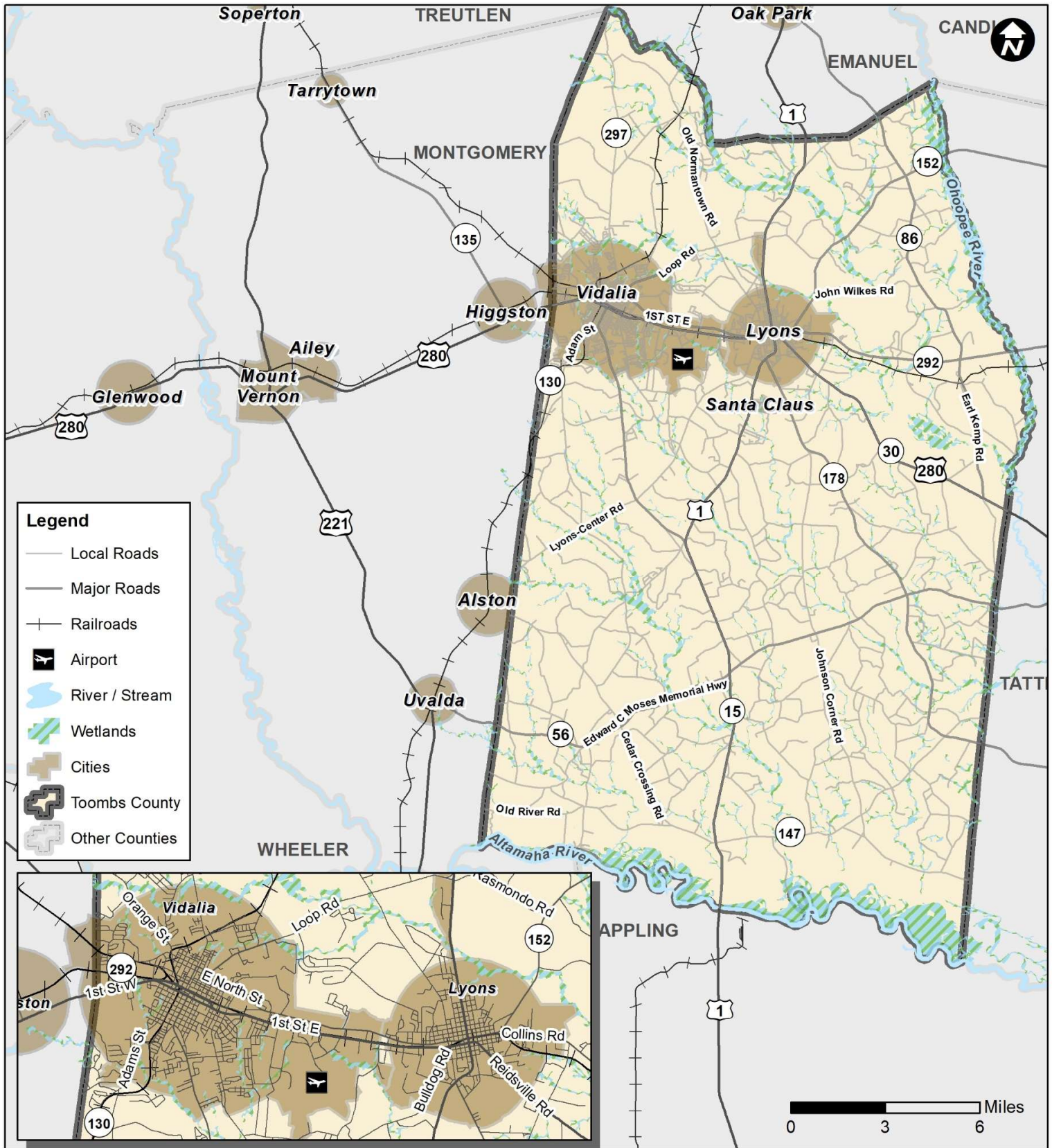


Figure 2-12 Wetlands

Data Source: Heart of Georgia Altamaha RC

3. COORDINATION WITH PREVIOUS STUDIES AND PROGRAMS

An effective transportation plan accounts for previously adopted plans in order to coordinate and contextualize goals and objectives, conditions, needs, and recommendations. Several plans have been completed in recent years to assist Toombs County with achieving its economic development, conservation and land-use goals. The following plans have been reviewed and helped to inform the development of the Plan. Summaries of the plans related to transportation in Toombs County are provided in this section.

- Toombs County and Cities in Toombs County Plans and Studies:
 - The 2014 Toombs County Joint Comprehensive Plan
 - The 2008 Toombs County Hazard Mitigation Plan
 - Toombs County / City of Vidalia / City of Lyons Pavement Ratings Reports

- Heart of Georgia Altamaha Regional Commission (HOGARC) Plans and Studies:
 - The 2017-2022 Comprehensive Economic Development Strategy
 - The 2011-2012 Multi-Region River Corridor Feasibility Study
 - The 2013 Regional Assessment
 - The 2016 Regional Bicycle Plan
 - The 2012 Regional Resource Plan

- State Plans and Programs:
 - GDOT Statewide Transportation Plan and Strategic Transportation Plan
 - Statewide Transportation Improvement Program (STIP)
 - Statewide Freight and Logistics Plan
 - GDOT Statewide Rail Plan
 - GDOT Statewide Bicycle and Pedestrian Plan

3.1. TOOMBS COUNTY JOINT COMPREHENSIVE PLAN

The Toombs County Joint Comprehensive Plan, titled *Sweet: So Much More than the Vidalia Onion*, was developed for Toombs County and its three cities: Lyons, Santa Claus and Vidalia. The Plan became effective on March 1, 2014, and describes the County's current land use, consisting mostly of agriculture and forestry, as well as its demographic and economic conditions. It also identifies long-term goals and policies relating to the County's economic development, natural and cultural resources, housing, land use, community facilities and services, and intergovernmental coordination. Table 3-1 includes specific needs identified in the Plan for each of its three largest cities.

Table 3-1: Needs for Toombs County's Largest Cities

Lyons	Santa Claus	Vidalia
<ul style="list-style-type: none"> • Continued water/sewer infrastructure improvements • Continued street and streetscape improvements • Continued downtown revitalization/utilization • Police station/public safety improvements • Continued recreation/Partin Park improvements 	<ul style="list-style-type: none"> • Improved water/sewer infrastructure • Street improvements, especially Prancer Street • City website with online shop • Establishment of a local arts/crafts festival • Local candy shop/restaurant 	<ul style="list-style-type: none"> • Continuing water/sewer/infrastructure improvements • Continuing downtown revitalization • Drainage improvements • Information technology and broadband/wi-fi improvements • Continuing public safety improvements • Continuing transportation system improvements • New signage • Continuing landmark/historic fabric preservation • Housing stock improvements • Solid waste management service improvements • Continuing culture/arts/tourism support/development • Recreational facilities/parks improvements

3.2. TOOMBS COUNTY HAZARD MITIGATION PLAN

The Toombs County Hazard Mitigation Plan is an update provided by the County to the Federal Emergency Management Agency (FEMA) Region IV in July 2008. The purpose of the plan is to prepare the County for potential hazards and natural disaster threats, then identify steps that need to be taken to minimize their impact. The potential hazards and natural disaster threats include the following: thunderstorm/windstorm, wildfire, tornado, flooding, drought, winter storm, hailstorms, hurricane, and dam failure.

Regarding emergency routes, the plan states:

Toombs County is on a route for evacuees from coastal Georgia and Florida to come to in the event of a hurricane. US Interstate 16, north of Toombs County running east to west, US Highway 280, running east to west, and US Highway 1, running north to south, are utilized as major evacuation routes for the Atlantic Coast of Georgia.

3.3. TOOMBS COUNTY / CITY OF VIDALIA / CITY OF LYONS PAVEMENT RATINGS REPORTS

Toombs County, City of Vidalia and City of Lyons have done the roadway pavement study during 2016 to 2017. The purpose of the pavement study was to determine the overall pavement condition, provide network level maintenance and rehabilitation recommendations, provide appropriate strategies for efficient usage of available resources. The pavement study utilized a Pavement Condition Index (PCI) to

evaluate the overall pavement condition on a scale of 0 to 100, with 0 representing totally failed pavement to 100 representing new pavement. Toombs County's PCI is 71 out of 100 based on field results and data calculation process. A PCI of 71 falls in the category of "Good", which indicates that on average the roads have 12 to 20 years of remaining service life and require minor fixes and microsurfacing.

The study recommended Toombs County continue to maintain the roads that are in the "Good" category and improve the roads that fall into "Poor" and "Very Poor" categories. It suggested 80 percent of the pavement budget should be allocated toward "Good", "Fair" and "Poor" roads and 20 percent should be allocated toward failed streets. In the Aggressive Funding Scenario, it is recommended that Toombs County aim to increase the current PCI from 71 to a level of 80 over the next 10 years, which would require an average budget of \$2 million per year. In the Maintain Status-Quo Scenario, about \$1.5 million per year is required to maintain the overall PCI of 71. In the General Fund Scenario, the County's PCI will decrease to 65 within 10 years, assuming a \$1 million budget with no expected increase over a 10-year period.

3.4. HOGARC COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY

The Heart of Georgia Altamaha Regional Commission (HOGARC) is the regional commission responsible for overseeing planning for 17 counties in central Georgia, including Toombs County. This strategy document's purpose is to identify opportunities for economic growth and resilience throughout the HOGARC region between 2017 and 2022. The themes of the strategy are listed below:

- Connecting the workforce with a diversified economy
- Highlighting and investing in infrastructure
- Addressing community development needs and quality of life issues

Table 3-2 identifies economic development objectives for Toombs County.

Table 3-2: Economic Development Programs for Toombs County

Program	Year to Complete	City
Develop the National Guard Armory building for business or public use	2019	Lyons
Expand the capacity of the east sewer plant to accommodate downtown services and applicable areas of the City	2019	Lyons
Attract entrepreneurship for the establishment of a candy store and restaurant	2019	Santa Claus
Promote quarterly events to be held at the amphitheater	2022	Vidalia
Expand the Sweet Onion RV Park	2019	Vidalia
Establish free public Wi-Fi throughout the City	2022	Vidalia

3.5. MULTI-REGION RIVER CORRIDOR FEASIBILITY STUDY

This study was conducted during 2011 and 2012 and included two phases. Phase 1 was completed in 2011, which provides an inventory of current and planned conservation resources in close proximity to the Ocmulgee, Oconee, Altamaha and Ochoopee Rivers located within the HOGARC region. The Altamaha River forms the southern boundary of Toombs County, and the Ochoopee River forms a portion of its eastern boundary. The study identifies potential economic and transportation improvements that can improve access to the Altamaha River.

Phase 2 of the study was completed in 2012. It is a follow-up to the Phase 1 study, consisting of a more comprehensive analysis of the findings from Phase 1, and identifies potential transportation and conservation improvements for the HOGARC region, particularly its rivers.

The recommendations made for Toombs County are identified below:

- Pursue upgrades to existing public landings, such as improved access and parking as needed, and additional amenities.
- Organize a local advocacy group for the Altamaha River to promote its sustainable usage, facility upgrades, special events, protection, and otherwise strive to keep the river in the public eye.
- Seek development of recommended bicycle trails, including the central regional route along US 280 and the US 1 connector route, as well as local bike paths to provide connectivity to local attractions.
- Explore potential Georgia Scenic Byway designation for the Old River Road west of US 1 in Toombs County, and possibly across Montgomery County into Wheeler County.
- Actively participate in multi-regional Altamaha River Partnership.
- Support annual “Tales of the Altamaha” regional folk play production and continued development of Altamaha Heritage Museum in Lyons.
- Complete documentation for Downtown Lyons Historic District nomination to the National Register of Historic Places.
- Develop a local Altamaha River Corridor Master Plan to identify and prioritize needed and desired facility upgrades, new facility development and bike-pedestrian and multi-use trail linkages with

river corridor resources, nearby communities, and between points of interest. Any such document should be consistent with the local comprehensive plan, the Heart of Georgia Altamaha RC's Regional and Regional Resource Plans, and state planning objectives.

3.6. HOGARC REGIONAL ASSESSMENT

The HOGARC Regional Assessment was completed in 2013. It is an examination of existing development patterns, conditions, policies and activities within the region. It identifies potential issues and opportunities relating to the following areas:

- Economic development
- Natural and cultural resources
- Community facilities and services
- Housing
- Land use
- Intergovernmental coordination

The Regional Assessment notes the importance of transportation for the HOGARC region. It notes that Toombs County has no fixed-route transit service, and that Vidalia was included in the alignment of a proposed high-speed rail corridor connecting Macon and Savannah.

3.7. HOGARC REGIONAL BICYCLE/PEDESTRIAN PLAN

In 2016, HOGARC finalized a Regional Bicycle/Pedestrian Plan, which serves as a guide for the development of bicycle and pedestrian infrastructure within the HOGARC region. It also examined how conditions changed since the 2005 Regional Bike/Pedestrian Plan was completed.

The 2005 HOGARC Regional Bicycle Plan recommended new bike routes within Toombs County. One such route would be along US 280, connecting Lyons and Vidalia, coming from Claxton in Evans County. Another proposed route would be along US 1, running from Emanuel County south through Lyons to Appling County. Figure 3-1 represents the planned bike routes in Toombs County. As noted in Section 4.10.1, improvements were recently implemented on a portion of US 1 from Lyons to Emanuel County.

The 2016 Plan includes other recommendations designed to encourage cycling and walking within the County. These include the creation of a bike/ped website with an events calendar webpage, encouraging a complete streets policy for municipalities, as well as cycling tourism.

The 2016 Plan noted that the biggest obstacle to implementing the recommended bicycle and pedestrian improvements identified in the 2005 Plan was inadequate funding resulting from the Great Recession. The 2016 Plan also notes that sidewalk infrastructure is mostly confined to municipalities.

Toombs County Long Range Transportation Plan

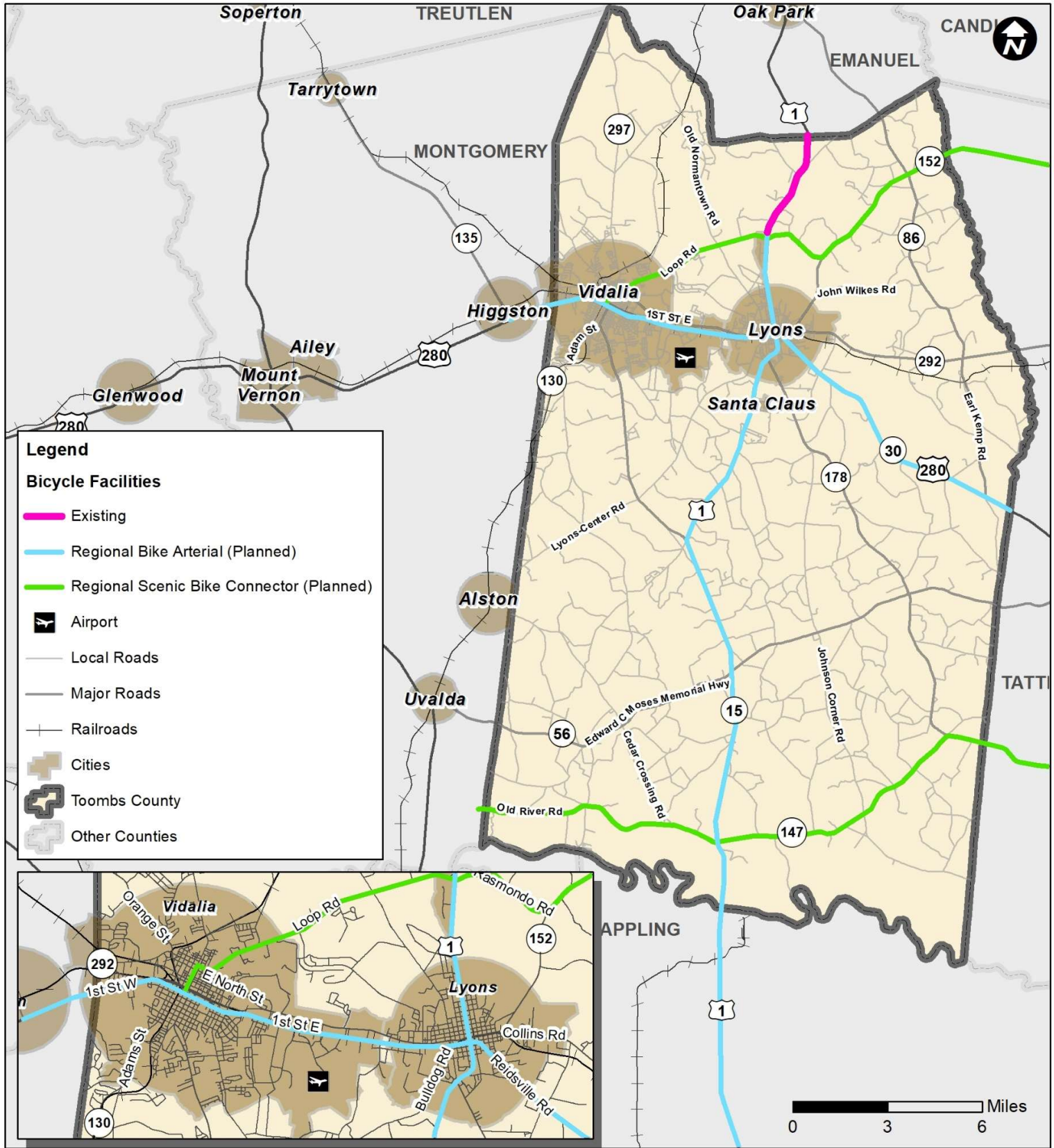


Figure 3-1 HOGARC Planned Bike Routes

Data Source: 2016 Heart of Georgia Altamaha Regional Commission Bicycle/Pedestrian Plan

3.8. HOGARC REGIONAL RESOURCE PLAN

The HOGARC Regional Resource Plan was completed in 2012. Its purpose is to identify ways to protect natural and cultural resources in the HOGARC region, in compliance with state guidelines. The Plan also provides guidance on how to educate stakeholders on the importance of these resources, their impact on the region's environmental, social, and economic well-being, as well as the region's quality-of-life.

3.9. STATE PLANS AND PROGRAMS

2040 Statewide Transportation Plan / 2015 Statewide Strategic Transportation Plan (2016)

Completed in January 2016, the 2040 Statewide Transportation Plan (SWTP) / 2015 Statewide Strategic Transportation Plan (SSTP)⁴ combined the federally required long-range SWTP and the state SSTP to outline the needs of highways, bridges, transit systems, freight rail, airports, bike/pedestrian facilities, and marine port throughout the state. GDOT is currently updating both plans through the horizon year of 2050 with latest demographic information, transportation needs assessment and public involvements.⁵

GDOT 2010 – 2050 Statewide Freight and Logistics Plan

The Georgia Statewide Freight and Logistics Plan was initially developed in the 2010-2011 timeframe to guide strategic investment in the various freight modes throughout the state. Much emphasis was placed on moving freight to and from the Port of Savannah along the I-16 corridor. The plan designated US 1, which connects Toombs County to I-16, as a Statewide Freight Corridor (see Section 4.7 for additional information). The plan also noted:

- Vidalia onions represent approximately 40% of total spring onion production nationally
- Chicken of the Sea in Lyons is one Georgia's large food processing facilities/employers

The plan described the railroads operating in Toombs County:

Georgia Central Railway, LP

The Georgia Central Railway (GC) operates on the former Macon, Dublin and Savannah Railroad (Macon to Vidalia) as well as former Seaboard Air Line Railway tracks from Vidalia to Savannah. As of 2005, it has been owned by GWI through its subsidiary Rail Link. Based in Lyons, Georgia, with about 45 employees, CG generates 1.3 million tons of freight and 15,000 carloads annually. This 171-mile short line interchanges with CSXT, Heart of Georgia Railroad, and NS. Commodities transported include, coal, corn, fertilizer, grain, kaolin, lumber, newsprint, plastics, pulpwood, scrap metal, scrap paper, and woodchips.

Heart of Georgia Railroad Inc. ("HOG")

HOG was created in 1999 to lease and operate 219 miles of track owned by the Georgia Department of Transportation. It connects with Genesee & Wyoming's Georgia Southwestern Railroad at Americus and their Georgia Central Railway at Vidalia. HOG serves the inland intermodal terminal at Cordele providing direct rail service five days a week via the Georgia Central Railway to the Port of Savannah for auto, agricultural produces and other merchandise customers. HOG has Class 1 connection with CSX at Cordele and with Norfolk Southern at Americus and Helena. It transports approximately 10,000 annual carloads of agricultural products, feed, fertilizer and lumber/forest

⁴ 2040 SWTP/ 2015 SWTP, GDOT, January 2016

<http://www.dot.ga.gov/InvestSmart/Documents/SSTP/Statewide%20Transportation%20Plan%20Final%20Report.pdf>

⁵ Georgia 2050 SWTP/2020 SSTP Update landing page, GDOT

<http://www.dot.ga.gov/IS/SSTP>

products, of which 2,000 carloads are interchanges with Genesee & Wyoming's Georgia Central Railway.

Historically, the primary commodities hauled include feed products, chemicals, plastic pellets, aggregates, lumber, grain, pulp wood, scrap metal, and fertilizer, amounting to around 7,500 annual carloads. In addition to the freight services provided, HOG also hosts the SAM Shortline passenger excursion train, named in honor of the Savannah, Americus and Montgomery Railroad Company. The SAM excursion train is operated by the Georgia Department of Natural Resources (DNR) under the guidance of the Southwest Georgia Railroad Excursion Authority. The cars are owned by the Excursion Authority, and the engine is owned and operated by HOG.

Genesee & Wyoming completed acquisition of HOG's parent company in 2017⁶.

GDOT Statewide Bicycle and Pedestrian Plans

Several state bicycle and pedestrian plans and manuals are available⁷. The Georgia Bicycle and Pedestrian Plan - Statewide Route Network, last updated in 1998 and the Georgia Official Bicycle Map updated in 2010⁸, established statewide routes, none of which intersect Toombs County. The 2006 Georgia Guidebook for Pedestrian Planning⁹ reviews how to plan, prioritize, and fund pedestrian improvements in addition to state laws, education strategies, and local policy options. The 2019 Pedestrian and Streetscape Guide¹⁰ provides detailed guidance on designing for pedestrians and bicyclists. The 2018-2022 Pedestrian Safety Action Plan¹¹ and the 2018 Bicycle Safety Action Plan¹² outline strategies to improve pedestrian and bicycle safety.

GDOT Statewide Rail Plan

The 2015 Georgia State Rail Plan¹³ provided a framework to guide Georgia's rail freight and passenger transportation improvements through 2040. The plan notes that the Heart of Georgia Railroad, which traverses Toombs County, connects the Cordele Intermodal Center with the Port of Savannah. The plan recommended track, bridge and other infrastructure improvements on the Heart of Georgia Railroad under a proposed four-year short-range program.

Statewide Transportation Improvement Program (STIP)

The Statewide Transportation Improvement Program (STIP) lists federally-funded projects outside of Metropolitan Planning Organization (MPO) boundaries. Projects in the 2018-2021 STIP are examined in Section 4.3 below.

⁶Genesee & Wyoming Inc. - Acquisition of Control Exemption- Atlantic Western Transportation, Inc. and Heart of Georgia Railroad, Inc., Surface Transportation Board, April 2017, <https://www.federalregister.gov/documents/2017/04/18/2017-07828/genesee-and-wyoming-inc-acquisition-of-control-exemption-atlantic-western-transportation-inc-and>

⁷Bicycle & Pedestrian Program Website, GDOT, <http://www.dot.ga.gov/DS/Travel/BikePed#tab-3>

⁸Georgia Official Bicycle Map, GDOT, August 2010, http://www.dot.ga.gov/drivesmart/travel/Documents/BikeMaps/Bike_map_2010-Revised.pdf

⁹Georgia Guidebook for Pedestrian Planning, GDOT, June 2006, http://www.dot.ga.gov/DriveSmart/Travel/Documents/BikePed/qa_ped_guide.pdf

¹⁰ Pedestrian and Streetscape Guide, GDOT, April 2019,

<http://www.dot.ga.gov/PartnerSmart/DesignManuals/TrafficOps/GDOT%20Pedestrian%20and%20Streetscape%20Guide.pdf>

¹¹ Pedestrian Safety Action Plan 2018-2022, GDOT, April 2018, <http://www.dot.ga.gov/DriveSmart/Travel/Documents/BikePed/BikePedSAP.pdf>

¹² Georgia Bicycle Safety Action Plan, GDOT, August 2018,

http://www.dot.ga.gov/DriveSmart/Travel/Documents/BikePed/5201%20qa%20bikes%20BSAP%20report_3.pdf

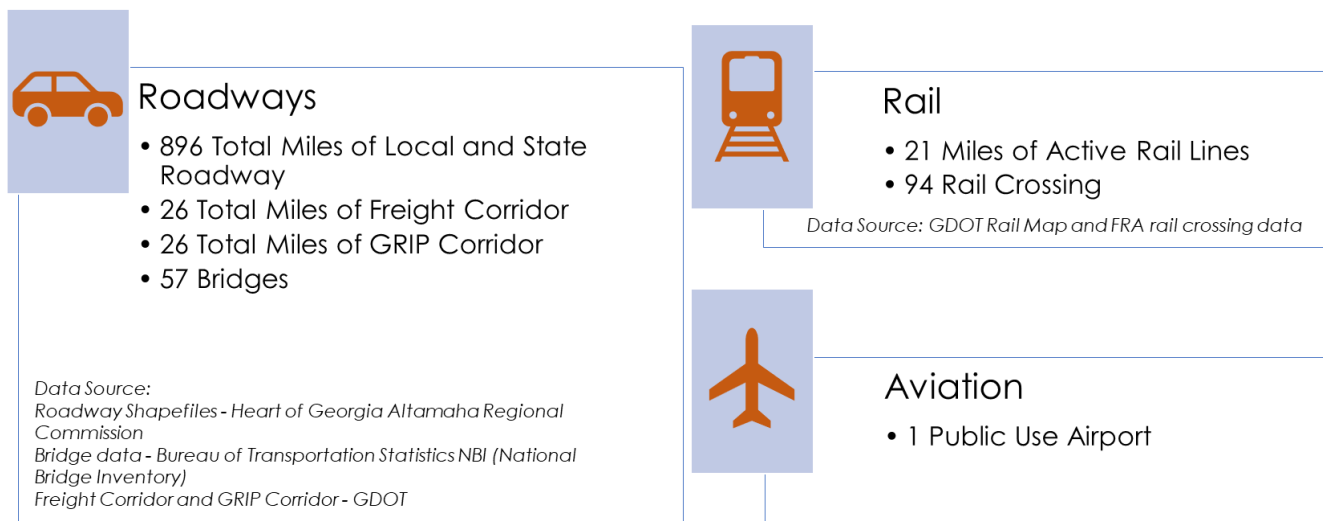
¹³Georgia State Rail Plan, GDOT, January 2016, <http://www.dot.ga.gov/InvestSmart/Rail/Documents/StateRailPlan/2015GeorgiaStateRailPlan-1-26-16.pdf>

4. TRANSPORTATION NETWORK AND OPERATING CONDITIONS

The multi-modal transportation network in Toombs County is essential for the efficient movement of people, commodities, goods and services within and through the County. This section summarizes Toombs County’s existing transportation network and its existing and future operating conditions. A travel demand model was developed for this study. Existing conditions data was analyzed to prepare and validate the associated travel demand model. By gathering this data, existing and future operating deficiencies in Toombs County’s transportation network can be identified.

Figure 4-1 summarizes key statistics related to the transportation system in Toombs County. Almost 900 miles of state and local roads, 26 miles of designated freight corridor, and 57 bridges exist in the county. The two active rail lines in Toombs County span 21 miles and involve 94 crossings. Vidalia Regional Airport provides aviation services as a public use airport.

Figure 4-1: Transportation System Statistics



4.1. ROADWAY CHARACTERISTICS

This section presents the characteristics of the roadways in Toombs County. The data used for this analysis is collected from the latest GDOT Roadway Characteristics (RC) Database and GDOT Highway System Status maps. The following components were reviewed and analyzed as part of the study process:

- Functional Classification
- Road Lanes
- Roadway Shoulders
- Roadway Surface Type
- Roadway Level of Service (LOS)

4.1.1. Functional Classification

Roadways are grouped into functional classes according to the character of traffic they are intended to serve. GDOT, coordinating with local transportation agencies, determined the functional classifications by utilizing Federal Highway Administration (FHWA) Functional Classification Guidelines and the

design standards developed by the American Association of State Highway and Transportation Officials (AASHTO). Additional information specific to GDOT policies related to functional classification of roadways is also available in the GDOT Plan Development Process (PDP) at: <http://www.dot.ga.gov/PS/DesignManuals>

The FHWA defines the hierarchy of the highway functional classification system including principal arterials, minor arterial roads, collector roads, and local roads for rural areas, urbanized areas and small urban areas. The functional system for rural areas, currently applicable to Toombs County, is defined as:

- **Principal Arterial** – 1) serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel; 2) serve all urban areas of 50,000 and greater population and a large majority of those with a population of 25,000 and over; and 3) provide an integrated network without stub connections except where unusual geographic or traffic flow conditions dictate otherwise. The principal arterial system is usually stratified into **Interstate** system and other **principal** arterials. Toombs County currently does not have an interstate system through.
- **Minor Arterial** – 1) link cities and larger towns and form an integrated network providing interstate and intercounty service; 2) be spaced at such intervals, consistent with population density, so that all developed areas of the State are within a reasonable distance of an arterial highway; and 3) provide service to corridors with trip lengths and travel density greater than those predominantly served by rural collector or local systems. Minor arterials therefore constitute routes whose design should be expected to provide for relatively high overall travel speeds, with minimum interference to through movement.
- **Collector Road** – generally serve primarily intracounty travel rather than statewide importance and constitute those routes on which predominant travel distances are shorter than on arterial routes. Consequently, more moderate speeds may be typical, on the average. Collectors are typically classified as **major** collector and **minor** collector.
- **Local Road** – 1) serve primarily to provide access to adjacent land; and 2) provide service to travel over relatively short distances as compared to collectors or other higher systems. Local roads constitute the rural mileage not classified as part of the principal arterial, minor arterials, or collector systems.

The Toombs County study area has approximately 98 centerline miles of arterial facilities and 175 miles of collectors. If a local government disagrees with a proposed system and classification, the local government should write to GDOT including GDOT Commissioner, GDOT District Engineer and the Administrator of the GDOT's Office of Transportation Data, explaining the concern. The System and Classification Branch of GDOT Office of Transportation Data will review the correspondence from the local government and research other alternatives with the coordination of with Commissioner and District Engineer. Table 4-1 shows the mileage for all the road classification in Toombs County. Figure 4-2 maps Toombs County's roads by functional classification.

Table 4-1: 2017 Roadway Functional Classifications

Classification	Mileage	% of Total Miles
Principal Arterial	49	6%
Minor Arterial	40	5%
Major Collector	124	15%
Minor Collector	53	6%
Local Street	564	68%
Total	829	100%

Source: GDOT Mileage by Route and Road System Report 445, 2017

Table 4-2 displays the mileage and vehicle miles traveled (VMT) for the different roadway classifications in Toombs County, as of 2017. The Toombs County study area is served by multiple state roads (approximately 18 percent of the County’s total miles) which carry almost 58 percent of the County’s traffic. To ensure future mobility for Toombs County, it is important to evaluate and identify needed improvements to the state road system through the development of this Plan.

Table 4-2: 2017 Existing Mileage and Vehicle Miles Traveled

Area	Toombs County	Percent of Total	Georgia	Percent of Total
State Routes	54,3372	57.86%	202,740,545	58.59%
County Roads	197,618	21.04%	91,546,182	26.45%
City Streets	198,177	21.10%	51,766,217	14.96%
Total	939,167	100.00%	346,052,944	100.00%

Source: GDOT 445 Report, Mileage by Route Type and Functional Classification, 2017

Toombs County Long Range Transportation Plan

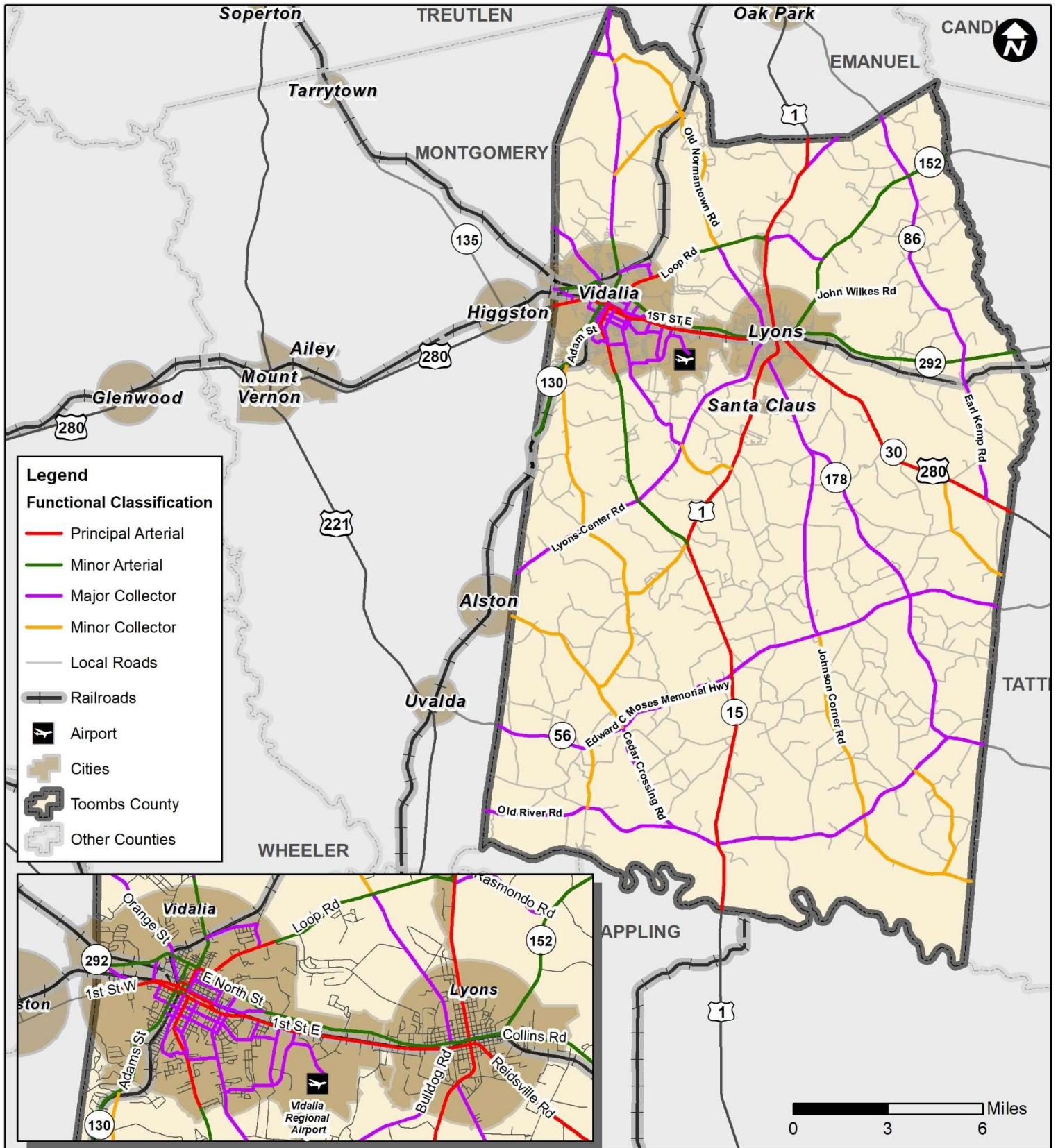


Figure 4-2 Functional Classification

Data Source: GDOT RC 2017

4.1.2. Roadway Lanes

Another important attribute reviewed from GDOT's RC Database is the number of lanes provided on each roadway facility. Figure 4-3 represent the number of lanes within Toombs County. Most of the roads in Toombs County serve traffic with one lane each direction. Some road segments along US 280 between Lyons and Vidalia have two lanes each direction with a center turn lane.

4.1.3. Roadway Shoulders

GDOT's RC Database also provides information on roadway shoulders. For this analysis, both the shoulder type and shoulder width were reviewed to determine segments of roadways in need of potential shoulder upgrades or operational widening. A wide variety of shoulder widths and types are present throughout Toombs County. Insufficient shoulder width can contribute to travel speed reductions, potentially impact safety, and influence bicycle and pedestrian usage of facilities. The following guidelines are used to determine potential shoulder deficiencies:

- No shoulder or an unidentifiable shoulder
- Grass shoulder less than 4 feet
- Paved shoulder less than 2 feet

Roadway segments with potentially deficient shoulders will become candidates for recommended upgrades. Figure 4-4 illustrate the condition of the shoulders along Toombs County roadways.

4.1.4. Roadway Surface Type

The final attribute reviewed from GDOT's RC Database is roadway surface type. Roadway surface dramatically affects the capacity, useful life, and safety of a particular facility. The list below details the surface types for paved roads present in the study area.

- **High Rigid** – Portland cement concrete pavements with or without bituminous surface if less than one inch.
- **High Flexible** – Mixed bituminous penetration road on a rigid or flexible base with a combined (surface and base) thickness of seven inches or more. Includes any bituminous concrete, sheet asphalt, or rock asphalt.
- **Mixed Bituminous Penetration** – Low type (less than seven inches combined thickness surface and base). Surface is one inch or more.
- **Mixed Bituminous Pavement** – A road, the surface course of which is one inch or more in compacted thickness composed of gravel, stone, sand or similar material, mixed with bituminous material under partial control as to grading and proportions.
- **Bituminous Surfaced Treated** – An earth road, a soil-surfaced road, or a gravel or stone road to which has been added by any process a bituminous surface course with or without a seal coat, the total compacted thickness which is less than one inch. Seal coats include those known as chip seals, drag seals, plant mix seals, and rock asphalt seals.

The list below details the surface types for unpaved roads present in the study area.

- **Gravel or Stone Road** – A road, the surface of which consists of gravel or stone. Surfaces may be stabilized.
- **Soil-Surfaced Road** – A road, the surface of which consists of mixed or stabilized soil.
- **Graded and Drained** – A road of natural earth aligned and graded to permit reasonable convenient use by motor vehicles and drained by longitudinal and transverse drainage systems (natural and artificial) sufficient to prevent serious impairment of the road by normal surface water, with or without dust palliative treatment or a continuous course of special borrow material to protect the new roadbed temporarily and to facilitate immediate traffic service.

Figure 4-5 presents a map of existing roadway surface types, and Table 4-3 summarizes the centerline mileage of roads by pavement type within Toombs County.

Table 4-3: Mileage and Paved Road Percentage

Pavement Type	Centerline Miles	% of Total
Asphalt	459	54.4%
Unpaved	370	44.6%
Total	829	100%

Source: GDOT 441 Report, Public Road Mileage by Surface Type and Road Type, 2017

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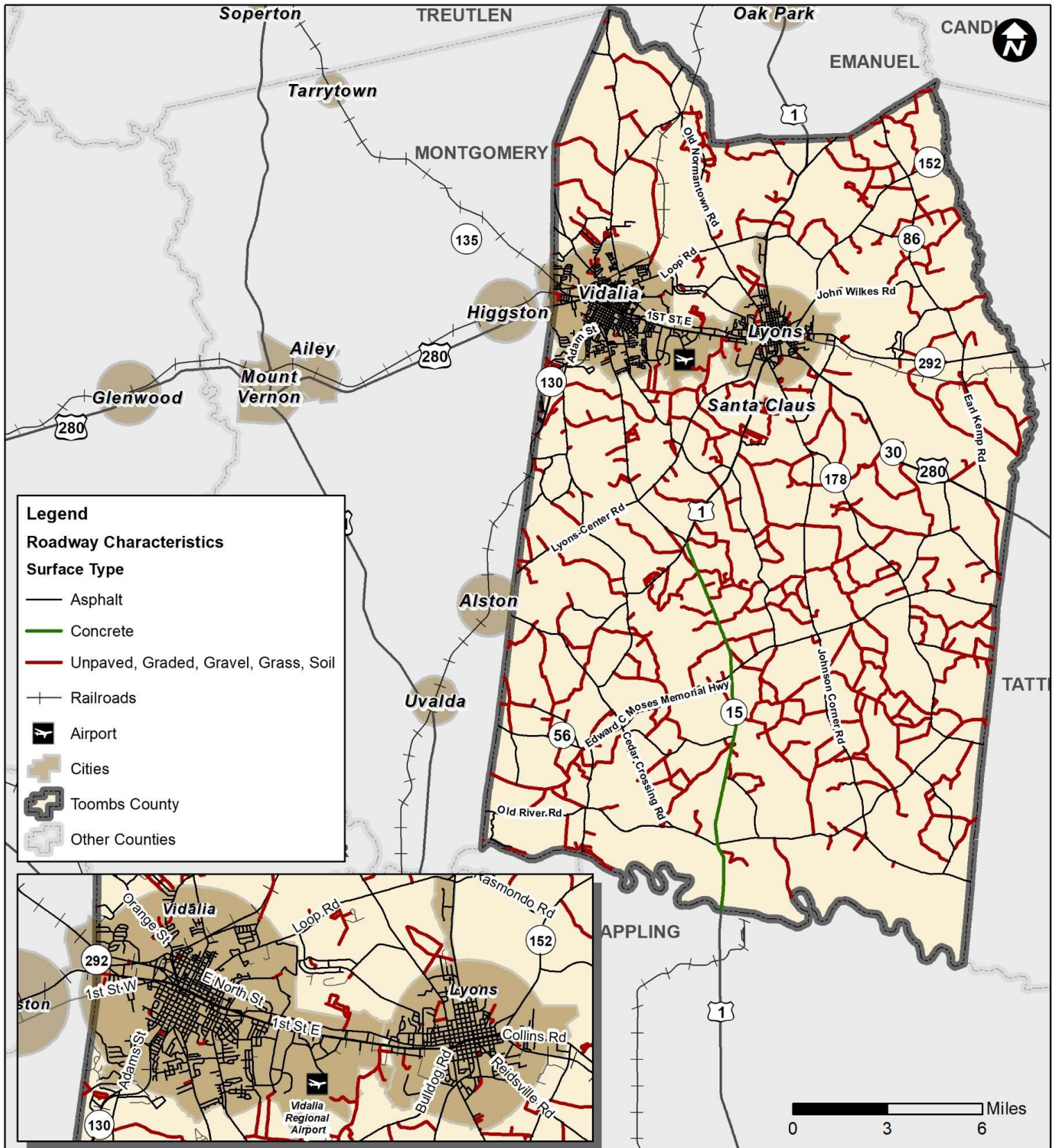


Figure 4-5 Existing Roadway Surface by Type

Data Source: GDOT RC 2017

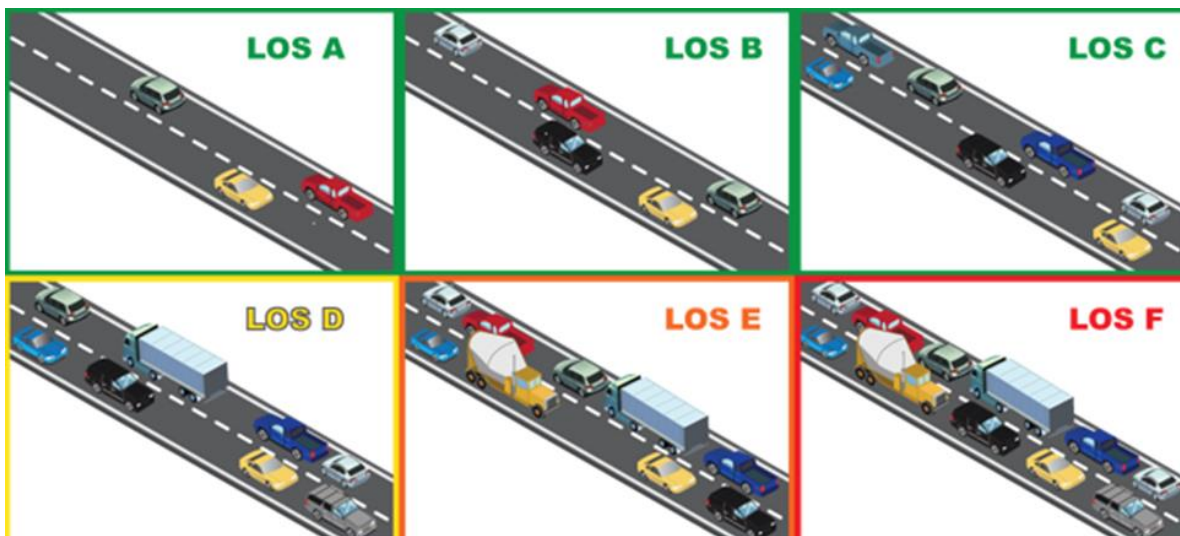
4.2. ROADWAY OPERATING CONDITIONS

A travel demand model was developed to assist in the evaluation of existing and future travel conditions throughout Toombs County. More detailed information regarding the model and model development process is presented in the Appendix B. One key output from the travel demand model is the daily volume to capacity (v/c) ratio for each roadway segment. Each volume to capacity ratio corresponds to a level of service (LOS) based on accepted methodologies from the current Highway Capacity Manual (HCM). LOS is a qualitative measure of traffic flow describing operating conditions. Six levels of service are defined by the FHWA in the HCM for use in evaluating roadway operating conditions. They are given letter designations from A to F, with LOS A representing the best operating conditions and F the worst. A facility may operate at a range of levels of service depending upon time of day, day of week, or period of the year. A qualitative description of the different levels of service is provided below.

- **LOS A** – Drivers perceive little or no delay and easily progress along a corridor.
- **LOS B** – Drivers experience some delay but generally driving conditions are favorable.
- **LOS C** – Travel speeds are slightly lower than the posted speed with noticeable delay in intersection areas.
- **LOS D** – Travel speeds are well below the posted speed with few opportunities to pass and considerable intersection delay.
- **LOS E** – The facility is operating at capacity and there are virtually no useable gaps in the traffic.
- **LOS F** – More traffic desires to use a particular facility than it is designed to handle resulting in extreme delays.

Figure 4-6 illustrates the level of service characteristics.

Figure 4-6: Level of Service



The recommended approach used to identify deficient segments was to analyze the volume to capacity ratios. At planning stage, travel demand models generate v/c ratios to capture the overall relationship between travel demand and roadway capacities. The v/c ratios are high level “indices” suggesting if there are roadway segment level deficiencies and potential improvements needed when forecasted growth

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occurs. The thresholds for assigning level of services to v/c ratios vary by roadway characteristics and area type. The following thresholds are used to assign the level of service to modeled daily v/c for Toombs County, as a rural area:

- v/c less than 0.35 - LOS C or better
- v/c between 0.35 and 0.55 – LOS D
- v/c between 0.55 and 1.00 – LOS E
- v/c greater than 1.00 – LOS F

According to the travel demand model results, a majority of the roads in Toombs County operate at a LOS D or better, meaning travel is relatively unimpeded. Several segments experience more congestion, operating at a LOS E or worse. These include portions of SR 15 and some streets in City of Lyons. See Table 4-4 and Figure 4-7.

Table 4-4: 2017 Roadway Segments with Modeled Daily LOS E or Worse

Road Name	From	To	2015 Modeled LOS
Victory Dr	US 280	S State St	E
US 280	Victory Dr	US 1	E

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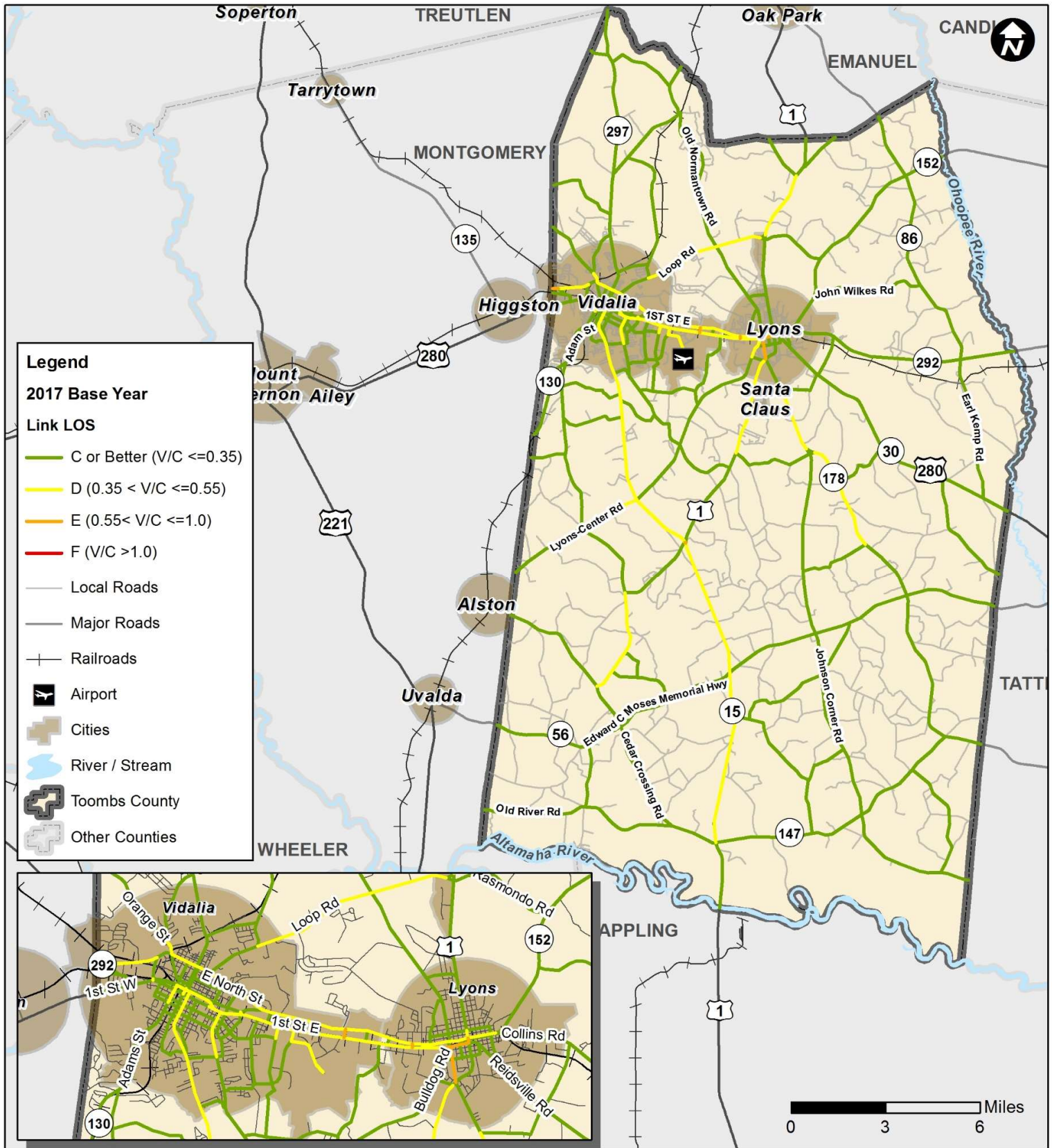


Figure 4-7 2017 Base Year Modeled Daily Level of Service (LOS)

Data Source: Toombs County Travel Demand Models

4.3. EXISTING AND PROGRAMMED PROJECTS

Within the context of the existing roadway network and conditions presented in the previous section, a review of ongoing, programmed, and planned projects sets the stage for the future roadway network. The future development needs assessment will consider these projects as the baseline for improvement. Recent and ongoing projects have been supported by the Transportation Investment Act (TIA) and the special-purpose local option sales tax (SPLOST). Table 4-5 lists the 2013-2022 TIA projects in Toombs County. The allocation of the original TIA project budgets by project type within Toombs County are shown in Figure 4-8. Figure 4-9 maps the 2013-2022 TIA projects in Toombs County. Ninety percent of the funds are dedicated to the US 1/SR 4 widening. Approximately five percent of the funds were for resurfacing and maintenance projects and about two percent went toward other roadway projects. The remainder of the funds were for a variety of other project types. Many of the TIA projects are already complete as of the time of this Plan development.

The 2017 SPLOST included four road improvements identified below and illustrated in Figure 4-10.

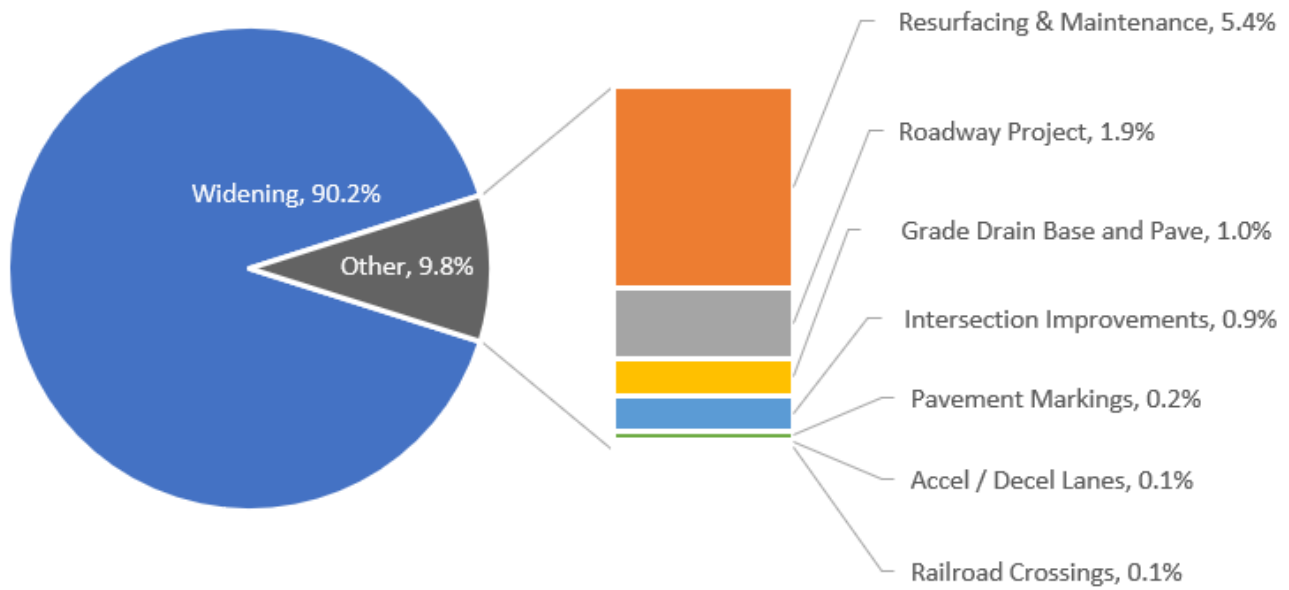
- Glynn James Road
- Ezra Taylor Road
- Laura Dixon Road and Old River Road
- Various roads and bridges

Table 4-5: 2013-2022 TIA Projects

GDOT PI No.	Regional Project ID	Project Description	Project Type
0012419	HG-1141	Lyons Center Rd	Resurfacing & Maintenance
0012420	HG-1140	Countywide Striping	Pavement Markings
0012421	HG-1147	SR 130 at US 1 Acceleration-Deceleration Lane	Accel / Decel Lanes
0012422	HG-1145	Providence Church Rd	Resurfacing & Maintenance
0012423	HG-1146	Donald Anderson	Resurfacing & Maintenance
0012424	HG-1148	Five Point Rd Resurfacing	Resurfacing & Maintenance
0012425	HG-1143	Mt Moriah Church Rd	Resurfacing & Maintenance
0012426	HG-1142	Marvin Church Rd	Resurfacing & Maintenance
0012427	HG-1149	Ezra Taylor Rd	Grade Drain Base and Pave
0012428	HG-1144	New Normantown Rd	Resurfacing & Maintenance
0012429	HG-1150	South Victory Dr	Resurfacing & Maintenance
0012430	HG-1151	West Oglethorpe Ave	Resurfacing & Maintenance
0012431	HG-1152	North Lanier and North Lexington	Resurfacing & Maintenance
0012432	HG-1154	SR 292 and Oxley Dr	Intersection Improvements
0012433	HG-1157	Mose Coleman Rd	Roadway Project
0012434	HG-1156	Michael Collins Dr	Roadway Project
0012435	HG-1159	Airport Rd	Roadway Project
0012436	HG-1155	Adams St	Resurfacing & Maintenance
0012437	HG-1158	Pete Phillips Rd	Resurfacing & Maintenance
0012438	HG-1160	Brinson Rd	Widening
0012439	HG-1161	Lowery Pl	Widening
0012440	HG-1162	Curry St	Widening
0012441	HG-1163	Truman St	Widening
0012442	HG-1164	Rudell Rd	Widening
0012443	HG-1165	Semco Rd	Widening
0012444	HG-1167	Upgrade Railroad Crossing (8 crossings)	Railroad Crossings

GDOT PI No.	Regional Project ID	Project Description	Project Type
522220-	RC09-000077	Widening of US 1/SR 4 from north of Williams Creek (near Appling line) to Green Oak Rd, 522190, 522180	Widening

Figure 4-8: Distribution of TIA Original Project Budgets by Project Type



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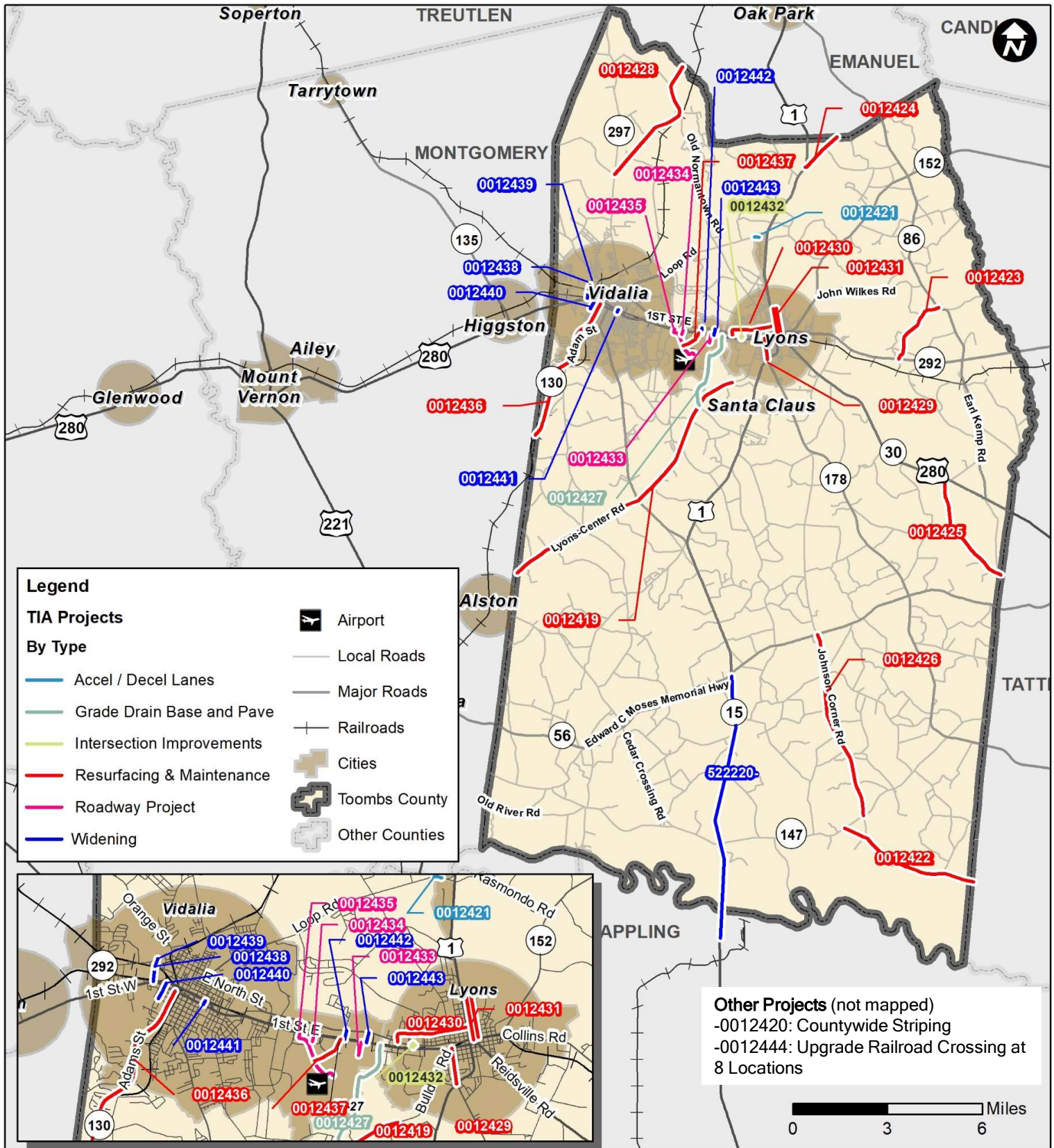


Figure 4-9 2013-2022 TIA Projects by Project Type

Data Source: GDOT TIA Projects

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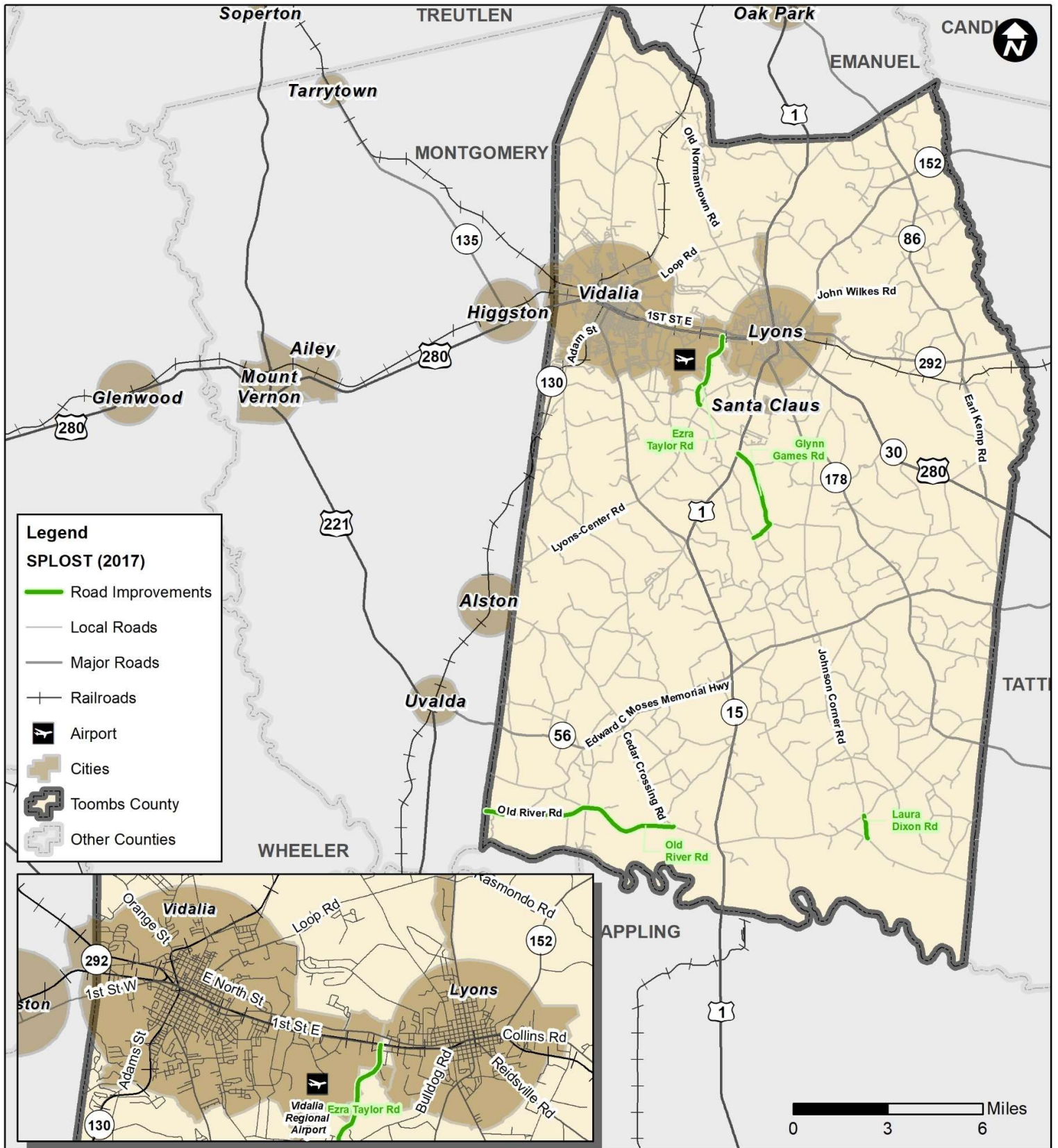


Figure 4-10 2017 SPLOST Projects

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Beyond the SPLOST and TIA projects, projects programmed in the current FY2018-2021 STIP are included in Table 4-6 and Figure 4-11. These projects have funding for the construction phase programmed by 2021 and are therefore assumed to be implemented in the near term. Additional projects in the STIP, representing projects planned for future implementation, are shown in Table 4-7 and Figure 4-12. Projects with italic fonts indicates a portion of the projects would be funded by TIA programs as well.

Table 4-6: Programmed Projects

Project ID	Description	Primary Work Type
0015742*	Bulldog Rd from Dorsey Jordan Rd to Tom McDonald Rd	Safety Improvement
522180-	US 1 / SR 4 from south of George Hill Rd to SR 29	Widening
0015583**	Green Tippett Rd at Rocky Creek	Bridge Replacement
0012428	New Normantown Rd in Toombs County	Resurface & Maintenance
0012437	<i>Pete Phillips Rd</i>	<i>Resurface & Maintenance</i>
0012438	<i>Brinson Rd</i>	<i>Resurface & Maintenance</i>
0012439	<i>Lowery Pl</i>	<i>Resurface & Maintenance</i>
0012440	<i>Curry St</i>	<i>Resurface & Maintenance</i>
0012441	<i>Truman St</i>	<i>Resurface & Maintenance</i>
0012442	<i>Rudell Rd</i>	<i>Resurface & Maintenance</i>
0012443	<i>Semco Rd</i>	<i>Resurface & Maintenance</i>
0012444	<i>Railroad Crossing Upgrades @ 3 locations in Vidalia</i>	<i>Railroad Crossing</i>
522190-	SR 4 from SR 29 to CR 386/Green Oak Rd; including Culvert @ Rocky Creek	Widening

*PI 0015742 has completed in May 2019.

**PI 0015583 is under construction as of June 2019.

Table 4-7: Long-Range and Planned Projects

Project ID	Description	Primary Work Type
522200-	US 1 / SR 4 from south of Green Oak Rd to Resmondo Rd	New Road / Widening
0004775	US 280 from west of US 1/ SR 4 to SR 86	Widening
0004776	US 280/ SR 30 from west of SR 86 in Toombs County to CR 219 in Tattnall County	Widening
0008031	South Vidalia Bypass from CR 245/Dixon Lake Rd to SR 15/SR 30	Roadway Project
0008032	SR 15 from SR 4 to CR 245/Dixon Lake Rd	Widening

4.4. CRASH ANALYSIS

The most recent vehicular crash data from GDOT (2016-2018) was collected and analyzed for state roads in the county using GDOT’s Georgia Electronic Accident Reporting System (GEARS). Crash data was used to determine roadway locations with potential safety deficiencies throughout the study area. Toombs County experienced a total of 3,060 crashes¹⁴, which included 17 fatal crashes (less than one percent of total) and 739 non-fatal injury crashes (24 percent of total). Figure 4-13 displays the fatal crash locations from 2016 to 2018. Figure 4-15 shows a crash density map using ArcGIS heat symbology based on crashes occurred from 2016 to 2018. During the same analysis period, the state of Georgia experienced a total of 1,409,292 crashes, less than one half a percent of which involved fatalities and 21 percent were non-fatal crashes involving injury.

Table 4-8 lists the top 10 crash intersections in Toombs County based on crash frequency. The highest crash location in the study area is at the intersection of US 280/ 1st Street E and Broadfoot Boulevard, with 50 crashes from 2016 to 2018, 16 of which involved injuries reported. The next highest crash location in the study area is at the intersection of SR 292/ North Street and SR 297/ McIntosh Street with 46 crashes, 11 with injuries. No fatalities occurred at these intersections from 2016 to 2018.

Cumulatively, these intersections account for 291 crashes for the 2016 to 2018 period, approximately 9.5 percent of the 3,060 crashes occurring in Toombs County during that time.

Table 4-8: Top 10 Crash Frequency Locations

Intersection	Injury	Total Crashes
US 280/ 1 st St E at Broadfoot Blvd	16	50
SR 292/ North St at SR 297/ McIntosh St	11	46
US 280/ 1 st St E at Harris Industrial Blvd/ Meadows Pkwy	10	30
US 280/1 st St E at Pete Phillips Dr	8	26
US 1/ S State St at SR 178/ S Victory Dr	3	25
US 280/1 st St E at Maple Dr	8	25
US 280/1 st St W at SR 130/ Montgomery St/ Adams St	5	24
US 280 at Church St	3	23
SR 292/ NW Broad St at Oxley Dr	5	22
US 280/ 1 st St E at Rigsbee Dr	10	20

See Section 4.10 Bicycle and Pedestrian Crash Data for additional information on bicycle and pedestrian crashes.

In addition to the high crash frequency locations analyzed above, a study of crash rates helps to highlight the locations of elevated safety concern by accounting for the differences in traffic volumes among locations. Table 4-9 lists the crash rates on key roadway segments. These are mapped in Figure 4-15 .

¹⁴ Approximately 400 records did not have latitude and longitude information and were therefore not usable in subsequent crash location analysis.

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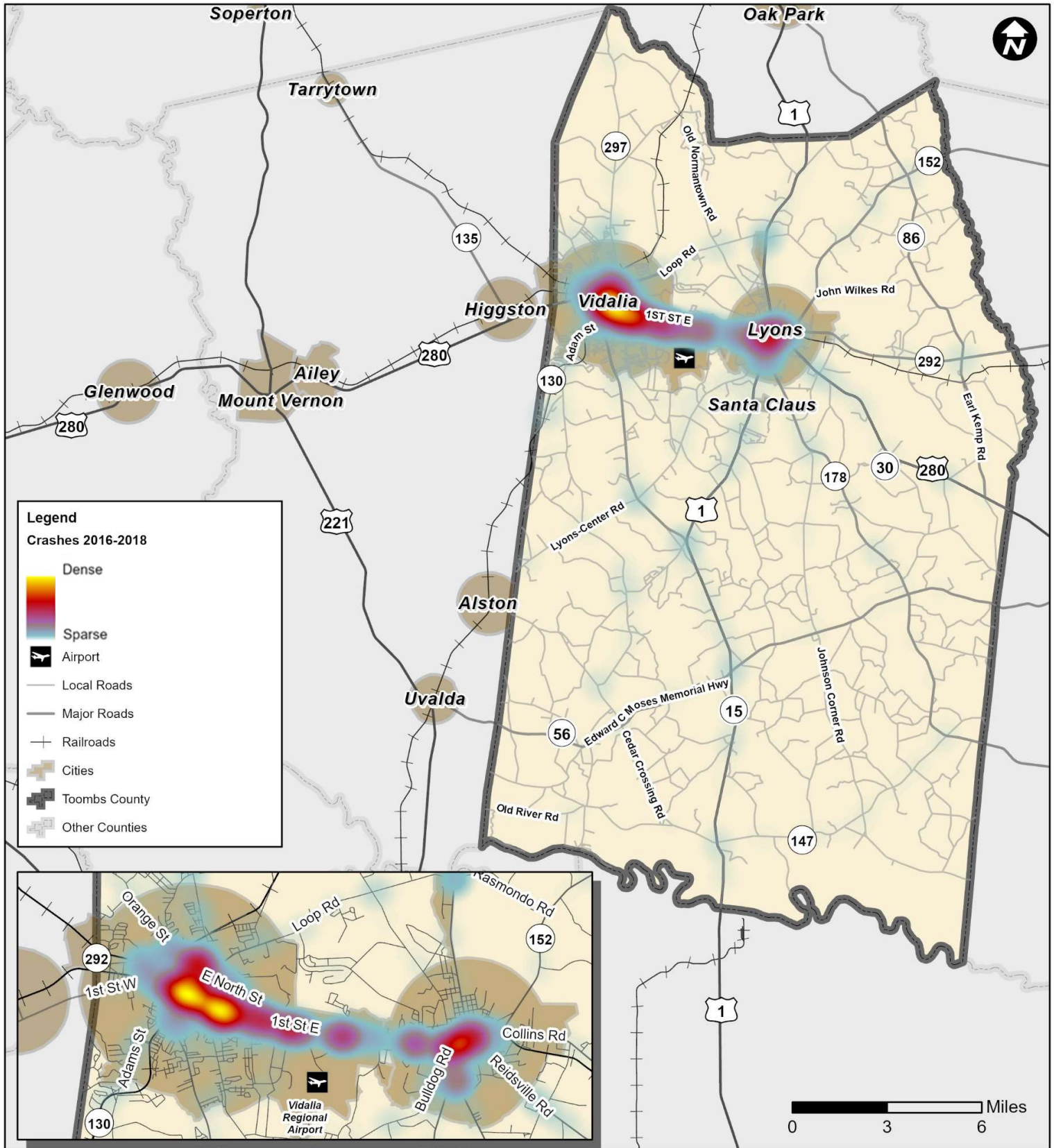


Figure 4-14 Crash Density Map

Data Source: Georgia Electronic Accident Reporting System (GEARS) 2016-2018

Table 4-9: Segment Crash Rates

Corridor		SR 292	US 280 /SR 30	US 1/ SR 15	US 1/ SR 4	SR 15/ SR 29	SR 56	SR 147	SR 178	US 280 / SR 30	SR 297
From/To		<i>From SR 152/ Cobbtown Rd to County Line</i>	<i>From S Lexington St to County Line</i>	<i>From Grady Ave to County Line</i>	<i>From Columbia Ave to County Line</i>	<i>From US 280/ SR 30/ 1st St to US 1/ SR 4</i>	<i>From US 1/ SR 15 to County Line</i>	<i>From US 1/ SR 15 to SR 178</i>	<i>From US 1/ SR 4 to Edward C. Moses Memorial Hwy</i>	<i>From Queen St to S Lexington St</i>	<i>From Wilshire Blvd to County Line</i>
Total Crashes	2016	10	16	39	16	28	10	9	8	162	17
	2017	9	16	53	16	15	6	9	16	177	8
	2018	11	24	47	11	26	6	14	15	168	14
Statewide Annual Average Crashes (2016-2018)		10	19	46	14	23	7	11	13	169	13
Statewide Annual Average Crash Rate* (2016-2018)		150	193	171	122	233	125	378	270	590	105
Statewide Annual Average Crash Rate by Functional Classification (2017)**		160	126	126	126	160	199	199	199	349	199
Ratio to Statewide Annual Average Crash Rate		0.9	1.5	1.3	0.9	1.4	0.6	1.8	1.3	1.6	0.5
Compared to GA Statewide Annual Average Crash Rate		Lower than statewide annual average crash rate	Higher than statewide annual average crash rate	Higher than statewide annual average crash rate	Lower than statewide annual average crash rate	Higher than statewide annual average crash rate	Lower than statewide annual average crash rate	Higher than statewide annual average crash rate	Higher than statewide annual average crash rate	Higher than statewide annual average crash rate	Lower than statewide annual average crash rate

Text in red indicates crash rates exceeding statewide averages

* Crash rates involve calculating the VMT on each individual link of a given segment, not simply using the entire segment distance and average AADT

**2018 statewide averages have not yet been released; 2017 statewide averages used for 2018 comparisons

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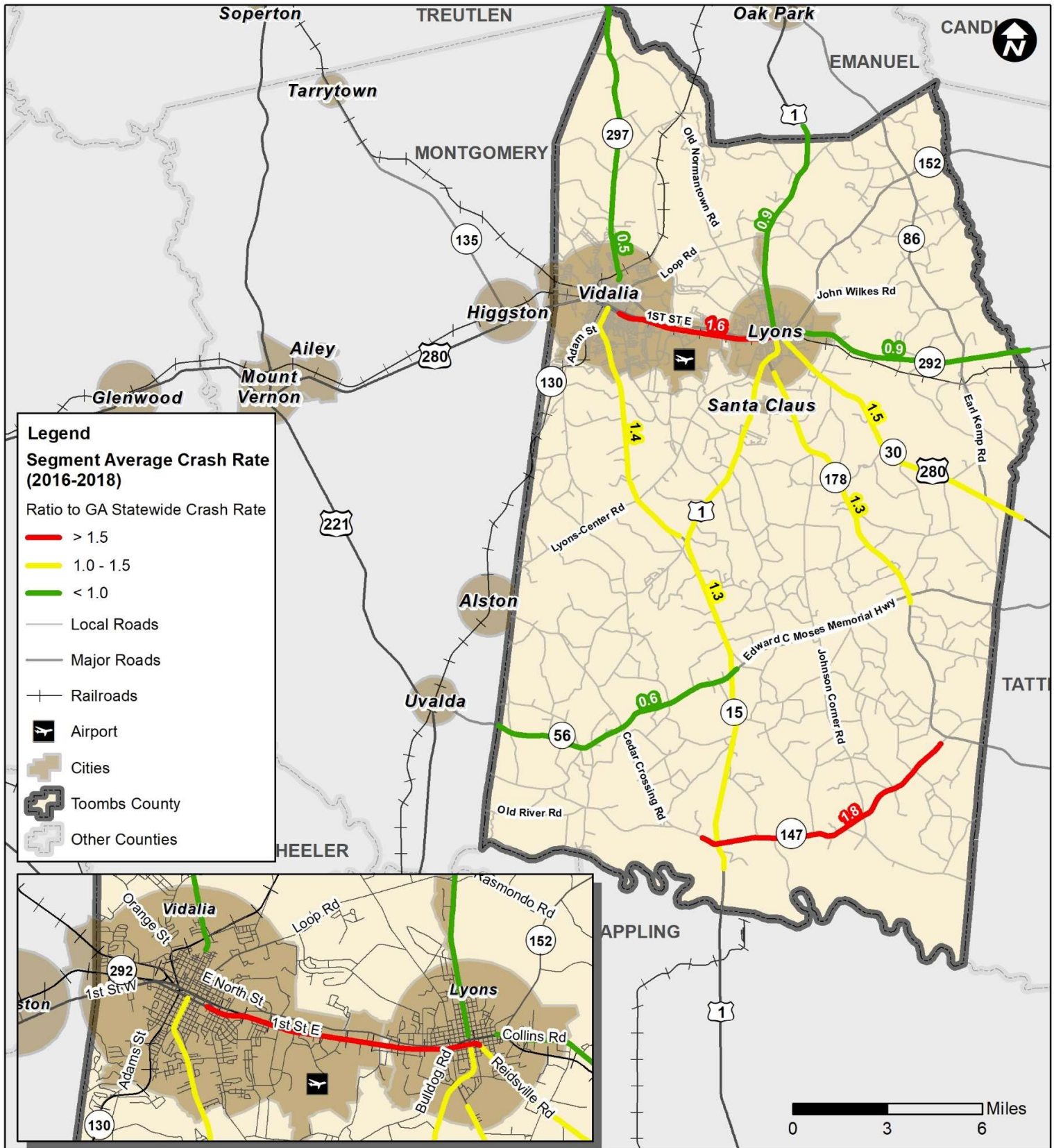


Figure 4-15 Segment Crash Rates

Data Source: Project Team Analysis based on Georgia Electronic Accident Reporting System (GEARS) 2016-2018

4.5. BRIDGES

Another critical transportation area of emphasis in Toombs County is bridge condition. Bridges were evaluated to determine the need for potential improvement. Deficient bridges can pose an obstacle to a fully functional road network due to load limits or other restrictions. The study area was reviewed to identify all bridges and assess the need for potential improvements.

4.5.1. Bridge Condition

Based on the Pavement and Bridge Condition Performance Measures final rule¹⁵, published in January of 2017, bridge condition is determined by the lowest rating of National Bridge Inventory (NBI) conditions rating for deck, superstructure, substructure or culvert. The condition ratings are based on professional inspections and they provide an overall characterization of the general condition of current bridge as shown in Table 4-10.

Table 4-10: National Bridge Inventory Bridge Condition Ratings

Rating / Code	Description
N	Not Applicable.
9	Excellent Condition.
8	Very Good Condition – no problems noted.
7	Good Condition – some minor problems.
6	Satisfactory Condition – structural elements show some minor deterioration.
5	Fair Condition – all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
4	Poor Condition – advanced section loss, deterioration, spalling or scour.
3	Serious Condition – loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. fatigue cracks in steel or shear cracks in concrete may be present.
2	Critical Condition – advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
1	“Imminent” Failure Condition – major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put back in light service.
0	Failed Condition – out of service – beyond corrective action.

¹⁵Tables of Frequently Requested NBI Information, FHWA, March 2019
<https://www.fhwa.dot.gov/bridge/britab.cfm>

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The deck, superstructure, substructure or culvert condition ratings for all Toombs County bridges were reviewed. The NBI contained 57 bridges in Toombs County. Of these 57 bridges, 88% were found to be in satisfactory or better condition. Table 4-11 and Figure 4-16 represent the six identified bridges any of the four ratings lower than Good condition (7). The first three bridges along US 1/SR 15 have been included in GDOT program under current design/construction.

Table 4-11: Toombs County Bridges with Conditions Fair or Lower

Map Key	Bridge Location	Deck	Super-structure	Sub-structure	Culvert	Overall Condition
1	US 1 / SR 15 at Altamaha River	5 - Fair	4 - Poor	5 - Fair	N	Poor
2	US 1 / SR 15 at Altamaha River Overflow	5 - Fair	4 - Poor	5 - Fair	N	Poor
3	US 1 / SR 15 at Williams Creek	5 - Fair	4 - Poor	5 - Fair	N	Poor
4	US 1 / SR 4 at Pendleton Creek	5 - Fair	6 - Satisfactory	6 - Satisfactory	N	Fair
5	Lyons Center Rd at Rocky Creek	N	N	N	5 - Fair	Fair
6	Taylor Springs Rd at Tiger Creek	N	N	N	5 - Fair	Fair

*N – Not Applicable.

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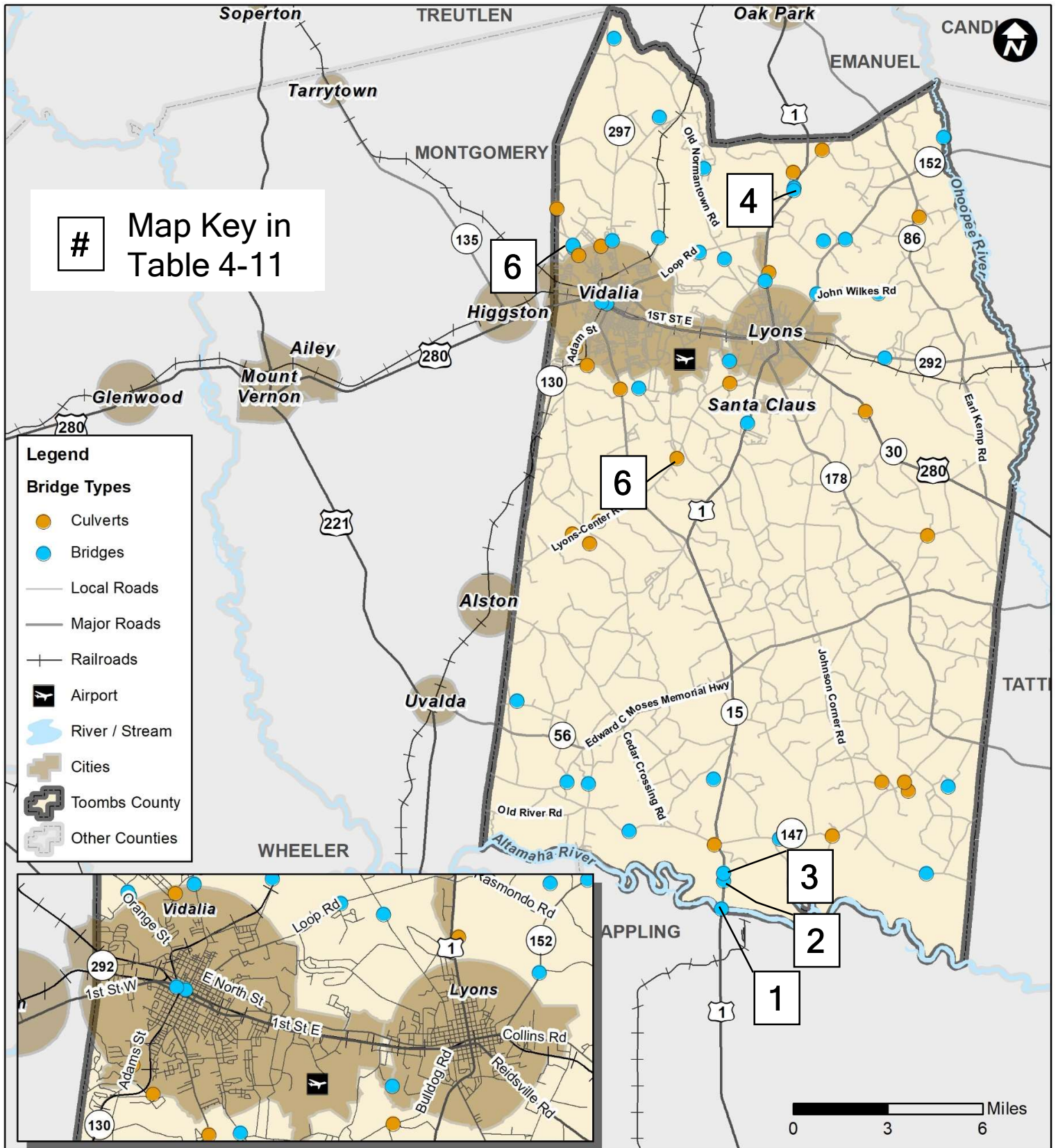


Figure 4-16 Bridge Condition Ratings

Data Source: Bureau of Transportation Statistics
 NBI (National Bridge Inventory), 2018

4.5.2. Bridge Age

As bridges deteriorate over time, age is one factor closely associate with bridge condition. Though varying from bridge to bridge, one source, FHWA Bridge Preservation Guide¹⁶ indicates the average life span of highway bridges is approximately 70 years. As the FHWA Bridge Preservation Guide indicates, preventative maintenance is required early in a bridge’s life cycle, while rehabilitation is required later to extend service life. Beyond bridge condition, bridge age can serve as a proxy for bridge rehabilitation and replacement needs. Bridges over 50 years old in Toombs County were reviewed and displayed in Figure 4-17. These bridges should be considered for rehabilitation or replacement in the near- or mid-term.

¹⁶ *Bridge Preservation Guide: Maintaining a Resilient Infrastructure to Preserve Mobility*, FHWA, April 2018
<https://www.fhwa.dot.gov/bridge/preservation/guide/guide.pdf>

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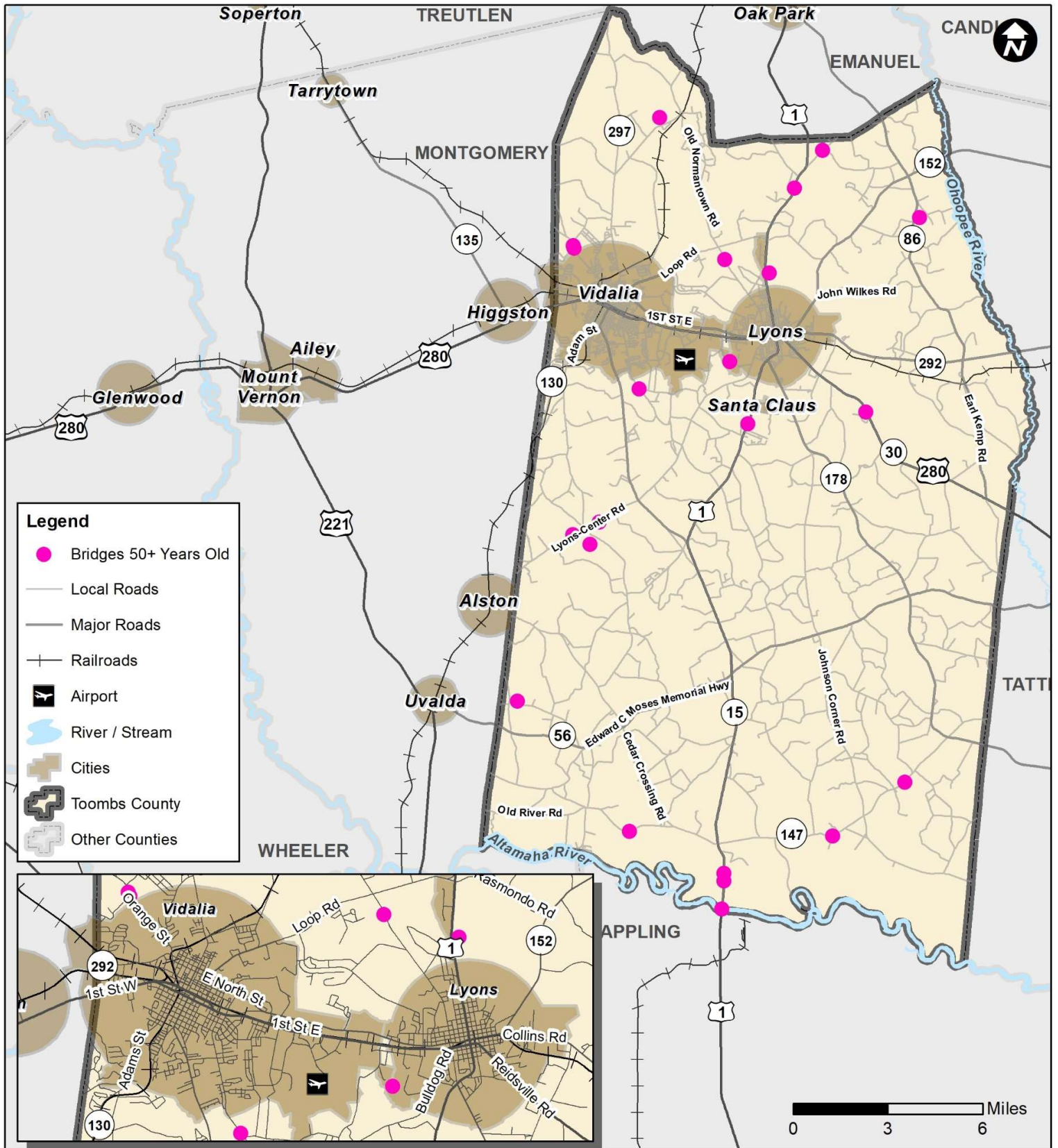


Figure 4-17 Bridges Over 50 Years Old

Data Source: Bureau of Transportation Statistics
 NBI (National Bridge Inventory), 2018

4.6. PUBLIC TRANSPORTATION

Toombs County does not currently have a public rural transit service system. Several programs provide limited transportation services to their qualified participants. Pineland Community Service Board works with the Toombs County Services Center to provide limited transportation services for developmentally disabled adults. Action Pact offers a shuttle service to transport senior citizens who qualify for meal delivery or their congregate meal program to and from their residence and to a limited number of “quality-of-life” destinations within the County four hours per day, two days per week. These services are limited to members of the programs offered by these organizations.

4.7. FREIGHT TRANSPORTATION

The preservation of freight mobility is a key component of the Plan. GDOT designated US 1 in Toombs County as a Statewide Freight Corridor as identified in the Georgia Statewide Freight and Logistics Plan. US 1 connects Toombs County to I-16, a primary freight corridor between the Port of Savannah and metro Atlanta. In addition, to the Georgia Statewide Freight Corridors, important freight corridors include those designated as part of the National Highway System (NHS). US 280 is on the NHS and provides east-west connectivity across the county and Heart of Georgia region. Additionally, a portion of SR 15/ SR 29 is on the NHS and provides freight connectivity from US 1 in the south near S. Thompson Road to US 280 in Vidalia.

Figure 4-18 shows the freight network in Toombs County as denoted by FHWA’s National Highway System routes and GDOT’s Statewide Designated Freight Corridors. In Toombs County, three highways are included in the National Highway System: US 1, US 280, and SR 15/ SR 29 between US 1 and US 280.

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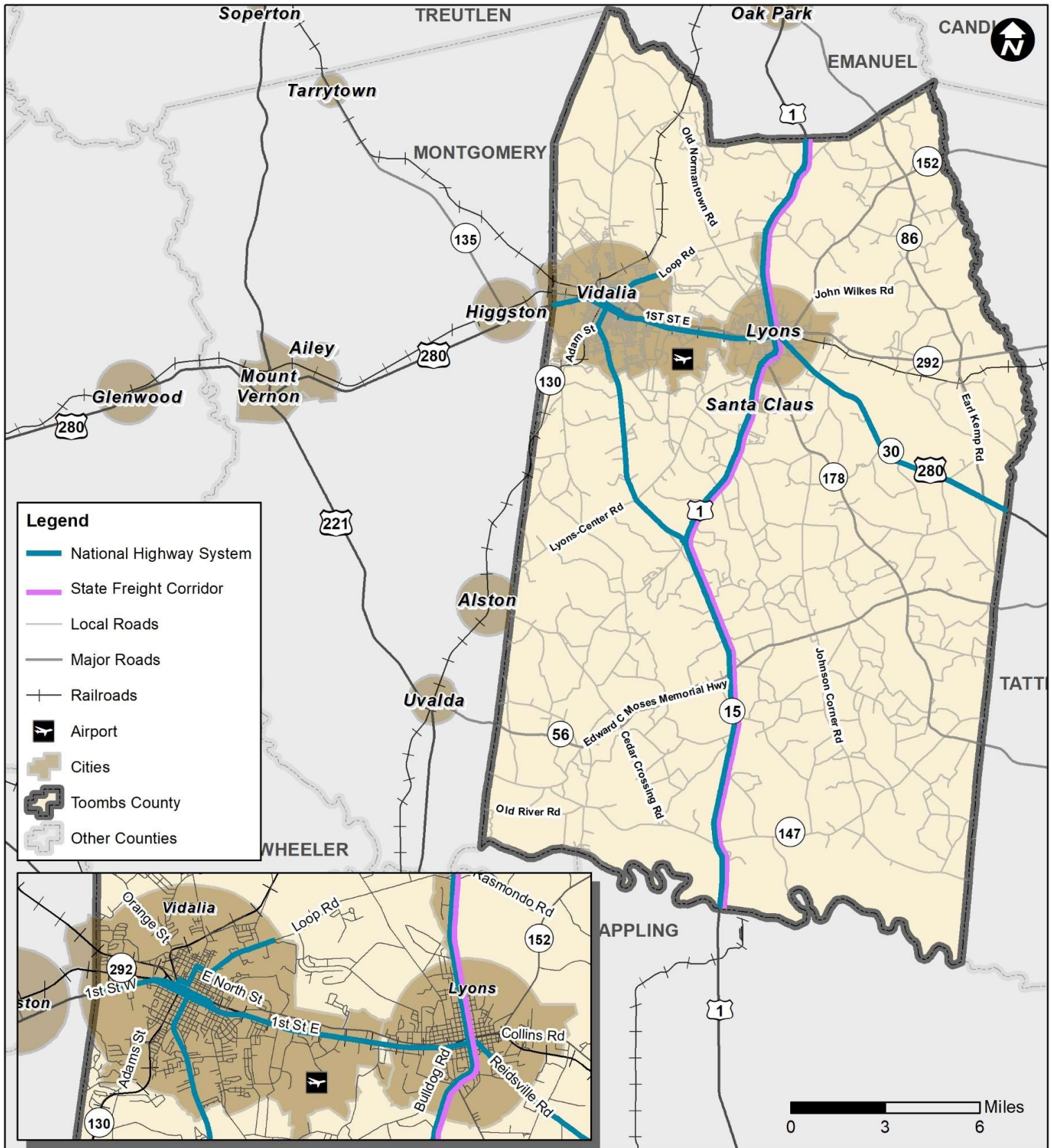


Figure 4.18 Designated Freight Corridors and National Highway System

Data Source: GDOT

4.8. RAIL

Two active rail lines run through Toombs County. The Georgia Central Railway runs east/west entering from Montgomery County and traversing through Vidalia, Lyons, and Ohoopee before entering Tattnall County. The rail line transports coal, chemicals, farm and food products, forest products, stone, plastics, and paper products. An average of two Georgia Central Railway trains per day with a maximum of 20 per week travel through Toombs County between 6 am and 6 pm.

The Heart of Georgia Railroad enters Toombs County from Montgomery County and terminates in Vidalia. The rail line transports aggregate, brick, cement, chemicals, metallic ore, food and feed, steel and scrap, paper, lumber, and pulp. An average of one train per day operates in Toombs County. The maximum speed of the trains on each rail line is 25 mph.

Two inactive rail lines are also located in Toombs County. The inactive Norfolk Southern line enters from Montgomery County southwest of Vidalia running parallel to SR 130 and terminates in Vidalia. The inactive Ogeechee rail line, owned by GDOT, begins in Vidalia and travels northeast through Normantown and into Emanuel County. Figure 4-19 shows active and inactive rail lines in Toombs County.

Although not directly operating within Toombs County, a Norfolk Southern rail line terminates just across the southern border in Appling County at the Edwin I Hatch Nuclear Power Plant. The rail line runs south and connects near Baxley, Georgia with a Norfolk Southern line that runs from Macon to Savannah.

In 2019, the Georgia Central Railway upgraded the entire rail line between Macon and Savannah to accommodate a capacity of 286,000 pounds. This upgrade brings the Central Georgia Railway up to the standards of its connecting Class I national railroads. The upgrade included the installation of 3,200 bridge stringers and 10,000 cross-ties. The upgrades will enable the rail line to serve the growing needs of the Port of Savannah. Additional investments are planned to enable 25 mph speeds along the entire track. An investment of four million dollars through the federal Consolidated Rail and Infrastructure and Safety Improvements (CRISI) Program matched by another four million dollars from Georgia Central Railway will enable these improvements to be made. The completed and anticipated improvements will enable the Central Georgia Railway to draw higher freight volumes to the line while also making the railway more attractive to new industrial development in the area ¹⁷.

¹⁷ *Genesee & Wyoming subsidiary upgrades infrastructure in Georgia*, *Freight Waves*, October 2019, <https://www.freightwaves.com/news/genesee-wyoming-subsi-dary-upgrades-infra-structure-in-georgia>
Georgia Central Railway landing page, *Genesee & Wyoming*, <https://www.gwrr.com/railroads/north-america/georgia-central-railway#m-tab-one-panel>

4.8.1. Rail Crossings

Toombs County has 45 public at-grade railroad crossings. Forty-four of the crossings are associated with the Georgia Central Railway and one crossing is located on the Heart of Georgia Railroad.

4.8.2. Rail Crash Data

The Federal Railroad Administration (FRA), Office of Safety Analysis, reports crashes which involved trains at rail crossings. Over the most recent five years (2014-2018), five crashes have occurred at public crossings in Toombs County as outlined in Table 4-12.

Table 4-12: Highway Rail Grade Crossing Incidents 2014-2018

Crossing ID	Location	City	Date/Type of Incident	Type of Crossing Warning	Injuries
Georgia Central Railway 636038F	Semco Dr	Vidalia	4/25/18 - Truck stopped on crossing struck by train	Crossbucks	0
Georgia Central Railway 636035K	Oxley Dr	Lyons	11/2/17 – Truck moving over crossing struck by train	Crossbucks	0
Georgia Central Railway 636030B	Lanier St	Lyons	12/8/16 – Automobile moving over crossing struck by train	Crossbucks	0
Georgia Central Railway 636035K	Oxley Dr	Lyons	10/1/15 – Pick-up truck moving over crossing struck by train	Crossbucks	1
Georgia Central Railway 640975F	College St	Vidalia	2/19/14 – Pick-up truck moving over crossing struck by train	Crossbucks Stop signs	0

Source: Federal Railroad Administration Highway-Rail Grade Crossing Accident/Incident Report

4.8.3. Rail Crash Prediction

The Federal Railroad Administration Web Accident Prediction System (WBAPS) is a computer model which predicts rail crossing collision rates based on basic data about a crossing’s physical and operating characteristics and on its five-year crash history. The system computes a predicted collision value for each crossing as the probability that a collision between a train and a highway vehicle will occur at a particular crossing in a year.

Crossings are then ranked according to their predicted collision value, with a ranking of “1” corresponding to the crossing with highest probability of a collision. While none of the 45 public rail crossings in Toombs County present a significant predicted collision rate, those with the highest rates are shown in Table 4-13.

Table 4-13: Top Five Public Highway Rail Crossing Predicted Accidents

Rank	Crossing ID	Location	City	Predicted Collision Value	AADT
1	Georgia Central Railway 63605K	Oxley Dr	Lyons	.090034	2,850
2	Georgia Central Railway 636030B	S Lanier St	Lyons	.057323	2,750
3	Georgia Central Railway 636032P	Washington St	Lyons	.051655	1,187
4	Central Georgia Railway 640975F	College St	Vidalia	.035063	960
5	Central Georgia Railway 636043C	Stockyard Rd	Vidalia	.019586	2,110

Source: Federal Railroad Administration Office of Safety Analysis Web Accident Prediction System 2018 based on 12/31/17 data

4.8.4. Planned and Programmed Railroad Improvements

The *Sweet: So Much More than the Vidalia Onion: A Joint Comprehensive Plan for Toombs County, Lyons, Santa Claus, and Vidalia, Georgia* (see Section 3.1) includes one recommendation related to railroad facilities. The recommendation is to seek funding to extend City of Vidalia Railroad [inactive Ogeechee line] to Emanuel County.

The Georgia State Rail Plan prepared in 2015 identifies short- and long-range improvements as outlined in Table 4-14.

In addition, railroad crossing upgrades in Vidalia are programmed in the Statewide Transportation Improvement Program (STIP), as indicated in Table 4-15.

Table 4-14: Planned Rail Improvements

Project Name	Project Description
Short-Range	
Heart of Georgia Railroad Bridge Upgrades	Upgrade 53 bridges between Cordele and Vidalia
Heart of Georgia Railroad Track Rehabilitation	Upgrade rail line between Nunez and Vidalia
Heart of Georgia Tie and Crossing Improvements	Replace deficient cross ties and upgrade crossings between Cordele and Vidalia
Long-Range	
Central Georgia Railway Bridge Improvements	Upgrade all rail bridges to accommodate 286,000 pound weight
Central Georgia Railway Tie and Track Improvements	Replace deficient ties and upgrade track over the length of the railroad
Central Georgia Railway Rail Improvements	Replace deficient rail over 13.3 miles (location TBD)
Heart of Georgia Railroad Crossing Improvements	Upgrade Grade Crossings as necessary

Source: Georgia State Rail Plan 2015

Table 4-15: Programmed Railroad Improvements

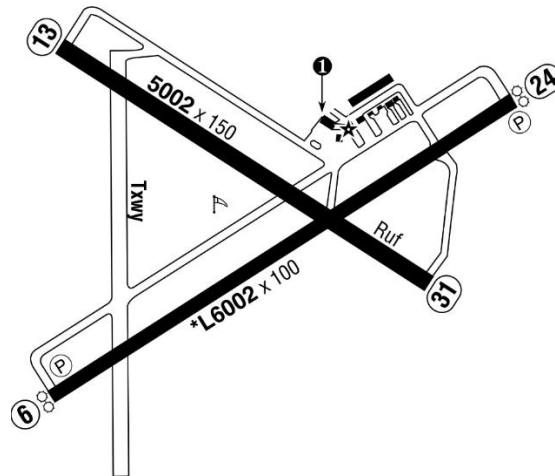
Project ID#	City	Project Description	Project Cost
0012444	Vidalia	Railroad Crossing Upgrades – 3 locations	\$157,500

Source: State Transportation Improvement Program (2018-2021)

4.9. AVIATION

The Vidalia Regional Airport is classified as a Level III Airport in the Georgia airport system. Level III airports are defined as existing air carrier airports and general aviation airports that have a regional business impact. Level III airports are recommended to have at least 5,500 feet of runway and precision-like approaches to accommodate 95 percent of business jet aircraft. The runway lengths at Vidalia Regional Airport are 5,002 and 6,002 feet. See Figure 4-20 for a diagram of Vidalia Regional Airport.

Figure 4-20: Vidalia Regional Airport



Source: <https://skyvector.com/airport/VDI/Vidalia-Regional-Airport>

The Airport, situated on 1,245 acres, is owned and operated by the City of Vidalia (See Figure 1-1 Study Area Map). The primary highway access to the airport from the east and west is via US 280. Other highways in the vicinity include US 1 and SR 15, 135, and 130. The Airport accommodates a variety of aviation-related activities that include recreational flying, agricultural spraying, and corporate/business jets.

The Sweet: So Much More than the Vidalia Onion: A Joint Comprehensive Plan for Toombs County, Lyons, Santa Claus, and Vidalia, Georgia makes a recommendation related to airport facilities. The recommendation is to continue to maintain/upgrade the Vidalia Regional Airport as a modern airport facility through infrastructure/equipment upgrades/maintenance, as needed, such as a new corporate hangar, new striping and lighting, and drainage improvements. The airport Capital Improvements Plan is outlined in Table 4-16.

Table 4-16: Vidalia Regional Airport Capital Improvements Plan 2020-2024

Year	Project Description	Federal Share	State Share	Local Share	Total Project Cost
2020	Rehabilitate Terminal Apron – Bid and Construction	\$2,340,000	\$130,000	\$130,000	\$2,600,000
	Rehabilitate Runway 7/25 - Design	\$94,500	\$5,250	\$5,250	\$105,000
	Conduct DBE Plan (FY 2021-2023)	\$10,800	\$600	\$600	\$12,000
2021	Rehabilitate Runway 7/25 – Bid and Construction	\$1,260,000	\$70,000	\$70,000	\$1,400,000
	Update Airport Layout Plan	\$175,500	\$9,750	\$9,750	\$195,000
2022	Construct Taxiway - Design	\$65,250	\$3,625	\$3,625	\$72,500
2023	Construct Taxiway – Bid and Construction	\$585,000	\$32,500	\$32,500	\$650,000
	Construct Hangar Building – Bid and Construction	\$540,000	\$30,000	\$30,000	\$600,000
	Rehabilitate Runway 14/32 – Design	\$90,000	\$5,000	\$5,000	\$100,000
	Rehabilitate Taxiway C – Design	\$63,000	\$3,500	\$3,500	\$70,000
	Conduct DBE Plan (FY 2024-2026)	\$10,800	\$600	\$600	\$12,000
2024	Rehabilitate Runway 14/32 – Bid and Construction	\$585,000	\$32,500	\$32,500	\$650,000
	Rehabilitate Taxiway C – Bid and Construction	\$405,000	\$22,500	\$22,500	\$450,000
	Construct Apron - Design	\$67,500	\$3,750	\$3,750	\$75,000
	TOTAL (2020-2024)	\$6,292,350	\$349,575	\$349,575	\$6,991,500

Source: Vidalia Regional Airport Capital Improvements Plan Updated November 12, 2018

In addition to the five-year Capital Improvements Plan, there are several long-term projects identified. These include apron construction, corporate hangar construction, pavement maintenance, airfield re-marking, and obstruction removal, as needed.

4.10. BICYCLE AND PEDESTRIAN FACILITIES

Bicycle and pedestrian facilities are an important component of the roadway network, providing healthy, non-polluting means of transportation to many residents, especially for those too young or too old to drive or those without financial means to own a car. Walkable communities not only provide additional transportation alternatives, but they also promote physical activity and healthy lifestyles, provide recreational opportunities, and can enhance economic development. Likewise, an on-street bicycle route system or trail network can spur tourism and provide recreation and fitness opportunities for residents, while also creating the backbone of an alternative transportation network.

This section provides a description of the existing bicycle and pedestrian conditions in the County. It also provides a summary of policies, plans, and crash data related to bicycle and pedestrian facilities.

4.10.1. Existing Facilities

Toombs County has one on-road designated bicycle facility. US 1 between Lyons and the Emanuel County line was recently improved to include 6-foot paved shoulders and striped bicycle lanes in both directions. As noted in Section 3.7 and below in Section 4.10.3, this is part of a larger recommended project improving US 1 all the way to Appling County. The cities of Vidalia and Lyons have basic sidewalk networks to accommodate pedestrians.

4.10.2. Bike and Ped Crash Data

Crash data for the most recent three years was examined to identify bicycle and pedestrian incidents in Toombs County. During 2016-2018, seven bicycle injuries and one bicycle fatality occurred, shown in Table 4-17. During the same period, seven pedestrian injuries and one pedestrian fatality occurred, shown in Table 4-18. The crashes involving bicyclists and pedestrians are mapped in Figure 4-21.

Table 4-17: Bicycle Crashes 2016-2018

Date	Route	Intersecting Route	Injuries	Fatalities
4/11/16	SR 292	West of Semco Dr	0	1
10/20/16	US 1/SR 4	Lincoln St	1	0
12/16/16	SR 292 in Vidalia	SR 130	1	0
4/13/17	US 280/SR 30 in Vidalia	Queen St	1	0
7/5/17	SR 178 in Lyons	Coleman Dr	1	0
2/17/18	E Gordon Ave in Lyons	S Lanier St	1	0
3/28/18	SR 56	1.4 miles east of Jeff Webber	1	0
4/26/18	Winona St in Vidalia	Sixth St	1	0
TOTAL			7	1

Table 4-18: Pedestrian Crashes 2016-2018

Date	Route	Intersecting Route	Injuries	Fatalities
3/20/16	210 Crooms St in Vidalia	Thompson St	1	0
11/1/16	5768 Cedar Crossing Vidalia Rd		1	0
1/11/17	SR 152	SR 86	0	1
2/2/17	Peacock St in Vidalia	Jones St	1	0
4/1/17	Fifth St in Vidalia	Bay St	1	0
4/10/17	178 S Victory Dr in Lyons		1	0
5/24/17	Palmer St in Vidalia	Orange St	1	0
10/13/17	SR 292	W St	1	0
TOTAL			7	1

4.10.3. Planned Bicycle and Pedestrian Facility Improvements

The *Sweet: So Much More than the Vidalia Onion: A Joint Comprehensive Plan for Toombs County, Lyons, Santa Claus, and Vidalia, Georgia* makes several recommendations related to bicycle and pedestrian transportation. These recommendations are:

- Seek transportation improvements (highway, airport, rail, bicycle, and pedestrian) to enhance/support economic development efforts.
- Make additional streetscape improvements in downtown Lyons and Vidalia, as needed.
- Complete road/sidewalk improvements from North Main to Pine Streets and Morris to Thompson Streets in Vidalia.
- Improve bicycle/pedestrian facilities, including rails to trails project, in downtown Lyons.
- Support/promote bicycling through Toombs County, including annual Sweet Onion Century Ride, bicycle connector route along US 1, state designation of central regional bicycle route and its connections along US 280, and other improvements to bicycle corridors.

The HOGARC updated the *Regional Bicycle/Pedestrian Plan* in 2016. The plan calls for implementation of two *Regional Arterial* routes and two *Regional Scenic Connector* routes for bicycle travel. The *Regional Arterial* routes are proposed as the primary foundation of the bicycle network and are recommended by HOGARC for state bicycle route designation. The *Regional Scenic Connector* routes were identified based on their proximity to historical locations, traffic counts, scenery, and distance to connect to the *Regional Arterial* routes. The proposed regional bicycle network is shown in Figure 4-22. Toombs County's portion of the proposed bike network is mapped in Figure 4-23.

Proposed Regional Arterial Routes are:

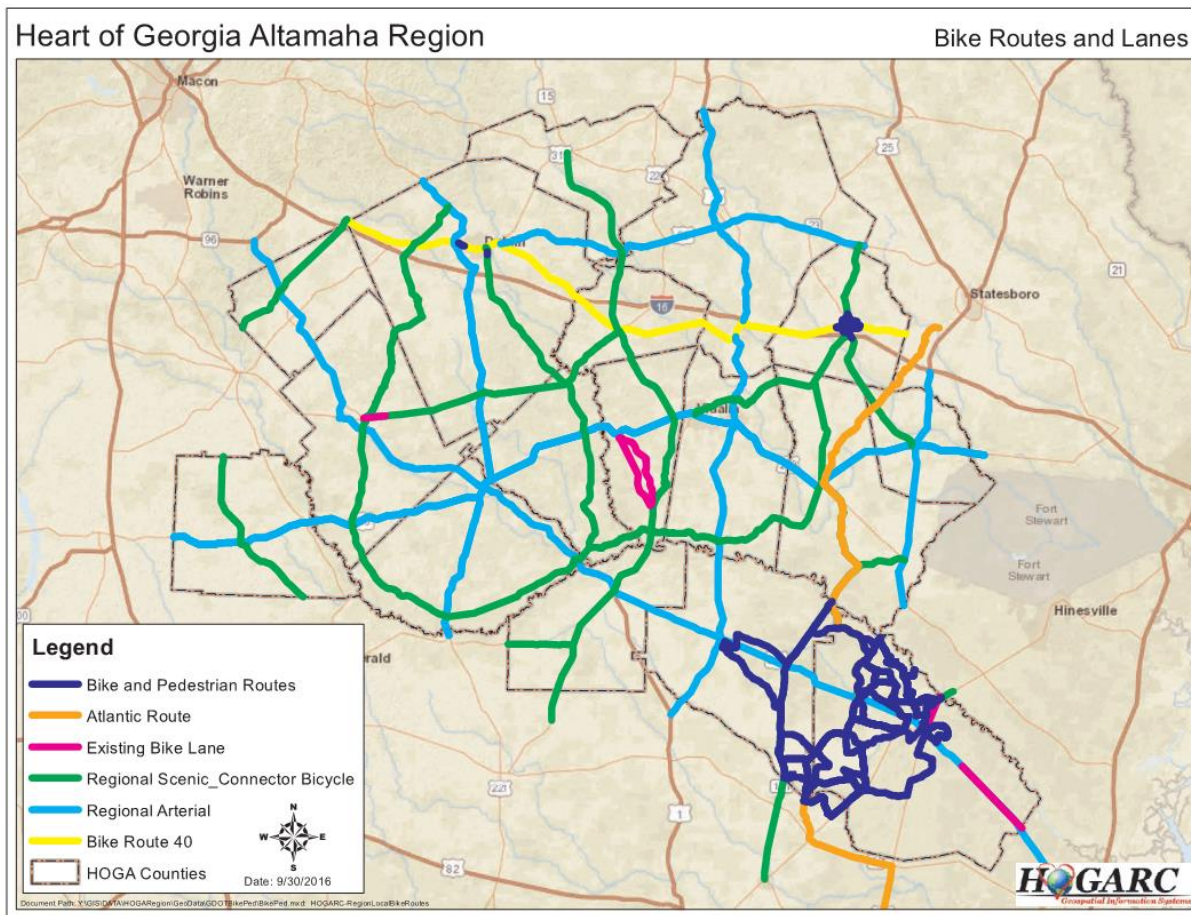
1. **Regional Arterial Route US 1 / SR 4 / SR 15)** The North-South route begins at the Emanuel County/Jefferson County line on US 1 and continues south for approximately 95 miles to the Appling County/Bacon County line. The majority of this highway has paved shoulders with permitting rumble strips. The segment of highway needing improvement is between the City of Lyons and the Altamaha River. Currently this portion of US 1 is two lanes without a paved shoulder in either direction. It should be noted this highway is scheduled to be upgraded bringing it to par with the four lane segments of US 1. This plan recommends a four to six-foot paved shoulder in each direction for bicycle use. US 1 north of Lyons to the City of Oak Park has recently been widened to a four-lane highway. This portion of highway was deemed the best for bicyclists in the Region.
2. **Regional Arterial Route US 280 / SR 30** This route is an East-West route beginning on US 280 at the Evans County/Bryan County line and continues west for 118 miles through Pitts and ends at the Wilcox/Crisp County line. Currently, no paved shoulders or other infrastructure is present on this highway. Cyclists must share the two-lane roadway with vehicles at present. It should be noted this highway is included in the Governor's Road Improvement Program (GRIP) and is identified as an important route for inland port traffic to/from Cordele. As highway improvements progress, it is recommended to include four to six-foot paved shoulders among the improvements.

Toombs County Long Range Transportation Plan

Proposed Regional Scenic Connector Routes are:

1. One East-West route is proposed along S. River Road and SR 147 through the south part of Toombs County. The full route begins in Laurens County on SR 338, continuing onto Dublin Eastman Road, Middle Ground Church Road, SR 117, SR 19, Bells Ferry Road, and Old River Road, before ending on SR 147 in Tattnall County.
2. One East-West route is proposed on SR 130 through the north part of Toombs County. The full route follows SR 130/ SR 152 Vidalia to Cobbtown in Candler County.

Figure 4-22: Proposed Regional Bicycle Network



The HOGARC also prepared a Multi-Region River Corridor Feasibility study in 2011 and 2012 (see sections 3.4 and 3.5). Phase II of the plan noted that the proposed US 1 bicycle route connects the Altamaha river landing at the US 1 bridge directly to the heritage and recreational resources in Lyons, offering an opportunity to enjoy both resources via bicycle. The plan recommends the development of bicycle trails including the central regional route along US 280 and the US 1 Connector route as well as local bicycle paths to provide connectivity to local attractions.

Despite these proposed future projects, no funds have been programmed to implement proposed programmed bicycle or pedestrian improvements in Toombs County.

Toombs County Long Range Transportation Plan

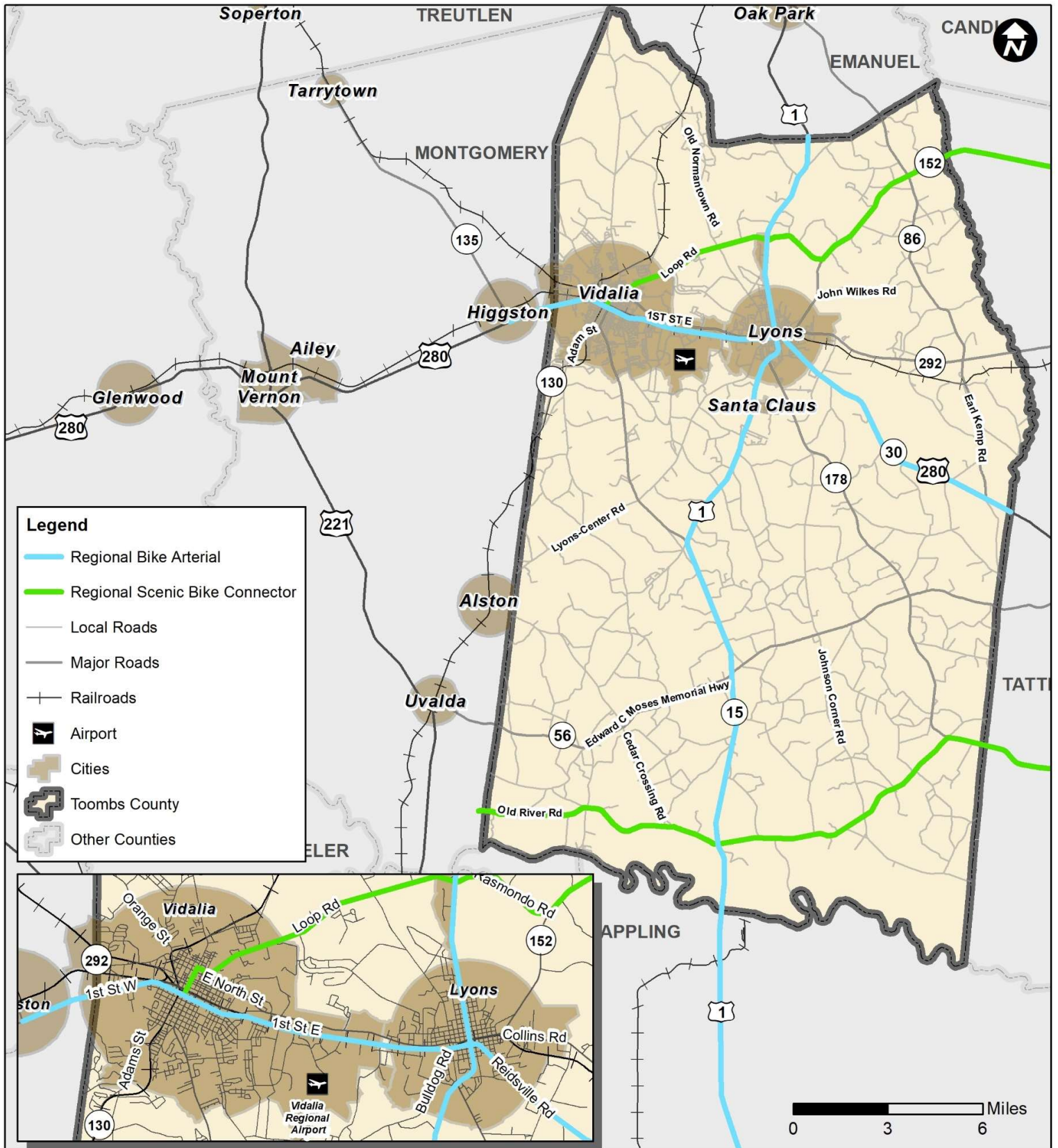


Figure 4-23 HOGARC Proposed Bike Routes

Data Source: Heart of Georgia Altamaha RC

5. PUBLIC AND STAKEHOLDER INVOLVEMENT

5.1. STUDY ADVISORY COMMITTEE

A study advisory committee was established with participants invited based on guidance from local County and City staff. The committee included representation from the following: Toombs County, the City of Lyons, the City of Vidalia, the City of Santa Claus, Heart of Georgia Altamaha Regional Commission, GDOT District 5, the Toombs-Montgomery County Chamber of Commerce, and major employers. The role of the Study Advisory Committee was to provide a local perspective and feedback regarding:

- Local transportation goals and objectives;
- Multi-modal issues, opportunities, and constraints;
- Recommendation and review of potential improvements; and
- Effective communication with the community at-large.

Two study advisory committee meetings were held during the Plan development:

- First – May 30, 2019, from 11:30 AM to 12:30 PM at the Santa Claus Community Center
- Second – November 21, 2019 from 11:00 AM to 12:30 PM at the Durden Cabin in Partin Park¹⁸

The meeting materials and notes are provided in Appendix C.

5.2. COLLATERAL MATERIALS

The study team developed materials to inform the public of study activities and to solicit public input on transportation issues, projects and priorities. The following materials are included as part of this study:

5.2.1. Study Webpages

A study webpage was developed and linked to the GDOT website. Study details, an online survey and all public outreach materials are available for downloading from the website at www.dot.ga.gov/toombs

5.2.2. Study Factsheet

A study factsheet was created and made available for the public to review at their convenience and circulated via the project website, members of the study team, and Study Advisory Committee. The factsheet included information on the study process and schedule, addressing frequently asked questions, and contact information and announcements for upcoming study activities. The factsheet is intended to generate interest in the study and to encourage feedback. The study factsheet is included in Appendix C.

5.2.3. Public Online Survey

To enhance the public engagement for the Plan development process, a survey, designed and distributed in a manner to encourage participation from the rural study area population, was utilized. In order to reach the study area population, an online survey was developed and made accessible to the public. The form was user-friendly, convenient to complete, and intended to maximize participation.

The survey questions were developed with guidance from GDOT and the study team to capture data necessary to enhance the understanding of the multi-modal transportation issues and opportunities within the County. The survey was developed to gather information on existing conditions of the local transportation network and the opportunities for improvement to the transportation system.

¹⁸ Due to a facility utility issue, the meeting was moved to the nearby Callaway Community Center.

The survey was conducted during June and July of 2019. There were 92 responses received at the end of the survey period. The majority of the respondents (65 percent) live and work within Toombs County and 16 percent live outside and travel into the County. The top three transportation issues or concerns identified by the respondents were safety, roadway paving, and traffic congestions. Respondents were able to leave comments on the survey and mark on an interactive map to specify their concerned routes, intersections, or locations. An interactive map was developed during the study for the study team to access the survey results online. The interactive map provided statistical analysis for pertinent transportation concerns, commute descriptions, and project categories, and allowed the study team to visualize the stakeholder feedback.

The detailed survey questions and results and a screenshot of the interactive map representing the survey results are included in Appendix C.

The inputs from the Study Advisory Committee and public online surveys assisted the study team to identify the transportation issues, opportunities and needs in Toombs County.

6. GOALS AND OBJECTIVES

6.1. NATIONAL GOALS

The National goals of the Federal-aid highway program included in the Moving Ahead for Progress in the 21st Century (MAP-21) Act and carried forward by the Fixing American's Surface Transportation Act (FAST Act) and incorporated into FHWA's transportation performance management are:

- **Safety** – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure condition** – To maintain the highway infrastructure asset system in a state of good repair.
- **Congestion reduction** – To achieve a significant reduction in congestion on the National Highway System.
- **System reliability** – To improve the efficiency of the surface transportation system.
- **Freight movement and economic vitality** – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental sustainability** – To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- **Reduced project delivery delays** – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

6.2. STATE GOALS

In 2012, Governor Nathan Deal released the Governor's Strategic Goals for Georgia, which included a vision of "a lean and responsive state government that allows communities, individuals and businesses to prosper." Specifically, it envisioned a Georgia that is educated, mobile, growing, healthy, safe and fiscally responsible. The following goals established for the state of Georgia are very relevant to transportation:

- **Mobile:** Transporting people and products by improving the movement of people and goods across and within the state, expanding Georgia's role as a major logistics hub for global commerce and leveraging public-private partnerships, and improving intergovernmental cooperation for successful infrastructure development.
- **Growing:** Creating jobs and growing businesses.
- **Healthy:** Providing for accessible care and active lifestyles.
- **Safe:** Protecting the public's safety and security by reducing injury and loss of life on Georgia's roads.

In addition, the 2018 Statewide Strategic Transportation Plan (SSTP) established four key goals for Georgia's transportation system:

- Ensuring safety and security
- Maximizing the value of Georgia's assets
- Minimizing impact on the environment
- Supporting Georgia's economic growth and competitiveness

6.3. LOCAL GOALS

The Toombs County Joint Comprehensive Plan included a variety of community goals, long-term policies, and needs and opportunities related to transportation.

Community goals included:

- Economic Development
 - Improve transportation access/quality
- Land Use
 - Improve/promote transportation access/quality
- Community Facilities and Services
 - Maintain/upgrade/expand infrastructure/services, as needed
 - Improve/promote transportation access/quality

Two long-term policies under economic development were:

- The community will continue to seek transportation improvements (highway, airport, rail, bicycle, and pedestrian) to enhance and support economic development efforts
- The community will continue to support and maintain the Vidalia Regional Airport, through necessary infrastructure/equipment upgrades and maintenance, service expansions and other means

Needs listed under transportation access/quality were:

- Seek transportation improvements (highway, airport, rail, bicycle, and pedestrian) to enhance/support economic development efforts
- Develop ranking program for road improvement projects in Toombs County
- Improve transportation access/quality, including completing 4-laning of US 1 and US 280 through Toombs County
- Make additional streetscape improvements in downtown Lyons and Vidalia, as needed
- Maintain and upgrade, as needed, existing county roads and city streets through resurfacing, paving, and other improvements, including reducing mileage of dirt roads in County each year
- Pave Ezra Taylor Road to new park (Vidalia)
- Complete TIA-listed projects
- Improve/establish Prancer Street in Santa Claus (current dirt golf cart path)
- Construct new US 1 bridge over Altamaha River
- Complete road/sidewalk improvements from North Main to Pine streets and Morris to Thompson streets in Vidalia
- Complete addition of center and right turn lanes along SR 292 from former Seawinder Restaurant to Morningside Drive, Vidalia (expected completion by late 2014)
- Purchase mini-excavator for Lyons Road Department and replace department's outdated equipment each year, as feasible
- Improve bicycle/pedestrian facilities, including completion of Rails to Trails project in downtown Lyons
- Support/promote bicycling through Toombs County, including annual Sweet Onion Century Ride, bicycle connector route along US 1, state designation of central regional bicycle route and its connections along US 280, and other improvements to bike corridors
- Continue to maintain/upgrade Vidalia Regional Airport as modern airport facility through infrastructure/equipment upgrades/maintenance, as needed, such as new corporate hangar, new striping and lighting, and drainage improvements currently underway
- Seek funding to extend City of Vidalia Railroad to Emanuel County

- Seek funding to improve gateways into Toombs County, Vidalia, and Lyons with new signage/landscaping
- Establish memorial garden at US 1 north entrance to Santa Claus
- Replace all street signage in Vidalia

Opportunities listed under transportation access/quality included:

- T-SPLOST funding, which will help pay for road and street upgrades countywide
- One-way pairing along US 280 in Vidalia
- I-16 proximity
- Sweet Onion Cyclists
- Annual Sweet Onion Century Bike Ride
- Upgrades at Vidalia Regional Airport, including new A-wash and navigational beacons (2010)
- Rail service via City of Vidalia Railroad, Georgia Central Railway, and Heart of Georgia Railroad
- Gateway improvements along US 280 West and SR 297 North in Vidalia and in Santa Claus (2013)

6.4. TOOMBS COUNTY LONG RANGE TRANSPORTATION GOALS

Within the context of the national, state, and local goals building on previous studies and through stakeholder involvement, the following goals and objectives were established guide the current plan.

Goal 1: Maintain a safe, reliable and efficient transportation system which will sustain economic activity and promote economic development

- Improve the safety of the roadway network by identifying high-crash locations and identifying safety-related funding sources to implement improvements at these locations
- Identify projects that improve and enhance access to employment and activity centers
- Explore transportation solutions that accommodate growth in travel demand while sustaining economic activity and promoting economic development

Goal 2: Improve mobility within Toombs County through enhanced multi-model connectivity

- Identify potential projects that provide key linkages between existing roadway facilities
- Address congested corridors or intersections with solutions that enhance and connect existing roadways
- Enhance north-south and east-west connectivity in the County by improving existing connections and creating new connections including the bypass
- Access [Assess] the need of rail crossings improvements within the County that enhance the modes of rail and roadway

Goal 3: Promote sustainability through the coordination of land use and transportation plans and projects

- Review the plan in conjunction with the future land use element of the Toombs County and Heart of Georgia Region plans to assess potential impacts to the transportation system
- Encourage transportation improvements compatible with area development types
- Focus transportation improvements on developed and developing areas

Goal 4: Facilitate implementation of plan recommendations through coordination efforts

- Explore projects that link to other ongoing studies in the County, in neighboring Counties, and the Region
- Create a multi-model project prioritization tool to identify project priorities

- Identify programmatic funding sources for potential projects, such as STIP, TIA and SPLOST programs
- Coordinate with elected officials and citizens during the identification of projects to ensure support and identify potential issues early in process

7. NEEDS AND IMPROVEMENTS

7.1. NEEDS AND DEFICIENCIES EVALUATION

Based on the activities summarized in Sections 1-6 of this document, an assessment of future conditions was conducted and identified a series of potential deficiencies within the Toombs County transportation system. Potential improvements were identified in various areas of transportation, including roadway, intersection, bridges, rail crossing, bicycle and pedestrian facilities. These potential deficiencies and improvements were developed in consultation with the Study Advisory Committee and follow the established goals and objectives. The deficiency identification and improvement development process follows the steps previously illustrated in Figure 1-2.

7.2. ROADWAY NEEDS

The transportation network was analyzed for the three different types of potential deficiencies or needs: roadway capacity, roadway operational, and intersection improvement. The capacity needs include both the need of new roadways and widening the existing roadways. The operational needs include but are not limited to turn lanes, pavement, pavement markings, signage, and shoulders. The intersection needs include but are not limited to turn lanes, signalization, signal timing, realignment, and safety improvements. Further detailed engineering analysis should be performed to determine the type of improvements for all types of needs. Needs were evaluated through travel demand model analysis, collected data and field research. Stakeholder and public survey inputs were also considered in the identification of needs.

7.2.1. Future Year Operations

The travel demand models utilize the forecasted future year socioeconomic data including population, households, employment and school enrollment data, to predict the future travel demand for the Toombs County transportation network. Based on the travel demand model results of the forecast year 2050, segments listed in Table 7-1 are projected to be operating at LOS E or worse.

Table 7-1: 2050 Roadway Segments with Modeled Daily LOS E or Worse

Road Name	From	To	2050 Modeled LOS
SR 15	Stella Ave	Lyons-Center Rd	E
Bulldog Rd	Dee Mosley Rd	US 280	E
Victory Dr	US 1	US 280	E
US 280	Bulldog Rd	Walnut St	E
Adam St	US 280	Darby Cir	E
Slayton St	US 280	Waters Dr	E

Figure 7-1 displays the roadway segments operation at LOS E or worse for 2050 No Build condition.

Toombs County Long Range Transportation Plan

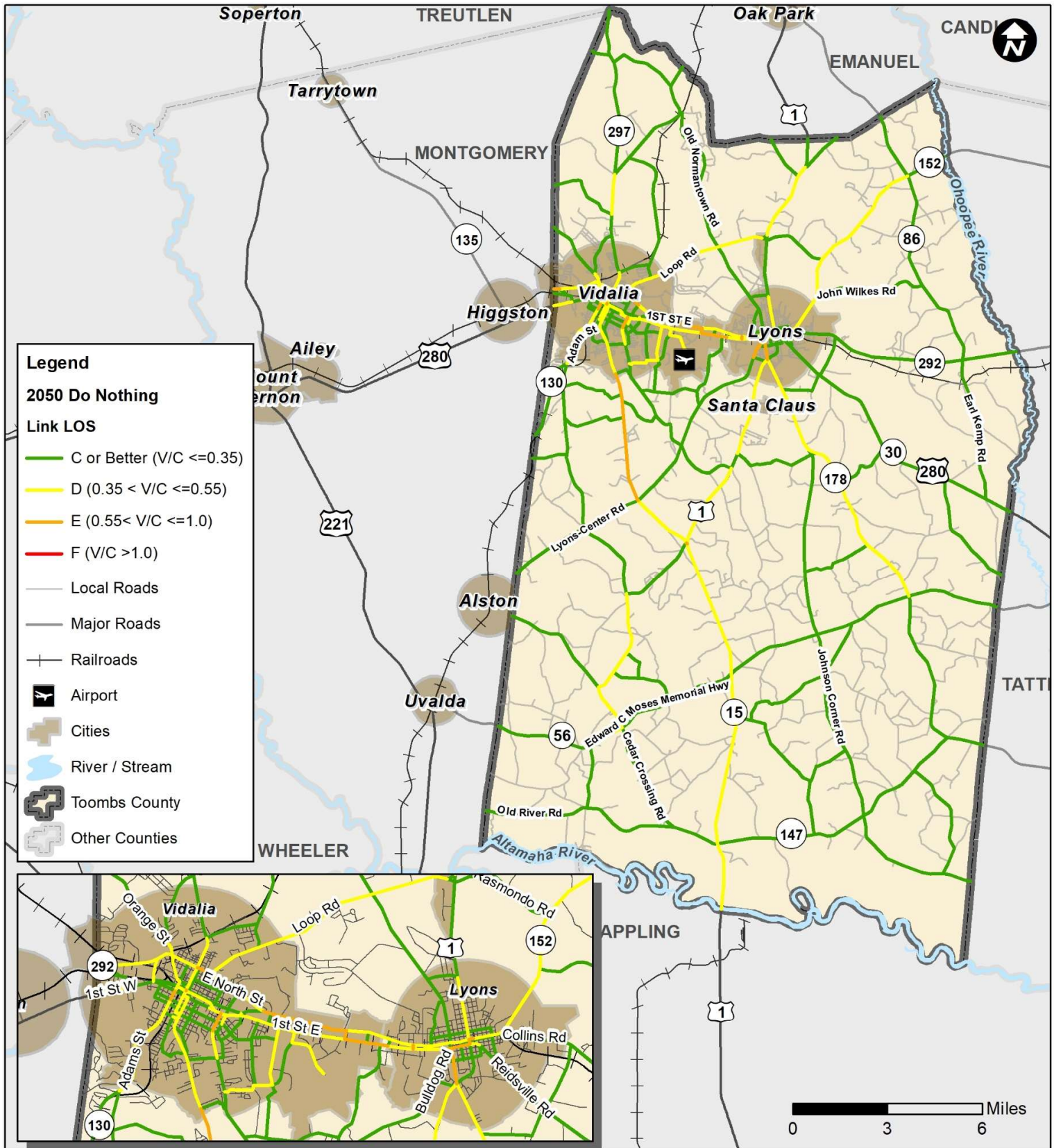


Figure 7-1 2050 No Build LOS

7.2.2. Roadway Capacity Needs

Based on the roadway characteristics, travel demand model results, safety analysis, as well as the inputs from stakeholders and public surveys, roadway needs were identified for Toombs County at a planning level. Detailed corridor specific traffic analysis and logical termini analysis by professional engineers, Toombs County and/or further review by GDOT District 5 are necessary in order to make specific improvement recommendations. The segments with identified capacity needs were listed in Table 7-2.

Table 7-2: Roadway Capacity Needs

Road	From	To
SR 292	City of Lyons	City of Vidalia
US 1	Kingston Dr	Cedar Crossing Rd
US 280	County line	Bulldog Rd
US 280/ SR 30	West of US 1/ SR 4	SR 86
SR 15	US 1/ SR 4	Dixon Lake Rd
Vidalia Bypass	CR 245/ Dixon Lake Rd	SR 30/ SR 15
US 1/ SR 4 Bypass	South of Green Oak Rd	Resmondo Rd
US 1/ SR 4	George Hill Rd	SR 29
SR 4	SR 29	Green Oak Rd

7.2.3. Roadway Operational Needs

Operational needs include geometric concerns and other issues that impact the flow of traffic on an existing roadway facility. Operational improvements may include the addition of turn lanes or passing lanes to improve through movements, shoulder widening or upgrades, introduction of traffic calming elements, improved curve or turning radii, and/or paving projects. Operational upgrades of facilities can provide relief to adjacent facilities experiencing capacity problems by providing for viable movement of increased traffic flows without the major investment associated with a capacity enhancement or new roadway facility.

Based on the roadway characteristics, safety analysis, as well as the inputs from stakeholders and public surveys, roadway operational needs were identified for Toombs County at a planning level. Detailed corridor specific traffic analysis and logical termini analysis by professional engineers, Toombs County and/or further review by GDOT District 5 are necessary in order to make specific improvement recommendations. Operational needs were identified and recommended for further analysis in Table 7-3.




Table 7-3: Roadway Operational Needs

Road	From	To	Potential Needs
Adams St	US 280	9 th St	Operations/Capacity
Bulldog Rd	US 280	School complex vicinity	Operations/Capacity
Slayton St	US 280	Waters Dr	Operations/Capacity
Victory Dr	US 280	US 1	Operations/Capacity
Clifford Rogers Rd	Perry Edgerton Rd	Sid Newton Rd	Pavement
Currie Rd	Marvin Church Rd	Lilliot Rd	Pavement
Jeff Weber Rd	SR 56	Sid Newton Rd	Pavement
Levy Cave Rd	Sid Newton Rd	Hoke Gay Rd	Pavement
Lilliot Rd	SR 147	Marvin Church Rd	Pavement
Rodney Stanley Rd	Johnson Corner Rd	Sid Newton Rd	Pavement
Victory Cir	n/a	n/a	Pavement
Quint Shrine Rd	n/a	n/a	Restriping
Cedar Crossing-Vidalia Rd	Adams St	Lyons Center Rd	Pavement
Brantley Rd	SR 297	Vann Rd	Safety
5 Points Rd	US 1	Bill Branch Cir	Shoulders
Aimwell Rd	US 280	US 1	Shoulders
Lyons Center Rd	County line	Lyons	Shoulders
Parker Ave	Bulldog Rd	S State St	Shoulders
SR 292	County line	County line	Shoulders
Adams St	Darby Cir	Cedar Crossing-Vidalia Rd	Shoulders
JR Rollins Rd	SR 15	Cedar Crossing-Vidalia Rd	Shoulders
N Loop Road	North St	Liberty St	Shoulders
Orange St	North St	Thompson Pond Rd	Shoulders
Rackettown Rd	Pendelton Springs Rd	US 1	Shoulders
SR 15	Lyons Center Rd	Bloomfield Rd	Shoulders




7.2.4. Intersection Needs

Intersection needs were identified based on safety analysis, existing and future traffic volumes, as well as safety concerns raised by the Study Advisory Committee and via public surveys. Improvements to address the needs may include an adjustment in intersection controls, signage improvements, signal timing improvements and/or geometric realignment. Recommendations for intersection improvements as part of the LRTP process are based on planning-level data and require detailed location-specific project improvement recommendations. Considerations include available right-of-way, traffic volumes, safety, driver expectancy and the context of the area. Roundabouts are warranted for intersections with single lane approaches, average daily traffic volume under 16,000 and circulating traffic under 1,800 vehicles per hour. Table 7-4 compares three common types of intersection controls frequently considered for intersection improvements: signalization, stop control and roundabouts.

Table 7-4: Signal Intersection, Stop Control Intersection and Roundabout

		Signal Intersection 	Stop Control Intersection 	Roundabout 
Safety	Crash Frequency	High	Medium	Low
	Crash Severity	Higher due to higher speeds and higher speed differential	Medium	Lower due to lower speeds and lower speed differential. Elimination of high-speed T-bone or rear end collisions
	Traffic Calming	Not effective	Effective at All-way Stop Controlled intersections. Not effective for through traffic at Two-way Stop Controlled intersections	Entering and circulating geometry ensure lower speeds (18-30MPH)
Traffic Operations	Capacity	Constrained by green time in cycle length	Higher capacity than signalized intersections due to the omission of lost time (red and yellow) at signalized intersections	Higher capacity than stop control at lower proportions of major street traffic, same capacity as stop control when major and minor street volumes are equal. Higher capacity than signalized intersection due to omission of lost time (red and yellow) at signalized intersections.
	Operational Benefits	Greater delays to all vehicles	Delays at off-peak periods	Less delays
	Traffic Signing	Typical intersection signing	Typical intersection signing	Typical intersection signing with YIELD signs for the traffic entering the roundabout
	Traffic Speed	Not limited by geometrics	Lower speed on side roads than signalized intersections	Geometric features ensure slow entering and circulating speeds (18-30MPH)

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		Signal Intersection 	Stop Control Intersection 	Roundabout 
	User Familiarity	Drivers are very familiar with using signalized intersections	Drivers are very familiar with using stop-controlled intersections	Drivers are less familiar with roundabouts
Right-of-Way Impacts	Overall Right-of-Way Requirements	Requires less space on the approaches than roundabouts if no exclusive left turn lanes; more space if exclusive left turns constructed	Requires less space than roundabouts	Typically requires more space at the conjunctions but less space on the approaches than stop-controlled and signalized intersections
Community Impacts	Community Enhancements	Community enhancement is available on the perimeter of the intersection	Community enhancement is available on the perimeter of the intersection	Community enhancements are available on the perimeter of the intersection. Allows additional landscaping, monuments, and other aesthetic uses within the central island
	Environmental Benefits	More fuel consumption and emissions due to idling vehicles during red time phases	More fuel consumption and emissions due to idling vehicles	Overall less fuel consumption and vehicle emissions
Cost	Maintenance	Routine signal maintenance required	Less cost than signals and minimum maintenance costs	Pavement markings and landscaping costs required. Minimum maintenance costs

The following intersection needs are identified and recommended for future analysis:

- Bulldog Rd at Parker Ave
- Old Normantown Rd and SR 130/Liberty St
- US 1/SR 4/SR 15 and S Thompson Rd
- SR 152 and SR 86
- US 1 and SR 56
- US 280/Main St and SR 297/McIntosh St/Church St
- SR 292 and SR 297
- SR 292 and W Oglehorpe Ave
- US 280 and Harris Industrial Blvd/Meadows Pkwy
- US 280 and Slayton St
- US 280 and Victory Dr
- SR 130 and SR 292
- SR 292 and Oxley Dr (north of railroad)
- US 280 and Commerce Way (main entrance to Southeastern Technical College)
- SR 292 and Broadfoot Blvd
- US 1 and SR 292
- US 280 and Broadfoot Blvd
- US 280 and Adams St
- US 1 and SR 178
- US 280 and Maple Dr
- US 280 and McNatt St
- US 280 and Semco Rd
- US 280 and Pete Philips Dr
- US 280 and Rigsbee Dr
- 1st St and Church St
- 1st St and Montgomery St

7.2.5. Bridge Needs

Based on the bridge condition ratings identified in Section 4.5, three bridges were identified for potential improvements:

- Lyons Center Rd at Rocky Creek
- Thompson Pond Rd at Swift Creek Trib.
- US 1/ SR 4 at Pendleton Creek

7.2.6. Rail Crossing Needs

As stated in Section 4.8 the majority of the existing rail crossings provide adequate control devices and signing. The following rail crossing needs were identified and improvements are recommended to ensure safety and efficient rail crossings in Toombs County:

- Brice Rd railroad crossing (Crossing 641093R)
- Rigsbee Dr rail crossing (Crossing 641073E)
- Broadfoot Blvd rail crossing near Main Street (Crossing 641074L)
- Semco Dr rail crossing (Crossing 636038F)
- Lanier St rail crossing (Crossing 636030B)
- SR 292 rail crossing west of Orange Street (Crossing 732631X)

7.2.7. Public Transit Needs

Toombs County does not currently have a public rural transit service system. Several programs provide limited transportation services to their qualified participants. The Pineland Community Service Board works with the Toombs County Services Center to provide limited transportation services for developmentally disabled adults. Action Pact offers a shuttle service to transport senior citizens who qualify for meal delivery or their congregate meal program to and from their residence and to a limited number of “quality-of-life” destinations within the County four hours per day, two days per week. These services are limited to members of the programs offered by these organizations. Expanded transit service is not recommended at this time.

7.2.8. Bicycle and Pedestrian Facility Needs

Bicycle and pedestrian transportation needs were developed based on safety data, roadway characteristics, and stakeholder and public survey input received during the plan development process and should be regarded as a planning-level assessment. Pedestrian improvements were also integrated into recommended roadway and intersection recommendations as deemed suitable. Detailed corridor-specific traffic analysis and logical termini analysis by professional engineers, Toombs County, and/or further review by GDOT District 5 are necessary in order to make specific improvement recommendations. See Table 7-5 and Table 7-6 for recommended bicycle and pedestrian needs.

Table 7-5: Bicycle Transportation Facility Needs

Road	From	To	Potential Needs
SR 130 North	Downtown Vidalia	US 1	Bicycle Signage
SR 292	East County Line	West County Line	Bicycle Facilities
US 280	East County Line	West County Line	Bicycle Facilities
US 1	End of current facility in Lyons	Altamaha River/County Line	Bicycle Facilities
Old River Rd and SR 147	East County Line	SR 178	Bicycle Signage

Table 7-6: Pedestrian Transportation Facility Needs

Road	From	To	Type of Needs
US 280	Durden St	Broadfoot Blvd	Pedestrian Crossings
US 280	Maple St	Cypress St	Sidewalks
Bulldog Rd	Toombs Middle School	US 280	Sidewalks

To expand bicycling and walking options in Toombs County, the following recommendations should be considered throughout the county:

- Appropriate bicycle and pedestrian facilities should be considered for inclusion in all roadway improvement projects. The need for a facility, type of facility, and level of accommodation will vary depending on location, adjacent land use, populations served, and other factors.
- For roads with a rural typical section (i.e. open drainage, no curb and gutter) where cycling has been determined to be desirable, consider constructing minimum 6.5' paved shoulders as part of future proposed GDOT widening, reconstruction or resurfacing projects, and minimum 4' shoulders on county roads (increase to 6.5' if rumble strips are used).
- Upgrade intersections for pedestrian and bicycle safety anytime a roadway is improved. Intersection treatments may include, but are not limited to: pedestrian traffic signals, pedestrian countdown signal heads, raised medians or crossing islands, crosswalks, advance crosswalk bars, curb ramps (as required by ADA in all roadway alteration projects), pedestrian or trail crossing signage, "no turn on red" or other restrictive signage, and signal time adjustments. Two helpful resources for identifying potential pedestrian safety treatments are FHWA's PEDSAFE tool¹⁹ and FHWA's "How to Develop a Pedestrian Safety Action Plan."²⁰
- Update subdivision and zoning regulations to require developers to do the following:
 - Construct sidewalks on both sides of the road within subdivisions and along the main street frontage of a subdivision, commercial, office or retail development.
 - Provide bicycle parking at large commercial, office, and retail developments.
 - Construct a path, bike lanes or suitable bicycle facility as part of any new development.
 - Provide inter-development or inter-parcel walkways and pedestrian connections not otherwise located parallel to street rights-of-way, and where warranted to improve nonmotorized access to major facilities or other activity centers.

7.2.9. Potential Deficiencies Identification

Over the course of the study, stakeholder and public input were collected regarding transportation issues and opportunities for consideration during the need and deficiency assessments. Each deficiency was considered alongside technical data in order to determine if a need for the improvement in fact exists and would be reasonable to move forward. If a need did exist, the improvement was recommended for inclusion in the plan recommendations. Study Advisory Committee members had opportunities to comment on potential improvement recommendations during the course of the Plan development. Table 7-7 through Table 7-11 summarize the deficiencies identified in the above sections, their associated improvements proposed, and the recommendation for inclusion in the plan. Bold improvements are already part of GDOT's program.

¹⁹Pedestrian and Bicycle Safety Guide and Countermeasure Selection System, FHWA
<http://www.pedbikesafe.org>

²⁰How to Develop a Pedestrian and Bicycle Safety Action Plan, FHWA, August 2017
http://safety.fhwa.dot.gov/ped_bike/ped_focus/docs/fhwas17050.pdf

Table 7-7: Identified Roadway Deficiencies

Reference Number	Identified Needs	Source	Need Identified by Data Analysis?	Recommended for Inclusion in Plan?
RO-01	Capacity on SR 292 from 2 to 4 lanes from Lyons to Vidalia	Public Survey; number of survey comments: 1	Yes	Yes – operational improvements recommended
RO-02	Capacity on US 1 from 2 to 4 lanes from south of SR 147 to south of Georgia Hill Rd. Incorporate paved shoulders to accommodate bicycles	GDOT STIP Projects: PI522200-; Stakeholder Input and Public Survey; number of survey comments: 1	Yes	Yes – GDOT STIP project
RO-03	Capacity on US 280 from 2 to 4 lanes from the county line to Bulldog Rd	Public Survey; number of survey comments: 2	Yes	Yes – operational improvements recommended
RO-04	Widening and sidewalks on Adams St from US 280 to 9th St	Study Team Analysis	Yes	No – not recommended by the stakeholders committee
RO-05	Widening and sidewalks on Bulldog Rd from US 280 to Toombs County Middle School south entrance	Stakeholder Input; Study Team Analysis	Yes	Yes – LOS E projected in 2050
RO-06	Widening and sidewalks on Slayton St from US 280 to Waters Dr	Study Team Analysis	Yes	Yes – LOS E projected in 2050
RO-07	Widening and sidewalks on Victory Dr from US 280 to US 1	Study Team Analysis	Yes	Yes – LOS E projected in 2050
RO-08	Pavement on Clifford Rogers Rd from Perry Edgerton Rd to Sid Newton Rd	Public Survey; number of survey comments: 1	No	No – low traffic volumes
RO-09	Pavement on Currie Rd from Marvin Church Rd to Lilliot Rd	Public Survey; number of survey comments: 1	No	No – low traffic volumes
RO-10	Pavement on Jeff Webber Rd from SR 56 to Sid Newton Rd	Public Survey; number of survey comments: 1	No	No – low traffic volumes
RO-11	Pavement on Levy Cave Rd from Sid Newton Rd to Hoke Gay Rd	Public Survey; number of survey comments: 1	No	No – low traffic volumes
RO-12	Pavement on Lilliot Rd from SR 147 to Marvin Church Rd	Public Survey; number of survey comments: 1	No	No – low traffic volumes
RO-13	Pavement on Rodney Stanley Rd from Johnson Corner Rd to Sid Newton Rd	Public Survey; number of survey comments: 1	Yes	Yes – provide better connection between SR 178 and Johnson Corner Rd
RO-14	Pavement on Victory Cir	Public Survey; number of survey comments: 1	No	No – would be included in project RO-35
RO-15	Restriping Quint Shrine Rd	Public Survey; number of survey comments: 1	Yes	No – recommend provide this location to be included GDOT District 5’s maintenance program
RO-16	Pavement and shoulders along Cedar Crossing-Vidalia Rd from Adam St to Lyons Center Rd	Public Survey; number of survey comments: 2	Yes	Yes – currently unpaved shoulder less than 4 feet width
RO-17	Pavement on US 280 from Lyons east to the county line	GDOT STIP Project: PI0004775; Public Survey; number of survey comments: 1	Yes	Yes – GDOT STIP project; combine with RO-31
RO-18	Speed limit signage along Brantley Road from SR 297 to Vann Rd	Public Survey; number of survey comments: 1	Yes	Yes – roadway safety improvements
RO-19	Shoulders along 5 Points Rd from US 1 to Bill Branch Cl	Public Survey; number of survey comments: 1	Yes	Yes - currently unpaved shoulder with 6 feet width; further analysis recommended

Reference Number	Identified Needs	Source	Need Identified by Data Analysis?	Recommended for Inclusion in Plan?
RO-20	Shoulders along Aimwell Rd from US 280 to US 1	Public Survey; number of survey comments: 1	Yes	Yes - currently unpaved shoulder with 6 feet width; further analysis recommended
RO-22	Shoulders along Lyons Center Rd from the county line east to Lyons	Public Survey; number of survey comments: 1	Yes	Yes - currently unpaved shoulder with 5 feet width; further analysis recommended
RO-23	Shoulders along Parker Ave from Bulldog Rd to S State St	Public Survey; number of survey comments: 1	Yes	Yes - currently unpaved shoulder with 4 feet width; further analysis recommended
RO-24	Shoulders along SR 292 from the Montgomery County line to the Tattnall County line	Public Survey; number of survey comments: 1	Yes	Yes - currently majority of the segment has unpaved shoulder with 11 feet width; further analysis recommended
RO-25	Shoulders widening along Adams St from Darby Cir to Cedar Crossing-Vidalia Rd	Public Survey; number of survey comments: 1	Yes	No – not recommended by the stakeholders committee
RO-26	Pavement on JR Rollins Rd from SR 15 to Cedar Crossing-Vidalia Rd	Public Survey; number of survey comments: 1	Yes	Yes – provide connections between major roads
RO-27	Shoulders widening along N Loop Rd North St to Liberty St	Public Survey; number of survey comments: 1	Yes	Yes - currently unpaved shoulder with 8 feet width; further analysis recommended
RO-28	Shoulders widening along Orange St North St to Thompson Pond Rd	Public Survey; number of survey comments: 1	Yes	Yes - currently unpaved shoulder with 4 feet width; further analysis recommended
RO-29	Shoulders widening along Rackettown Rd from US 1 to Pendelton Springs Rd	Public Survey; number of survey comments: 1	Yes	Yes - currently unpaved shoulder with 6 feet width; further analysis recommended
RO-30	Shoulders widening along SR 15 from Lyons Center Rd to Bloomfield Rd	Public Survey; number of survey comments: 1	Yes	Yes - currently unpaved shoulder with 6 feet width; further analysis recommended
RO-31	Widening on US 280 from West of US 1/SR 4 to SR 86	GDOT STIP Project: PI 0004775	Yes	Yes
RO-32	Widening on US 280/SR 30 from SR 86 to Tattnall County Line	Study Team Analysis	Yes	No – part of GDOT PI 0004776 in Tattnall County
RO-33	Widening on SR 15 from SR 4 to CR 245/Dixon Lake Rd	GDOT STIP Project: PI 0008032; Study Team Analysis	Yes	Yes
RO-34	Widening on Vidalia Bypass from CR 245/Dixon Lake Rd to SR 15/SR 30	GDOT STIP Project: PI 0008031; Study Team Analysis	Yes	Yes
RO-35	US 1/SR 4 Bypass from south of Green Oak Rd to Resmondo Rd	GDOT STIP Project: PI 522200-; Study Team Analysis	Yes	Yes
RO-36	Safety Improvement on Bulldog Rd from Dorsey Jordan Rd to Tom McDonald Rd	GDOT STIP Project: PI 0015742; Study Team Analysis	No	No – under construction at the time of study
RO-37	US 1/SR 4 from south of George Hill Rd to SR 29	GDOT STIP Project: PI 522180; Study Team Analysis	Yes	Yes
RO-38	SR 4 from SR 29 to Green Oak Rd; including Culvert at Rocky Creek	GDOT STIP Project: PI 522190; Study Team Analysis	Yes	Yes

Table 7-8: Identified Intersection Deficiencies

Reference Number	Identified Needs	Source	Need Identified by Data Analysis?	Recommended for Inclusion in Plan?
IN-01	Operational improvements at the intersection of Bulldog Rd and Parker Ave	Stakeholder Input; Study Team Analysis	Yes	Yes – further intersection analysis recommended
IN-02	Operational improvements at the intersection of Old Normantown Rd and SR 130/ Liberty St	Public Survey; number of survey comments: 1	Yes	Yes – further intersection analysis recommended
IN-03	Operational improvements at the intersections of US 1/ SR 15/SR 4, and S Thompson Rd	Stakeholder Input	Yes	Yes – further intersection analysis recommended
IN-04	Operational improvements at the intersection of SR 152 and SR 86	Public Survey; number of survey comments: 1	Yes	Yes – further intersection analysis recommended
IN-05	Operational improvements at the intersection of US 1 and SR 56	Public Survey; number of survey comments: 1	Yes	Yes – further intersection analysis recommended
IN-06	Operational improvements at the intersection of US 280/ Main St and SR 297/ McIntosh St/ Church St by restriping pavement markings, left turn arrows, repainting crosswalk, and adjusting signal timing	Public Survey; number of survey comments: 4	Yes	Yes – further intersection analysis recommended
IN-07	Operational improvements at the intersection of SR 292 and SR 297 by adjusting signal timing. Repaint crosswalk	Stakeholder Input and Public Survey; number of survey comments: 3	Yes	Yes – further intersection analysis recommended
IN-08	Operational improvements at the intersection of SR 292 and W Oglethorpe Ave	Public Survey; number of survey comments: 1	Yes	Yes – further intersection analysis recommended
IN-10	Operational improvements at the intersection of US 280 and Harris Industrial Blvd/Meadows Pkwy	Public Survey; number of survey comments: 17	Yes	Yes – further intersection analysis recommended
IN-11	Operational improvements at the intersection of US 280 and Slayton St	Stakeholder Input	Yes	Yes – further intersection analysis recommended
IN-13	Operational improvements at the intersection of US 280 and Victory Dr by adjusting signal timing	Stakeholder Input and Public Survey; number of survey comments: 2	Yes	Yes – further intersection analysis recommended
IN-14	Traffic signal at the intersection of SR 130 and SR 292 in Vidalia	Stakeholder Input and Public Survey; number of survey comments: 10	Yes	Yes – further intersection analysis recommended
IN-15	Traffic signal and repaint crosswalk at the intersection of SR 292 and Oxley Dr, north of the railroad	Public Survey; number of survey comments: 7	Yes	Yes – further intersection analysis recommended
IN-17	Traffic signal at the intersection of US 280 and Commerce Way	Public Survey; number of survey comments: 1		Yes – further intersection analysis recommended
IN-18	Left turn signal at the intersection of SR 292 and Broadfoot Blvd	Stakeholder Input and Public Survey; number of survey comments: 4	Yes	Yes – further intersection analysis recommended
IN-19	Left turn signal at the intersection of US 1 and SR 292	Stakeholder Input and Public Survey; number of survey comments: 2	Yes	Yes – further intersection analysis recommended
IN-20	Left turn signal at the intersection of US 280 and Broadfoot Blvd	Stakeholder Input and Public Survey; number of survey comments: 1	Yes	Yes – further intersection analysis recommended

Reference Number	Identified Needs	Source	Need Identified by Data Analysis?	Recommended for Inclusion in Plan?
IN-21	Turn lanes at the intersection of US 280 and Adams St	Public Survey; number of survey comments: 1		Yes – further intersection analysis recommended
IN-22	Turn lanes at the intersection of US 1 and SR 178	Public Survey; number of survey comments: 5	Yes	Yes – further intersection analysis recommended
IN-24	Turn lanes at the intersection of US 280 and Maple Dr	Public Survey; number of survey comments: 1	Yes	Yes – further intersection analysis recommended
IN-25	Turn lanes at the intersection of US 280 and McNatt St	Public Survey; number of survey comments: 2	Yes	Yes – further intersection analysis recommended
IN-26	Turn lanes at the intersection of US 280 and Semco Rd	Public Survey; number of survey comments: 1	Yes	Yes – further intersection analysis recommended
IN-27	Further analysis at US 280 and Pete Philips Dr	Study Team Analysis	Yes	Yes – further intersection analysis recommended
IN-28	Further analysis at US 280 and Rigsbee Dr	Study Team Analysis	Yes	Yes – further intersection analysis recommended
IN-29	Further analysis at 1 st St and Church St	Study Team Analysis	Yes	Yes – further intersection analysis recommended
IN-30	Further analysis at 1 st St and Montgomery St	Study Team Analysis	Yes	Yes – further intersection analysis recommended

Table 7-9: Identified Bridge Deficiencies

Reference Number	Identified Needs	Source	Need Identified by Data Analysis?	Recommended for Inclusion in Plan?
BR-01	Lyons Center Rd at Rocky Creek	Study Team Analysis	Yes - Overall Condition: Fair	Yes
BR-02	Thompson Pond Rd at Swift Creek Trib	Study Team Analysis	Yes - Overall Condition: Poor	Yes
BR-03	US 1/ SR 4 at Pendleton Creek	Study Team Analysis	Yes - Overall Condition: Fair	Yes

Table 7-10: Identified Rail Crossing Deficiencies

Reference Number	Identified Needs	Source	Need Identified by Data Analysis?	Recommended for Inclusion in Plan?
RC-01	Replacement of ties at Brice Rd rail crossing (ID 641093R)	Public Survey; number of survey comments: 1	Yes	Yes – based on site visits
RC-02	Replacement of ties at Rigsbee Dr rail crossing (ID 641073E)	Public Survey; number of survey comments: 1	Yes	Yes – based on site visits
RC-03	Pavement markings at Broadfoot Blvd rail crossing (ID 641074L)	Stakeholder Input and Public Survey; number of survey comments: 1	Yes	Yes – based on site visits
RC-04	Pavement markings at Lanier St rail crossing (ID 636030B)	Study Team Analysis	Yes	Yes – based on site visits
RC-05	Pavement markings at SR 292 rail crossing west of Orange St (ID 732631X)	Study Team Analysis	Yes	Yes – based on site visits
RC-06	Warning sign at Semco Dr rail crossing (ID 636038F)	Study Team Analysis	Yes	Yes – based on site visits

Table 7-11: Identified Bicycle and Pedestrian Facility Deficiencies

Reference Number	Identified Needs	Source	Need Identified by Data Analysis?	Recommended for Inclusion in Plan?
BP-01	Bicycle facilities on SR 292 from county line to county line through Vidalia and Lyons	Public Survey; number of survey comments: 6	No	No - Parallel bicycle facilities are recommended by the HOGARC along US 1 – See BP-02
BP-02	Bicycle facilities on US 1 from in Lyons from the end of the current facility to the Altamaha River/county line.	Study Team Analysis; HOGARC Regional Bicycle/Pedestrian Plan	Yes	Yes
BP-03	Bicycle facilities on US 280 from county line to county line through Vidalia and Lyons	Public Survey; number of survey comments: 7	Yes	Yes
BP-04	Bicycle facility signage to Old River Rd and SR 147	Study Team Analysis; HOGARC Regional Bicycle/Pedestrian Plan	Yes	Yes
BP-05	Bicycle facility signage to SR 130 North from Downtown Vidalia to US 1 in north Lyons	HOGARC Regional Bicycle/Pedestrian Plan; Public Survey; number of survey comments: 1	Yes	Yes
BP-06	Pedestrian Crossing pavement markings at 10 intersections on US 280 between Durden St and Broadfoot Blvd	Public Survey; number of survey comments: 1	Yes	Yes
BP-07	Sidewalk along Bulldog Rd from Toombs County Middle School, past Toombs County High School	Public Survey; number of survey comments: 2	Yes	Yes
BP-08	Sidewalk to US 280 from Cypress St to Maple St	Public Survey; number of survey comments: 1	Yes	Yes
BP-09	Sidewalk to Broadfoot Blvd from SR 292 to US 280	Recommended by the stakeholders committee	No	Yes
BP-10	Sidewalk to SR 297 from JR Trippe Middle School to US 280	Recommended by the stakeholders committee	No	Yes

7.2.10. Potential Improvement Identification

The need for transportation improvements within Toombs County is supported by the deficiencies identified in this section. These deficiencies cover the multi-modal roadway system in the county including:

- Roadway;
- Intersections;
- Bridges;
- Rail Crossings; and
- Bicycle and Pedestrian Facilities.

As part of the Plan process, specific future improvements have been identified for roadways, bridges, rail and the bicycle and pedestrian network. A complete listing of recommended improvements is provided in Table 7-12, with numbers referencing the needs previously identified in Table 7-7 through Table 7-11. Bold improvements in the tables are already part of GDOT's program. Not all identified deficiencies result in a corresponding improvement recommendation. During analysis, some deficiencies are revealed to be located on extremely low-volume roadways, overlap with or exist within the limits of other deficiencies, or are already under construction by the time of this document's final preparation stages. These deficiencies were removed from consideration. Maps of these project locations can be found in Figure 7-2 through Figure 7-6.

Table 7-12: Potential Improvements

Reference Number	Improvements	Length (miles)	Improvement Type	Source	Anticipated Benefits
RO-01	Capacity improvement on SR 292 from 2 to 4 lanes from Lyons to Vidalia	5.4	Roadway widening	Public survey	Improved capacity and safety
RO-02²¹	Capacity on US 1 from 2 to 4 lanes from south of SR147 to south of Georgia Hill Rd. Incorporate paved shoulders to accommodate bicycles	8.5	Roadway widening	GDOT STIP Projects: PI522200-; Stakeholder Input and Public Survey	Improved capacity and safety
RO-03	Capacity on US 280 from 2 to 4 lanes from the county line to Bulldog Rd	6.8	Roadway widening	Public survey	Improved capacity and safety
RO-05	Widening and sidewalks on Bulldog Rd from US 280 to Toombs County Middle School south entrance	1.2	Roadway widening; sidewalks	Stakeholder input; study team analysis	Improved capacity and safety; enhanced multi-modal system
RO-06	Widening and sidewalks on Slayton St from US 280 to Waters Dr	0.4	Roadway widening; sidewalks	Study team analysis	Improved capacity and safety; enhanced multi-modal system
RO-07	Widening and sidewalks on Victory Dr from US 280 to US 1	0.7	Roadway widening; sidewalks	Study team analysis	Improved capacity and safety; enhanced multi-modal system
RO-13	Pavement on Rodney Stanley Rd from Johnson Corner Rd to Sid Newton Rd	2.3	Roadway pavement	Public survey	Improved safety and operations
RO-16	Pavement and shoulders along Cedar Crossing-Vidalia Rd from Adam St to Lyons Center Rd	5.4	Roadway resurfacing; shoulder widening	Public survey	Improved safety and operations
RO-18	Speed limit signage along Brantley Road from SR 297 to Vann Rd	1.0	Speed limit signage	Public survey	Improved safety and operations
RO-19	Shoulders along 5 Points Rd from US 1 to Bill Branch Cir	0.9	Paved shoulders	Public survey	Improved safety and operations
RO-20	Shoulders along Aimwell Rd from US 280 to US 1	7.0	Paved shoulders	Public survey	Improved safety and operations
RO-22	Shoulders along Lyons Center Rd from the county line east to Lyons	10.1	Paved shoulders	Public survey	Improved safety and operations
RO-23	Shoulders along Parker Ave from Bulldog Rd to S State St	0.4	Paved shoulders	Public survey	Improved safety and operations
RO-24	Shoulders along SR 292 from the Montgomery County line to the Tattnall County line	15.3	Paved shoulders	Public survey	Improved safety and operations
RO-26	Pavement along JR Rollins Rd from SR 15 to Cedar Crossing-Vidalia Rd	2.1	Roadway pavement	Public survey	Improved safety and operations
RO-27	Shoulders widening along N Loop Rd from North St to Liberty St	1.5	Shoulder widening	Public survey	Improved safety and operations
RO-28	Shoulders widening along Orange St from North St to Thompson Pond Rd	1.7	Shoulder widening	Public survey	Improved safety and operations
RO-29	Shoulders widening along Rackettown Rd from US 1 to Pendelton Springs Rd	1.5	Shoulder widening	Public survey	Improved safety and operations
RO-30	Shoulders widening along SR 15 from Lyons Center Rd to Bloomfield Rd	4.9	Shoulder widening	Public survey	Improved safety and operations

²¹ Bold improvements are already part of GDOT's program.

Reference Number	Improvements	Length (miles)	Improvement Type	Source	Anticipated Benefits
RO-31²²	Widening on US 280/SR 30 from West of US 1/SR 4 to SR 86	9.2	Roadway widening	GDOT STIP project: PI 0004775	Improved capacity
RO-33	Widening on SR 15 from SR 4 to Dixon Lake Rd	4.9	Roadway widening	GDOT STIP project: PI 0008032; study team analysis	Improved capacity
RO-34	Widening on Vidalia Bypass from Dixon Lake Rd to SR 15/SR 30	3.6	New roadway	GDOT STIP project: PI 0008031; study team analysis	Improved capacity
RO-35	US 1/SR 4 Bypass from south of Green Oak Rd to Resmondo Rd	7.1	New roadway	GDOT STIP project: PI 522200-; study team analysis	Improved capacity
RO-37	US 1/SR 4 from south of George Hill Rd to SR 29	3.8	Roadway widening	GDOT STIP project: PI 522180-; study team analysis	Improved capacity
RO-38	SR 4 from SR 29 to Green Oak Rd; including Culvert at Rocky Creek	3.7	Roadway widening	GDOT STIP project: PI 522190-; study team analysis	Improved capacity
IN-01	Operational improvements at the intersection of Bulldog Rd and Parker Ave	n/a	Operational improvements	Stakeholder input; study team analysis	Improved safety and operations
IN-02	Operational improvements at the intersection of Old Normantown Rd and SR 130/ Liberty St	n/a	Operational improvements	Public survey	Improved safety and operations
IN-03	Operational improvements at the intersections of US 1/ SR 15/SR 4, and S Thompson Rd	n/a	Operational improvements	Stakeholder input	Improved safety and operations
IN-04	Operational improvements at the intersection of SR 152 and SR 86	n/a	Operational improvements	Public survey	Improved safety and operations
IN-05	Operational improvements at the intersection of US 1 and SR 56	n/a	Operational improvements	Public survey	Improved safety and operations
IN-06	Operational improvements at the intersection of US 280/ Main St and SR 297/ McIntosh St/ Church St by restriping pavement markings, left turn arrows, repainting crosswalk, and adjusting signal timing	n/a	Operational improvements	Public survey	Improved safety and operations; enhanced multi-modal system
IN-07	Operational improvements at the intersection of SR 292 and SR 297 by adjusting signal timing. Repaint crosswalk	n/a	Operational improvements	Stakeholder input; public survey	Improved safety and operations; enhanced multi-modal system
IN-08	Operational improvements at the intersection of SR 292 and W Oglethorpe Ave	n/a	Operational improvements	Public survey	Improved safety and operations
IN-10	Operational improvements at the intersection of US 280 and Harris Industrial Blvd/Meadows Pkwy	n/a	Operational improvements	Public survey	Improved safety and operations
IN-11	Operational improvements at the intersection of US 280 and Slayton St	n/a	Operational improvements	Stakeholder input	Improved safety and operations
IN-13	Operational improvements at the intersection of US 280 and Victory Dr by adjusting signal timing	n/a	Operational improvements	Stakeholder input; public survey	Improved safety and operations
IN-14	Traffic signal at the intersection of SR 130 and SR 292 in Vidalia	n/a	Traffic signal	Stakeholder input; public survey	Improved safety and operations
IN-15	Traffic signal and repaint crosswalk at the intersection of SR 292 and Oxley Dr, north of the railroad	n/a	Traffic signal	Public survey	Improved safety and operations
IN-17	Traffic signal at the intersection of US 280 and Commerce Way	n/a	Traffic signal	Public survey	Improved safety and operations

²² Bold improvements are already part of GDOT's program.

Reference Number	Improvements	Length (miles)	Improvement Type	Source	Anticipated Benefits
IN-18	Left turn signal at the intersection of SR 292 and Broadfoot Blvd	n/a	Traffic signal	Stakeholder input; public survey	Improved safety and operations
IN-19	Left turn signal at the intersection of US 1 and SR 292	n/a	Traffic signal	Stakeholder input; public survey	Improved safety and operations
IN-20	Left turn signal at the intersection of US 280 and Broadfoot Blvd	n/a	Traffic signal	Stakeholder input; public survey	Improved safety and operations
IN-21	Turn lanes at the intersection of US 280 and Adams St	n/a	Turn lanes	Public survey	Improved safety and operations
IN-22	Turn lanes at the intersection of US 1 and SR 178	n/a	Turn lanes	Public survey	Improved safety and operations
IN-24	Turn lanes at the intersection of US 280 and Maple Dr	n/a	Turn lanes	Public survey	Improved safety and operations
IN-25	Turn lanes at the intersection of US 280 and McNatt St	n/a	Turn lanes	Public survey	Improved safety and operations
IN-26	Turn lanes at the intersection of US 280 and Semco Rd	n/a	Turn lanes	Public survey	Improved safety and operations
IN-27	Further analysis to determine specific intersection improvements at US 280 and Pete Philips Dr	n/a	Operational improvements	Study team analysis	Improved safety and operations
IN-28	Further analysis to determine specific intersection improvements at US 280 and Rigsbee Dr	n/a	Operational improvements	Study team analysis	Improved safety and operations
IN-29	Further analysis to determine specific intersection improvements at 1st St and Church St	n/a	Operational improvements	Study team analysis	Improved safety and operations
IN-30	Further analysis to determine specific intersection improvements at 1st St and Montgomery St	n/a	Operational improvements	Study team analysis	Improved safety and operations
BR-01	Lyons Center Rd at Rocky Creek	n/a	Bridge replacement	Study team analysis	Improved safety and operations
BR-02	Thompson Pond Rd at Swift Creek Trib	n/a	Bridge replacement	Study team analysis	Improved safety and operations
BR-03	US 1/ SR 4 at Pendleton Creek	n/a	Bridge replacement	Study team analysis	Improved safety and operations
RC-01	Replacement of ties at Brice Rd rail crossing (ID 641093R)	n/a	Rail crossing upgrade	Public survey	Improved safety and operations
RC-02	Replacement of ties at Rigsbee Dr rail crossing (ID 641073E)	n/a	Rail crossing upgrade	Public survey	Improved safety and operations
RC-03	Pavement markings at Broadfoot Blvd rail crossing (ID 641074L)	n/a	Rail crossing upgrade	Stakeholder input; public survey	Improved safety and operations
RC-04	Pavement markings at Lanier St rail crossing (ID 636030B)	n/a	Rail crossing upgrade	Study team analysis	Improved safety and operations
RC-05	Pavement markings at SR 292 rail crossing west of Orange St (ID 732631X)	n/a	Rail crossing upgrade	Study team analysis	Improved safety and operations
RC-06	Warning sign at Semco Dr rail crossing (ID 636038F)	n/a	Rail crossing upgrade	Study team analysis	Improved safety and operations
BP-02	Bicycle facilities on US 1 from in Lyons from the end of the current facility to the Altamaha River/county line.	19.4	Bike lanes and wide shoulders	Study team analysis; HOGARC Regional Bicycle/Pedestrian Plan	Enhanced multi-modal system
BP-03	Bicycle facilities on US 280 from county line to county line through Vidalia and Lyons	16.9	Bike lanes and wide shoulders	Public survey	Enhanced multi-modal system

Reference Number	Improvements	Length (miles)	Improvement Type	Source	Anticipated Benefits
BP-04	Bicycle facility signage to Old River Rd and SR 147	16.4	Bike lane signage	Study team analysis; HOGARC Regional Bicycle/Pedestrian Plan	Enhanced multi-modal system
BP-05	Bicycle facility signage to SR 130 North from Downtown Vidalia to US 1 in north Lyons	6.0	Bike lane signage	Public survey; HOGARC Regional Bicycle/Pedestrian Plan	Enhanced multi-modal system
BP-06	Pedestrian Crossing pavement markings at 10 intersections on US 280 between Durden St and Broadfoot Blvd	0.7	Pedestrian crossing pavement	Public survey	Enhanced multi-modal system
BP-07	Sidewalk along Bulldog Rd from Toombs County Middle School, past Toombs County High School to US 280	0.6	Sidewalk	Public survey	Enhanced multi-modal system
BP-08	Sidewalk to US 280 from Cypress St to Maple St	2.8	Sidewalk	Public survey	Enhanced multi-modal system
BP-09	Sidewalk to Broadfoot Blvd from SR 292 to US 280	0.5	Sidewalk	Stakeholder input	Enhanced multi-modal system
BP-10	Sidewalk to SR 297 from JR Trippe Middle School to US 280	1.9	Sidewalk	Stakeholder input	Enhanced multi-modal system

Toombs County Long Range Transportation Plan

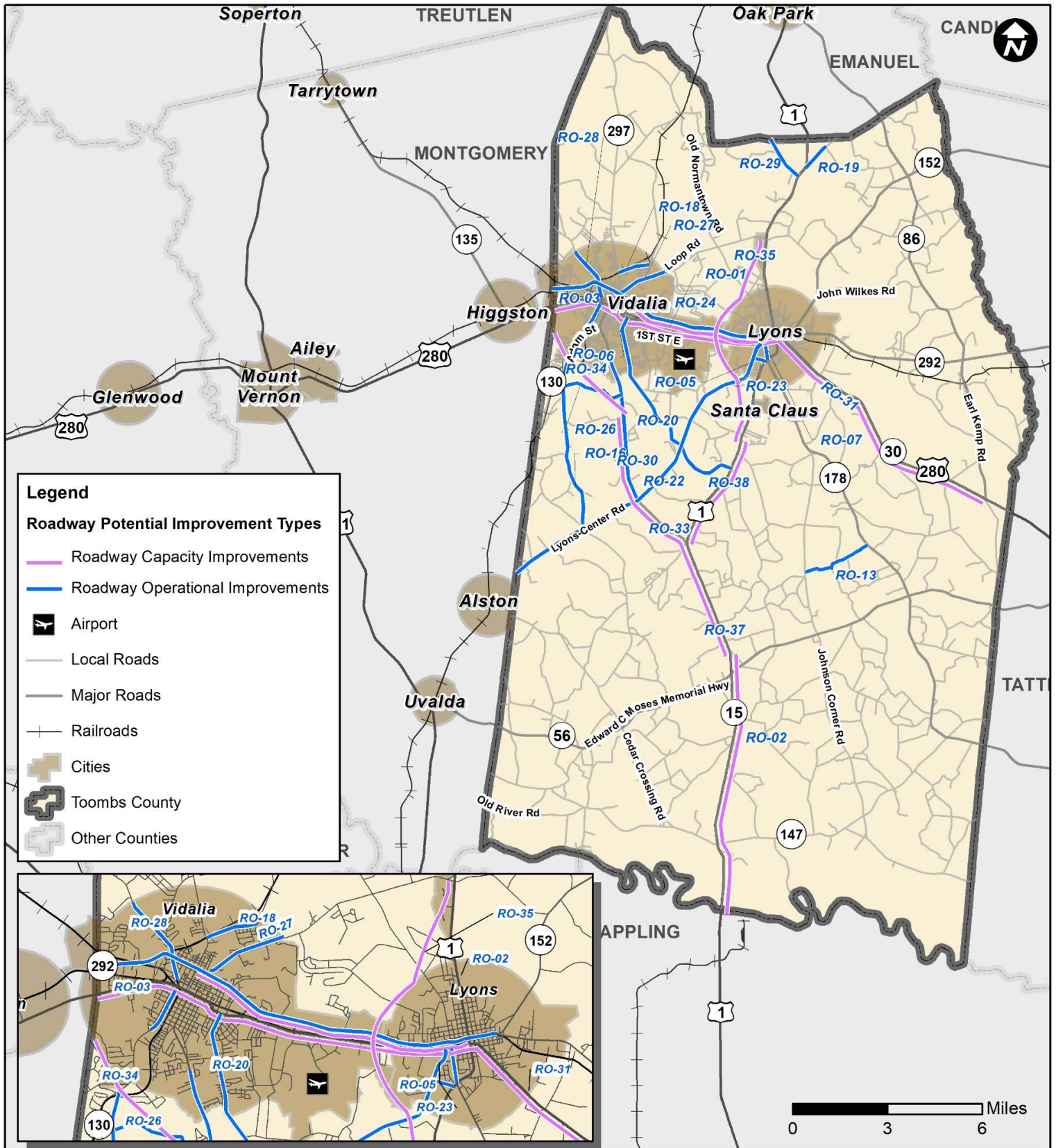


Figure 7-2 Recommended Roadway Capacity and Operational Improvements

Toombs County Long Range Transportation Plan

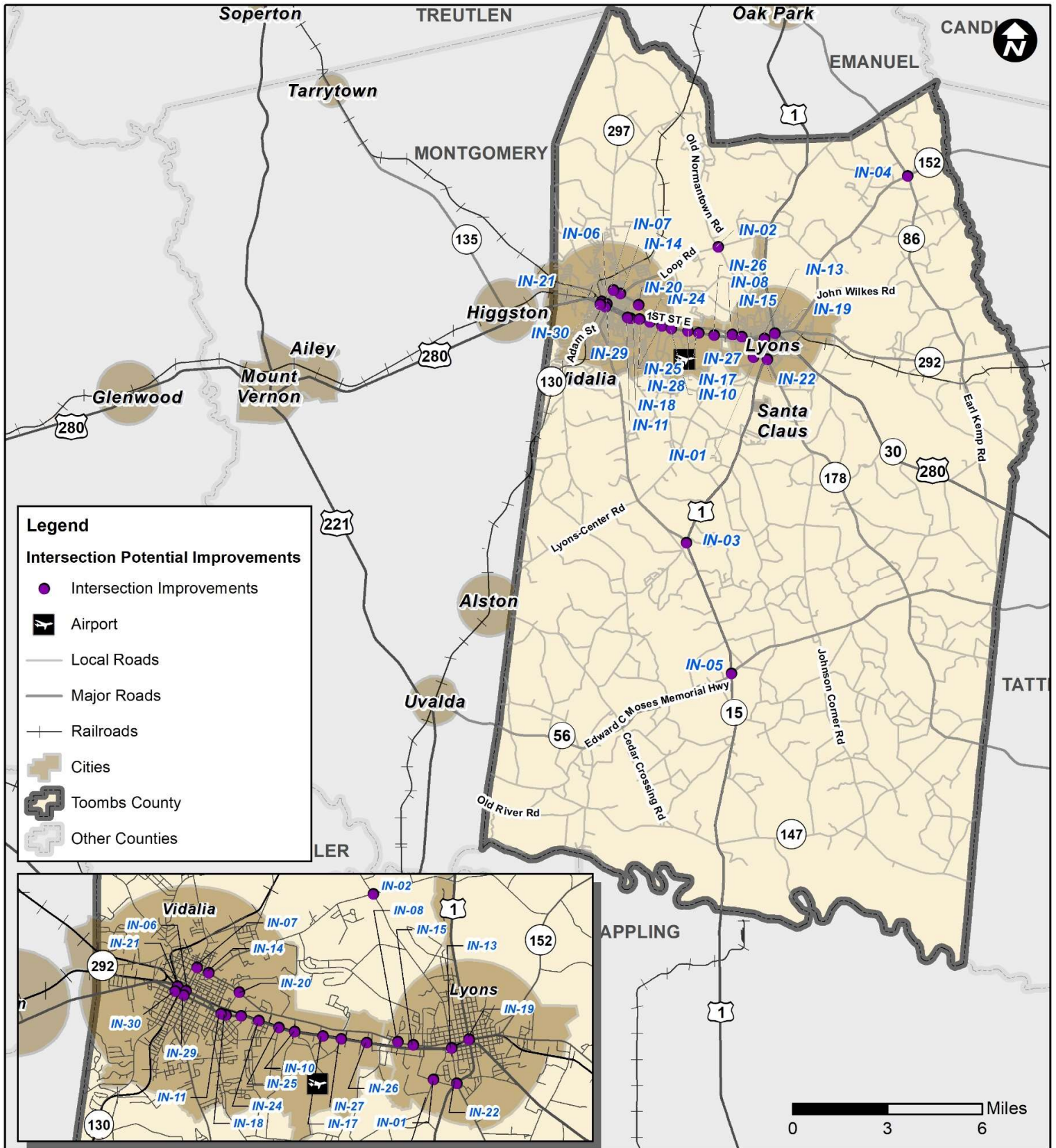


Figure 7-3 Recommended Intersection Improvements

Toombs County Long Range Transportation Plan

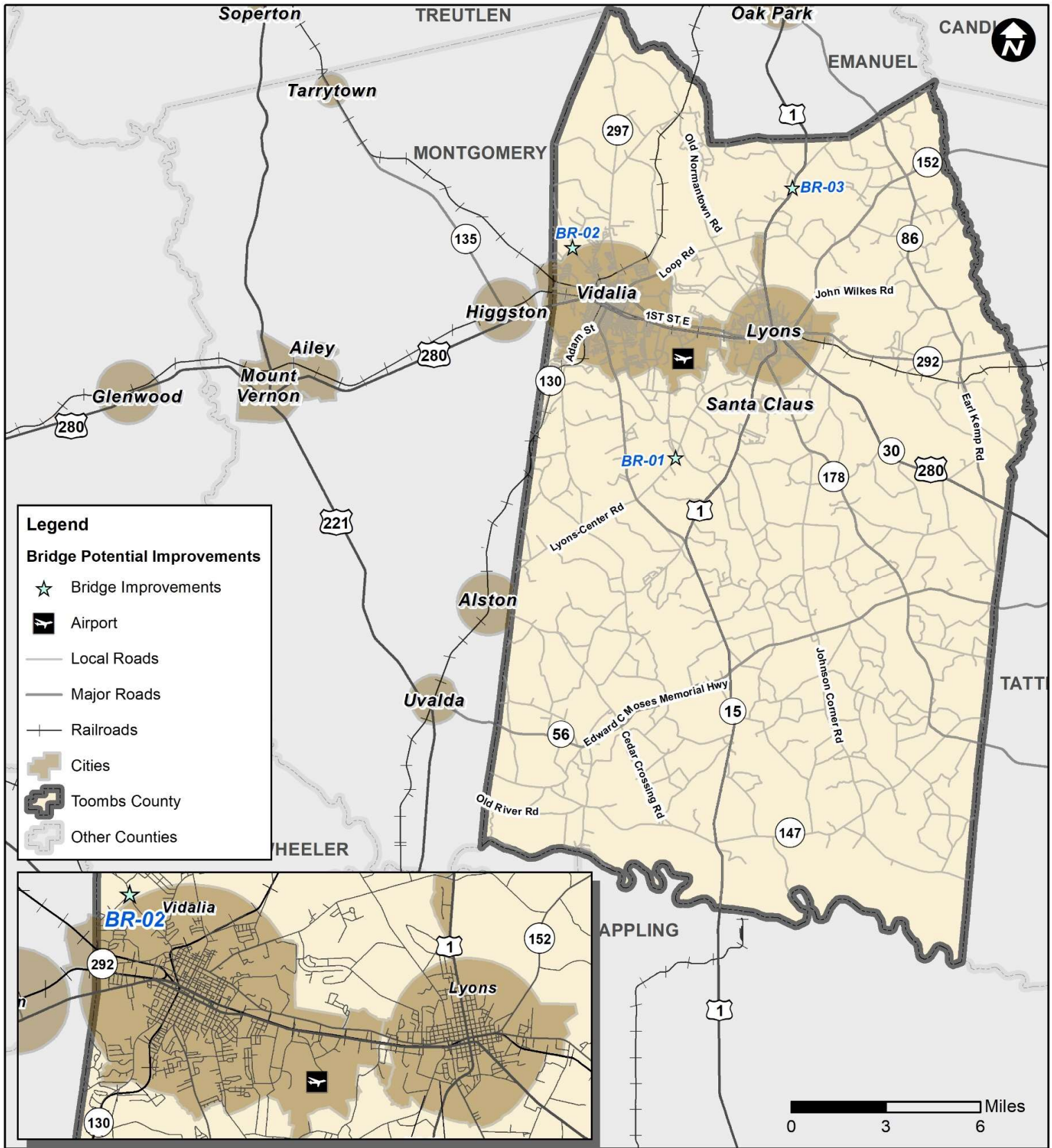


Figure 7-4 Recommended Bridge Improvements

Toombs County Long Range Transportation Plan

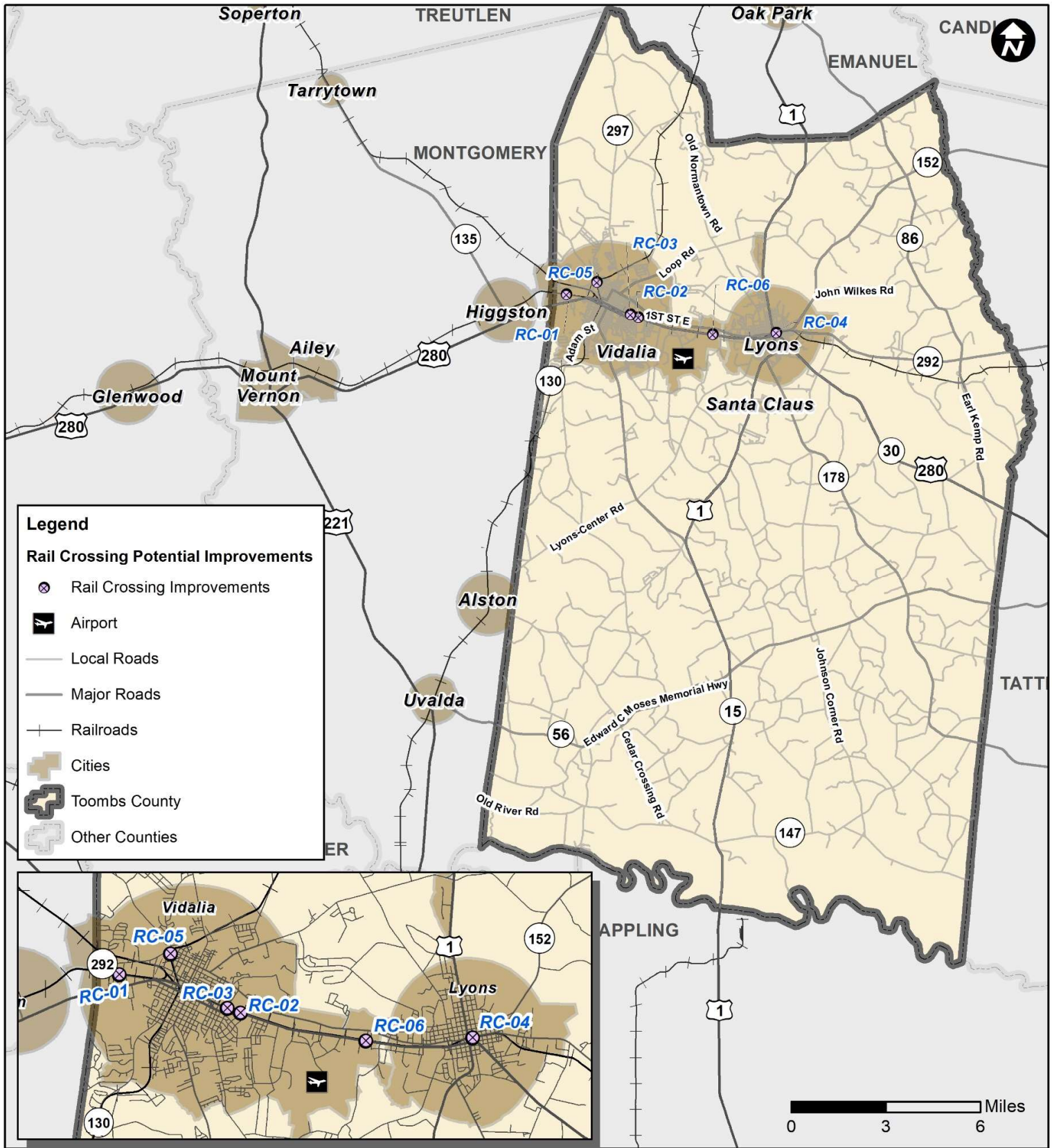


Figure 7-5 Recommended Rail Crossing Improvements

8. PRIORITIZED RECOMMENDATIONS

8.1. PROJECT PRIORITIZATION OVERVIEW

Potential improvements identified by the study team to address future transportation needs in Toombs County were vetted with local stakeholders and elected officials and prioritized based on established criteria consistent with the study goals and objectives identified in Section 6. This section will present the recommended improvements, and the final list of prioritized projects for each category including roadway, bridge, rail crossing, bicycle and pedestrian improvements.

8.2. ESTIMATED COSTS

Associated project costs were estimated based on a planning-level project cost calculation approach. GDOT recently developed a planning-level per mile cost assumption by project type and by project scale. Please note that all planning-level costs are current-year dollars, based on the best assumptions and information available at the time this study was completed. All planning-level project costs will be further refined as specific improvements and engineering concepts evolve. Actual project costs could be higher or lower depending on a number of factors including the results of more detailed environmental and engineering studies, fluctuations in the cost of land and materials, and the year of expenditure. All planning-level cost estimates should be considered preliminary in nature and taken with appropriate care. The estimated costs for potential projects should not be included in the project prioritization and project selection process. More detailed engineering studies are required to identify highly accurate cost estimates based on specific project characteristics and concepts.

8.2.1. Roadway, Bridge and Rail Cost Estimates

Roadway assumptions include the planning-level cost averages of pavement based on GDOT's recommended typical section for the facility type. Bridge improvements are calculated based on the appropriate typical section and length of the improved bridge.

In the case of intersection and operational improvement recommendations, a micro-level analysis and review by GDOT District 5 and/or a professional engineer is required to make specific project recommendations. Specific recommendations may include improvements such as turn lanes at each approach of an intersection, or a right turn lane off of a major arterial. For purposes of the Toombs County study, the planning-level cost estimate used for operational improvements is a placeholder of \$350,000. This planning-level estimate represents a reasonable average for intersection improvements, but it is important to note that actual costs could be higher or lower depending on the specifics of the improvement identified (for example, additional of a left turn lane vs. geometric modifications). In cases where a specific improvement item is identified, such as a traffic signal or a roundabout, a unit cost for the item is used if available. Planning-level construction costs estimates for these types of improvements should be revisited when a more detailed analysis is conducted. Rail crossing improvement costs were developed based on unit costs provided by the GDOT Office of Planning.

8.2.2. Bicycle and Pedestrian Cost Estimates

Bicycle and pedestrian facility improvement costs assume 5-foot sidewalks and 6.5-foot paved shoulders (each direction) in rural sections, both of which are desirable, typical rules of thumb for sidewalk and

shoulder widths for these types of improvements nationwide. Cost estimates bike and pedestrian facilities are summarized below from experience of recent studies²³:

- Bike installation cost is assumed \$150,000 per mile
- Bike route signage is assumed \$25,000 per mile
- Pedestrian high visibility crosswalk is assumed \$3,000 per intersection

8.3. PROJECT PRIORITIZATION CRITERIA

A project prioritization tool has been developed in Excel spreadsheets. The spreadsheet tool included potential improvements that were ranked by mode based on evaluation factors developed with input throughout the course of the study. The following sections document the prioritization of recommended improvements for Toombs County.

Qualitative and quantitative evaluation factors were established and applied to potential improvements. The evaluation methodology produces a score for each potential project, resulting in a prioritization of improvement options to meet the County's transportation needs. Prioritization criteria were developed for the following types of projects – roadway capacity and operations, intersections, bridges, rail crossing and bicycle and pedestrian improvements.

8.3.1. Roadway Improvements Prioritization

Qualitative Criteria

Qualitative Criteria were established to evaluate the deficient corridors based on various conditions or standards established through the study process. These criteria were vetted with the stakeholders. The following list documents the qualitative criteria established for the roadway network improvement evaluation. These correspond to the goals and objectives documented in Section 6.

- Included in the Governor's Road Improvement Program / National Highway System / Freight Corridor System
- Provide Access to Employment and Activity Centers
- Improve System Connectivity
- Support Previous or Ongoing Studies/Plans
- Improve Multi-Modal Connectivity
- Require Right-of-Way Acquisition Needs

Potential projects were considered alongside the established criteria and associated scoring presented in Table 8-1. Based on the resulting scores, an initial prioritization list was established. The highest score based on qualitative criteria is 45 points. The qualitative score is combined with the quantitative score documented on the following sections for the final prioritization score.

²³ *Costs for Pedestrian and Bicyclist Infrastructure Improvements, UNC Highway Safety Research Center, November 2013*
http://www.pedbikeinfo.org/cms/downloads/Countermeasure%20Costs_Report_Nov2013.pdf,

Table 8-1: Roadway Project Prioritization Qualitative Criteria

Corridor Prioritization Criteria	Possible Scores	
Included in the Governor’s Road Improvement Program/National Highway System/Freight Corridors Is the project corridor identified as a part of GRIP/NHS/Freight Corridor?	No	0
	Yes	5
Access to Employment and Activity Centers Does the proposed project improve access to employment and activity centers?	No	0
	Future	5
	Existing	10
Improve System Connectivity Does the proposed project enhance north-south or east-west connectivity in the County by improving existing connections or creating new connections?	No	0
	Yes	5
Support Previous or Ongoing Studies/Plan Does the proposed project support previous or ongoing studies? Has the project identified by other transportation plans?	No	0
	Yes	5
Improve Multi-Model Connectivity Does the proposed project include or promote one or more multi-model components?	Low	0
	Moderate	5
	High	10
Right-of-Way Acquisition Needs Does the project require additional right-of-way (ROW)?	Low	0
	Moderate	5
	High	10
Sub-Total Possible Score		45

Quantitative Criteria

Quantitative criteria selected for roadway projects to evaluate the traffic and safety conditions, including traffic volume to capacity ratios, crash rates, and number of fatalities. The criteria also include the buffered analysis to assess how many households, schools and emergency service facilities are close to the project’s vicinity. The total score that a facility can receive for quantitative criteria is 80. Table 8-2 represents the quantitative criteria for the roadway projects.

The final score that a facility can receive is up to 125. Based on the identified improvements and evaluation made during the qualitative and quantitative evaluation, a prioritized list of recommendations was established in Table 8-3. Priority scores are not meant to be the final decision on whether a project should be implemented or not. Instead these rankings should be employed in conjunction with input from key technical staff from the Cities, County and GDOT; input from political decision makers and, public comments.

Table 8-2: Roadway Project Prioritization Quantitative Criteria

Roadway Projects Prioritization Criteria	Possible Scores	Notes
Volume to Capacity Ratio		Relieve Congestion / Improve Efficient
0 - 0.349	1	Rural LOS C or Better
0.35 - 0.549	5	Rural LOS D
0.55 - 0.999	10	Rural LOS E
> 1.0	15	Rural LOS F
Ratio of Corridor Crash Rate to Statewide Crash Rate		Address Safety Concerns
0.01 - 0.99	1	less than state average crash rates
1.00 - 1.49	5	1 - 1.5 times state average crash rates
1.5 - 1.99	10	1.5 - 2 times state average crash rates
> 2	15	greater than 2 times state average crash rates
Number of Fatalities		Address Safety Concerns
0	0	
1	5	
> 2	10	
Total Households Served		Households within a 2-mile buffer along the corridor
33th percentile of total households in the buffer	1	
67th percentile of total households in the buffer	5	
100th percentiles of total households in the buffer	10	
Total Employment Served		Employers within a 2-mile buffer along the corridor
33th percentiles of total employment in the buffer	1	
67th percentiles of total employment in the buffer	5	
100th percentiles of total employment in the buffer	10	
Total Schools Served		Schools within a 2-mile buffer along the corridor
1	1	
2 - 4	5	
5 - 6	10	
Total Emergency Services Facilities Served		Facilities within a 2-mile buffer along the corridor?
1	1	
2 - 4	5	
5 - 6	10	
Sub-Total Possible Score	80	

Table 8-3: Roadway Capacity and Operational Improvement Project Prioritization

Ranking	Project Ref. No.	Facility	From	To	Length	Existing Conditions	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost
1	RO-01	SR 292	Lyons	Vidalia	5.4	2 lanes	Operations/Capacity	Widen from 2 to 4 lanes	Survey	Improved capacity and safety	\$22,443,920
2	RO-03	US 280	West County line	Bulldog Rd	6.8	2 lanes	Capacity	Widen from 2 to 4 lanes	Survey	Improved capacity and safety	\$28,460,243
3	RO-07	Victory Dr	US 280	US 1	0.7	2 lanes	Operations/Capacity	Minor Widening	Study Team analysis	Improved capacity and safety; enhanced multi-modal system	\$2,639,000
4	RO-35²⁴	US 1/SR 4 Bypass	S of Green Oak Rd	Resmondo Rd	7.1	n/a	Capacity	New Road	PI 522200- / Study Team analysis	Improved capacity	\$70,362,622
5	RO-24	SR 292	County line	County line	15.3	11' unpaved shoulder	Shoulders	Add Shoulders	Survey	Improved capacity and safety; enhanced multi-modal system	\$1,991,201
6	RO-06	Slayton St	US 280	Waters Dr	0.4	2 lanes	Operations/Capacity	Minor Widening	Study Team analysis	Improved capacity and safety; enhanced multi-modal system	\$1,508,000
7	RO-02	US 1	South of SR 147	South of Georgia Hill Rd	8.5	2 lanes	Capacity	Widen from 2 to 4 lanes	PI 522220- /Survey, Stakeholder Input	Improved capacity and safety	\$57,714,555
8	RO-05	Bulldog Rd	US 280	Toombs County Middle School	1.2	2 lanes	Operations/Capacity	Minor Widening	Study Team analysis	Improved capacity and safety; enhanced multi-modal system	\$4,524,000
9	RO-31	US 280 / SR 30	West of US 1/ SR 4	SR 86	9.2	2 lanes	Capacity	Widen from 2 to 4 lanes	PI 0004775/ Study Team analysis	Improved capacity	\$60,492,852
10	RO-33	SR 15	SR 4	CR 245/Dixon Lake Rd	4.9	2 lanes	Capacity	Widen from 2 to 4 lanes	PI 0008032/ Study Team analysis	Improved capacity	\$44,106,539
11	RO-30	SR 15	Lyons Center Rd	Bloomfield Rd	4.9	6' unpaved shoulder	Shoulders	Widen Shoulders	Survey	Improved capacity	\$633,177
12	RO-26	JR Rollins Rd	SR 15	Cedar Crossing-Vidalia Rd	2.1	Dirt road	Pavement	Pave Dirt Road	Survey	Improved safety and operations	\$401,781
13	RO-34	Vidalia Bypass	CR 245/Dixon Lake Rd	SR 15/SR 30	3.6	n/a	Capacity	New Road	PI 008031/ Study Team analysis	Improved safety and operations	\$13,330,000
14	RO-38	SR 4	SR 29	CR 386/Green Oak Rd	3.7	2 lanes	Capacity	Widen from 2 to 4 lanes	PI 522190- / Study Team analysis	Improved capacity	\$33,303,643
15	RO-37	US 1 /SR 4	S of George Hill Rd	SR 29	3.8	2 lanes	Capacity	Widen from 2 to 4 lanes	PI 522180- / Study Team analysis	Improved safety and operations	\$25,698,153
16	RO-20	Aimwell Rd	US 280	US 1	7.0	6' unpaved shoulder	Shoulders	Add Shoulders	Survey	Improved safety and operations	\$906,311
17	RO-22	Lyons Center Rd	County line	Lyons	10.1	5' unpaved shoulder	Shoulders	Add Shoulders	Survey	Improved safety and operations	\$1,313,000
18	RO-28	Orange St	North St	Thompson Pond Rd	1.7	4' unpaved shoulder	Shoulders	Widen Shoulders	Survey	Improved safety and operations	\$225,661

²⁴ Bold improvements are already part of GDOT's program.

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Ranking	Project Ref. No.	Facility	From	To	Length	Existing Conditions	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost
19	RO-18	Brantley Rd	SR 297	Vann Rd	1.0	No speed limit signs	Safety	Speed Limit Signage	Survey	Improved safety and operations	\$780
20	RO-23	Parker Ave	Bulldog Rd	S State St	0.4	4' unpaved shoulder	Shoulders	Add Shoulders	Survey	Improved safety and operations	\$52,550
21	RO-27	N Loop Road	North St	Liberty St	1.5	8' unpaved shoulder	Shoulders	Widen Shoulders	Survey	Improved safety and operations	\$200,910
22	RO-13	Rodney Stanley Rd	Johnson Corner Rd	Sid Newton Rd	2.3	Dirt road	Pavement	Pave Dirt Road	Survey	Improved safety and operations	\$440,627
23	RO-16	Cedar Crossing-Vidalia Rd	Adams St	Lyons Center Rd	5.4	<4' unpaved shoulder	Pavement; Shoulders	Pavement Resurfacing; Add Shoulders	Survey	Improved safety and operations	\$1,754,237
24	RO-19	5 Points Rd	US 1	Bill Branch Cir	0.9	6' unpaved shoulder	Shoulders	Add Shoulders	Survey	Improved safety and operations	\$121,889
25	RO-29	Rackettown Rd	US 1	Pendelton Springs Rd	4.9	6' unpaved shoulder	Shoulders	Widen Shoulders	Survey	Improved safety and operations	\$195,000

8.3.2. Intersection Improvements Prioritization

Criteria were established to evaluate the potential intersection improvements based on various standards established through the study process. The following list documents the criteria established for the intersection evaluation.

- What is the average annual daily traffic at the intersection?
- How many households and schools are within a 2-mile buffer around the intersection?
- How many emergency services facilities are within a 2-mile buffer around the intersection?
- How many crashes occurred at the intersection between 2016 – 2018?
- Did a fatality occur at the intersection?
- Is the intersection currently identified by Study Advisory Committee?

By comparing potential projects to these established criteria, it was possible to determine which projects scored highest against these critical measures. This information was used to prioritize projects. The total score that an intersection can receive for these criteria is 65. Table 8-4 documents the scoring used for the intersection prioritization and Table 8-5 displays the scoring applied to the proposed intersection improvements.

Table 8-4: Intersection Improvement Project Prioritization Criteria

Intersection Improvements Prioritization Criteria	Possible Scores	Notes
AADT 2017		Relieve Congestion / Improve Efficient
33th percentile of AADTs at all intersections	1	
67th percentile of AADTs at all intersections	5	
100th percentile of AADTs at all intersections	10	
Total Households Served		Households within a 2-mile buffer around the intersection
33th percentile of total households in the buffer	1	
67th percentile of total households in the buffer	5	
100th percentile of total households in the buffer	10	
Total Schools Served		Schools within a 2-mile buffer around the intersection
1	1	
2-4	5	
5-6	10	
Total Emergency Services Facilities Served		Emergency services facilities within a 2-mile buffer around the intersection
1	1	
2-3	5	
4-5	10	
Total Crashes (2016-2018)		Address safety concern
33th percentile of total crashes	1	
67th percentile of total crashes	5	
100th percentile of total crashes	10	
Fatalities (2016-2018)		Facilities within a 2-mile buffer along the corridor?
0	0	
>1	10	
Is the intersection identified by County/Cities?		
No	0	
Yes	5	
Sub-Total Possible Score	65	

Table 8-5: Intersection Improvement Project Prioritization

Ranking	Project Ref. No.	Facility	Existing Conditions	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost
1	IN-30	1st St and Montgomery St	Signalized	Operational Improvement	Safety	Team analysis	Improved safety and operations	\$910,000
2	IN-29	1st St and Church St	Signalized	Operational Improvement	Safety	Team analysis	Improved safety and operations	\$455,000
3	IN-18	SR 292 and Broadfoot Blvd	T-intersection; Stop-controlled	Signal	Add Left-Turn Phase	Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$234,000
4	IN-27	US 280 and Pete Philips Dr	T-intersection; Signalized	Operational Improvement	Safety	Team analysis	Improved safety and operations	\$455,000
5	IN-24	US 280 and Maple Dr	T-intersection; Signalized	Turn Lanes	Add Turn Lanes	Survey, Team analysis	Improved safety and operations	\$234,000
6	IN-11	US 280 and Slayton St	T-intersection; Stop-controlled	Operational Improvement	Further analysis	Stakeholder input, Team analysis	Improved safety and operations	\$234,000
7	IN-07	SR 292 and SR 297	Signalized	Operational Improvement	Further analysis	Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$910,000
8	IN-28	US 280 and Rigsbee Dr	Stop-controlled	Operational Improvement	Safety	Team analysis	Improved safety and operations	\$910,000
9	IN-25	US 280 and McNatt St	T-intersection; Signalized	Turn Lanes	Add Turn Lanes	Survey	Improved safety and operations	\$455,000
10	IN-10	US 280 and Harris Industrial Blvd	Signalized	Operational Improvement	Further analysis	Survey, Team analysis	Improved safety and operations	\$455,000
11	IN-06	US 280/ Main St and SR 297/ McIntosh St/ Church St	Signalized	Operational Improvement	Safety	Survey	Improved safety and operations	\$455,000
12	IN-22	US 1 and SR 178	Signalized	Turn Lanes	Add Turn Lanes	Survey, Team analysis	Improved safety and operations	\$455,000
13	IN-26	US 280 and Semco Rd	Yield sign only	Turn Lanes	Add Turn Lanes	Survey	Improved safety and operations	\$455,000
14	IN-21	US 280 and Adams St	Signalized	Turn Lanes	Add Turn Lanes	Survey	Improved safety and operations	\$455,000
15	IN-19	US 1 and SR 292	Signalized	Signal	Add Left-Turn Phase	Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$455,000
16	IN-15	SR 292 and Oxley Dr (north of railroad)	Multiple roads, Rail-crossing, All Stop-controlled	Signal	Add Signal	Survey, Team analysis	Improved safety and operations	\$455,000
17	IN-13	US 280 and Victory Dr	Signalized	Operational Improvement	Further analysis	Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$455,000
18	IN-08	SR 292 and W Oglehorpe Ave	T-intersection; Stop-controlled	Operational Improvement	Further analysis	Survey	Improved safety and operations	\$455,000
19	IN-14	SR 130 and SR 292	Stop-controlled	Signal	Add Signal	Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$910,000
20	IN-20	US 280 and Broadfoot Blvd	Signalized	Signal	Add Left-Turn Phase	Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$455,000
21	IN-01	Bulldog Rd at Parker Ave	Stop-controlled	Operational Improvement	Further analysis	Stakeholder input, Team analysis	Improved safety and operations	\$910,000
22	IN-04	SR 152 and SR 86	Stop-controlled	Operational Improvement	Safety	Survey	Improved safety and operations	\$234,000
23	IN-03	US 1/SR 4/SR 15 and S Thompson Rd	Multiple roads, All Stop-controlled	Operational Improvement	Realignment	Stakeholder input	Improved safety and operations	\$234,000
24	IN-17	US 280 and Commerce Way	T-intersection; Stop-controlled	Signal	Add Signal	Survey	Improved safety and operations	\$910,000
25	IN-05	US 1 and SR 56	Stop-controlled	Operational Improvement	Safety	Survey	Improved safety and operations	\$455,000
26	IN-02	Old Normantown Rd and SR 130 / Liberty St	Stop-controlled	Operational Improvement	Further analysis	Survey	Improved safety and operations	\$455,000

8.3.3. Bridge Improvement Prioritization

Bridges with NBI condition ratings lower than “Fair” were recommended for improvements. The following factors are included in the prioritization criteria:

- What is the average annual daily traffic at the bridge?
- How many crashes occurred at the bridge between 2016 – 2018?
- Did a fatality occur at the bridge?
- What is the NBI condition rating for the bridge?

There are three bridges identified to be improved. There are no crashes occurring at the bridges. Therefore, the prioritization was determined by the bridge’s condition and their AADTs. Table 8-6 summarizes the bridge project prioritization. Table 8-10

Table 8-6: Bridge Improvement Project Prioritization

Ranking	Project Ref. No.	Facility	Existing Conditions	Needs	Improvement Type	Source	Anticipated Benefits	Estimated Cost
1	BR-02	Thompson Pond Rd at Swift Creek Trib.	Overall Condition: Poor	Bridge Upgrade	Bridge Upgrade /Replacement	Team analysis	Improved safety and operations	\$132,955
2	BR-03	US 1/ SR 4 at Pendleton Creek	Overall Condition: Fair	Bridge Upgrade	Bridge Upgrade /Replacement	Team analysis	Improved safety and operations	\$936,000
3	BR-01	Lyons Center Rd at Rocky Creek	Overall Condition: Fair	Bridge Upgrade	Bridge Upgrade /Replacement	Team analysis	Improved safety and operations	\$44,318

8.3.4. Rail Crossing Improvements Prioritization

Six locations were identified for minor rail crossing improvements through the study. These low-cost improvements include pavement markings, signage, and tie replacement. Table 8-7 lists the rail crossing projects, all of which are recommended for implementation.

Table 8-7: Rail Crossing Improvement Projects

Project Ref. No.	Facility	Needs	Improvement Type	Source	Anticipated Benefits	Estimated Cost
RC-01	Brice Rd rail crossing (ID 641093R)	Repair Ties	Repair Ties	Survey	Improved safety and operations	\$19,004
RC-02	Rigsbee Dr rail crossing (ID 641073E)	Repair Ties	Repair Ties	Survey	Improved safety and operations	\$3,801
RC-03	Broadfoot Blvd rail crossing (ID 641074L)	RRX Warning Device	Pavement Markings	Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$13,000
RC-04	Lanier St rail crossing (ID 636030B)	RRX Warning Device	Pavement Markings	Team analysis	Improved safety and operations	\$13,000
RC-05	SR 292 rail crossing west of Orange St (ID732631X)	RRX Warning Device	Pavement Markings	Team analysis	Improved safety and operations	\$13,000
RC-06	Semco Dr rail crossing (ID 636038F)	RRX Warning Device	Warning Signage	Team Analysis	Improved safety and operations	\$390

8.3.5. Bicycle and Pedestrian Facility Improvements Prioritization

The prioritization criteria used to evaluate potential bicycle and pedestrian improvements were based on GDOT’s Guidebook for Pedestrian Planning project prioritization framework, as well as the goals and objectives established in this study. In addition to project recommendations, policy recommendations were also made which will have the effect of improving the bicycle and pedestrian network system-wide over the long term.

The evaluation criteria account for both system deficiencies (e.g. where there are no bicycle or pedestrian facilities) as well as bicycle and pedestrian potential factors (i.e. do the land use and demographics create a need or demand for facilities?). The total score that a facility can receive for these criteria is 33. Table 8-8 lists the criteria and the associated weights for each factor in prioritization. Table 8-9 displays the scoring applied to the proposed bicycle and pedestrian improvements.

Table 8-8: Bicycle and Pedestrian Facility Improvement Prioritization Criteria

Bicycle and Pedestrian Improvements Prioritization Criteria	Possible Scores
Bicycle and Pedestrian Facility Deficiency Factors	
Have there been bicycle or pedestrian crashes at this location, along this corridor, how many, and what severity?	
No more than one crash along this corridor (but not the project location) in past 3 years	1
No more than one crash at the project location within last 3 years	2
2 or more crashes on the corridor, but not at the project location in the past 3 years	3
2 or more crashes at the project location in the past 3 years	4
1 or more injuries or fatalities at the project location or along the corridor in the past 3 years	5
Is this project replacing an existing facility or do none currently exist?	
Purely a cosmetic upgrade of existing facility	1
Existing bike/ped facilities but in poor condition	2
Existing bike/ped facilities but many gaps or discontinuous	3
No facilities currently on one side of road	4
No facilities currently exist on either side of the road, or no street crossing facilities	5
Does the project location have high motor vehicle speeds, high traffic volumes, multiple lanes to cross, or complicated intersections? Some roads due to their traffic and design characteristics are more difficult to cross and less attractive, and sometimes less safe, to walk or bike along. These roads often warrant improvements more so than quiet residential streets that are already bike and pedestrian friendly.	
Project location is on a quiet, 2-lane residential street with low speeds and low traffic volumes.	1
Project location is on a street with moderate traffic volumes and speeds, no more than 3 lanes of traffic (not including on-street parking).	3
Project location is on a major street with high speeds, high traffic volumes, multiple traffic lanes, wide intersections, and few crossing locations.	5
Bicycle and Pedestrian Facility Potential Factors	
Is there evidence of existing demand (bike/pedestrian counts, worn paths along roadside), current or forecasted population densities that rely more heavily on walking and biking (i.e. young, elderly, low-income populations), or existing or future land uses that support biking and walking?	
On a scale of 1-to-5, with 1 being the least demand and 5 being the highest demand for bicycle and pedestrian facilities.	1-5
Is the project within a bicycle or pedestrian priority area, i.e. for bicycles, within 1-mile radius of schools, parks, libraries, or community facilities (such as senior center, YMCA, community health clinic, etc.); for pedestrians, within ½ mile radius of schools, parks, libraries or community facilities (such as senior center, YMCA, community health clinic, etc.)?	
No	0
Partially	3
Yes	5
Does the proposed project provide a direct connection to: <ul style="list-style-type: none"> • Major employment or activity centers • Downtown Commercial Business Districts 	

Bicycle and Pedestrian Improvements Prioritization Criteria	Possible Scores
<ul style="list-style-type: none"> • Existing or proposed transportation projects or major real estate developments • Other modes of transportation (such as public transit or a shared path access point) • Does the project close a gap in a sidewalk or bike facility? 	
<p>On a scale of 1-to-5, with 1 providing very little connectivity and 5 providing the greatest connectivity to multiple destinations. 0 = No connectivity.</p>	0-5
<p>Was the proposed project previously identified in a community plan (STIP, CRC Bike/Ped Plan, Comprehensive Plan, Land Use Plan, Recreation Plan, etc.)?</p>	
<p>No</p>	0
<p>Yes</p>	3
<p>Total Possible Score</p>	33

Table 8-9: Bicycle and Pedestrian Facility Improvement Project Prioritization

Ranking	Project Ref. No.	Facility	From	To	Length	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost
1	BP-02	US 1	End of current facility in Lyons	Altamaha River/County line	19.4	Bicycle Facilities	Bike Lanes and Wide Shoulders	HOGARC Regional Bicycle/Pedestrian Plan	Improved safety and operations	\$3,783,000
2	BP-03	US 280	County line	County line	16.9	Bicycle Facilities	Bike Lanes and Wide Shoulders	Survey, HOGARC Regional Bicycle/Pedestrian Plan	Improved safety and operations	\$3,293,660
3	BP-08	US 280	Cypress St	Maple St	2.8	Sidewalk	Add	Survey	Improved safety and operations	\$1,820,000
4	BP-06	US 280	Durden St	Broadfoot Blvd	0.7	Pedestrian Crossings	New Paint (10 Intersections)	Survey	Improved safety and operations	\$39,000
5	BP-07	Bulldog Rd	Toombs Middle School	US 280	0.6	Sidewalk	Add	Survey	Improved safety and operations	\$390,000
6	BP-09	Broadfoot Blvd	SR 292	US 280	0.5	Sidewalk	Add	Stakeholder Input	Improved safety and operations	\$325,000
7	BP-10	SR 297	JR Trippe Middle School	US 280	1.9	Sidewalk	Add	Stakeholder Input	Improved safety and operations	\$1,235,000
8	BP-04	Old River Rd and SR 147	County line	SR 178	16.4	Bicycle Facilities	Signage	HOGARC Regional Bicycle/Pedestrian Plan	Improved safety and operations	\$533,000
9	BP-05	SR 130 North	Downtown Vidalia	US 1	6.0	Bicycle Facilities	Signage	Survey, HOGARC Regional Bicycle/Pedestrian Plan	Improved safety and operations	\$194,049

8.4. LOGICAL TERMINI AND ENVIRONMENTAL CONSIDERATIONS

8.4.1. Logical Termini Considerations

For roadway capacity improvements, logical termini were determined to help link the long-range planning process with National Environmental Policy 2003 and 2007 (NEPA) regulations, including independent utility, or the need for each project absent the construction of other area projects. The FHWA Code of Federal Regulations (CFR) includes three general principles at 23 CFR 771.111(f) that should be used to frame a highway project.

In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated in each environmental impact statement (EIS) or finding of no significant impact (FONSI) shall:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
- Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Transportation projects that receive federal funds must follow NEPA requirements in order to receive approval from the Federal Highway Administration. Among other environmental studies conducted during the NEPA process, a survey is conducted to assess historic resources under Section 106 of the National Historic Preservation Act. Identified historic resources that are National Register eligible properties are given special consideration during the NEPA process and transportation projects must receive State Historic Preservation Officer (SHPO) concurrence before receiving approval. These requirements are in place to identify historic resources, assess impacts, and determine appropriate measures to avoid, minimize, or mitigate adverse effects to historic resources. These principles were factored into the project development process in several capacities. First, all projects were considered alongside data including wetlands and historic resources for potential environmental impacts. Second, logical termini for each capacity improvement were examined and revised based on the analysis conducted to date.

8.4.2. Environmental Justice Considerations

As discussed in Chapter 2, Section E: Environmental Justice on page 11, EO 12898 signed into law by President Bill Clinton on February 11, 1994 requires that groups historically underrepresented in the transportation planning process are not disproportionately impacted as a result of transportation improvements. In accordance with EO 12898, agencies have integrated special efforts into the transportation planning process to identify the groups described above and to appropriately engage them throughout the development of transportation improvement recommendations. The environmental justice analysis conducted as part of this study and discussed in Section 2 identified areas with high concentrations of low-income and minority populations. As a result, it was confirmed that improvements recommended as part of this study will improve safety, mobility, and access for all users on a county-wide basis. Positive benefits will accrue to EJ communities through bicycle and pedestrian enhancements and roadway safety and capacity improvements. Figure 8-1 overlays recommended improvements and environmental justice areas to demonstrate projects and illustrate that there are no disproportionate negative impacts in these locations.

Toombs County Long Range Transportation Plan

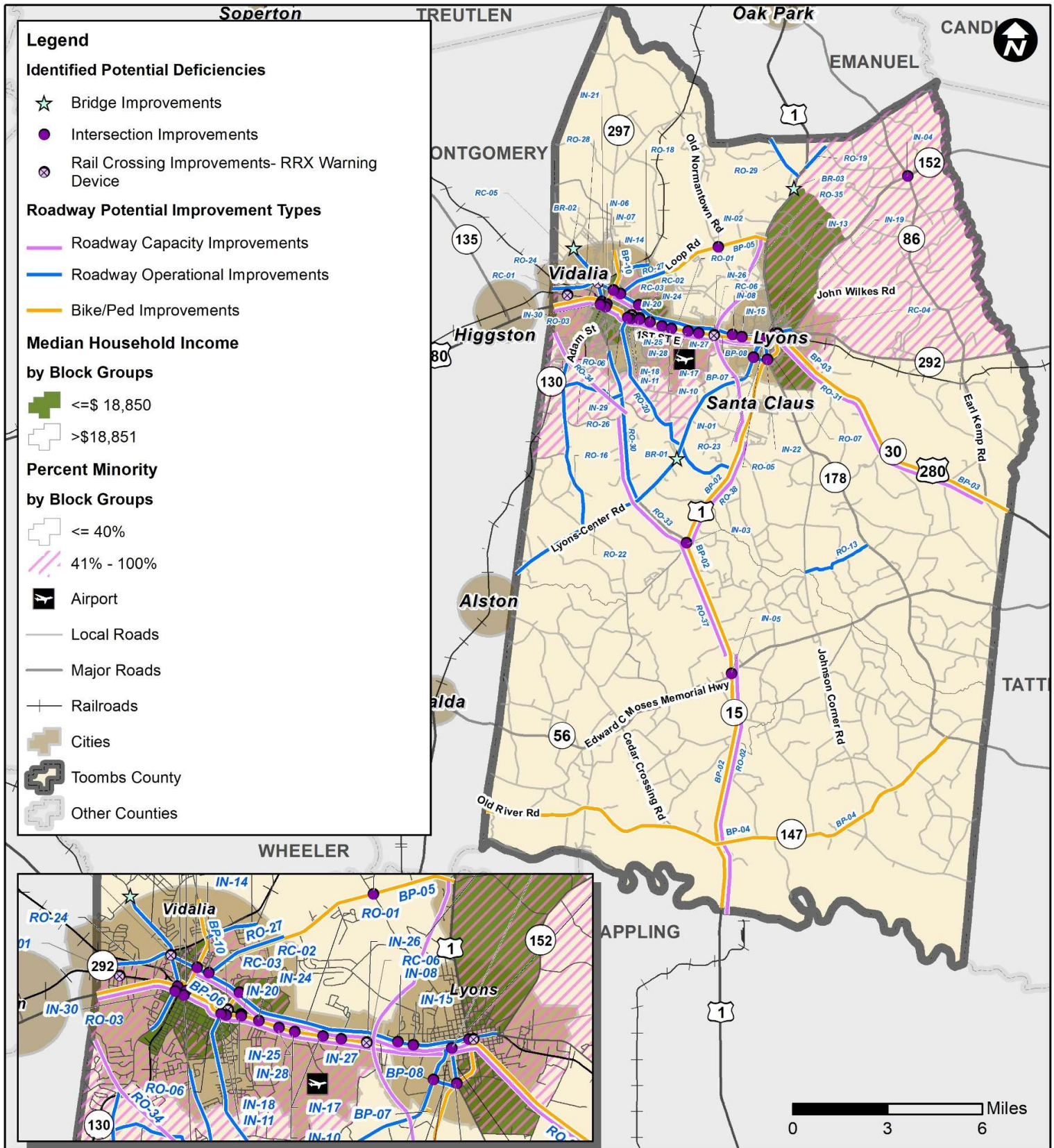


Figure 8-1 Environmental Justice Evaluation

8.5. SUMMARY OF RECOMMENDED IMPROVEMENTS

Based on the analysis completed as part of this study, a prioritized listing of recommended projects was created for Toombs County. This information is presented in Table 8-10 to

Table 8-14 including:

- Roadway Capacity and Operational Improvements (increasing travel lane widths and/or shoulders)
- Intersection Improvements
- Bridge Improvements
- Rail Crossing Improvements
- Bicycle and Pedestrian Improvements

Projects highlighted bold in Table 8-10 were programmed or planned projects through existing programs, i.e. TIA or GDOT STIP projects. These projects were consistent with the projects shown in the Table 4-5 , Table 4-6 and Table 4-7 in Section 4.3 on the existing and programmed projects.

For each recommendation, several informational elements were produced including: facility; limits; existing and improved configuration; comments; source; improvement type; need; anticipated benefit; cost and prioritization score. For successful implementation of these projects, additional detailed engineering studies and environmental analysis are required to determine the most appropriate alignment, design, cost and prioritization score of each project. Additionally, successful project implementation will require identified funding mechanisms, political support, and public recognition of the project need and benefit. The LRTP provides a basis for each of these achievements, but more work is necessary in order to advance and ultimately build each project.

Table 8-10: Recommended Projects – Roadway Capacity and Operational Improvements

Project Ref. No.	Facility	From	To	Length	Existing Conditions	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost	Ranking
RO-01	SR 292	Lyons	Vidalia	5.4	2 lanes	Operations /Capacity	Widen from 2 to 4 lanes	Public Survey	Improved capacity and safety	\$22,443,920	1
RO-03	US 280	West County line	Bulldog Rd	6.8	2 lanes	Capacity	Widen from 2 to 4 lanes	Public Survey	Improved capacity and safety	\$28,460,243	2
RO-07	Victory Dr	US 280	US 1	0.7	2 lanes	Operations /Capacity	Minor Widening	Team analysis	Improved capacity and safety; enhanced multi-modal system	\$2,639,000	3
RO-35²⁵	US 1/SR 4 Bypass	S of Green Oak Rd	Resmondo Rd	7.1	n/a	Capacity	New Road	STIP: PI 522200-; Team analysis	Improved capacity	\$70,362,622	4
RO-24	SR 292	County line	County line	15.3	11' unpaved shoulder	Shoulders	Add Shoulders	Public Survey	Improved capacity and safety; enhanced multi-modal system	\$1,991,201	5
RO-06	Slayton St	US 280	Waters Dr	0.4	2 lanes	Operations /Capacity	Minor Widening	Team analysis	Improved capacity and safety; enhanced multi-modal system	\$1,508,000	6
RO-02	US 1	South of SR 147	South of Georgia Hill Rd	8.5	2 lanes	Capacity	Widen from 2 to 4 lanes	STIP: PI 522220-; Stakeholder Input; Public Survey	Improved capacity and safety	\$57,714,555	7
RO-05	Bulldog Rd	US 280	School complex vicinity	1.2	2 lanes	Operations /Capacity	Minor Widening	Team analysis	Improved capacity and safety; enhanced multi-modal system	\$4,524,000	8
RO-31	US 280 / SR 30	West of US 1/ SR 4	SR 86	9.2	2 lanes	Capacity	Widen from 2 to 4 lanes	STIP: PI0004775; Team analysis	Improved capacity	\$60,492,782	9
RO-33	SR 15	SR 4	CR 245/Dixon Lake Rd	4.9	2 lanes	Capacity	Widen from 2 to 4 lanes	STIP: PI 008032; Team analysis	Improved capacity	\$44,106,539	10
RO-30	SR 15	Lyons Center Rd	Bloomfield Rd	4.9	6' unpaved shoulder	Shoulders	Widen Shoulders	Public Survey	Improved capacity	\$633,177	11
RO-26	JR Rollins Rd	SR 15	Cedar Crossing-Vidalia Rd	2.1	Dirt road	Pavement	Pave Dirt Road	Public Survey	Improved safety and operations	\$401,781	12
RO-34	Vidalia Bypass	CR 245/Dixon Lake Rd	SR 15/SR 30	3.6	n/a	Capacity	New Road	STIP: PI 008031; Team analysis	Improved safety and operations	\$13,320,000	13
RO-38	SR 4	SR 29	CR 386/Green Oak Rd	3.7	2 lanes	Capacity	Widen from 2 to 4 lanes	STIP: PI 522190-; Team analysis	Improved capacity	\$33,303,643	14
RO-37	US 1 /SR 4	S of George Hill Rd	SR 29	3.8	2 lanes	Capacity	Widen from 2 to 4 lanes	STIP: PI 522180-; Team analysis	Improved safety and operations	\$25,698,153	15
RO-20	Aimwell Rd	US 280	US 1	7.0	6' unpaved shoulder	Shoulders	Add Shoulders	Public Survey	Improved safety and operations	\$906,311	16
RO-22	Lyons Center Rd	County line	Lyons	10.1	5' unpaved shoulder	Shoulders	Add Shoulders	Public Survey	Improved safety and operations	\$1,313,000	17
RO-28	Orange St	North St	Thompson Pond Rd	1.7	4' unpaved shoulder	Shoulders	Widen Shoulders	Public Survey	Improved safety and operations	\$225,661	18
RO-18	Brantley Rd	SR 297	Vann Rd	1.0	No speed limit signs	Safety	Speed Limit Signage	Public Survey	Improved safety and operations	\$780	19
RO-23	Parker Ave	Bulldog Rd	S State St	0.4	4' unpaved shoulder	Shoulders	Add Shoulders	Public Survey	Improved safety and operations	\$52,550	20
RO-27	SR 130 / N Loop Road	North St	Liberty St	1.5	8' unpaved shoulder	Shoulders	Widen Shoulders	Public Survey	Improved safety and operations	\$200,910	21

²⁵ Bolded improvements are already part of GDOT's program.

Project Ref. No.	Facility	From	To	Length	Existing Conditions	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost	Ranking
RO-13	Rodney Stanley Rd	Johnson Corner Rd	Sid Newton Rd	2.3	Dirt road	Pavement	Pave Dirt Road	Public Survey	Improved safety and operations	\$440,627	22
RO-16	Cedar Crossing-Vidalia Rd	Adams St	Lyons Center Rd	5.4	<4' unpaved shoulder	Pavement; Shoulders	Pavement Resurfacing; Add shoulders	Public Survey	Improved safety and operations	\$1,754,237	23
RO-19	5 Points Rd	US 1	Bill Branch Cir	0.9	6' unpaved shoulder	Shoulders	Add Shoulders	Public Survey	Improved safety and operations	\$121,889	24
RO-29	Rackettown Rd	Pendelton Springs Rd	US 1	4.9	6' unpaved shoulder	Shoulders	Widen Shoulders	Public Survey	Improved safety and operations	\$637,000	25

Notes: Estimated costs are in current year dollars and uninflated. All costs are estimated at planning-level, based on best available data and assumptions. Further detailed cost assessment should be conducted prior to final project selection.

Table 8-11: Recommended Projects – Intersection Improvements

Project Ref. No.	Facility Location	Existing Conditions	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost	Ranking
IN-30	1st St and Montgomery St	Signalized	Operational Improvement	Safety	Team analysis	Improved safety and operations	\$455,000	1
IN-29	1st St and Church St	Signalized	Operational Improvement	Safety	Team analysis	Improved safety and operations	\$455,000	2
IN-18	SR 292 and Broadfoot Blvd	T-intersection; Stop-controlled	Signal	Add Left-Turn Phase	Public Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$910,000	3
IN-27	US 280 and Pete Philips Dr	T-intersection; Signalized	Operational Improvement	Safety	Team analysis	Improved safety and operations	\$455,000	4
IN-24	US 280 and Maple Dr	T-intersection; Signalized	Turn Lanes	Add Turn Lanes	Public Survey, Team analysis	Improved safety and operations	\$234,000	5
IN-11	US 280 and Slayton St	T-intersection; Stop-controlled	Operational Improvement	Further analysis	Stakeholder input, Team analysis	Improved safety and operations	\$455,000	6
IN-07	SR 292 and SR 297	Signalized	Operational Improvement	Further analysis	Public Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$455,000	7
IN-28	US 280 and Rigsbee Dr	Stop-controlled	Operational Improvement	Safety	Team analysis	Improved safety and operations	\$455,000	8
IN-25	US 280 and McNatt St	T-intersection; Signalized	Turn Lanes	Add Turn Lanes	Public Survey	Improved safety and operations	\$234,000	9
IN-10	US 280 and Harris Industrial Blvd	Signalized	Operational Improvement	Further analysis	Public Survey, Team analysis	Improved safety and operations	\$455,000	10
IN-06	US 280/ Main St and SR 297/ McIntosh St/ Church St	Signalized	Operational Improvement	Safety	Public Survey	Improved safety and operations	\$455,000	11
IN-22	US 1 and SR 178	Signalized	Turn Lanes	Add Turn Lanes	Public Survey, Team analysis	Improved safety and operations	\$234,000	12
IN-26	US 280 and Semco Rd	Yield sign only	Turn Lanes	Add Turn Lanes	Public Survey	Improved safety and operations	\$234,000	13
IN-21	US 280 and Adams St	Signalized	Turn Lanes	Add Turn Lanes	Public Survey	Improved safety and operations	\$234,000	14
IN-19	US 1 and SR 292	Signalized	Signal	Add Left-Turn Phase	Public Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$910,000	15
IN-15	SR 292 and Oxley Dr (north of railroad)	Multiple roads, rail-crossing, All Stop-controlled	Signal	Add Signal	Public Survey, Team analysis	Improved safety and operations	\$910,000	16
IN-13	US 280 and Victory Dr	Signalized	Operational Improvement	Further analysis	Public Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$455,000	17

Project Ref. No.	Facility Location	Existing Conditions	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost	Ranking
IN-08	SR 292 and W Oglete Ave	T-intersection; Stop-controlled	Operational Improvement	Further analysis	Public Survey	Improved safety and operations	\$455,000	18
IN-14	SR 130 and SR 292	Stop-controlled	Signal	Add Signal	Public Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$910,000	19
IN-20	US 280 and Broadfoot Blvd	Signalized	Signal	Add Left-Turn Phase	Public Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$910,000	20
IN-01	Bulldog Rd at Parker Ave	Stop-controlled	Operational Improvement	Further analysis	Stakeholder input, Team analysis	Improved safety and operations	\$455,000	21
IN-04	SR 152 and SR 86	Stop-controlled	Operational Improvement	Safety	Public Survey	Improved safety and operations	\$455,000	22
IN-03	US 1/SR 4/SR 15 and S Thompson Rd	Multiple roads, All Stop-controlled	Operational Improvement	Realignment	Stakeholder input	Improved safety and operations	\$455,000	23
IN-17	US 280 and Commerce Way (main entrance to Southeastern Technical College)	T-intersection; Stop-controlled	Signal	Add Signal	Public Survey	Improved safety and operations	\$910,000	24
IN-05	US 1 and SR 56	Stop-controlled	Operational Improvement	Safety	Public Survey	Improved safety and operations	\$455,000	25
IN-02	Old Normantown Rd and SR 130 / Liberty St	Stop-controlled	Operational Improvement	Further analysis	Public Survey	Improved safety and operations	\$455,000	26

Notes: Estimated costs are in current year dollars and uninflated. All costs are estimated at planning-level, based on best available data and assumptions. Further detailed cost assessment should be conducted prior to final project selection.

Table 8-12: Recommended Projects – Bridge Improvements

Project Ref. No.	Facility Location	Existing Conditions	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost	Ranking
BR-02	Thompson Pond Rd at Swift Creek Trib.	Overall Condition: Poor	Bridge Upgrade	Bridge Upgrade/Replacement	Team analysis	Improved safety and operations	\$132,955	1
BR-03	US 1/ SR 4 at Pendleton Creek	Overall Condition: Fair	Bridge Upgrade	Bridge Upgrade/Replacement	Team analysis	Improved safety and operations	\$936,000	2
BR-01	Lyons Center Rd at Rocky Creek	Overall Condition: Fair	Bridge Upgrade	Bridge Upgrade/Replacement	Team analysis	Improved safety and operations	\$44,318	3

Notes: Estimated costs are in current year dollars and uninflated. All costs are estimated at planning-level, based on best available data and assumptions. Further detailed cost assessment should be conducted prior to final project selection.

Table 8-13: Recommended Projects – Rail Crossing Improvements

Project Ref. No.	Facility	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost	Ranking
RC-01	Brice Rd rail crossing (ID 641093R)	Repair Ties	Repair Ties	Public Survey	Improved safety and operations	\$19,004	n/a
RC-02	Rigsbee Dr rail crossing (ID 641073E)	Repair Ties	Repair Ties	Public Survey	Improved safety and operations	\$3,801	n/a
RC-03	Broadfoot Blvd rail crossing (ID 641074L)	RRX Warning Device	Pavement Markings	Public Survey, Stakeholder Input, Team analysis	Improved safety and operations	\$13,000	n/a
RC-04	Lanier St rail crossing (ID 636030B)	RRX Warning Device	Pavement Markings	Team analysis	Improved safety and operations	\$13,000	n/a
RC-05	SR 292 rail crossing west of Orange St (ID732631X)	RRX Warning Device	Pavement Markings	Team analysis	Improved safety and operations	\$13,000	n/a
RC-06	Semco Dr rail crossing (ID 636038F)	RRX Warning Device	Warning Signage	Team analysis	Improved safety and operations	\$390	n/a

Notes: Estimated costs are in current year dollars and uninflated. All costs are estimated at planning-level, based on best available data and assumptions. Further detailed cost assessment should be conducted prior to final project selection.

Table 8-14: Recommended Projects – Bicycle and Pedestrian Facility Improvements

Project Ref. No.	Facility	From	To	Length	Existing Conditions	Needs or Deficiency	Improvement Type	Source	Anticipated Benefits	Estimated Cost	Ranking
BP-02	US 1	end of current facility in Lyons	Altamaha River/County line	19.4	No bike facilities	Bicycle Facilities	Bike Lanes and Wide Shoulders	HOGARC Regional Bicycle/Pedestrian Plan	Improved safety and operations	\$3,783,000	1
BP-03	US 280	County line	County line	16.9	No bike facilities	Bicycle Facilities	Bike Lanes and Wide Shoulders	Public Survey, HOGARC Regional Bicycle/Pedestrian Plan	Improved safety and operations	\$3,293,660	2
BP-08	US 280	Cypress St	Maple St	2.8	No pedestrian facilities	Sidewalk	Add	Public Survey	Improved safety and operations	\$1,820,000	3
BP-06	US 280	Durden St	Broadfoot Blvd	0.7	No pedestrian facilities	Pedestrian Crossings	New Paint (10 Intersections)	Public Survey	Improved safety and operations	\$39,000	4
BP-07	Bulldog Rd	Toombs Middle School	US 280	0.6	No pedestrian facilities	Sidewalk	Add	Public Survey	Improved safety and operations	\$390,000	5
BP-09	Broadfoot Blvd	SR 292	US 280	0.5	No pedestrian facilities	Sidewalk	Add	Stakeholder Input	Improved safety and operations	\$325,000	6
BP-10	SR 297	JR Trippe Middle School	US 280	1.9	Pedestrian facilities partially present	Sidewalk	Add	Stakeholder Input	Improved safety and operations	\$1,235,000	7
BP-04	Old River Rd and SR 147	County line	SR 178	16.4	No bike facilities	Bicycle Facilities	Signage	HOGARC Regional Bicycle/Pedestrian Plan	Improved safety and operations	\$533,000	8
BP-05	SR 130 North	Downtown Vidalia	US 1	6.0	No bike facilities	Bicycle Facilities	Signage	Public Survey, HOGARC Regional Bicycle/Pedestrian Plan	Improved safety and operations	\$194,049	9

Notes: Estimated costs are in current year dollars and uninflated. All costs are estimated at planning-level, based on best available data and assumptions. Further detailed cost assessment should be conducted prior to final project selection.

9. FUNDING AND IMPLEMENTATION

9.1. FUNDING SOURCES

Several funding sources will be utilized to implement recommended projects. Eligibility for funds is typically dictated by the agencies responsible for maintaining and operating the transportation facility in question and is subject to funding availability. Most major facilities in Toombs County are either operated by GDOT or the County. Hence, as competing transportation needs continue to grow throughout the State, it is highly likely that overmatching of local funds could accelerate projects on state owned and maintained facilities. Leveraging local and regional funding from the Transportation Investment Act (TIA) funds to attract contributions from state and federal funding sources will be crucial in delivering on Toombs County's vision and goals for the future transportation network.

Funding for most transportation projects in the county has historically come in part through GDOT. GDOT is primarily funded from Federal Title 1 Apportionments and State funding sources. Federal apportionments mainly come from the Federal Highway Administration (FHWA), which provides funding for various surface transportation programs. At the state level, motor fuel taxes provide most of the revenue used for surface transportation funding.

This chapter provides an overview of the of the most common funding mechanisms at the federal, state, and local levels of government in Georgia to provide context of the sources that could be used for projects as Toombs County makes its transportation funding decisions in the future.

9.1.1. Federal Funding Sources for Transportation

A substantial portion of GDOT funding comes from the federal government through Federal Title I Apportionments. The primary funding source for Title I is the federal gasoline tax collected at the state level. The US Congress authorizes federal transportation funding to the states and other public entities, generally every six years. In 2015, the Fixing America's Surface Transportation (FAST) Act was signed into law, authorizing \$305 billion in funding over fiscal years 2016 through 2020 for surface transportation infrastructure planning and investment. These lump sum funds are apportioned throughout the state.

Federal funding for the majority of highway system improvements in Toombs County is expected to come from the Surface Transportation Block Grant Program (STBG). Locally-sponsored projects within the county will generally require a 20 percent local funding commitment to match federal funds. The local government is also generally responsible for completing the planning and design of the projects as well. Federal and state funds are programmed by GDOT for right-of-way and construction costs. State-sponsored projects generally require a 20 percent local funding match.

Details on Federal revenue programs for highways, including project eligibility and maximum allowed Federal contribution/minimum allowed non-federal are listed below:

- **National Highway Performance Program (NHPP)** - Provides support for the condition and performance of the NHS, for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS. Funding ratio: 80 percent federal/20 percent non-federal.
- **Surface Transportation Block Grant Program (STBG)** - Provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. Funding ratio: 80 percent federal/20 percent non-federal.

- **Highway Safety Improvement Program (HSIP)** - Provides funding aimed at achieving a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. Funding ratio: 90 percent federal/10 percent non-federal.
- **National Highway Freight Program (NHFP)** - Provides funding to improve the efficient movement of freight on the National Highway Freight Network (NHFN) and support several goals, including improving the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas. Funding ratio: 80 percent federal/20 percent non-federal.

As part of the federal apportionment and allocation, there are opportunities for local governments to collaborate with GDOT on special transportation projects. One opportunity is with the Transportation Alternative Program (TA Funds). TA funds provide federal transportation funds through GDOT to local governments through a competitive process for a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to storm water and habitat connectivity.

9.1.2. Federal Funding for Public Transportation

As the population of Toombs County grows and demographic trends change with a larger percentage of the population being elderly, the needs for special public transit to serve seniors and disabled people will likely increase. The county can continue to monitor its needs for local public transportation services and identify potential opportunities to tap into the available federal sources for these programs. Generally, the federal funding programs applicable to rural areas for transit projects include:

- **Section 5310, Enhanced Mobility of Seniors and Individuals with Disabilities** – This program provides formula funding to states to support transportation services of seniors and individuals with disabilities, in all areas – large urbanized (over 200,000), small urbanized (50,000-200,000), and rural (under 50,000). Project examples include: buses and vans; wheelchair lifts; ramps and securement devices; transit-related information technology systems, including scheduling/routing/one-call systems; and mobility management programs. Eligible subrecipients include private nonprofit organizations, states or local government authorities, or operators of public transportation. The federal share of eligible capital costs may not exceed 80 percent, and 50 percent for operating assistance.
- **Section 5311, Formula Grants for Rural Areas** – This program aids states to support public transportation in rural areas with populations of less than 50,000. Eligible activities include planning, capital, operating, job access and reverse commute projects, and the acquisition of public transportation services. The federal share is 80 percent for Americans with Disabilities Act (ADA) non-fixed route paratransit service.

9.1.3. State Funding Sources for Transportation

Georgia collects the largest share of its own-source revenues from taxes collected on motor fuels. For calendar year 2019, the state excise tax rate is 27.5 cents per gallon for all fuel types (except for diesel fuel). To better support the rising costs of maintaining and improving transportation infrastructure, every year the Department of Revenue adjusts the excise tax rate to account for (1) inflation and (2) vehicle's fuel efficiency. Inflation adjustments will no longer be used after July 1, 2022. Other state revenues specifically collected for transportation projects are: a \$5 per day hotel/motel fee, an annual fee for heavy vehicles, and an annual fee on alternative fuel vehicles.

State funds are awarded at the discretion of the GDOT to projects that further statewide transportation goals. For most projects that are not federally funded, state funds provide more flexibility in project delivery and can often be completed more quickly than federally-funded projects.

Funds from the Local Maintenance Improvement Grant (LMIG) program are also available to cities and counties. LMIG is a GDOT program that helps local governments conduct improvements to the state's roadway network. Eligible activities include: Bridge repair or replacement; Intersection improvements; Sidewalks; Signal installation or improvement; Turn lanes; and Patching, leveling and resurfacing among others. The annual LMIG allocation is based on the total centerline road miles for each local road system and the total population of each county or city as compared with the total statewide centerline road miles and total statewide population. Toombs County received \$862,300 from FY 2019 LMIG funds and is anticipated to receive \$956,130 in FY 2020.

9.1.4. Local Funding Source for Transportation

Local governments (cities and counties) mainly rely on sources derived from general revenues (e.g., sale tax and property taxes) and discretionary grant funds from federal and state sources to fund transportation projects.

In 2012, voters in the Heart of Georgia Altamaha Region (HOGA) approved a 10-year one percent sales tax to fund regional and local transportation improvements. Collection of these Transportation Investment Act (TIA) funds began on January 1, 2013. 75 percent of the region's TIA proceeds is used to fund all projects on the region's final project list. GDOT is responsible for the delivery of these regional projects. The remaining 25 percent of the region's TIA proceeds is divided among all local governments within HOGA based on the county's population and road mileage. These 'discretionary funds' may be used for any transportation project and are selected and delivered solely by local governments. Toombs County can use its share of these 'discretionary funds' for any transportation project, such as roads, bridges, bike lanes, pedestrian facilities, etc., including operations and maintenance thereof. Discretionary funds may also be used as a local match for state and/or federal funding.

Since TIA collections began in 2013, eleven projects have been completed in Toombs County by the publication of this plan, a total investment of \$7.1 million fully funded with TIA funds. Over the 2019-2022 period, five projects are budgeted with \$60 million coming from TIA funds.

9.1.5. Future Transportation Funding Needs

A combination of federal, state, local, and private funding sources should be pursued for individual projects to improve transportation facilities in the study area. These sources should be pursued based on GDOT (state), regional and local investment priorities that weigh the best investments for anticipated benefits of the projects through the planning horizon year of 2050. A combination of sources will increase the likelihood for project implementation.

9.1.6. Effective Use of the Plan

This LRTP document identifies potential projects for implementation based on local transportation needs and verified by technical analysis. This is an important step towards implementation, but additional steps are necessary to advance projects into GDOT's Project Plan Development Process and/or to identify and solidify funding commitments from the state, if desired. The project implementation process for Georgia outside of an MPO area begins with support from local elected officials. Each county should begin with a thorough review of their LRTP priority projects. If funding is desired beyond what is available locally, the following steps are recommended:

- Step 1: Gather letters of support from local elected officials highlighting the need for the project(s) and the merits of the project(s).

- Step 2: Assess the level of funding support that may be provided by the county as a local match and/or for specific project phases (i.e. PE, ROW, etc.).
- Step 3: Contact your GDOT District Office (District 5 for Toombs County) and coordinate with the GDOT District Engineer regarding the project. Depending on project type, the GDOT District may know of state aid resources that could be used for feasibility studies and potentially for additional match funding sources.
- Step 4: The GDOT District Office typically serves as the project sponsor and submits a project information package to GDOT's Division of Planning for consideration.
- Step 5: Projects approved by GDOT's Division of Planning are programmed into GDOT's Work Program. As funding is identified, the project will move into GDOT's STIP.

Toombs County Long Range Transportation Plan

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