Oglethorpe County Multi-Modal Transportation Plan

APRIL 2014

PREPARED FOR

GDOT Georgia Department of Transportation
Office of Planning

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1 INTRODUCTION

1.1 PLAN BACKGROUND & OBJECTIVE

The Georgia Department of Transportation's (GDOT) Office of Planning, in conjunction with Oglethorpe County, initiated the development of a multi-modal transportation plan to guide transportation planning decisions in the county through the year 2040. The development of the *Oglethorpe County Multi-Modal Transportation Plan (*abbreviated as the *"Transportation Plan"* hereafter) includes an in-depth look at transportation and socio-economic conditions in order to identify potential projects that address existing and future transportation needs.

This study evaluated a variety of modes, including public transit, bicycle and pedestrian, rail, freight, and the roadway transportation infrastructure serving each mode. The *Transportation Plan* developed as part of this study was built upon existing work efforts to date and provides a mechanism for guiding transportation decision-making as development pressures increase throughout the county and the Northeast Georgia Region.

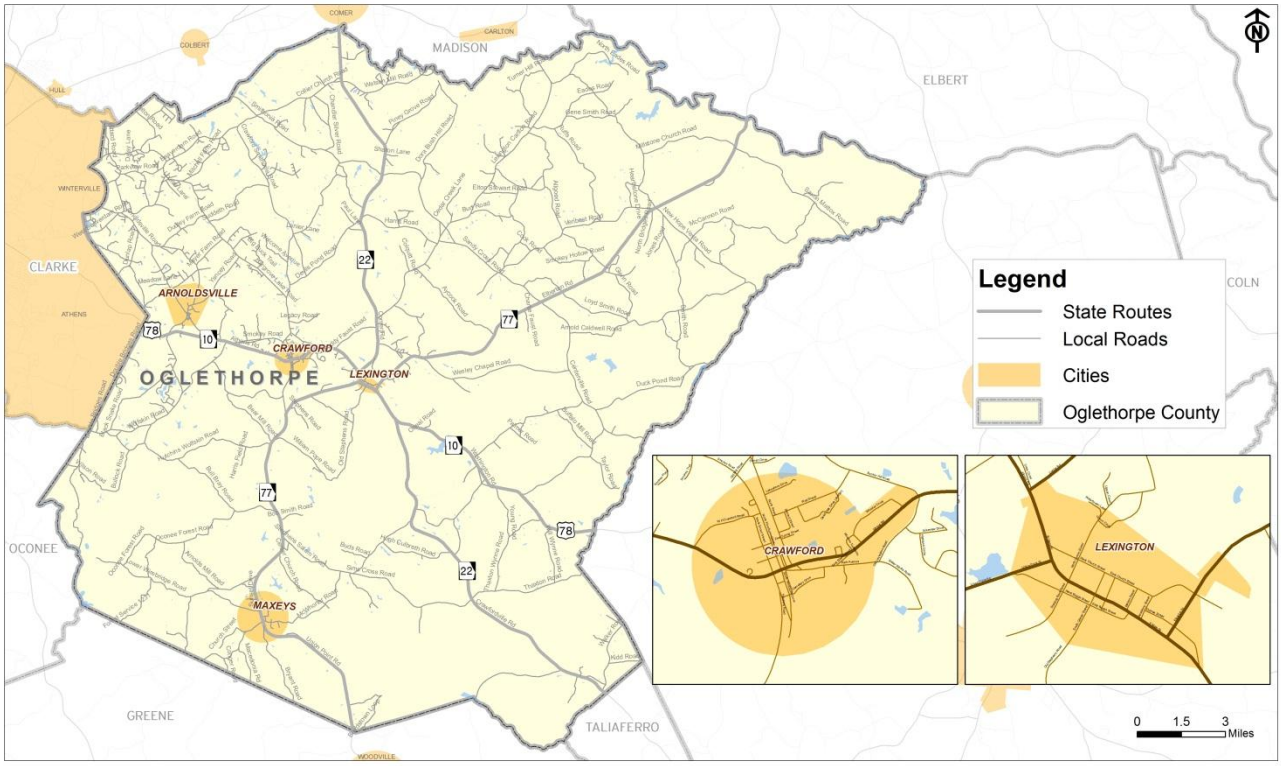
As part of this plan, existing and future conditions of the multi-modal transportation system (roadways, bicycle and pedestrian facilities, freight, and transit) were evaluated within Oglethorpe County. Ultimately, the plan will identify multi-modal transportation improvements and prioritize projects for implementation. As part of this effort, the travel demand model developed for the Athens-Clarke County Metropolitan Planning Organization (MPO) was expanded to include Oglethorpe County to represent the transportation network of the study area and to assist with analysis of future operating conditions. Additionally, a comprehensive and interactive stakeholder involvement program was implemented, and a public survey was conducted to establish plan goals and objectives, identify issues and opportunities, and to identify potential improvements to the Oglethorpe County transportation system. This process ensured that alternative transportation improvements were coordinated with various governments, and it afforded individual citizens the opportunity to provide their input.

The objective of this *Transportation Plan* is to identify transportation needs, determine the resources to meet those needs, and provide a framework of projects that address the transportation needs of the county. This *Transportation Plan* will also build upon previous plans that have identified long-range transportation needs. Ultimately, study efforts produced this *Transportation Plan* that provides for the efficient movement of people and goods within and through the county through the study horizon year (2040).

1.2 STUDY AREA

Located approximately 70 miles east of Atlanta in northeast Georgia, Oglethorpe County encompasses an area of approximately 442 square miles and is surrounded by Madison, Elbert, Wilkes, Taliaferro, Green, Oconee, and Clarke Counties. Oglethorpe County has strong economic ties to the Athens-Clarke metropolitan area, but the county generally maintains a rural feel with four small municipalities: Lexington (the county seat), Arnoldsville, Crawford, and Maxeys. A map of the study area is displayed in **Figure 1-1.**

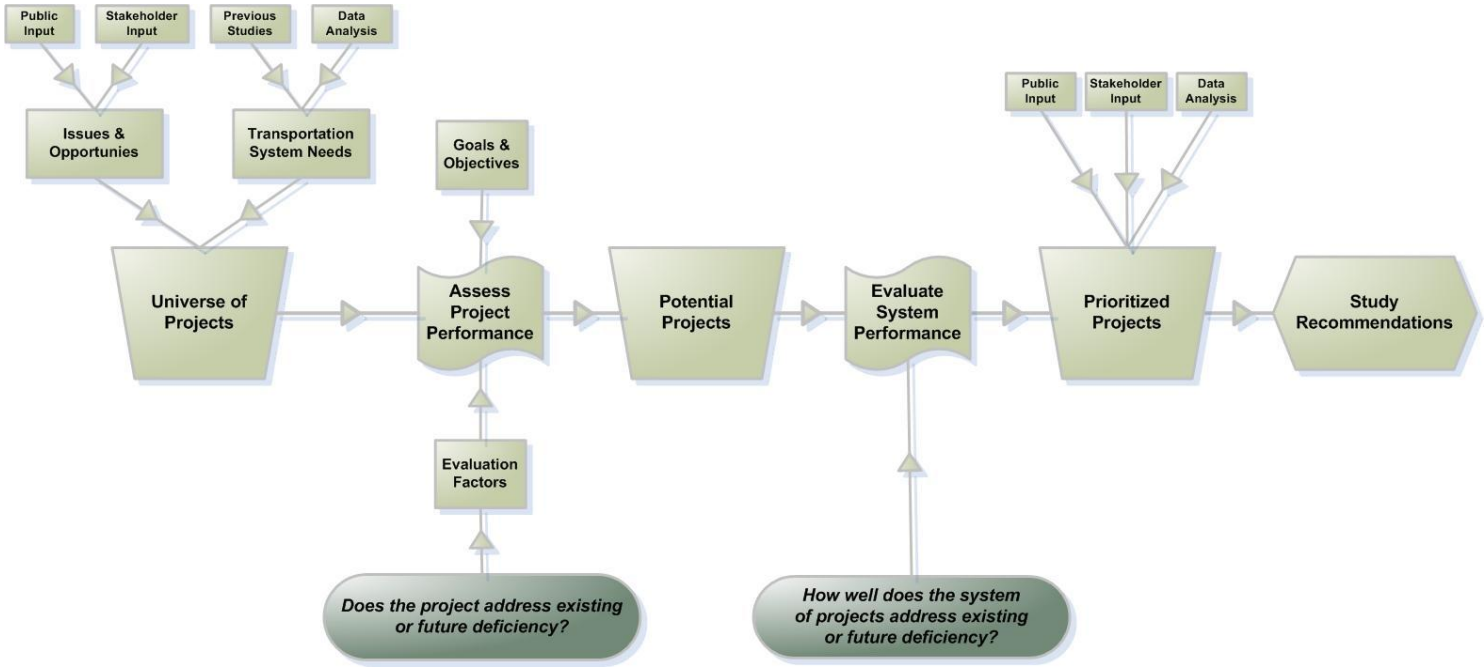
FIGURE 1-1: STUDY AREA



1.3 STUDY PROCESS

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

FIGURE 1-2: STUDY PROCESS



It is important to note that the development process for this *Transportation Plan* follows the same guidelines prescribed by federal legislation, known as *Moving Ahead for Progress in the 21st Century* (MAP-21), for MPO long-range transportation plans (LRTP). This more rigorous process establishes a performance-based framework for transportation planning and decision-making.

LRTPs are required to have a planning horizon of 20 or more years. The year 2040 was selected as a horizon year for this *Transportation Plan.* This time frame provides a basic structure and overall goal for meeting the long-term transportation needs for the community.

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 study area. 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.

A review of U.S. Census data shows that Oglethorpe County has experienced low population growth during the past 30 years. According to the 2010 U.S. Census, the most recent data available, Oglethorpe County had a total population of 14,899 in 2010. **Table 2-1** presents select demographic data and illustrates the characteristics of the population, households and other socio-economic factors in Oglethorpe County.

Table 2-1: General Demographic Characteristics

Demographic	2010
Total Population	14,899
Median Age	40.1
Total Population in Occupied Housing Units	14,722
Average Household Size	3.03
Occupied Housing Units	5,647
Owner-Occupied Housing Units	4,511 (79.9% of total)
Renter-Occupied Housing Units	1,136 (20.1% of total)
In Labor force (age 16+)	11,788 (79.1% of total)
Percent High School Graduate or Higher	76.1% (of Person age 25 +)

Source: 2010 U.S. Census

Approximately 89 percent of Oglethorpe County residents (13,258) live outside of the incorporated cities within the County. **Table 2-2** shows the rural and urban population breakdown for the year 2010. 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	2010
Arnoldsville	357
Crawford	832
Lexington	228
Maxeys	224
Unincorporated	13,258
County Total	**14,899**

Source: 2010 U.S. Census

One of the statistics identified in the demographic data is the percent of disabled individuals in the County. Since the disabled population data is not yet available from the 2010 U.S. Census and American Community Survey for the County, the percentage of the population with disabilities from the 2000 U.S. Census was reviewed for the County and compared to the Georgia State Average for this study. **Table 2-3** highlights the percentage of population with disabilities by age group based on 2000 U.S. Census data. The U.S. Census Bureau defines disability as:

> "A long-lasting physical, mental, or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from being able to go outside the home alone or to work at a job or business."

TABLE 2-3: PERCENTAGE OF POPULATION WITH A DISABILITY

Age Group	Percentage of Population With a Disability	
	Oglethorpe County	Georgia
Population 5 to 20 years old	11.2%	8.2%
Population 21 to 64 years old	25.5%	19.9%
Population 65 years old and over	51.4%	47.5%

Source: 2000 U.S. Census

As it can be seen from the table, the percentage of population with a disability in Oglethorpe County exceeds the statewide average for each age group, which presents the need for a transportation system that accommodates an aging and disabled population.

Historic Population Growth

According to the U.S. Census, Oglethorpe County has experienced a 67 percent increase in total population over the past 30 years, which is less than the statewide rate of 77 percent over the same time period. **Table 2-4** illustrates the growth trends from 1980 to 2010 for both Oglethorpe County and the State of Georgia. Information in **Table 2-4** shows that between 1980 and 2010, Oglethorpe County's population grew at an average annual rate of 1.7 percent, slightly lower than the annual average increase for Georgia (1.9 percent).

TABLE 2-4: HISTORICAL POPULATION GROWTH

Area	1980	1990	2000	2010	Total Growth (1980 -2010)	Average Annual Growth (1980 -2010)
Oglethorpe County	8,929	9,763	12,635	14,899	67%	1.7%
Georgia	5,462,989	6,478,149	8,186,453	9,687,663	77%	1.9%

Source: 2010 U.S. Census

Future Population Projections

Oglethorpe County population projections were collected and evaluated from various sources, including the Oglethorpe Joint City-County Comprehensive Plan 2005-2025, the Governor's Office of Planning and Budget (OPB) and the GDOT population forecasting data developed by Regional Economics Models, Inc. (REMI) for the Georgia Northeast Region.

The Oglethorpe Joint City-County Comprehensive Plan was completed in 2006 and projected population in the County from 2010 to 2025. The comprehensive plan projected that the County's population will grow by approximately 9,000 people from 2010 to 2025; significantly outpacing its historical growth rate for the ten year period from 2000 to 2010 and future projected growth rate from other sources.

The Governor's Office of Planning and Budget (OPB) is responsible (as denoted by state law – OCGA 45-12-171) for developing state and county population projections for the purpose of planning for statewide infrastructure including transportation, public buildings and water. The most recent projections (shown in **Table 2-5**), which use 2010 Census data as a baseline, provide annual population projections for the years 2012 through 2020, and in five year increments for 2020 through 2030, for Oglethorpe County.

TABLE 2-5: OPB'S POPULATION PROJECTIONS

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2025	2030
Population	14,899	15,460	15,647	15,833	16,008	16,183	16,358	16,533	16,708	17,530	18,295
Annual Growth Rate		1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.1%	1.0%

Source: Governor's Office of Planning and Budget 2011

REMI produces long term population forecasts at the national, state, regional and county level and develops economic models for evaluating the total economic effects of various transportation improvements. The most recent projections developed by REMI forecasts annual growth rates of 0.7% for the Georgia Northeast Region (including Oglethorpe County), which is slightly lower than the County and OPB projections.

Considering the historical population data and population projections from various sources, a future growth rate of 1.0 percent per year was assumed. This growth rate was approved by the County and is consistent with the County's current Comprehensive Plan Update. **Table 2-6** shows the 2010 and 2040 population projections for Oglethorpe County.

TABLE 2-6: POPULATION PROJECTIONS

Area	2010	2040
Oglethorpe County	14,899	20,082

2.2 ENVIRONMENTAL JUSTICE

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

- Black;
- Hispanic;
- Asian American;
- American Indian or Alaskan 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.

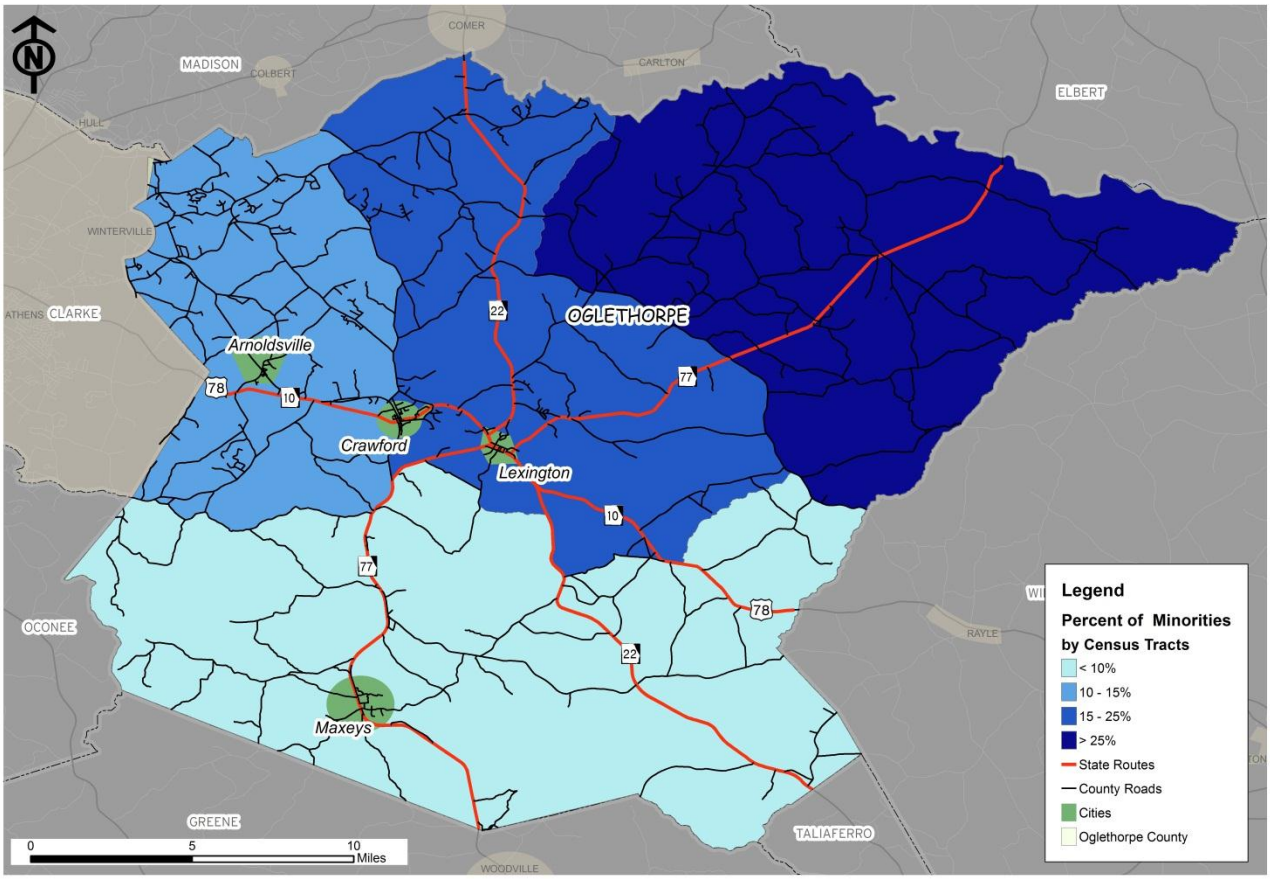
Environmental justice is intended to acknowledge minority and low-income populations that have been historically underrepresented in the transportation planning process and ensure that these groups are not disproportionately impacted as a result of transportation improvement recommendations.

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 use data to analytically assess if there would be a disproportionate impact on traditionally underrepresented communities. The following sections document the location of minority and low-income populations.

Minority Populations

The minority populations in Oglethorpe County were identified and analyzed using 2010 U.S. Census data. This data was reviewed by census tract and illustrates the higher density concentrations (more than 25 percent) of minorities, which are located in the northeast portion of the County. The Census tract covering the southern half of the County exhibits the least diversified population, with less than 10 percent minorities. The average minority population by census tract in Oglethorpe County is 21.7 percent, which is significantly less than the statewide average of 39 percent. The minority population in Oglethorpe County is presented in **Figure 2-1** on the next page as a percentage of the County population.

FIGURE 2-1: PERCENT OF MINORITIES



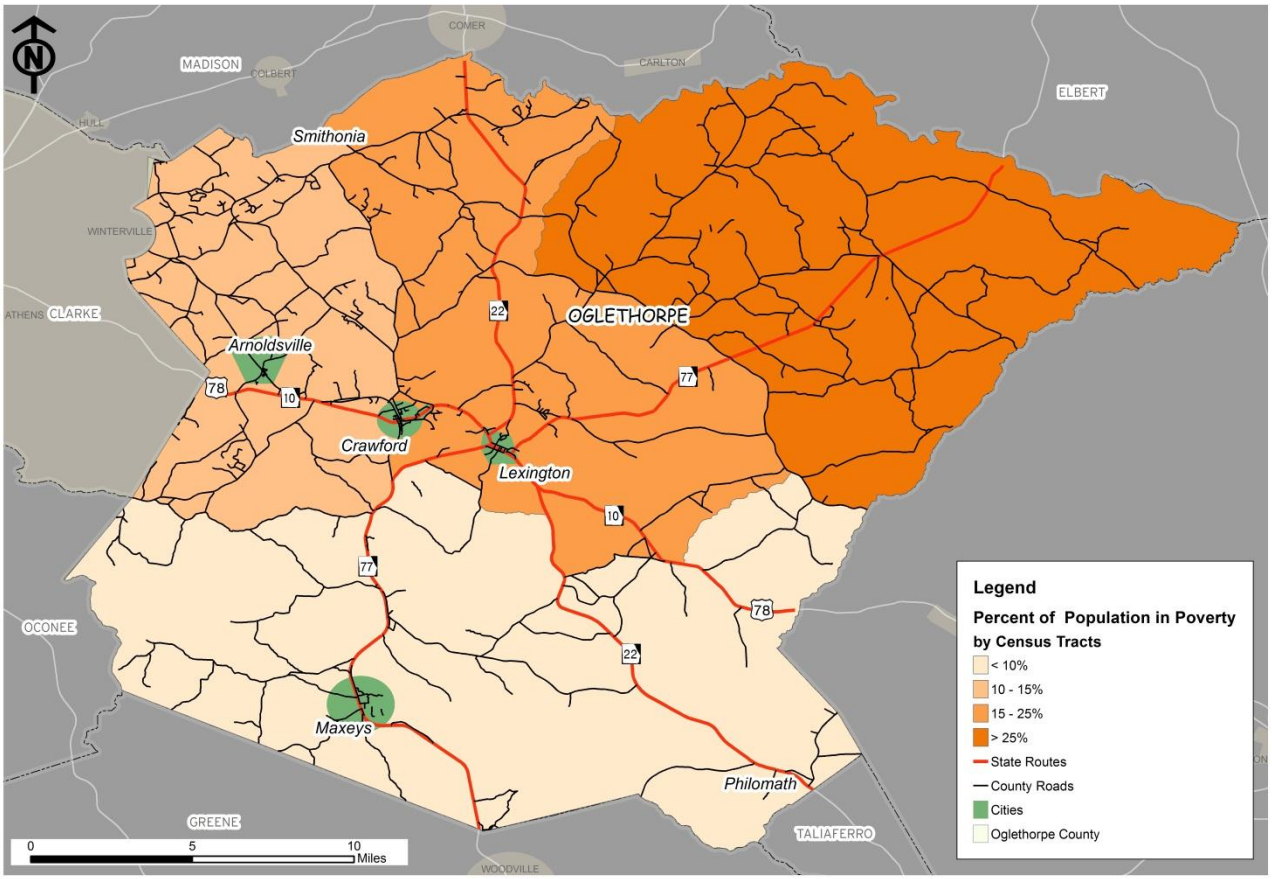
Low-Income Population

The second component of EJ, poverty level, was also analyzed using the 2010 Census data and was reviewed by census tract. Similar to the minority population, there are concentrations of low-income residents located in the northeast portion of the County. The average number of residents below the poverty line in Oglethorpe County is 16.1 percent, while the statewide average is 16.5 percent. The low-income census tracts are displayed in **Figure 2-2** on the next page.

Historically underrepresented populations were identified as part of this analysis and extra efforts were made to include these groups in the planning process. Representation from these groups was actively sought out for inclusion in the study advisory group. Outreach efforts are documented in Chapter 5, public involvement activities. 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. The following specific tasks were conducted in these areas:

- Coordinated with the Study Advisory Group to identify leaders within these communities;
    - Analyzed recommended projects to ensure that disproportionate impacts did not occur within these communities; and,
    - Analyzed recommended improvements to ensure that mobility benefits occurred within these communities – including bicycle and pedestrian and public transportation amenities.

FIGURE 2-2: PERCENT OF POPULATION IN POVERTY



2.3 EMPLOYMENT DATA

The review of Oglethorpe County employment data identified major employers, existing industry types, per capita income, and commute patterns.

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 2-7** shows the major categories of jobs and industries and their associated 2012 employment within Oglethorpe County.

TABLE 2-7: EXISTING INDUSTRY TYPE AND COUNTY EMPLOYMENT (2012)

Job/Industry Type	Oglethorpe County Employees	Percent of Total Employees
Agriculture, forestry, fishing and hunting	158	8.6%
Mining, quarrying, oil and gas extraction	100	5.4%
Construction	167	9.1%
Manufacturing	75	4.1%
Wholesale trade	11	0.6%
Retail trade	152	8.3%
Transportation and warehousing, and utilities	17	0.9%
Finance and insurance	38	2.1%
Real estate and rental and leasing	5	0.3%
Professional, scientific, and technical services	21	1.1%
Health care and social assistance	112	6.1%
Accommodation and food services	36	2.0%
Other services (utilities, information, administrative support, education service, arts, entrainment and recreation except public administration)	358	19.4%
Government	592	32.1%
Total	**1,842**	**100%**

Source: Georgia Department of Labor

In Oglethorpe County, government jobs (which include positions at the federal, state, and local level) make up the largest employment sector type, accounting for 32.1 percent of total employment. Other services including utilities, information, administrative support, education, etc. are the second largest employment sector type, accounting for 19.4 percent of total employment. The other three significant employment sectors are construction, agriculture/forestry/fishing/hunting, and retail trade.

Using the Georgia Department of Labor 2012 annual average employment data, the top ten largest employers for Oglethorpe County are provided below; they are listed alphabetically by area, not by the number of employees:

1. American Stadium Services Payroll
2. Anthony Refresh Group LLC
3. Bells Food Market
4. Greater Georgia Printers
5. James Greenhouses, Inc.
6. Keystone Granite Co., Inc.
7. Lakeview Farms LLC Cabaniss Dairy L
8. Piedmont Landscape Management
9. Quiet Oaks Nursing Homes
10. The Commercial Bank

According to the latest U.S. Census' *2007-2011 American Community Survey (ACS)* data, Oglethorpe County's per capita income is $19,052, which is lower than Georgia's statewide average of $25,383.

Also based on *2007-2011 ACS* data, 92.3 percent of workers rely on roadway-based transportation for commute trips, either by driving alone (75.1 percent) or carpooling (17.2 percent). Workers in Oglethorpe County who bike, walk, commute by other means, or work at home comprise about 4.7 percent of total workers. **Table 2-8** illustrates the breakdown in commuting patterns and characteristics by mode for Oglethorpe County and the State of Georgia.

TABLE 2-8: COMMUTE BEHAVIOR BY TRANSPORTATION MODE IN OGLETHORPE COUNTY

Work Commute	Oglethorpe County	Georgia
	Percentage	Percentage
Total Surveyed Workers (Age 16+)	100%	100%
Drove Alone	75.10%	78.80%
Carpooled	17.20%	11.10%
Public Transportation	0.10%	2.20%
Biked or Walked	1.30%	1.60%
Motorcycle or Other Means	0.40%	1.70%
Worked at Home	5.90%	4.60%
Mean Travel Time to Work (min.)	26.4	27

Source: U.S. Census Bureau, 2007-2011 American Community Survey

The Journey-to-Work data for Oglethorpe County from 2010 Census corresponds closely to the statewide averages for the various modes of travel. The percentage of carpooled travel in Oglethorpe County (17.2 percent) and percentage of working at home (5.9 percent) are higher than the statewide percentages (11.1 percent and 4.6 percent, respectively). However, the percentage of biking or walking commuters in Oglethorpe County (1.3 percent) and the percentage of public transportation commuters in Oglethorpe County (0.1 percent) are lower than the statewide numbers (1.6 percent and 2.2 percent), respectively, this is potentially due to the lack of bike trails and a publicly accessible transit system in Oglethorpe County. The mean travel time to work in Oglethorpe County (26.4 min.) is slightly lower than the statewide average (27 min.).

The commuting patterns of employed residents of Oglethorpe County are relevant to the *Transportation Plan* development. According to the U.S. Census, out of all employed residents of Oglethorpe County, 56.7 percent traveled to Athens-Clarke County for work. Only 21.8 percent of employed residents traveled to work within Oglethorpe County, 4.3 percent traveled to Madison County, 3.4 percent traveled to Oconee County, and 2.8 percent traveled to Elbert County, with the remaining 11 percent traveled to other counties in the region for work. The large imbalance of work trips originating in Oglethorpe County and destined for locations outside the County could imply a demand for commuter-oriented public transportation services to complete these trips. This could also potentially result in more frequent and longer trips on the transportation system.

Future Employment Projections

Oglethorpe County employment projections were also developed as inputs into the Oglethorpe travel demand model. The projections were estimated based on various sources, including historical employment data, the Oglethorpe Joint City-County Comprehensive Plan 2005-2025, and the GDOT employment forecasting data developed by REMI for the Georgia Northeast Region.

The Georgia Department of Labor collects and distributes detailed employment data by county for the entire state. **Table 2-9** presents the historical employment from 2000 to 2012 for Oglethorpe County. As shown, employment growth has not followed a consistent trend. Overall the employment data remained very similar over the past 12 years with an annual average growth rate of 0.1%.

TABLE 2-9: HISTORICAL EMPLOYMENT IN OGLETHORPE COUNTY

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1,724	1,669	1,698	1,737	1,684	1,741	1,782	1,769	1,755	1,744	1,842	1,815	1,738

REMI produces long term employment forecasts at the national, state, regional and county level and develops economic models for evaluating the total economic effects of various transportation improvements. The most recent projections developed by REMI forecasts annual employment growth of 1.2% for the Georgia Northeast Region (including Oglethorpe County). The Oglethorpe Joint City-County Comprehensive Plan, completed in 2006, projected employment in the County from 2010 to 2025. The comprehensive plan projected an annual growth rate of 2.6% for the period from 2000 to 2025, significantly outpacing its historical growth rate for the 12 year period from 2000 to 2012 and future projected other sources.

Considering the historical employment data and recent economic downturn, as well as REMI's projected annual growth rate for the Georgia Northeast Region, a future growth rate of 1.2 percent per year was assumed. This growth rate was approved by the County and is consistent with the County's current Comprehensive Plan Update.

2.4 LAND USE AND DEVELOPMENT

Existing Land Use

Agricultural and forest lands cover a majority of the landscape in Oglethorpe County, with intermingled low density residential, industrial, and public/institutional uses. Agriculture and forestry lands cover approximately 84 percent of the County, while residential uses cover approximately 12 percent. Industrial and transportation/communications/utilities land uses account for a majority of the remaining land use in the County. The majority of low-density residential uses are located in the northwestern corner of the County closest to Athens, with the dispersed concentrations spreading southeast towards Lexington and Maxeys. The existing land use patterns for Oglethorpe County are shown in **Figure 2-3** on the next page.

Figure 2-3: Existing Land Use

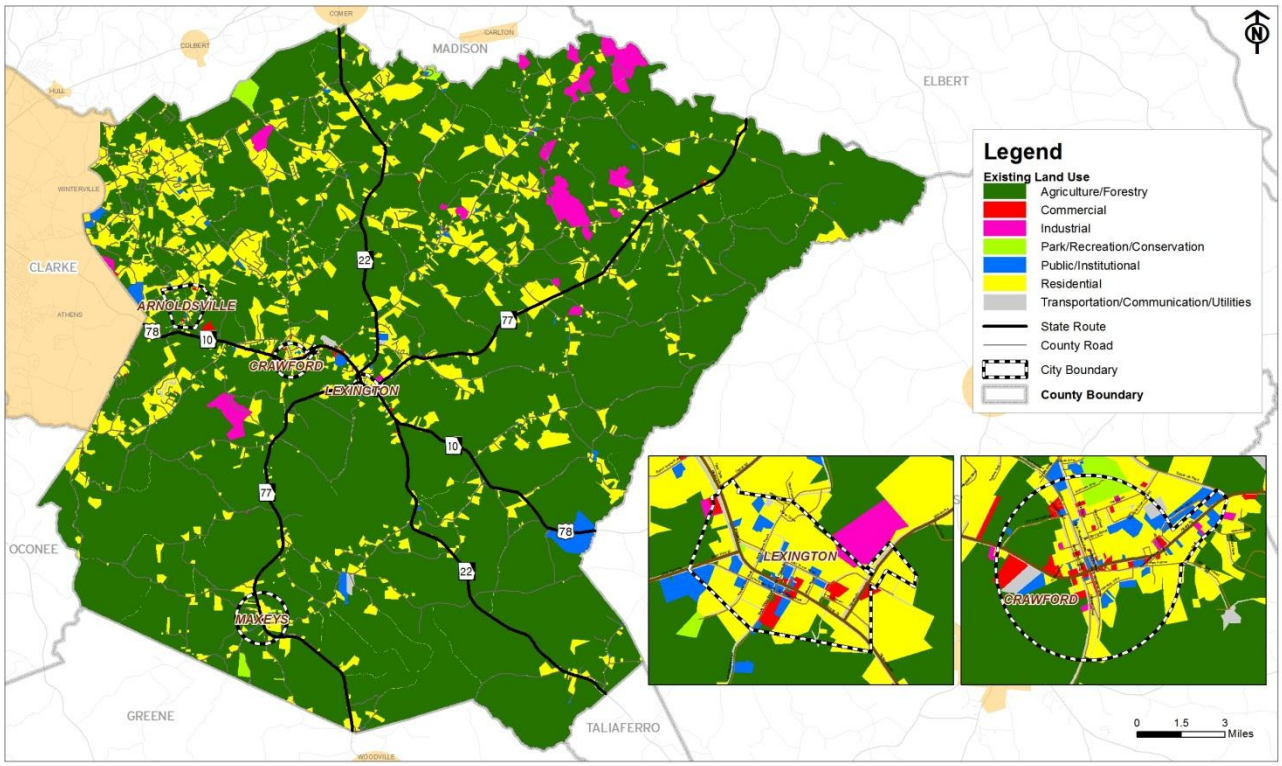


Table 2-10 shows the number of acres for each land use type in the County and the total percentage of the County's land use.

Table 2-10: Existing Land Use Breakdown

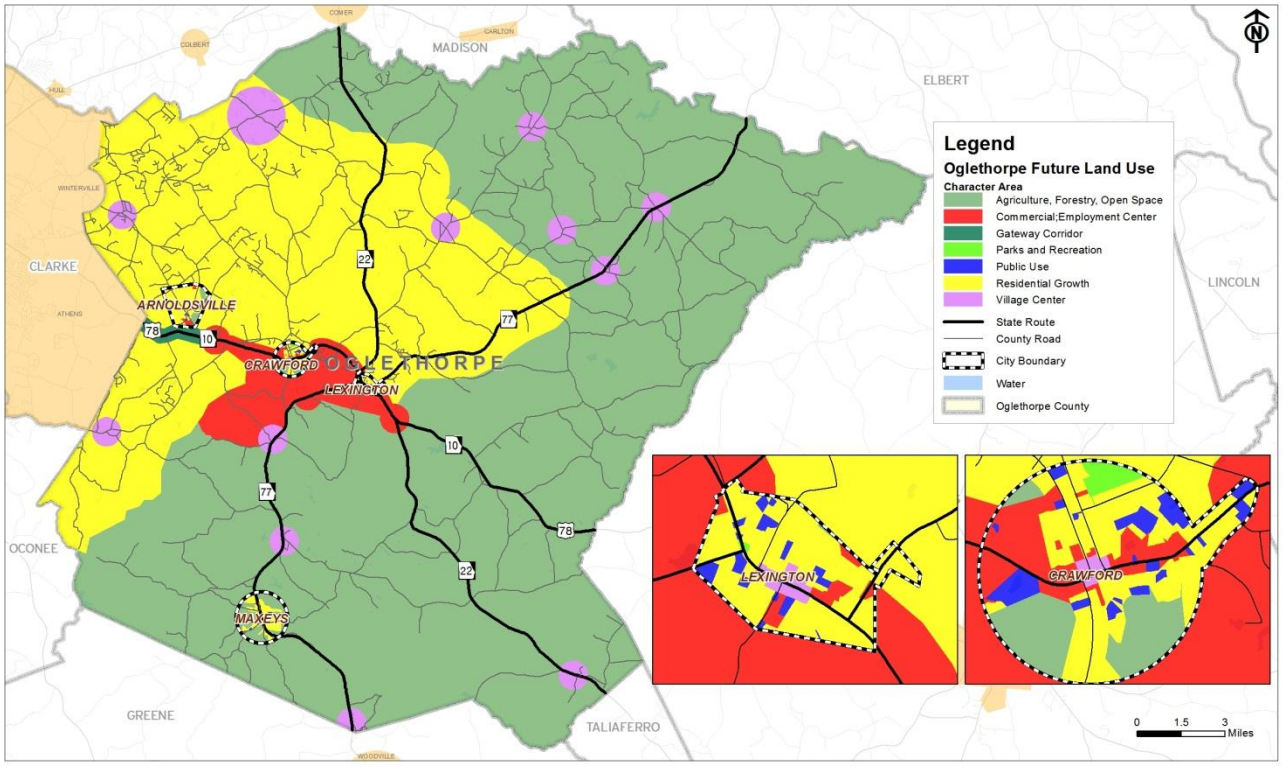
Land Use	Acres	Total %
Agriculture/Forestry	237,582	84%
Residential	33,504	12%
Commercial	418	0.15%
Public/Institutional	2,110	0.75%
Industrial	4,120	1.5%
Park/Recreation/Conservation	671	0.24%
Transportation/Communication/Utilities	4,547	1.6%
Total	**282,952**	**100%**

Future Land Use

The Oglethorpe County Comprehensive Plan identified development concepts in order to guide future land use development across the County. The land use goal of the County is to "promote the orderly development of land to accommodate growth through the coordination of available and planned public facilities and

services and the protection of key natural and cultural resources." The future land use map developed for the Comprehensive Plan is shown in **Figure 2-4** below.

FIGURE 2-4: FUTURE LAND USE



Future land use in Oglethorpe County will be heavily influenced by the expanding Athens metropolitan area. It is anticipated that the County will continue to experience growth in its northwestern portion, and it will be important for County planners to accommodate this anticipated growth by balancing the County's rural and residential development with a focus on expanding the local economy. It will also be important to mitigate any negative impacts to the County's natural and historical resources outlined in the following paragraphs.

2.5 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.

Historic Resources/Structures

Oglethorpe County has protected numerous historical resources within the County. There are three National Register Historic Districts, several individual National Historic properties, a significant number of historic buildings, two unique covered bridges, and sites in the County that represent architecture and history from the late 18th through 20th centuries.

Figure 2-5 illustrates Oglethorpe County's natural/historical resources. **Table 2-11** lists the resource and provides a location. The Watson Mill Covered Bridge (longest covered bridge in Georgia, ca. 1857) and the Howard's or Cloud's Creek Covered Bridge (longest single span, ca. 1904) are two of only a dozen such bridges in Georgia. The Lexington National Register Historic District encompasses virtually the entire city of Lexington. The Philomath National Register Historic District represents a small rural 19th century academic

community. The Smithonia National Register District includes a portion of the James Monroe Smith plantation, known as "Smithonia." The plantation was an empire that covered over 20,000 acres with more than 3,000 workers. It had two railroads, a hotel, mills, factories, streetlights and stores. These resources, as well as the granite Old Crawford Depot (ca. 1848) represent historic resources that are fast disappearing in this country.

FIGURE 2-5: NATURAL/HISTORICAL RESOURCES

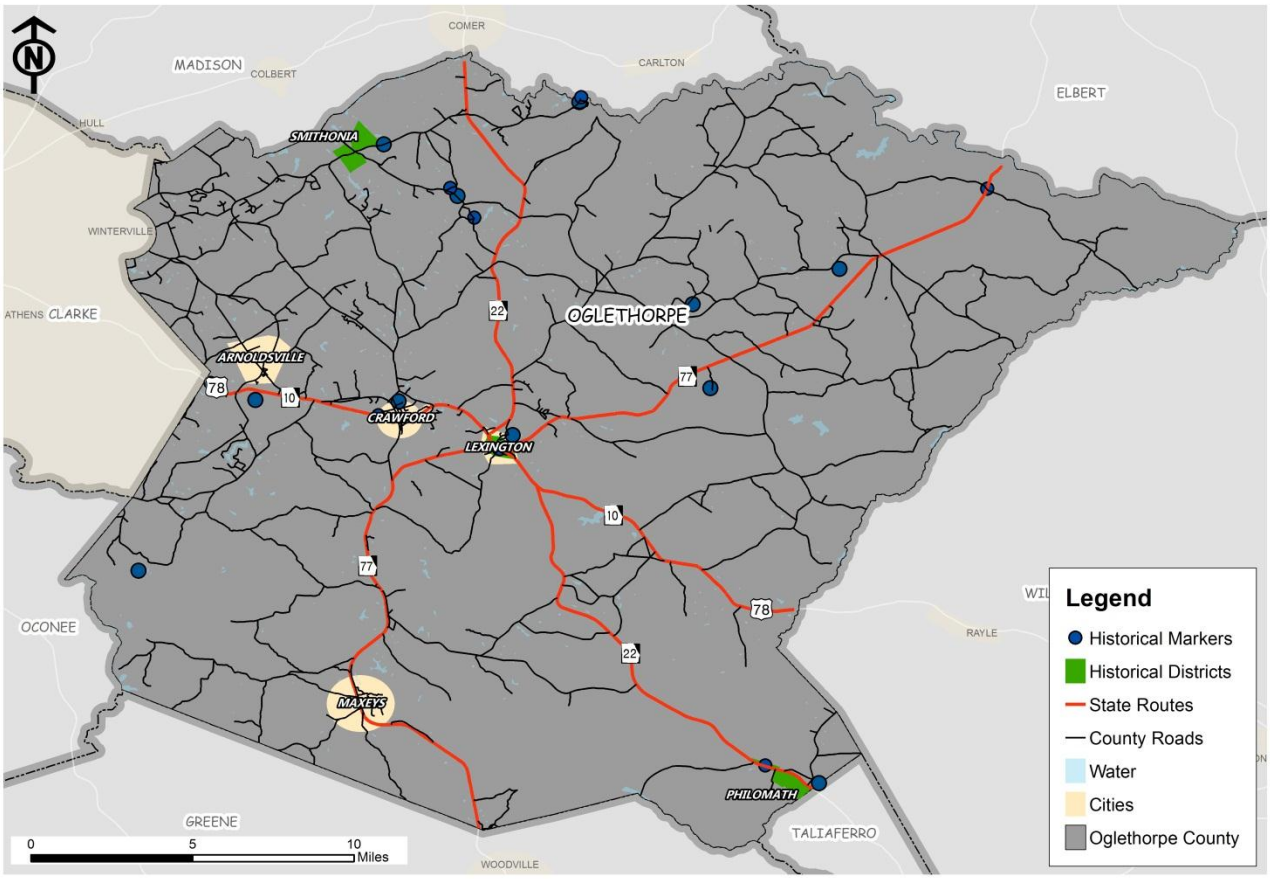


TABLE 2-11: SITES ON THE NATIONAL REGISTER OF HISTORIC PLACES

Historic Place	Location
Amis-Elder House	Crawford
J. L. Bridges Home	Lexington
Crawford Depot	Crawford
Faust Houses and Outbuildings	Lexington
Howard's Covered Bridge	Smithsonia
Langston-Daniel House	Crawford
Lexington Historic District	Lexington
Philomath Historic District	Philomath
Smith-Harris House	Vesta
Smithonia	Comer
Watson Mill Covered Bridge and Mill Historic District	Comer

Community Facilities

It is important to provide efficient connections between key community facilities. Therefore, one component of the Multi-Modal Transportation Plan is to understand where these resources are located and to evaluate community access to these vital facilities. Community facilities, schools, recreational areas, parks and community-identified special places are examined through the transportation needs assessment process of the Multi-Modal Transportation Plan. Those resources were documented and mapped in **Figure 2-6.**

FIGURE 2-6: COMMUNITY RESOURCES

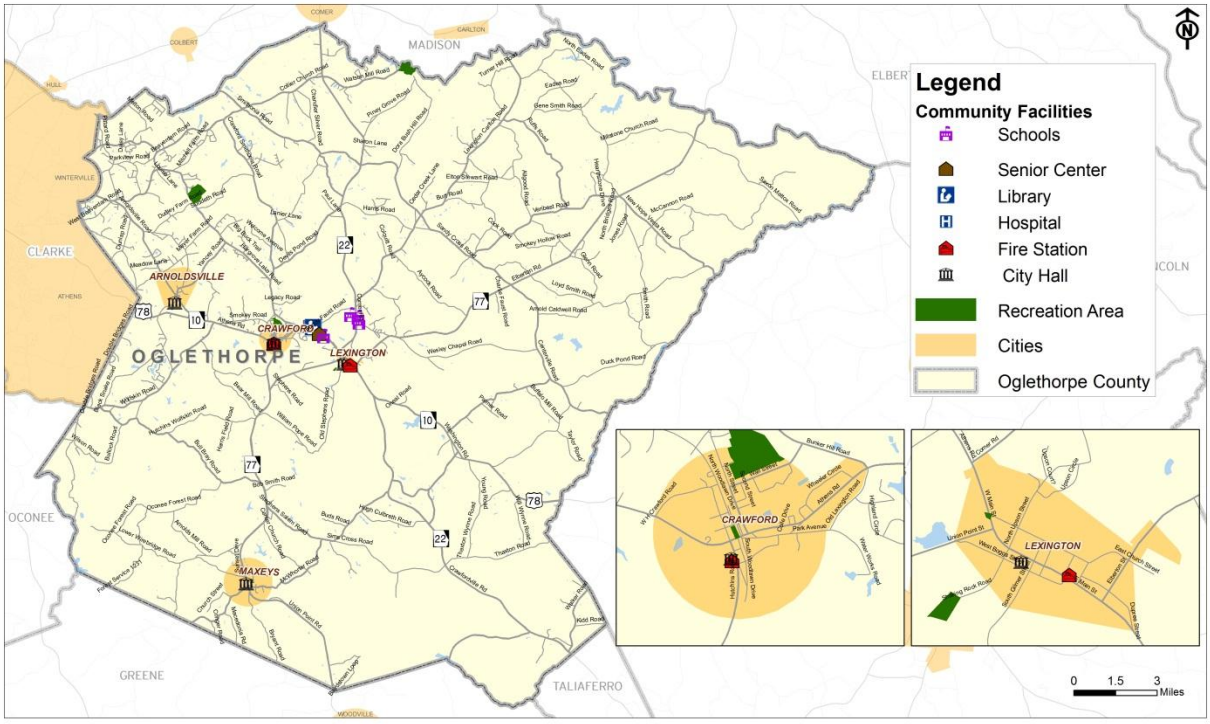


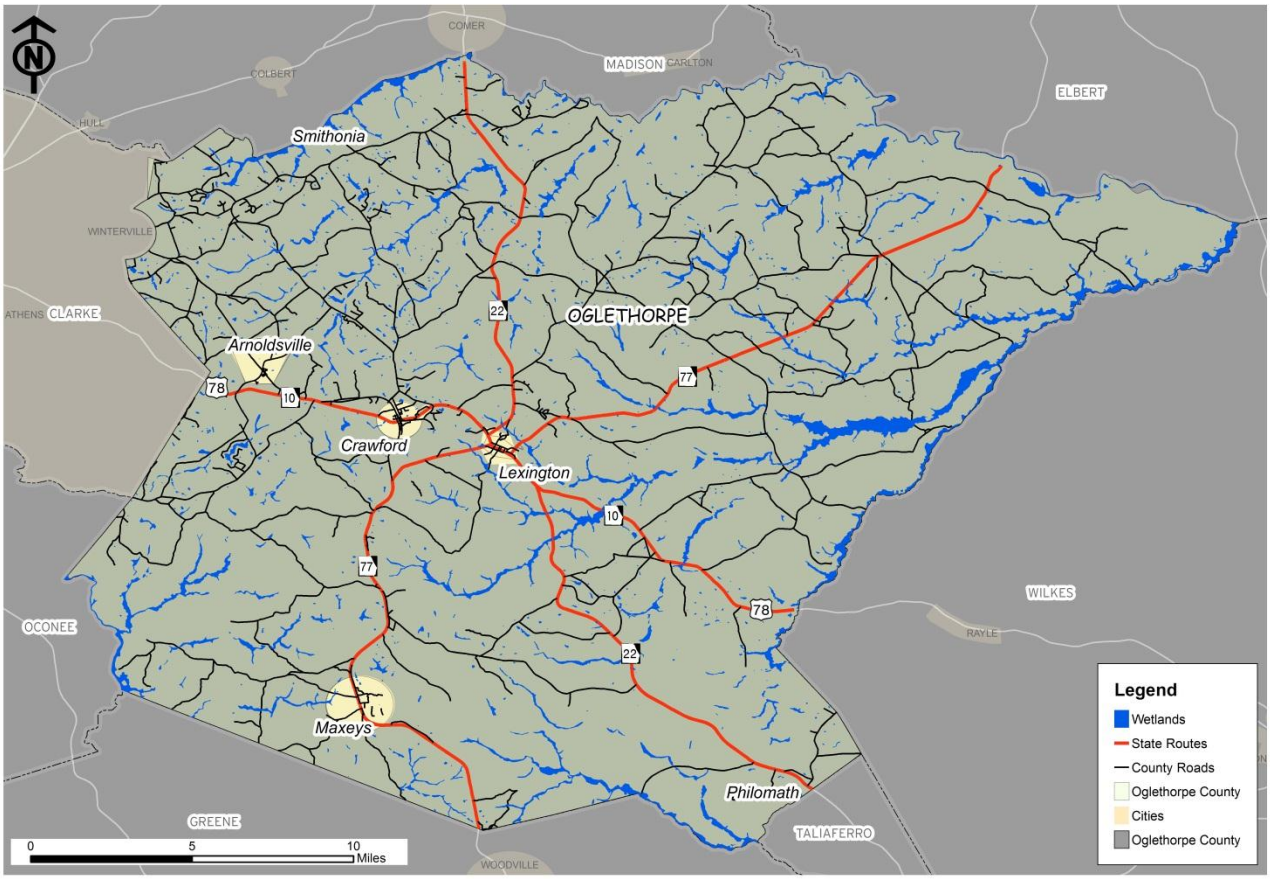
Table 2-12 lists the public schools in Oglethorpe County.

TABLE 2-12: OGLETHORPE COUNTY PUBLIC SCHOOLS

Public Schools	Location
Oglethorpe County Primary School	Lexington
Oglethorpe County Elementary School	Lexington
Oglethorpe County Middle School	Lexington
Oglethorpe County High School	Lexington

The Broad River creates the northern border of the County, while the Oconee River follows along the majority of the southern border. **Figure 2-7** illustrates the environmentally sensitive areas located throughout the County, including rivers, streams, wetlands, and floodplains.

FIGURE 2-7: WETLANDS AND STREAMS



3 Coordination with Previous Studies and Programs

An effective transportation plan accounts for previous planning efforts to ensure continuity between planning documents and that goals, objectives, and related projects recommended for the transportation system are consistent with the established community vision. Several previous studies and planning documents have contributed to the established community vision and existing work program for Oglethorpe County.

To that end, a review of the following planning studies and programs was conducted as part of the Multi-modal Transportation Planning development process:

- Georgia Statewide Transportation Plan (SWTP) and Statewide Strategic Transportation Plan (SSTP)
- Georgia Statewide Transportation Improvement Program (STIP)
- Joint City-County Comprehensive Plan 2005-2025 for Oglethorpe County
- GDOT Statewide Freight and Logistics Plan
- GDOT's Statewide Bicycle & Pedestrian Plan
- Northeast Georgia Regional Bicycle and Pedestrian Plan
- Transit Development Plan for Oglethorpe County
- Northeast Georgia Rural Human Service Transportation (RHST) Study
- Oglethorpe County Parks and Recreation Plan
- Madison Athens-Clarke Oconee Regional Transportation Study

3.1 Georgia SWTP and SSTP

The Georgia Statewide Transportation Plan (SWTP) presented a systematic analysis of existing and future transportation needs. It also assessed the funding available to the State over the 30-year planning horizon. The SSTP, first approved in 2010, includes projects, programs and other activities to support implementation of the state's strategic transportation goals and policies. The plan was updated in 2013 to reflect the two recent developments: the federal transportation funding bill "Moving Ahead for Progress in the 21st Century Act" (MAP-21) and the regional transportation referendum authorized by the Transportation Investment Act (TIA) of 2010 (three out of 12 regions statewide approved the referendum).

The goals developed under the SWTP and SSTP include:

- Support Georgia's economic growth and competiveness;
- Ensure safety and security;
- Maximize the value of Georgia's assets and get the most out of the existing network; and
- Minimize impact on the environment.

3.2 Statewide Transportation Improvement Program (STIP)

The Statewide Transportation Improvement Program (STIP) is Georgia's four-year transportation and capital improvements program which lists federally-funded transportation projects. Projects include highway, bridge, public transit, bike, pedestrian, railroad, and other improvements

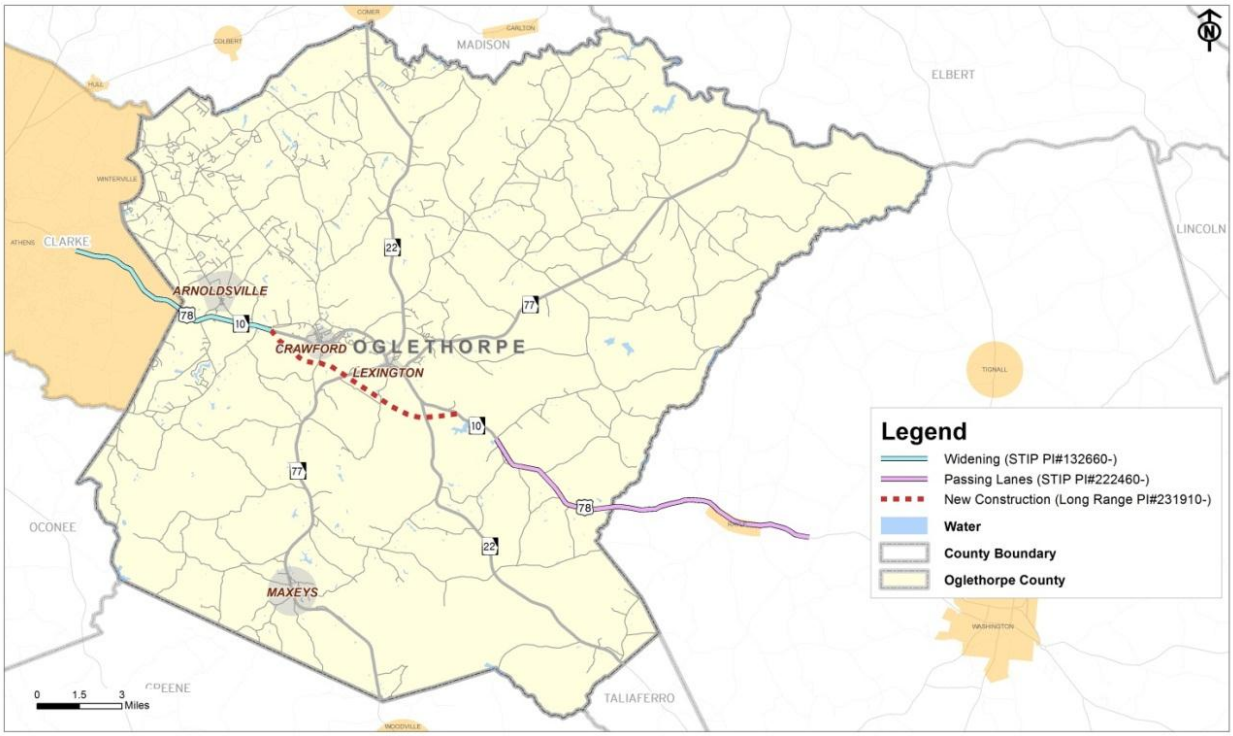
The SWTP and the FY 2014-2017 STIP were reviewed for planned and programmed projects within and/or impacting Oglethorpe County. Planned and programmed improvements for Oglethorpe County include roadway widening, passing lane improvements, and new construction of a bypass, as listed in **Table 3-1**. Additionally, these projects were given a project identification (PI) number by GDOT and are mapped in **Figure 3-1**.

Programmed improvements, for the purpose of this plan, refer to projects with a construction phase included in the STIP within the first four years of the planning horizon of 2014 - 2017. Planned projects refer to all other projects listed in the STIP and GDOT's Long Range Program.

Table 3-1: Planned and Programmed Projects

Project ID	Type	Location	Total Project Cost	Program
222460-	Passing Lanes	SR 10/U.S. 78 in eastern Oglethorpe County and western Wilkes County	$9,132,677	STIP
132660-	Widening	SR 10/U.S. 78 from Whit Davis Road to Smokey Road	$57,020,784	Long-Range
231910-	Roadway Project	Crawford/Lexington Bypass	$44,342,013	Long-Range

Figure 3-1: FY 2013-2016 STIP and Long Rang Projects



The SR 10/U.S. 78 widening project was included in the final transportation project list proposed to be funded through tax revenue from the Transportation Investment Act (TIA) of 2010 for the Northeast Georgia Region. The project could benefit the traveling public by alleviating congestion on SR 10/U.S. 78 and could potentially reduce the incidence of crashes along the corridor and its intersections.

3.3 Joint City-County Comprehensive Plan 2005-2025

In 2006, Oglethorpe County completed the Joint City-County Comprehensive Plan 2005-2025 to identify future capital investments based on the Community Agenda that was composed in 2005. This report is intended to meet the Standards and Procedures for Local Comprehensive Planning as established by the Georgia Department of Community Affairs (DCA) on May 1, 2005. The comprehensive plan developed a map to help guide the community vision of permitted land uses in Oglethorpe County and provided a comprehensive review of the issues and opportunities that will affect the future growth of the community over the next 20 years.

Table 3-2 below presents a summary of the Comprehensive Plan.

Table 3-2: Summary of the Joint City-County Comprehensive Plan

Key Data/Trends	Description
Land Use Issues	• New development is occurring within the unincorporated areas disconnected from existing municipalities. • Residential development is encroaching into active agricultural areas increasing the potential conflicts between farms and subdivisions.
Transportation Issues	• Increased truck traffic and congestion within downtown Lexington and Crawford along SR 10/U.S. 78. • Significant amount of local roads are unpaved. • Increase in Vehicle Miles Traveled (VMT) on local roads that are not designed to accommodate increased levels of traffic. • Lack of alternative modes of transportation, specifically bicycle and pedestrian facilities.
Transportation-Related Goal and Supportive Polices	Goal: Provide a safe, efficient, and effective transportation system that keeps pace with growth and integrates a variety of transportation modes increasing mobility options for all residents. Supportive Policies: • Coordinate transportation planning activities with local, regional, and state agencies. • Coordinate future development decisions with transportation capabilities. • Encourage intensive commercial uses at the intersections of major roads as indicated on the Future Development Map. • Control access points along major roads to decrease congestion and increase safety.

Key Data/Trends	Description
Land Use Issues	• New development is occurring within the unincorporated areas disconnected from existing municipalities. • Residential development is encroaching into active agricultural areas increasing the potential conflicts between farms and subdivisions.
Transportation Issues	• Increased truck traffic and congestion within downtown Lexington and Crawford along SR 10/U.S. 78. • Significant amount of local roads are unpaved. • Increase in Vehicle Miles Traveled (VMT) on local roads that are not designed to accommodate increased levels of traffic. • Lack of alternative modes of transportation, specifically bicycle and pedestrian facilities.
	• Encourage inter-parcel connectivity to minimize the number of access points along major roads. • Encourage the incorporation of sidewalks in new developments where appropriate.

3.4 GDOT Statewide Freight and Logistics Plan

The 2012 Georgia Statewide Freight and Logistics Plan evaluated the state's freight transportation network and the opportunity for Georgia to develop additional freight capacity to improve the movement of goods across the state. The study also considered the development of public-private partnerships in Georgia and neighboring states to ensure future freight growth not only in Georgia, but also across the entire Southeastern United States. Oglethorpe was not identified as one of the leading counties for freight flow in the state of Georgia.

3.5 GDOT Statewide Bicycle and Pedestrian Plan

The Statewide Bicycle and Pedestrian Plan, updated in 1998, includes fourteen bike/pedestrian routes covering approximately 2,943 miles throughout Georgia. Projects that are proposed along those routes must be designed to accommodate bicyclists and pedestrians. The goals developed as part of that study include:

- Promote non-motorized transportation as a means of congestion mitigation;
- Promote non-motorized transportation as an environmentally friendly means of mobility;
- Promote connectivity of non-motorized facilities with other modes of transportation;
- Promote bicycling and walking as mobility options in urban and rural areas of the state;
- Develop a transportation network of primary bicycle routes throughout the state to provide connectivity for intrastate and interstate bicycle travel; and
- Promote establishment of U.S. numbered bicycle routes in Georgia as part of a national network of bicycle routes.

Bicycle/Pedestrian-friendly design elements should be considered into other programmed improvement projects. Several factors were used in evaluating routes, including: accident history, total traffic volumes and

truck volumes, speeds, shoulder and travel lane width, pavement condition, network connectivity, access to cities and major points of interest, aesthetics, and the presence of potentially hazardous spot conditions.

GDOT's Statewide Bicycle and Pedestrian Plan was reviewed to identify proposed facilities in Oglethorpe County and revealed that State Bicycle Route 60 (Athens Link) falls within the bounds of the study area. **Section 4.8**, Bicycle and Pedestrian Facilities, provides further detail about the location and conditions of this State Bicycle Route and other bike and pedestrian facilities within the County.

3.6 Northeast Georgia Regional Bike and Pedestrian Plan

In August 2010, the Northeast Georgia Regional Commission (NEGRC) completed the Northeast Georgia Plan for Bicycling and Walking, which studied an area that includes Oglethorpe County, as well as Barrow, Clarke, Elbert, Greene, Jackson, Jasper, Madison, Newton, Oconee, and Walton Counties. The plan was designed to establish a foundation for developing an implementation plan proposing a network of bicycle and pedestrian facilities for the region. The major goals of the plan were to provide transportation and recreation options to encourage biking and walking, create safer communities, transform communities to support bicycling and walking trips, and enhance the quality of life for residents within the regional commission's boundaries.

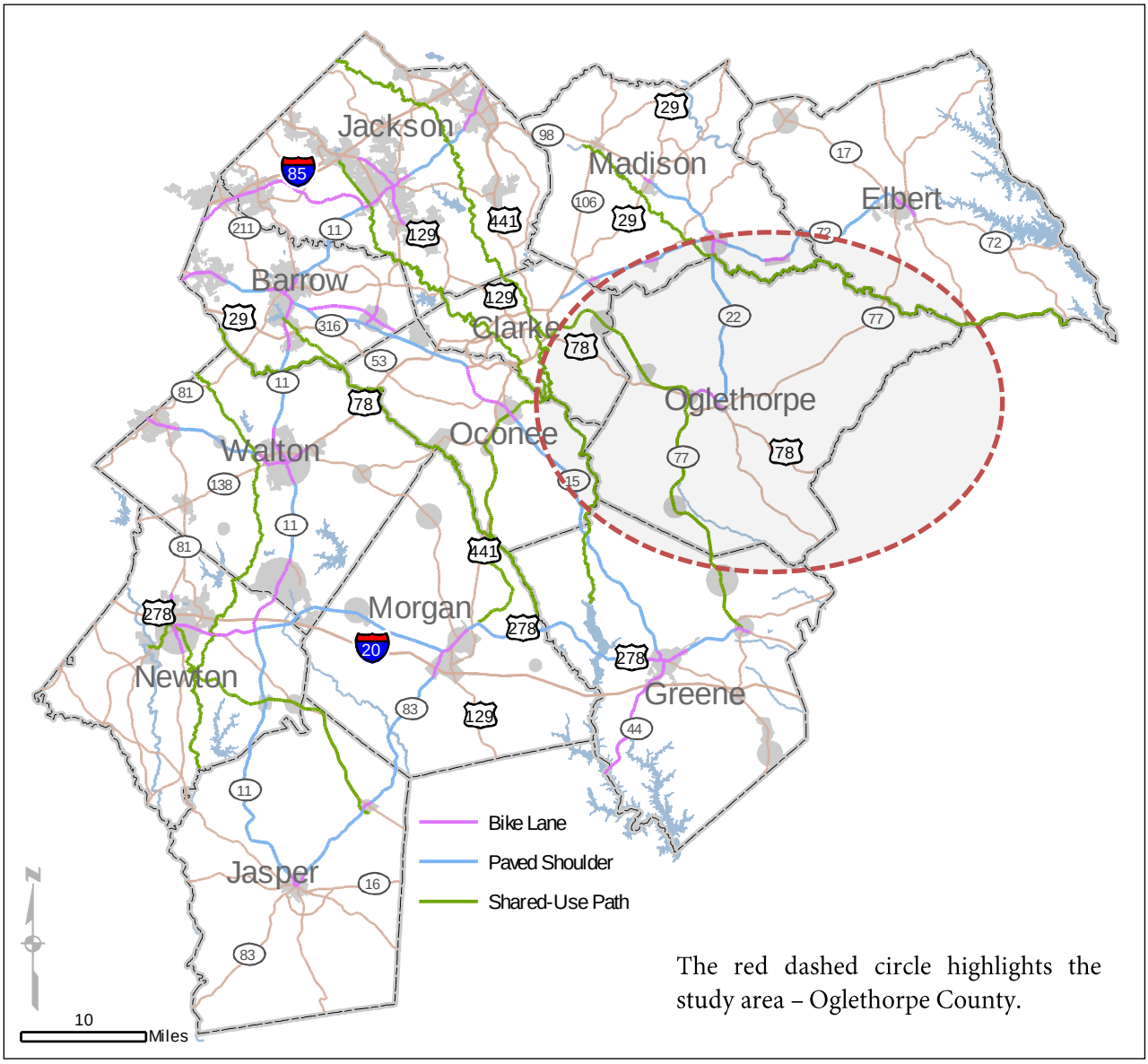
The Plan also identified existing bicycle and pedestrian facilities and activities in the region, and it noted that Oglethorpe County is not equipped with any shared-use paths, bike lanes, *sharrows*, or "share the road" facilities. The Plan identified Critical Focus Areas where demand for bicycle and pedestrian facilities may exist. This was based on examining destinations and activity centers and capturing population within a one-mile "walkshed" and a three-mile "bikeshed" of each destination. This analysis identified Lexington as a Critical Focus Area for bicycle and pedestrian amenity development.

The Plan formulated recommendations for bike lanes, paved shoulders, and shared-use paths for the Region. These recommendations seek to:

- Address connectivity within the Critical Focus Areas;
- Identify connectors between Critical Focus Areas to form a regional network; and
- Identify corridors which offer recreational opportunities based on their connectivity to various destinations or scenic or experience-based amenities.

Specific recommendations for Oglethorpe County are shown in **Figure 3-2**.

FIGURE 3-2: NEGRC REGIONAL BICYCLE AND PEDESTRIAN PLAN



Source: NEGRC – Northeast Georgia Plan for Bicycling and Walking, 2010.

3.7 Transit Development Plan for Oglethorpe County

In 2009, the NEGRC prepared the Transit Development Plan for Oglethorpe County, which provides general and specific options for initiating public transportation in Oglethorpe County. This Plan also conducted a survey to assess opinion and need for public transportation services, with the results of this survey effort summarized as follows:

- Thirty-nine percent (39%) of Oglethorpe County respondents indicated that they would take public transportation to work, while 61% said they would not;
- Sixty-six percent (66%) of respondents said that only some or few transportation needs were being met;
- Over half (>50%) of the respondents felt that there was at least somewhat of a need for public transportation services in Oglethorpe County;
- The most important locations that public transportation should serve included major employers, hospitals, and the Athens Multi-Modal Transportation Center. The least important locations were entertainment and cultural attractions;
- Fuel price was the most frequently cited reason for using public transportation, followed by accessibility and convenience; and
- Nearly half (48%) of respondents would walk less than one-half mile to access public transportation and 16% would walk more than one-half mile. Few respondents would bicycle if facilities were available.

The study drew a number of conclusions regarding the need for public transportation:

- The development of pedestrian and bicycle facilities near public transportation access points would likely increase the amount of walking and bicycling within Oglethorpe County, thus improving residents' health, enhancing livability, and creating tourism and economic development opportunities along these routes;
- Most residents employed outside of Oglethorpe County travel to Athens-Clarke County for work. The inclusion of public transportation could potentially reduce the number of automobiles from Oglethorpe County roads on work days, thus aiding the County in alleviating air pollution and traffic congestion issues, and possibly reducing the need for building a Crawford-Lexington Bypass; and
- Public transportation would enable the growing aging population to retain their independence for a longer period of time, as well as provide opportunities for travel to the grocery store and medical facilities, most of which are located in Athens.

The Plan thus sought to utilize existing resources in order to provide residents with a wider variety of transportation options to serve their needs. The following alternatives and recommendations were presented:

- Park-and-ride and carpool lots;
- Commuter shuttles;
- Rideshare; and
- On-demand transit.

Further detail on each is provided below.

Park-and-Ride and Carpool Lots

The Plan recommended that Oglethorpe County develop park-and-ride lots to facilitate carpooling and vanpooling. The Plan identified four potential park-and-ride locations:

- 1709 Athens Road in Crawford;
- 1185 Athens Road (Quick Pick) in Crawford;
- 1178 Athens Road (Family Dollar) in Crawford; and
- 103 W. Church Street (Lexington Baptist Church) in Lexington.

These lots would serve as a meeting and parking location for various carpooling and vanpooling services.

Commuter Shuttles

Commuter shuttles would operate at peak hours and make stops at the park-and-ride lots. The commuter shuttles could also use open bays at the Athens Multimodal Transportation Center and allow bus transfers onto the Athens Transit buses. Funding for circulator shuttle services could come from the Federal Transit Administration's Section 5311 program and would be administered by GDOT's Intermodal Office. Oglethorpe County would be responsible for a percentage match towards the cost of the program.

Rideshare

Rideshare programs include carpool or vanpool programs. Interested parties are matched up with others traveling to the same or a nearby destination. This type of program could be organized by the County, or accomplished via an existing online service. Riders could utilize the park-and-ride facilities to meet up with their carpool or vanpool.

On-Demand Transit

The study recommended that Oglethorpe County develop an on-demand transit service which would operate on an as-needed basis. With this service, passengers make an appointment for a ride and pay for that ride. Vans with a capacity of five to fifteen passengers are used for this type of program. The vehicles do not typically operate on a specific route or schedule. Fares charged for this service are based on mileage but need to be set so as to be affordable for residents. Funding for circulator shuttle services could come from the Federal Transit Administration's Section 5311 program and would be administered by GDOT's Intermodal Office. Oglethorpe County would be responsible for a percentage match towards the cost of the program.

3.8 Northeast Georgia RHST Study

In June 2012, GDOT completed the Rural Human Services Transportation Plan (RHST) for NEGRC. The Plan evaluated existing rural transit offerings, conducted stakeholder outreach, identified transit needs in the region, and developed a vision for future rural transit options in Northeast Georgia. The Plan findings for regional transit and human service transportation needs (outside of Athens) included:

- Additional transit service across all rural ridership groups, including seniors, low-income households, disabled persons, and people without vehicles;
- Additional transportation options for technical and higher education students;
- More transit options at key regional activity and employment centers;
- Coordination of rural and human service transportation offerings; and
- 24/7 service in some areas.

Oglethorpe County is currently served by T&T Transportation for general RHST trips and Medicaid trips are provided by Logisticare. The major recommendation from the Plan was to address the region's needs identified above by increasing service and coordination between transportation providers.

3.9 Oglethorpe County Parks and Recreation Plan

The Oglethorpe County Parks and Recreation Plan was completed in 2010. The Plan evaluated the need for recreational facility developments across the County, conducted interviews with key stakeholders in the recreation community, and developed park space and recreation program recommendations that would allow the County to improve the quality of life for residents and visitors.

The Plan identified several recreational opportunities for the County, including:

- Revenue generation for parks and recreation;
- Programs and services for older youth and adults;
- Ongoing maintenance and operation of existing facilities;
- Constructing new facilities; and
- Developing awareness for outdoor, conservation and recreational facilities in the County.

3.10 Madison Athens-Clarke Oconee Regional Transportation Study

In 2009, the Athens-Clarke County Planning Department conducted the Madison Athens/Clarke Oconee Regional Transportation Study (MACORTS) to update their 2035 Long Range Transportation Plan (LRTP). The MACORTS LRTP was developed directly from the considerations laid out by the federally mandated Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

The study area covered Athens-Clarke County and northern half of Oconee County and the southernmost portion of Madison County and will likely have a large impact on the future transportation developments in western Oglethorpe County. The transportation projects identified in the MACORTS study that border Oglethorpe County are identified in **Table 3-3** below.

Table 3-3: MACORTS Projects Terminating at Oglethorpe County Line (Unfuned)

MACORTS Project ID	Project Name	Project Description
ACC-5	Lexington Highway Widening	Widen Lexington Rd (SR 10/U.S. 78) to 4-lane divided highway with turn lanes at major intersections from Whit Davis Rd to Oglethorpe county line.
OC-8	Bob Godfrey/Barnett Shoals Widening	Widen Bob Godfrey/Barnett Shoals Rd to a standard two-lane section from the Oconee River to the Oglethorpe County line.

4 Transportation Network and Operating Conditions

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

4.1 Roadway Characteristics

This section presents the characteristics of the roadways in Oglethorpe County. The data is provided from GDOT's Roadway Characteristics (RC) Database. The following data was reviewed as part of the study process:

- Functional Classification;
- Roadway Lanes;
- Roadway Shoulders; and
- Roadway Surface Type.

Functional Classification

Roadways are grouped into functional classes according to the character of traffic they are intended to serve. GDOT 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/doingbusiness/PoliciesManuals/roads/Pages/OtherResources.aspx

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

- **Rural Principal Arterials** typically 1) serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel; 2) serve between urban areas with 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.
- **Rural Minor Arterials** typically 1) link cities and larger towns and form an integrated network providing interstate and inter-county service; 2) 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.
- **Rural Collector Roads** primarily serve intra-county travel rather than statewide travel and constitute those routes on which predominant travel distances are shorter than on arterial routes. Consequently,

more moderate speeds may be typical, on average. Collectors are typically classified as "major collector" and "minor collector."

- **Local Roads** – primarily 1) 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.

Table 4-1 shows the lane mileage for all the road classifications in Oglethorpe County. The Oglethorpe County study area has approximately 105 lane miles of arterial facilities, 323 lane miles of collectors and 687 lane miles of local streets.

TABLE 4-1: ROADWAY FUNCTIONAL CLASSIFICATIONS

Classification	Lane Mileage	% of Total Lane Miles
Principal Arterials	37	3%
Minor Arterials	68	6%
Major Collector	181	16%
Minor Collector	142	13%
Local	687	62%
Total	1,115	100%

Source: GDOT Office of Transportation Data-Mileage by Route Type and Road System

Table 4-2 below displays the mileage and vehicle miles traveled (VMT) for the different roadway classifications in Oglethorpe County and the State of Georgia. The Oglethorpe County study area is served by multiple state roads (approximately 14 percent of the lane miles), which handle close to 45 percent of the traffic. To ensure future mobility for Oglethorpe County, it is important to evaluate and identify needed improvements to the state road system through the development of this Plan.

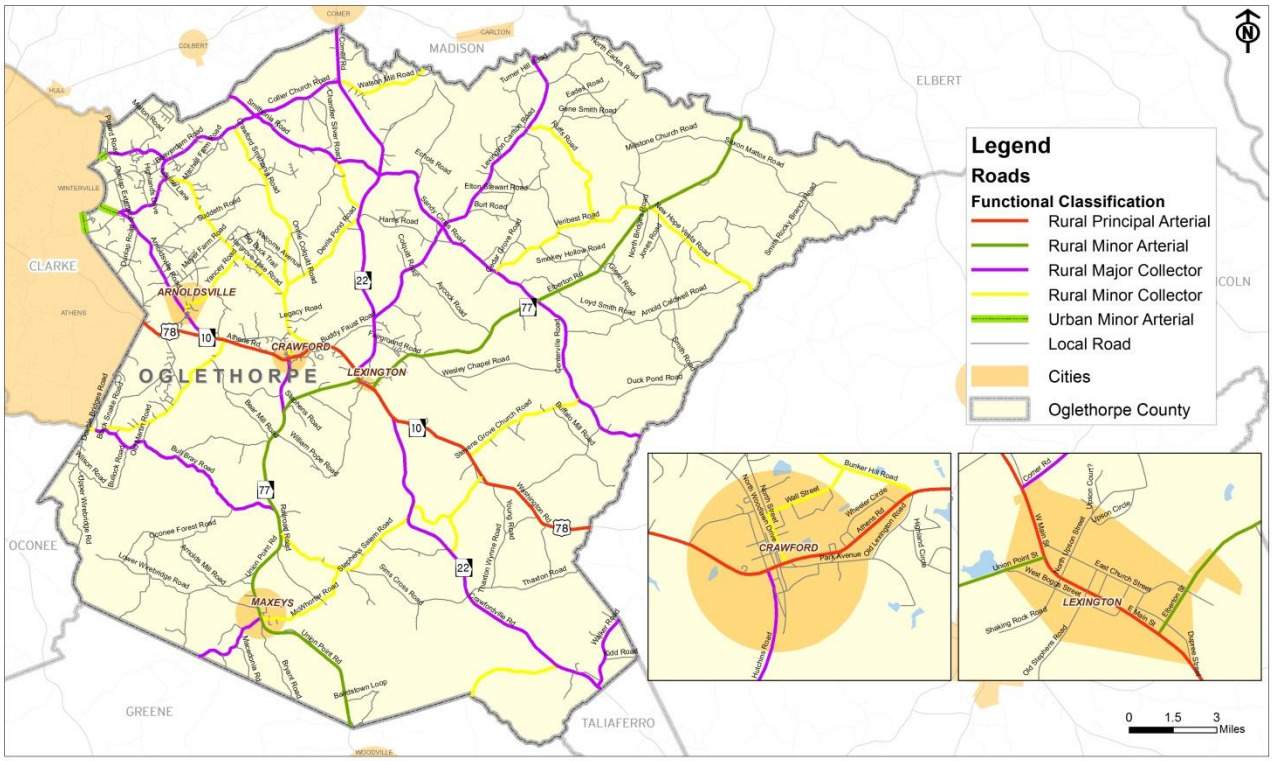
TABLE 4-2: MILEAGE AND VEHICLE MILES TRAVELED

Geographic Area	State Roads		County Roads		Local Roads		Total	
	Miles	VMT	Miles	VMT	Miles	VMT	Miles	VMT
Oglethorpe County	77	171	456	207	25	16	558	394
Georgia	17,985	180,752	97,296	77,035	21,492	48,269	118,773	306,056

Source: GDOT Office of Transportation Data-Mileage by Route Type and Road System

Figure 4-1 displays the functional classification of roadways in Oglethorpe County.

FIGURE 4-1: FUNCTIONAL CLASSIFICATION

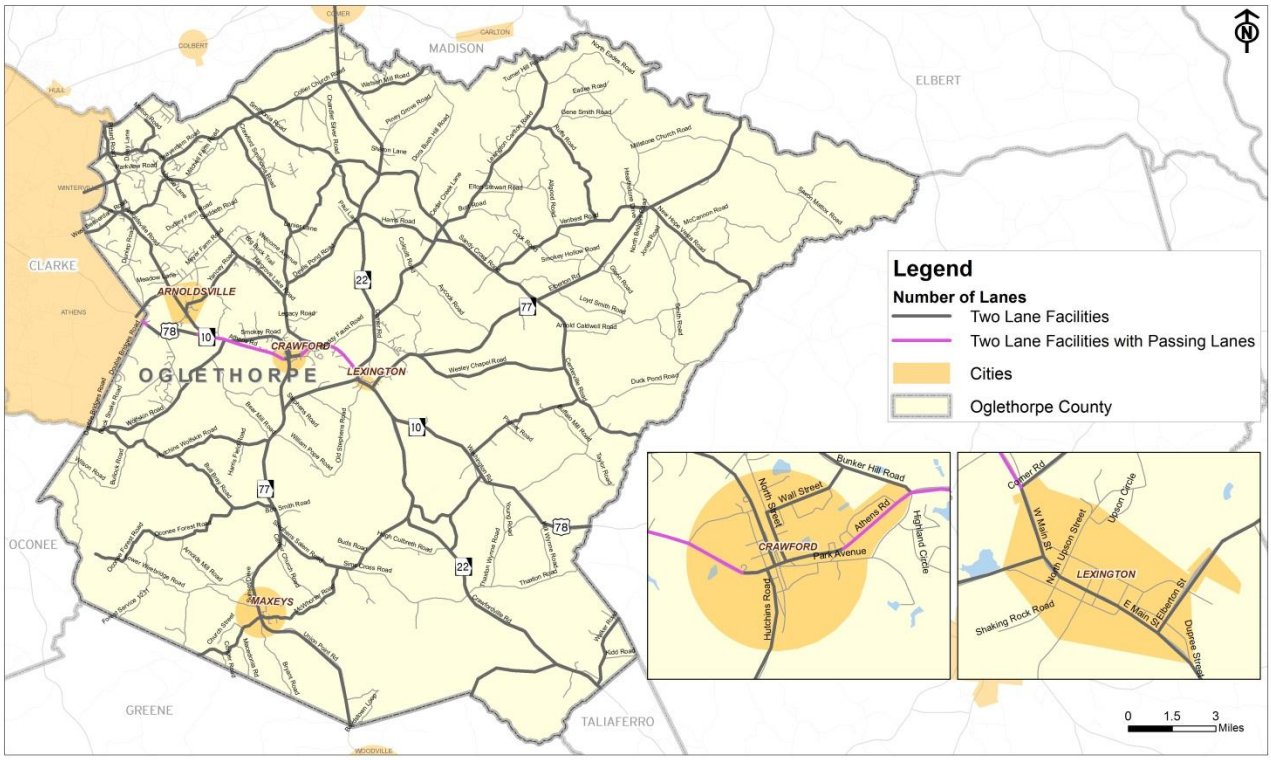


Roadway and Passing Lanes

Another important attribute reviewed from GDOT's RC Database is the number of lanes provided on each road. The roads in Oglethorpe County serve traffic in both directions. Additionally, all roads in the study area are 2-lane facilities with the exception of U.S. 78 from east of Dunlap Road to SR 22/Comer Road, which has periodic passing lanes for alternate directions. The passing lanes improve traffic flow and provide motorists opportunities to safely and easily pass slower vehicles.

Figure 4-2 displays the total number of lanes on the roads in Oglethorpe County.

FIGURE 4-2: TOTAL NUMBER OF LANES



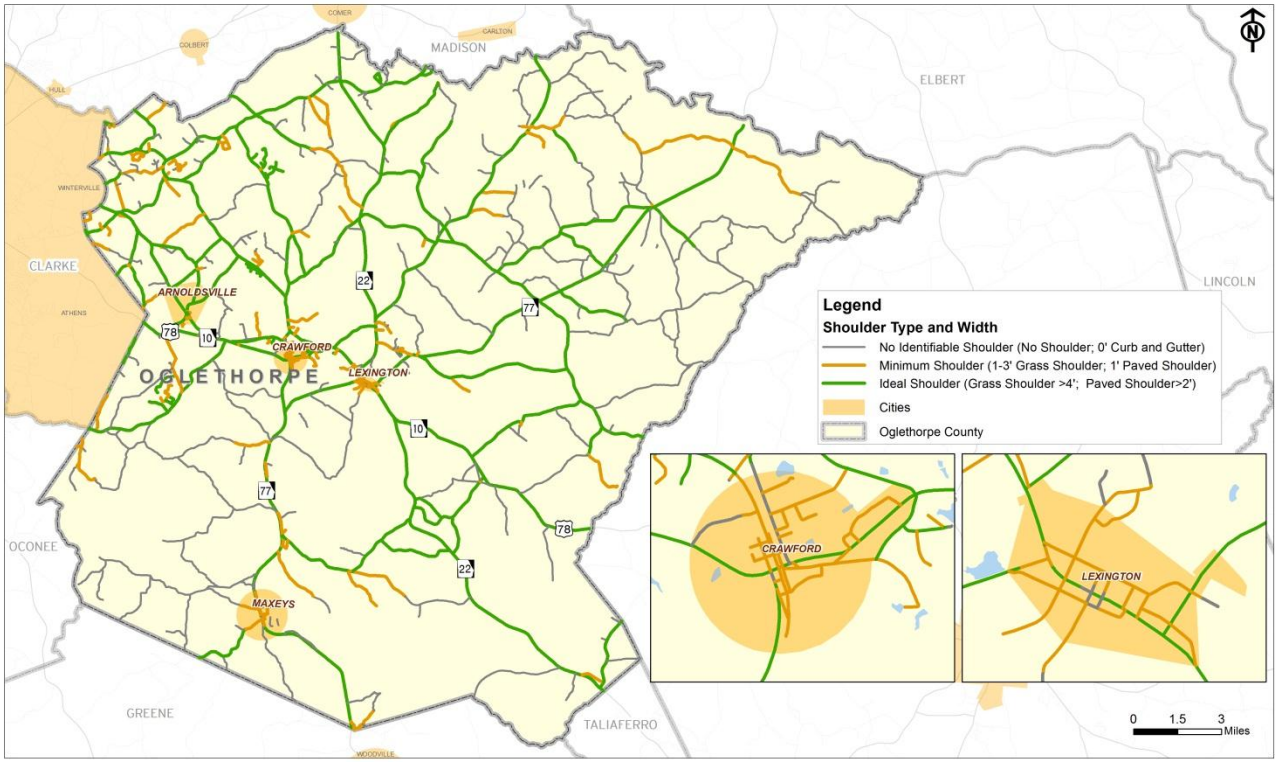
Roadway Shoulders

Another important attribute reviewed from GDOT's RC Database is roadway shoulders. For this analysis, both the shoulder type and width were reviewed to determine roadway segments in need of potential shoulder upgrades. A wide variety of shoulder widths and types are present throughout Oglethorpe County. Insufficient shoulder width can contribute to travel speed reductions, potentially impact safety, and may influence bicycle and pedestrian usage. The following guidelines are used to determine potential shoulder deficiencies:

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

Figure 4-3 displays the roadway shoulder type and widths according to GDOT's RC Database for Oglethorpe County. Roadway segments with potentially deficient shoulders will become candidates for recommended upgrades.

FIGURE 4-3: ROADWAY SHOULDER TYPE AND WIDTH



Roadway Surface Type

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

Paved Roads

- **High Rigid** - Portland cement concrete pavement 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.

Unpaved Roads

- **Gravel or Stone Road** - A road, the surface of which consists of gravel or stone. Surfaces may be stabilized.
- **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.

Approximately 529 miles of roadways in Oglethorpe County are dirt or gravel. This constitutes approximately 47 percent of the total roadway mileage of Oglethorpe County. **Table 4-3** below shows the mileage and the paved road percentage for all the road classifications in Oglethorpe County.

TABLE 4-3: MILEAGE AND PAVED ROAD PERCENTAGE

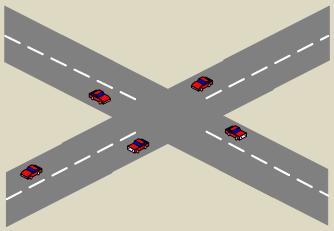
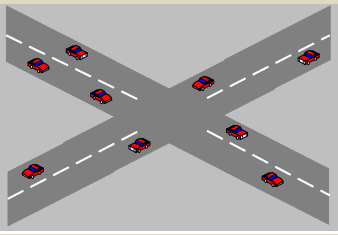
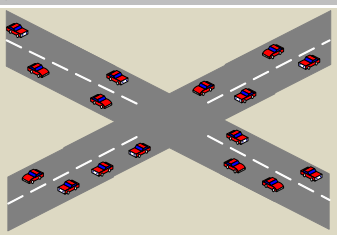
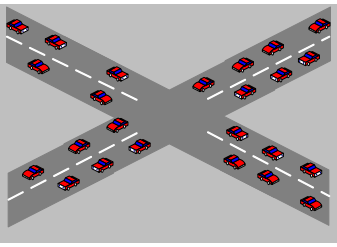
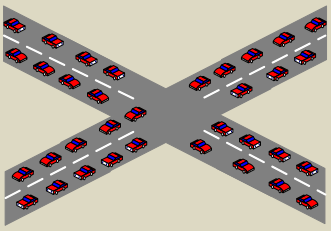
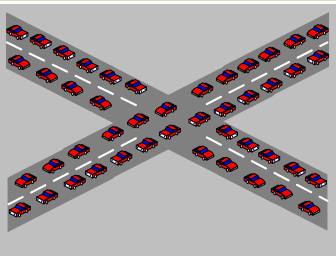
Classification	Total Lane Mileage	Paved Lane Mileage	% Paved
Principal Arterials	37	37	100%
Minor Arterials	68	68	100%
Major Collector	181	163	90%
Minor Collector	142	124	87%
Local	687	194	56%
Total	1,115	586	53%

4.2 EXISTING AND FUTURE ROADWAY OPERATING CONDITIONS

The travel demand model developed for the Athens-Clarke County MPO was expanded to represent Oglethorpe County's transportation network in order to assist with analysis of existing and future roadway operating conditions. More detailed information regarding the model and model development process is presented in **Appendix A**: Oglethorpe County Model Documentation Technical Memorandum. The key output from the travel demand model is the daily volume-to-capacity ratio for each roadway segment. Each volume-to-capacity ratio corresponds to a level of service based on accepted methodologies from the 2010 Highway Capacity Manual.

Prior to documenting the existing operating conditions, it is useful to summarize level of service. Level of service (LOS) is a qualitative measure of traffic flow describing operating conditions. Six levels of service are defined by the Federal Highway Administration (FHWA) in the Highway Capacity Manual 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 representing the worst. A facility may operate at a range of levels of service depending upon time of day, day of the week, or period of the year. A qualitative description of the different levels of service is provided in the table below. **Table 4-4** on the next page shows the level of service description and depiction.

TABLE 4-4: LEVEL OF SERVICE DESCRIPTION AND DEPICTION

Level of Service Description	Level of Service Depiction
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.	

The recommended approach used to identify deficient segments in Oglethorpe County was to analyze the volume of traffic on the roadway segments compared to the capacity of those segments, also known as the volume-to-capacity (V/C) ratio. For daily operating conditions, any segment identified as LOS D or worse was considered deficient.

The following thresholds were used to assign a level of service to the V/C ratios for rural facilities based on GDOT standards:

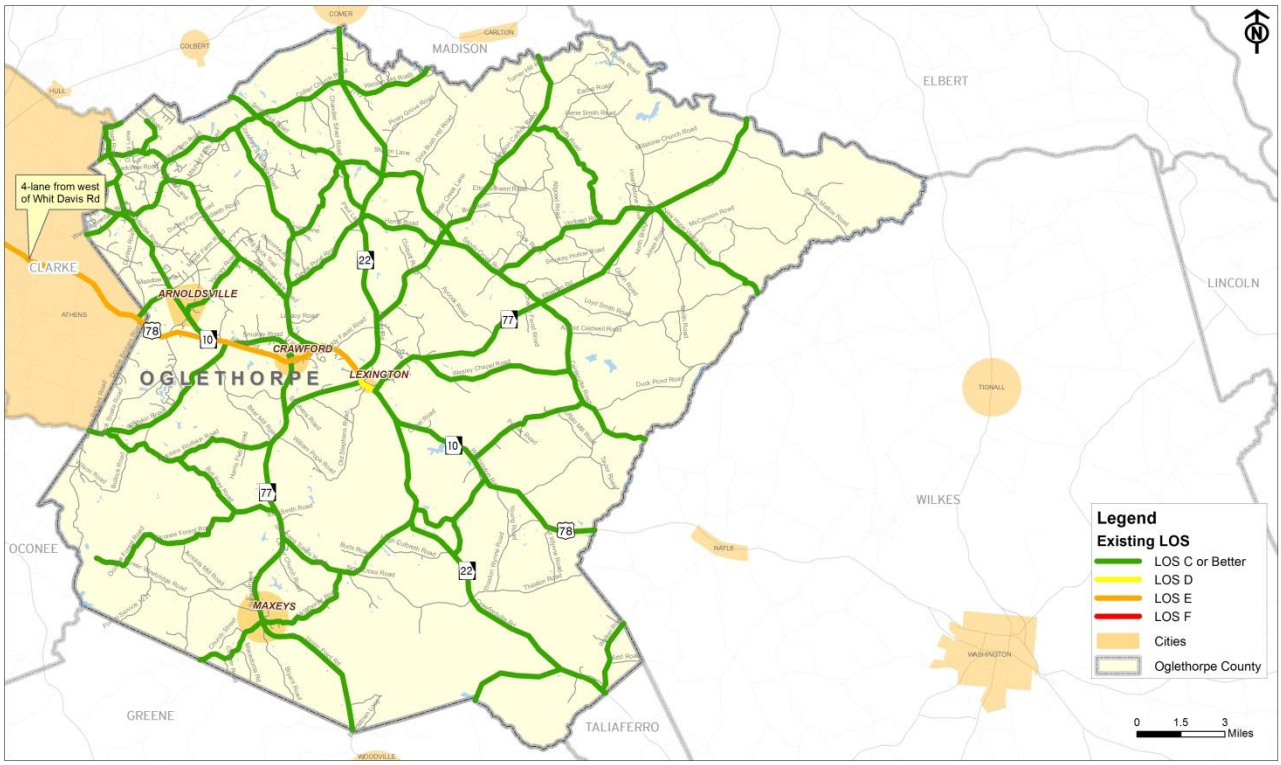
- V/C < 0.35 = LOS C or better;
- 0.35 < V/C < 0.55 = LOS D;
- 0.55 < V/C < 1.00 = LOS E; and,
- V/C > 1.00 = LOS F.

The existing conditions results derived from observed traffic count data where available, and the Oglethorpe County travel demand model, were used to determine deficient roadway segments. The existing analysis shows that the majority of roadways in Oglethorpe County currently operate at an acceptable LOS during daily conditions. Two segments currently operate daily at or below LOS D. **Table 4-5** displays the deficient roadway segments with the LOS for daily operating conditions. **Figure 4-4** displays the existing LOS for Oglethorpe County.

TABLE 4-5: EXISTING (2010) DEFICIENT SEGMENTS

Road	Location	Two-Way Daily Volume	V/C	LOS	Distance (miles)
SR 10/U.S. 78	between Whit Davis Road and Smokey Road	8,630 - 10,500	0.58 - 0.70	E	8.2
SR 10/U.S. 78	between SR 22 and SR 77	5,830	0.42 - 0.46	D	0.9

FIGURE 4-4: EXISTING (2010) LEVEL OF SERVICE (LOS)



Future operating conditions were evaluated for year 2040. In order to develop and evaluate future travel conditions, an existing plus committed (E+C) network was developed based on the existing network with the addition of committed projects identified in GDOT's STIP. Projects with funding of the construction phase authorized in the STIP year during 2013-2017 were considered "committed." Since no projects in Oglethorpe County have the construction phase authorized in the STIP year, the E+C network was the same as the existing roadway network and it was used to determine how well the roadway network would serve the future population and employment in Oglethorpe County, should no further improvements be funded.

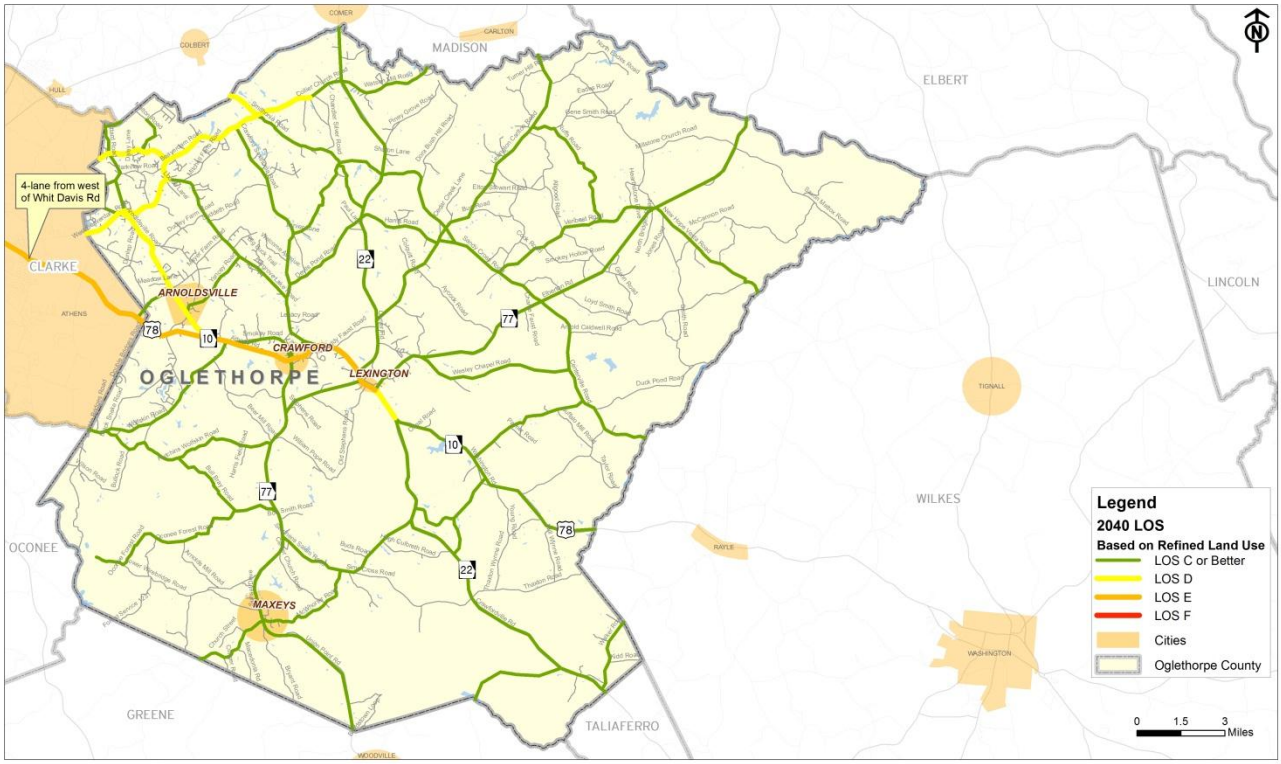
This long range transportation plan uses the adjusted population and employment projections based on various sources, which were discussed in detail in Chapter 2. Both projections were approved by the County and are consistent with the County's current Comprehensive Plan Update to ensure the plans are working in concert. It is useful to point out that the long-term projections for population and employment are the least reliable. This is not due to specific inaccuracies or projection techniques, but simply because it requires the judgment of stakeholders to assign population and employment throughout the study area, which in turn impacts estimates of travel demand. These long term results should be considered preliminary and when the transportation plan is updated every 3 to 5 years, the projects should be reexamined and amended as necessary.

The 2040 analysis shows that 10 segments can be expected to operate at or below LOS D under daily conditions. **Table 4-6** displays the deficient roadway segments with the LOS for daily operating conditions. **Figure 4-5** displays the future LOS for Oglethorpe County.

TABLE 4-6: FUTURE (2040) DEFICIENT SEGMENTS

Road	Location	Volume	V/C	LOS	Distance (miles)
SR 10/U.S. 78	Between Elberton Road and Double Bridges Road	4,070 - 6,450	0.37 - 0.86	E	13.2
SR 10/U.S. 78	Between Crawfordville Road and Elberton Road	2,690 - 2,740	0.37 - 0.38	D	2.3
Arnoldsville Road	Between SR 10/U.S. 78 and W Beaverdam Road	1,020 - 3,150	0.32 - 0.99	D	10.7
W Beaverdam Road	Between Robert Hardeman Road and Arnoldsville Road	1,110 - 1,120	0.33 - 0.37	D	2.7
Hargrove Lake Road	Between Arnoldsville Road and Beaverdam Road	1,400 - 1,700	0.44 - 0.53	D	4.6
Beaverdam Road	Between Hargrove Lake Road and Smithonia Road	1,070 - 1,480	0.36 - 0.49	D	7.1
Smithonia Road	Between Monticello Ct and Beaverdam Road	1,250 - 2,130	0.39 - 0.59	D	5.1
Crawford Smithonia Road	Between Beaverdam Road and Collier Church Road	1,290 - 1,350	0.43 - 0.45	D	1.5
Collier Church Road	Between Crawford Smithonia Road and Howard Bridge Road	1,140 - 1,170	0.36 - 0.39	D	3.9
Smithonia Road	Between Beaverdam Creek and Crawford Smithonia Road	1,520 - 1,550	0.51 - 0.52	D	2.3

Figure 4-5: Future (2040) Level Of Service (LOS)



4.3 Crash Analysis

The most recent available vehicular crash data from GDOT (2007 - 2011) was collected and analyzed for state roads in the County. The crash data was also analyzed using the Critical Analysis Reporting Environment (CARE) software developed by the University of Alabama. Crash data was used to determine roadway locations with potential safety deficiencies throughout the study area. The study area experienced a total of 739 crashes, with 19 fatal crashes (approximate 3%) and 289 non-fatal injury crashes (approximate 40%).

Crash Intersections

Table 4-7 and **Figure 4-6** illustrate the 24 crash locations (which represent intersections having at least three crashes during the analysis period) in the County. The highest crash location in the study area is at the intersection of U.S. 78/Athens Road at Buddy Faust Road, with 14 crashes between 2007 and 2011. The next highest crash locations in the County are at the intersections of U.S. 78/Athens Road and SR 22/Comer Road, U.S. 78/Athens Road at North Street, and Yancey Road at Arnoldsville Road. Of the 24 crash locations, one fatal crash occurred at the intersection of SR 22/Comer Road at Sandy Cross Road and two fatal crashes occurred at the intersection of SR 22/Comer Road at Collier Church Road.

Table 4-7: Crash Intersection Locations, 2007-2011

Intersection	Number of Crashes	Fatal Crashes
U.S. 78/Athens Road at Buddy Faust Road	14	0
U.S. 78/Athens Road at SR 22/Comer Road	12	0

Intersection	Number of Crashes	Fatal Crashes
U.S. 78/Athens Road at North Street	12	0
Yancey Road at Arnoldsville Road	12	0
U.S. 78/Athens Road at N Woodlawn Road	11	0
U.S. 78/Athens Road at Broad Street	9	0
U.S. 78/Atlanta Street at SR 77	8	0
U.S. 78/Athens Road at Smokey Road	8	0
Main Street at Wolfskin Road	7	0
Sandy Cross Road at Lexington Carlton Road	6	0
U.S. 78/Athens Road at Bunker Hill Road	6	0
U.S. 78/Athens Road at Oglethorpe Drive	6	0
SR 22/Comer Road at Collier Church Road	6	2
SR 22/Comer Road at Lexington Carlton Road	5	0
SR 22/Comer Road at Sandy Cross Road	5	1
Hargrove Lake Road at Arnoldsville Road	5	0
Arnoldsville Road at W Beaverdam Road	4	0
U.S. 78/Atlanta Street at Church Street	4	0
U.S. 78/Athens Road at Yancey Road	4	0
SR 77/Elberton Road at Sandy Cross Road	3	0
U.S. 78/Athens Road at WH Crawford Road	3	0
Devils Pond Road at Crawford Smithonia Road	3	0
Watkins Farm Road at Sandy Cross Road	3	0
GW Bray Road at Arnoldsville Road	3	0

Crash Road Segment

In addition to crash intersection locations, segment-level crash analysis was another area of focus. One measure that is used to determine the potential safety deficiencies is the roadway segment crash rate. Crash rates (crashes per hundred million vehicle miles traveled) for a roadway segment were calculated based on the following equation:

$$Crash\ Rate = \frac{(number\ of\ crashes\ in\ X\ years) * 100{,}000{,}000}{(AADT) * (X\ years) * (365\ days/year) * (distance)}$$

Crash rates on state route segments were investigated based on the CARE crash data and AADT counts for the year 2010. Error! Not a valid bookmark self-reference. displays the comparison of Oglethorpe County state route segment crash rates and Georgia statewide average crash rates. From the table, it can be found that most of the state routes in the County experienced lower crash rates, with only three segments having a higher crash rate than the statewide average. The segments with higher crash rates are:

- SR 22 from Piney Grove Road to County Line (74% higher than the statewide average);
- U.S. 78 from Smokey Road to Bunker Hill Road (11% higher than the statewide average); and
- U.S. 78 from Bunker Hill Road to SR 77 (60% higher than the statewide average).

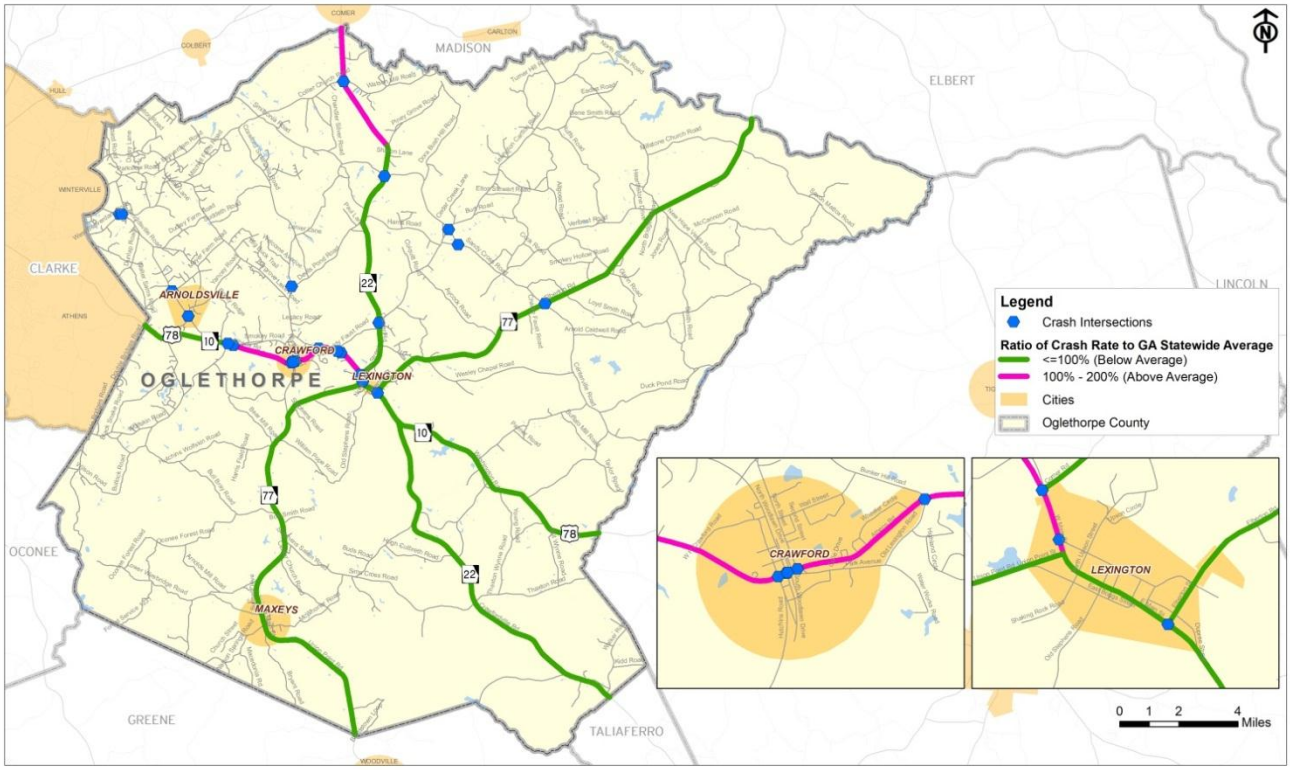
In addition to the crash intersection locations, fatal crash locations could also indicate the roadway safety deficiency to a certain degree. Potential roadway problems and future improvements should be examined at the fatal crash locations. Over the four years, there were a total of 16 fatal crashes that occurred in Oglethorpe County. Approximately 60 percent of the fatal crashes (11 out of 16) were located on state routes in the County. This suggests that targeted safety improvements, such as signage or shoulder widening, could be beneficial. **Figure 4-6** displays the crash locations and segments combined.

TABLE 4-8: STATE AND OGLETHORPE STATE ROUTE SEGMENT

Corridors	Segment	From	To	Distance (miles)	ADT	Total Crash (2010)	Crash Rate	Functional Classification	GA Average Crash Rate (2010)	% to GA Average Crash Rate
SR 22 North	1	US 78	Lexington Carlton Rd	2.1	2,580	1	51	Rural Major Collector	194	26%
	2	Lexington Carlton Rd	Harris Rd	3.6	880	0	0	Rural Major Collector	194	0%
	3	Harris Rd	Piney Grove Rd	2.7	1,500	0	0	Rural Major Collector	194	0%
	4	**Piney Grove Rd**	**County Line**	**4.5**	**1,800**	**10**	**338**	**Rural Major Collector**	**194**	**174%**
SR 77 North	1	US 78	County Line	16.6	878	8	150	Rural Minor Arterial	184	82%
SR 77 South	1	US 78	Hutching Rd	2.9	680	0	0	Rural Major Collector	194	0%
	2	Hutching Rd	Salem Rd	4.5	2,220	2	55	Rural Minor Arterial	184	30%
	3	Salem Rd	County Line	8.7	1,540	1	20	Rural Minor Arterial	184	11%
SR 22 South	1	US 78	Sims Cross Rd	7.3	1,150	1	33	Rural Major Collector	194	17%
	2	Sims Cross Rd	County Line	5.5	710	0	0	Rural Major Collector	194	0%
US 78	1	County Line - West	Smokey Rd	3.2	8,630	7	69	Rural Principal Arterial	131	53%
	2	**Smokey Rd**	**Bunker Hill Rd**	**3.11**	**9,080**	**15**	**146**	**Rural Principal Arterial**	**131**	**111%**
	3	**Bunker Hill Rd**	**SR 77 / Union Point Rd**	**2.1**	**9,320**	**15**	**210**	**Rural Principal Arterial**	**131**	**160%**
	4	SR 77 / Union Point Rd	SR 77 / Elberton Rd	0.59	5,830	1	80	Rural Principal Arterial	131	61%
	5	SR 77 / Elberton Rd	Salem Church Rd	4.49	4,963	0	0	Rural Principal Arterial	131	0%
	6	Salem Church Rd	County Line - East	5.02	2,600	3	63	Rural Principal Arterial	131	48%

Source: ADT - GDOT 2010 STARS DATA; GA Average Crash Rate - GDOT

FIGURE 4-6: CRASH INTERSECTION LOCATIONS AND ROAD SEGMENT



4.4 BRIDGES

Another critical transportation area of emphasis in Oglethorpe County is bridge conditions. Existing bridges were evaluated to determine the need for potential improvement. In addition to bridges, existing fords located within the County were also evaluated. A ford is a type of river-crossing that while less costly to construct than a bridge, has a higher likelihood of becoming impassable after heavy rain or during flood conditions. Deficient bridges and impassable fords can pose an obstacle to a fully functional road network. The study area was reviewed to identify all bridges and fords to assess the need for potential improvements.

Existing Bridges

Sufficiency rating is the general measure of the condition of each bridge. The sufficiency rating is used to determine the structural and geometric condition of the bridge, and represents the structural safety, adequacy, serviceability, and necessity of public use. This measure is used to identify need for maintenance, rehabilitation or reconstruction of a bridge structure. Bridges are rated on a point system from 1 to 100 (the maximum rating). The sufficiency rating can be used to establish a priority based bridge rehabilitation and reconstruction. It is important to note that bridges with ratings below 50 could be still able to safely accommodate traffic; however, upgrading these bridges to modern design and load standards will improve the operation and safety of the bridge, as well as the capacity of the roadway. All bridges with a sufficiency rating of 50 or lower were identified as deficient for purposes of the Plan. **Table 4-9** below provides a bridge inventory with a sufficiency rating for each in Oglethorpe County.

Table 4-9: Bridge Inventory

Road	Water Feature	Sufficiency Rating
Vesta Palmetto Road	Macks Creek	100
Young Road	Buffalo Creek	100
Vesta Palmetto Road	Little Macks Creek	100
Double Bridges Road	Moss Creek	100
Philomath-Woodville Road	Syls Fork Creek	100
Hutchins-Wolfskin Road	Barrow Creek	100
Melton Road	Sulfur Spring Branch	100
Old Stephens Road	Brooks Creek	100
Penny Harris Road	Grove Creek	100
SR 77	Indian Creek	99.7
SR 77	Little Indian Creek	99.7
Hargrove Lake Road	Mill Creek	99.5
SR 77	Goosepond Creek	99.5
SR 22	Brooks Creek	98.6
SR 22	Long Creek Overflow	98.6
SR 22	Long Creek	98.3
Gene Smith Road	Millstone Creek	96.5
SR 22	South Fork Broad River	95.2
McWhorter Road	Raiden Creek	92.5
Bull Bray Road	Barrow Creek Tributary	92.5
McWhorter Road	North Fork Little River	92.5
Hargrove Lake Road	Hawks Creek	92
SR 22	Buffalo Creek	91.6
Smithsonia Road	Sulphur Spring Br Tributary	91.6
Sandy Cross Road	Grove Creek	88.9
U.S. 78/ SR 10	Long Creek	86.6
Centerville Road	Buffalo Creek	85.6
SR 22	Big Clouds Creek	83.6
U.S. 78/ SR 10	Buffalo Creek	83.5
Centerville Road	Long Creek	82.7
U.S. 78/ SR 10	Dry Fork Creek	82.6
SR 22	Grove Creek	82.6
Pennfield Wirebridge Road	Sandy Creek	81.5

Centerville Road	Indian Creek	81.5
Lem Edwards Road	Sulfur Spring Branch	81.4
Hargrove Lake Road	Big Cloud Creek Tributary	80.9
U.S. 78/ SR 10	Moss Creek	79.4
Centerville Smithonia	Big Clouds Creek	77.2
Saxton-Mattox Road	Goosepond Creek	76
Wilson Road	Big Creek	74.3
SR 77	Broad River	73.6
Crawford-Smithonia	Hawks Creek	65.4
Arnold Caldwell Road	Long Creek	63.5
Godfrey Road	Big Creek	62.4
Crawford-Smithonia Road	Big Clouds Creek	54.8
Levington-Garlston Road	South Fork Broad River	50.6
Smithonia Road	Beaverdam Creek	49.8
Duck Pond Road	Dry Fork Creek	25.6
Saxton-Mattox Road	Long Creek	13
Watson Mill Road	South Fork Broad River	4

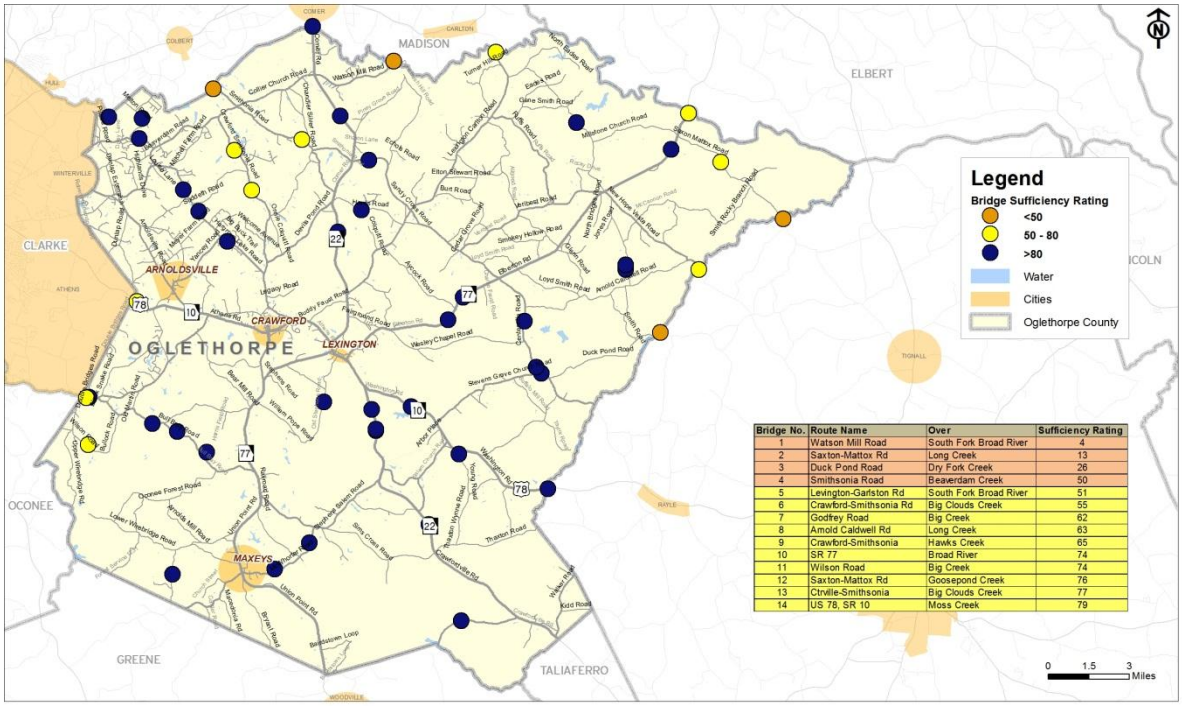
Based on the sufficiency rating, the majority of the 50 bridges in Oglethorpe County are in good condition and not in need of any major maintenance or upgrade activities. There are four bridges that have a sufficiency rating below 50 and are potentially eligible for maintenance and rehabilitation in the next 10-15 years, as follows:

- Watson Mill Road over South Fork Broad River (4.0 sufficiency rating);
- Saxton-Mattox Road over Long Creek (13.0 sufficiency rating);
- Duck Pond Road over Dry Fork Creek (25.6 sufficiency rating); and
- Smithonia Road over Beaverdam Creek (49.8 sufficiency rating).

In addition, there are 10 bridges that have a sufficiency rating between 50 and 80 and should be considered candidates for maintenance and rehabilitation within the horizon year of the Plan (2040). The candidate bridges in Oglethorpe County for maintenance and rehabilitation are mapped in **Figure 4-7.**

While this Plan reviewed bridge condition reports and identified bridges potentially eligible for maintenance and rehabilitation in the next 10-15 years, GDOT's Bridge Office continuously monitors all bridges throughout the state for maintenance, rehabilitation, and replacement needs.

FIGURE 4-7: BRIDGE SUFFICIENCY RATING



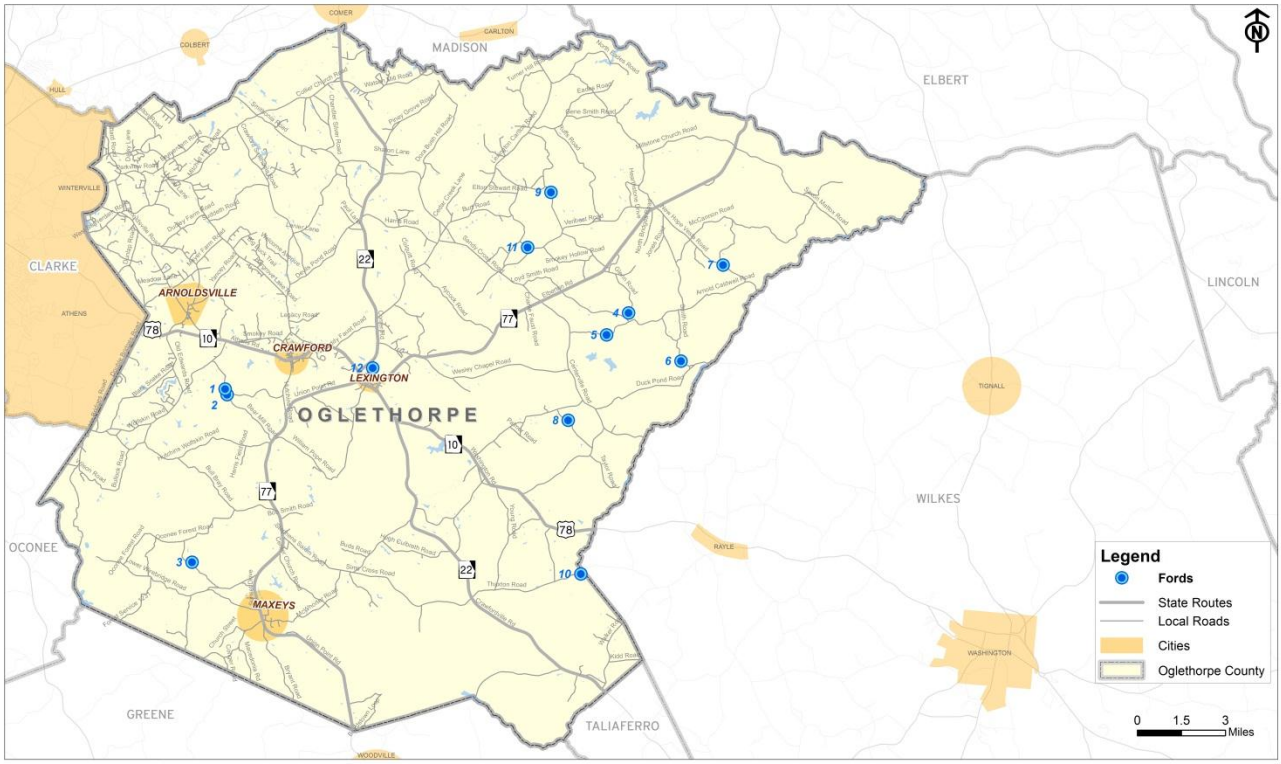
Bridge No.	Route Name	Over	Sufficiency Rating
1	Watson Mill Road	South Fork Broad River	4
2	Saxton-Mattox Rd	Long Creek	13
3	Duck Pond Road	Dry Fork Creek	26
4	Smithsonia Road	Beaverdam Creek	50
5	Lexington-Garlston Rd	South Fork Broad River	51
6	Crawford-Smithsonia Rd	Big Clouds Creek	55
7	Godfrey Road	Big Creek	62
8	Arnold Caldwell Rd	Long Creek	63
9	Crawford-Smithsonia	Hawks Creek	65
10	SR 77	Broad River	74
11	Wilson Road	Big Creek	74
12	Saxton-Mattox Rd	Goosepond Creek	76
13	Ctrville-Smithsonia	Big Clouds Creek	77
14	US 78, SR 10	Moss Creek	79

Existing Fords

There are 12 fords (**Figure 4-8**) in Oglethorpe County where either the dilapidated bridges have been abandoned or bridges have never been built. All the fords are shallow enough to be crossed by cars and other wheeled or tracked vehicles. The problem with fords is that they overflow in wet weather.

The fords in Oglethorpe County are mostly located on local roads, except the ford located on New Hope Vesta Road, which is classified as a rural minor collector. While the traffic volumes on the fords are relevant lower than the traffic volumes on most existing bridges, as the population and economy in the Oglethorpe County continues to grow, some fords may pose constraints on the load limits and/or safety concerns.

FIGURE 4-8: FORD LOCATIONS



4.5 PUBLIC TRANSPORTATION

Existing County Services

Oglethorpe County does not currently operate any on-demand rural transit services. An on-demand rural transit system typically utilizes vans and provides a fare-based, pick-up and delivery service for any residents who request it via a 24-hour advance trip appointment. On-demand rural transit is largely funded by Federal Transit Administration (FTA) Section 5311 Rural Public Transportation Funding and is administered by GDOT's Intermodal Office.

Oglethorpe County does provide transportation services for its low-income and disabled population via the Human Services Transit program, which provides transportation for Medicaid recipients, Temporary Assistance for Needy Families (TANF) recipients, and eligible residents receiving assistance from the Department of Behavioral Health and Developmental Disabilities. This program, funded at the federal and state level, is administered by the Georgia Department of Community Health (Georgia DCH) and the Georgia Department of Human Services (Georgia DHS).

The Senior Center in Crawford

Additionally, Oglethorpe County operates a Senior Citizens Center, located in Crawford. The Senior Center provides daily transportation and other services for its 65+ members. County residents age 60 and over are eligible for membership to the

center. The center is equipped with two large vans and two minivans which can transport up to 35 passengers. These vehicles provide services for two-hours in the morning and two-hours in the afternoon for routes throughout the County each day to transport members to and from their homes to the Center. Depending on the daily activities planned, the vans may take members to the Wal-Mart in Athens for their groceries, prescriptions and household goods; to scheduled medical appointments; and/or to other shopping and recreational destinations. The Senior Center transportation services are funded by the County and by the Georgia Division on Aging Services (Georgia DAS).

Regional Services

The Northeast Georgia region's only fixed route public transit system is operated by Athens Transit for Athens-Clark County. This system, funded by FTA Section 5307 Urban Public Transit Funding, offers a multi-modal bus, van and vehicle terminal located in downtown Athens; 19 fixed bus routes; various special shuttle services; and four park-and-ride facilities. The park-and-ride facility located in the parking lot at the Wal-Mart Supercenter at 4375 Lexington Road is approximately 10 to 12 miles from Crawford and Lexington along the U.S. 78 corridor.

Four of the twelve counties, as well as one city in NEGRC, currently offer rural public transportation services. Elbert, Greene, Jackson and Morgan Counties, as well as the city of Social Circle in Walton County, each operate individual on-demand transit systems. There is currently no connectivity between these county systems, nor is there connectivity to the Athens Transit system.

4.6 Freight Transport

Truck freight activity in Oglethorpe County is centered on the timber, granite and agricultural industries. According to the Georgia Statewide Freight and Logistics Plan (2011), truck traffic is concentrated on U.S. 78, SR 77, and SR 22. The truck percentage ranges from 13% to 17% for U.S. 78; 14% to 23% for SR 22; and 10% to 22% for SR 77, based on the GDOT 2010 State Traffic and Report Statistics (STARS) data. The Average Annual Daily Traffic (AADT) count on any thoroughfare in the County is generally below 1,000 trucks per day. However, along U.S. 78 between Athens and Lexington, truck traffic increases with an AADT greater than 1,000 trucks per day.

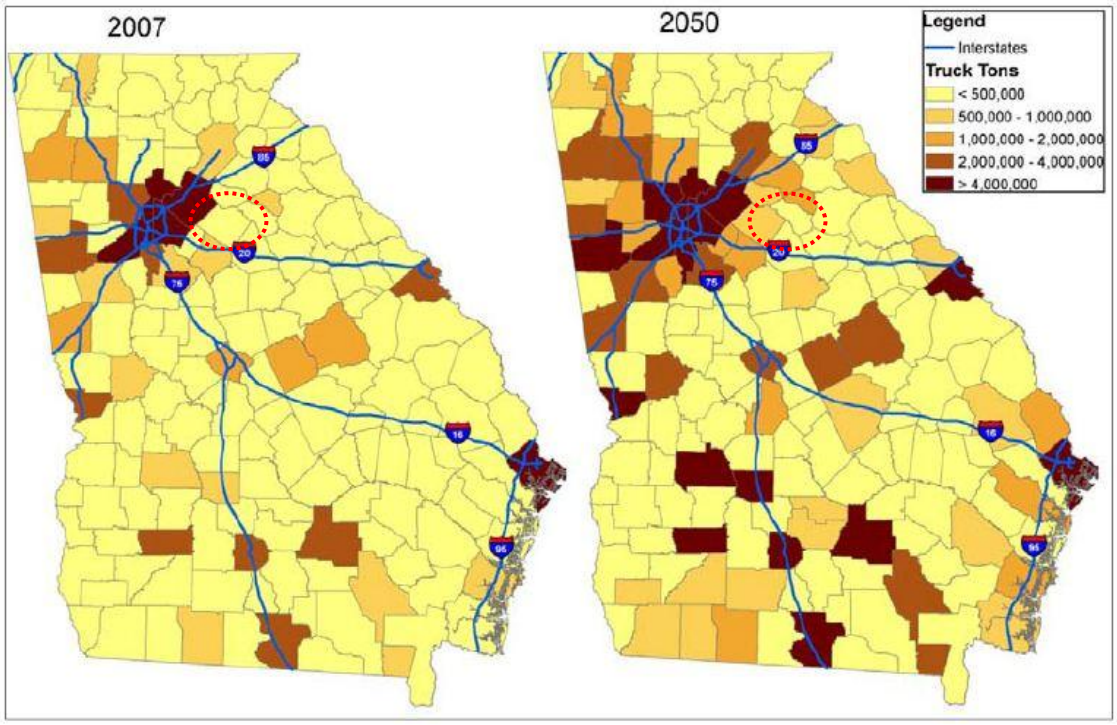
Inbound and outbound trucks each carry up to 500,000 tons of goods per year through Oglethorpe County. As seen in the Figures below, the Georgia Statewide Freight and Logistics Plan forecasts that while inbound truck tonnage will experience minor growth, outbound truck tonnage is projected to grow between 500,000 and 1,000,000 tons per year by the year 2050.

Natural resources in Oglethorpe County, such as timber and granite, account for the projected increased growth in outbound freight. Oglethorpe County has one of the highest acreages of timber in northeastern Georgia. Timber forested throughout the County is transported to a number of plant locations, including paper mills along the Georgia coast. The northeastern part of Oglethorpe County overlays rich deposits of monument-quality granite, supporting a number of quarries and granite-related industries. Much of the granite quarried in the County is trucked primarily to its point of sale in Elbert County. This trend may change somewhat as the industry expands in the County, resulting in increased truck traffic transporting granite material into Lexington for point of sale.

In addition to timber and granite, the movement of agricultural projects accounts for much of the freight traffic in the County. Oglethorpe County produced 54.1 million broilers in 2007, ranking the fifth in Georgia counties (U.S. Department of Agriculture, Census of Agriculture). Poultry and poultry products, in particular,

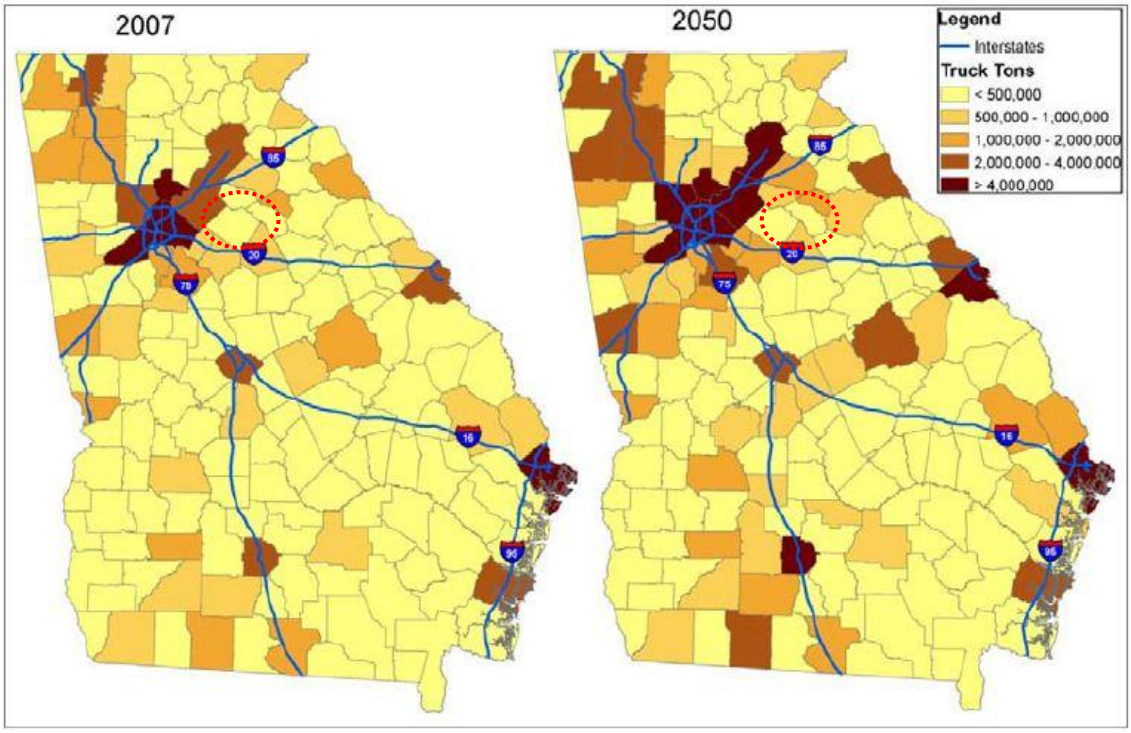
are transported to major processing plants (Pilgrim's Pride and Harrison, Inc.) in the Athens, Elberton, and Bethlehem areas.

Figure 4-9: Inbound Truck Tons in Georgia, 2007 and 2050



Source: Georgia Statewide Freight and Logistics Plan, 2011

Figure 4-10: Outbound Truck in Tons, 2007 and 2050



Source: Georgia Statewide Freight and Logistics Plan, 2011

U.S. 78 is a popular thoroughfare for both local and thru-truck traffic in the County with trucks traveling to/from Athens and Augusta favoring this route. Safety can be an issue with truck traffic, particularly along U.S. 78, as many trucks travel at excessive speeds through downtown Crawford and Lexington. With the exception of a traffic signal in Crawford, there currently are no traffic control devices to slow traffic in these areas. Specific locations on U.S. 78 where truck speed is an issue include Buddy Faust Road, Bunker Hill Road, Old Edwards Road, and Yancey Road.

U.S. 78 west of Crawford, has site distance and horizontal visibility limitations. Trucks traveling at excessive speeds along this thoroughfare can decrease safety along this route. Trucks taking short-cut routes on non-GDOT maintained roads, such as Wolfskin Road between U.S. 78 and Watkinsville, also create safety concerns.

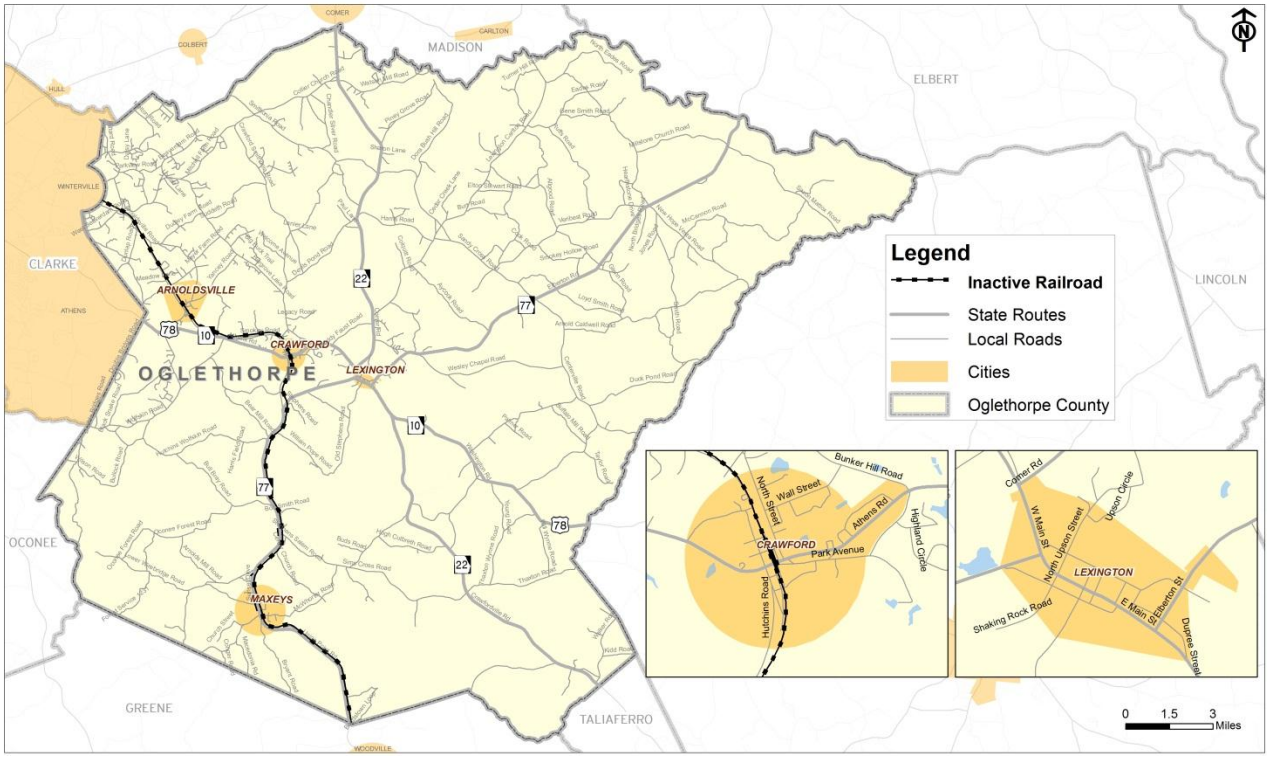
Unpaved roads which house logging, granite, poultry and other industrial facilities also experience the high impact of frequent truck traffic. Trucks must sometimes travel four to five miles on these unpaved roads to reach their destinations. In some areas, 20 to 30 trucks may traverse these roads each day. Industries reliant on such truck travel would be better served with road improvements to better facilitate transporting their goods and products.

4.7 Rail

Oglethorpe County does not currently have any active rail lines; however, CSX Transportation operates a rail line that traverses east to west bordering the northern edge of the County. This line connects Atlanta, Winder, Athens, and Elberton into South Carolina, and carries20 to 40 million gross tons of cargo per year. Commodities transported include coal, non-metallic minerals, automotive products, agricultural products, and wood and timber products. According to the Georgia Statewide Freight and Logistics Plan (2012), this single-track line is currently categorized as a bottleneck corridor due to a combination of yard, main line, and interchange issues, and it is expected to experience increased capacity demand in future years.

There are approximately 27 miles of inactive CSX rail line right-of-way (ROW) in Oglethorpe County, located in the western half of the County between Arnoldsville, Crawford, and Maxeys, as shown in **Figure 4-11** on the next page. Discussions have ensued, with both pros and cons, to utilize the abandoned rail line for the Firefly Trail, a 39-mile rail-trail initiative that would connect Athens-Clarke, Oglethorpe, and Greene Counties. There are, however, no specific development plans for the trail through Oglethorpe County at this point in time.

FIGURE 4-11: INACTIVE RAIL IN OGLETHORPE COUNTY



4.8 BICYCLE AND PEDESTRIAN FACILITIES

Bicycle and pedestrian facilities are an important component of the roadway network. They provide active transportation and recreation options for all residents and visitors, connecting residential neighborhoods to each other and to commercial, medical and business destinations, as well as to recreational facilities and to other transportation hubs. Walkable and bikeable communities not only provide additional transportation options, but they also enhance the way people experience the area by fostering active lifestyles, promoting community-based commerce and reducing the environmental impacts of motorized transportation.

This section provides a description of the existing bicycle and pedestrian conditions in Oglethorpe County. It includes an inventory of existing and planned facilities, recent crash data, and public and stakeholder input garnered as part of this Plan. This section also provides a summary of existing plans and policies, as well as their recommendations that relate to bicycle and pedestrian facilities in Oglethorpe County.

Existing Facilities

Sidewalks in Oglethorpe County are limited primarily to the downtown areas of Crawford (U.S. 78 and North Street) and Lexington (Main Street and Boggs Street). All of the schools, the library, and local parks are rurally located and thus do not have sidewalk networks that connect them to surrounding residential areas. Major shopping and medical destinations are located primarily in nearby Athens and require vehicle transportation to reach.

There are currently no multi-use paths or bicycle lanes in Oglethorpe County. There is, however, a definite presence of recreational bicycling along the County's rural roads and landscape. Common routes for recreational riders are along Wolfskin Road, Hargrove Lake Road, Winterville Road and Sandy Cross Road.

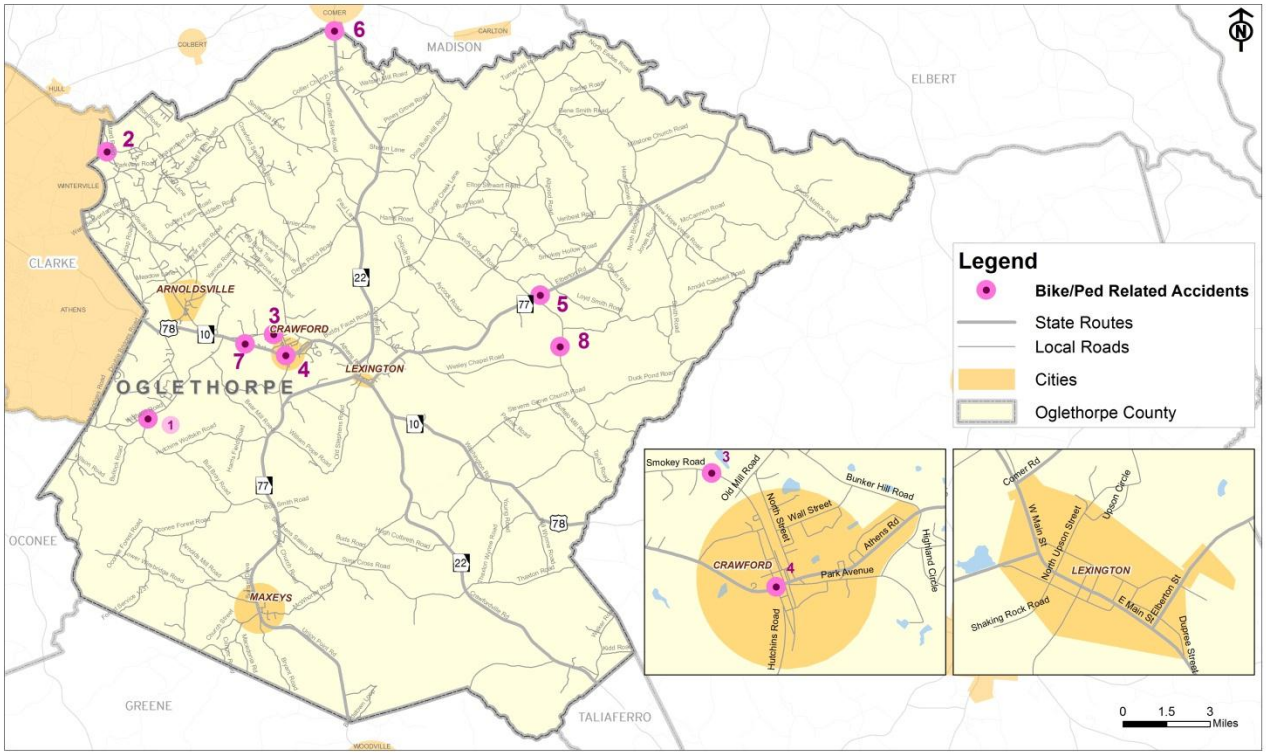
Nature and hiking trails are located in various parks throughout the County. These can be found at:

- Bryan Park, located in the city of Crawford;
- Watson Mill State Park, located on the northern border to Madison County, on the east fork of the Broad River;
- Shaking Rock Park, located off U.S. 78 in Lexington; and
- Redlands Wildlife Management Area, located at the northern tip of Oconee National Forest.

Bicycle and Pedestrian-Related Crash Data

Nine crashes involving bicycles and/or pedestrians have been reported for Oglethorpe County between 2007 and 2011. The locations are shown on **Figure 4-12** and described in **Table 4-10** on the next page.

FIGURE 4-12: BICYCLE AND PEDESTRIAN RELATED CRASHES



Source: GDOT Crash Database

TABLE 4-10: BICYCLE AND PEDESTRIAN RELATED CRASHES, 2007 - 2011

Map ID	Year	Crash Location	Crash Severity	Type
1	2007	Old Martin Road at Wolfskin Road	Non-Fatal Injury Crash	Pedestrian
2	2007	Smithonia Road between Pittard Road and Howington Road	Non-Fatal Injury Crash	Bicycle
3	2009	Smokey Road between Smokey Trail and Old Mill Road	Non-Fatal Injury Crash	Bicycle
4	2009	North Board Street at U.S. 78/Athens Road	Non-Fatal Injury Crash	Pedestrian
5	2010	Elberton Road between Loyd Smith Road and Tiller Bridges Road	Non-Fatal Injury Crash	Bicycle
6	2010	Comer Road close to Gholston Church Road	Non-Fatal Injury Crash	Bicycle
7	2010	U.S. 78/Athens Road between Amber Lane and Heather Lane	**Fatal Crash**	Pedestrian
8	2011	Centerville Road between Wesley Chapel Road and Arnold Caldwell Road	Non-Fatal Injury Crash	Bicycle

Source: GDOT Crash Database

The data above shows that a fatal crash occurred in 2010 on U.S. 78/Athens Road between Amber Lane and Heather Lane. The fatal crash was a head-on collision involving a pedestrian. Four of the nine crashes since 2007 involved pedestrians, and the other five crashes involved bicycles.

Existing Recommendations

There are no proposed bicycle-pedestrian or trail improvement projects planned for Oglethorpe County for the 2013 to 2016 STIP planning period. However, a number of planning documents have been compiled and prepared over the past several years, which identify measures and action items for bicycle and pedestrian facilities in Oglethorpe County.

In 2007, at the request of the County, the Georgia Department of Community Affairs, Quality Growth Resource Team (QGRT), developed growth management solutions for Oglethorpe County. These solutions aimed to:

- Maintain and enhance the rural quality of life;
- Encourage high-quality development, both master planned and commercial;
- Guide future expansion of community facilities and infrastructure;
- Preserve the integrity of the community's historic resources;
- Expand commercial and retail opportunities to increase sales tax revenues; and
- Create more jobs within the County for local citizens.

The Resource Team Report recommends physical infrastructure improvements to guide growth to the cities of Crawford and Lexington, while maintaining the rural character of the remainder of the County. Bicycle and pedestrian initiatives that support this recommendation include:

- Expanding the transportation network/historic grid patterns within Crawford and Lexington to allow for a traditional development pattern and encourage walkability; and

- Expanding the existing sidewalk network to continue along existing streets in Crawford and Lexington and include sidewalks on all new streets either through zoning requirements, a community sidewalk program or other methods.

Furthermore, the report encourages downtown revitalization for Crawford and Lexington that would create appeal, promote their historic resources and enhance these rural activity centers. This includes streetscape enhancements to add street trees, benches, planters, and crosswalks, as well as improvements to sidewalks and lighting for the Crawford and Lexington downtown area.

The *Northeast Georgia Plan for Bicycling and Walking* conducted by the Northeast Georgia Regional Commission in 2010 identified Critical Focus Areas where demand for bicycle and pedestrian facilities may exist, and bike and pedestrian facilities to serve the demand. Specific recommendations for Oglethorpe County are listed in **Table 4-11** below.

TABLE 4-11: NEGRC REGIONAL BICYCLE AND PEDESTRIAN PLAN RECOMMENDATIONS

Location	Corridor Name	Recommended Facility Type	Length (miles)
Oglethorpe County	SR 22	Paved Shoulder	12.80
Crawford-Lexington	U.S. 78	Bike Lane	4.31
Madison-Elbert-Oglethorpe	Broad River	Greenway	27.23
Clarke-Oglethorpe-Greene	Firefly Trail	Rail-Trail	39.31
Clarke-Oconee-Oglethorpe-Greene	Oconee River	Greenway	22.46

Source: NEGRC – Northeast Georgia Plan for Bicycling and Walking, 2010.

5 Public and Stakeholder Involvement

It is important to understand transportation issues, opportunities and needs as perceived by citizens and key stakeholders, in addition to those identified through technical analyses. As part of the Multi-Modal Transportation Plan process, GDOT participated in ongoing coordination with staff representatives and elected officials from Oglethorpe County, the Northeast Georgia Regional Commission, the Cities of Arnoldsville, Crawford, Maxeys, and Lexington, as well as the Athens-Clarke County MPO. The outreach approach outlined in the plan included the formation of a Study Advisory Committee that convened at key milestones during the planning process. Outreach also incorporated a public survey that was conducted to solicit feedback from residents living and working in the County.

5.1 Study Advisory Committee

A Study Advisory Committee has been established with participants invited based on guidance from local County and City staff. The Committee includes representation from the following: Oglethorpe County; the City of Arnoldsville; the City of Crawford; the City of Maxeys; the City of Lexington; the Northeast Georgia Regional Commission; GDOT District 2; the Oglethorpe County Chamber of Commerce; major employers; and others suggested by County and City staff. Participants in the Study Advisory Group are listed in **Table 5-1**.

Table 5-1: Study Advisory Committee Members

Name	Title	Organization/Agency
Billy Pittard	Commissioner	Oglethorpe County
Josh Hawkins	Director of Planning and Zoning	Oglethorpe County
Renee Gardner	Director of Senior Citizens Center	Oglethorpe County
Jim Dove	Executive Director	Northeast Georgia Regional Commission
Jimmy Coile	Mayor	City of Crawford
Bill Winkle	Mayor	City of Maxeys
David Montgomery	Mayor	City of Lexington
Larry McFalls	Mayor	City of Arnoldsville
Randy Yeargin	Chairman	Board of Education
Phillip Todd	Director	School Transportation
Cary Fordyce	President	Chamber of Commerce
Doy Johnson	General Manager	Elberton Granite Association (Major Employer)

Name	Title	Organization/Agency
Bobby Miller	General Manager	Greater Georgia Printers (Major Employer)
Todd Boyd	General Manager	J&J Chemical (Major Employer)
Melanee McGee	Director	Oglethorpe Children's Academy
Tracy Graham	General Manager	Georgia Forestry Commission
Danny Sanders	General Manager	Oglethorpe Feed and Farm Supply
Wendy Ryan	Director	Emergency Medical Services
Douglas Spencer	President	Fire Association
Stephen Hooper	Director	Emergency Management Agency
Sherry McDuffie	Transportation Planner	Athens-Clarke County
Vonda Everett	Planning & Programming Engineer	GDOT, District 2 Office
Mike Smith	Sheriff	Oglethorpe County
Chris Wright	Patrol Officer	Georgia State Patrol

The Study Advisory Committee met at three key milestones during the plan development effort. The first meeting took place early in the study process to discuss issues and opportunities, provide an overview of the study process, and develop study goals and objectives. The second meeting provided an opportunity to gather feedback on the needs assessment of both existing and future conditions and the preliminary project recommendations. The third meeting focused discussion on the study's recommendations and policy guidance to assist with maintaining the existing infrastructure. Study Advisory Committee dates and locations are documented in **Table 5-2.**

TABLE 5-2: STUDY ADVISORY COMMITTEE MEETINGS

Purpose	Location	Date / Time
Meeting #1	Historic Crawford Depot	April 16, 2013 / 2:00 PM
Meeting #2	Historic Crawford Depot	October 15, 2013 / 10:30 AM
Meeting #3	Historic Crawford Depot	February 18, 2014 / 10:30 AM

Documentation of each Study Advisory Committee meeting can be found in **Appendix B.**

5.2 Public Surveys

The Oglethorpe County Multi-Modal Transportation Plan's Public Survey was designed to gain input from those who are most familiar with the County's potential transportation-related issues and opportunities. The survey queried the public about various transportation topics. Twenty-one questions covering commute patterns, transportation improvement priorities and issues on traffic operations, safety, trucks, road conditions, bridges, sidewalks and bicycle routes, and public transportation were included in the survey and provided the public with the opportunity to express their thoughts and concerns.

The survey was made available to the general public online on the GDOT Study website (www.dot.ga.gov/oglethorpestudy) and Oglethorpe County's website from March 2013 through June 2013. In addition, the Oglethorpe County school system was asked to participate in the process by distributing hard copies of the survey to students to take home to their families. Approximately 200 public surveys were completed. The survey collected valuable insight and information from county citizens that were then incorporated into the study assessment and recommendations.

A number of common themes and issues emerged from the responses, including the following:

- Respondents overwhelmingly viewed U.S. 78 as needing traffic operational improvements in the downtown areas of Crawford and Lexington, with particular opportunities cited at its intersection with Buddy Faust Road, Bunker Hill Road, and SR 22.
- Respondents felt that traffic operations, sidewalks, and other safety improvements are greatly needed in the vicinity of the high, middle, elementary and primary schools.
- Respondents expressed urgency and frustration with road conditions in the County. Pavement conditions, potholes, inadequate shoulders, visibility problems and gravel roads were frequently cited as areas needing attention in order to make roads safer and more passable by vehicles, bicycles, trucks, and school buses.
- Respondents were somewhat divided on their feelings about bicycle routes in the County with most supporting bike routes and some strongly opposing them. However, there was a general consensus that bicycling is prevalent in the County and that existing conditions are unsafe for both bicycles and vehicles.
- Respondents did express some support for public transportation in the County. A number of comments indicated that bus service, possibly within the County and outside the County to Athens, may be desirable.

Documentation of the detailed public survey instrument and results can be found in **Appendix C.**

5.3 Public and Stakeholder Input

Table 5-3 summarizes general themes expressed by citizens and stakeholders relative to transportation issues, opportunities and needs in Oglethorpe County.

Table 5-3: Public and Stakeholder Input

Transportation and Growth
• Need recommendations on the best way to preserve the existing transportation network; need to focus on growth areas and preservation of rural areas. • Desire for concentrating growth in dense areas and maintaining rural areas. • Project priorities should be prepared and evaluated, so the project with highest priorities can be ready for implementation as funding becomes available. • Consider schools and emergency service areas as growth hubs.
Transportation Improvement Priorities
The following lists the transportation improvement priorities identified and their associated percent of respondents who agreed: • Improve roadway safety (51%). • Add or coordinate traffic signals, turn lanes, and other features to improve traffic flow (44%). • Provide transportation services for the elderly, disabled, and/or the general public (39%). • Enhance the operations and maintenance of the current transportation system (27%). • Relieve traffic congestion (24%). • Enhance bicycle and pedestrian amenities (20%). • Address truck travel (14%). • Improve connectivity (14%).
Roadway Operations and Safety
• Widening of U.S. 78 was the #1 project in the Transportation Investment Act of 2010 (TIA) list for the County connecting Lexington/Crawford west to Athens. • Need for widening/passing lanes near Crawford coming to and from Athens. • Need to review speed limits in town; the speed limit drops dramatically in small intervals and it will be beneficial to have better signage and advance warning; consider extending reduced speed limit signs further out. • Congestion due to slow moving traffic and large trucks is a constant commute problem.
Intersection Operations and Safety
• Need operational improvements at the SR 22 (Comer Road) / U.S. 78 intersection; there is a safety concern and it is difficult to enter highway. • Need operational improvements at other U.S. 78 intersections: Buddy Faust Road; Bunker Hill Road; Hutchins Road; Wolfskin Road; and Cherokee Corner. • Need operational improvements at SR 22 and Buddy Faust Road. • The intersection at Arnoldsville Road and Yancey Road should be squared off.

Bicycle and Pedestrian
• Support was expressed for bicycle and pedestrian options in growth areas, such as in the Crawford civic areas and around schools and parks (Bryan Park, specifically). • Preserve accessibility to schools and businesses in Lexington and Crawford. • Sidewalks, crosswalks, and pedestrian lights are needed in concentrated population areas. • Concern was expressed that the Firefly Trail is inconsistent with the community's desires and local culture; the Trail's proximity to private property was also expressed as a concern. • Recreational bicyclers create dangerous travel conditions, particularly when they occupy a full travel lane; need to improve the safety for the common areas for recreational riders along Wolfskin Road, Hargrove Lake Road, Winterville Road and Sandy Cross Road.
Public Transportation
• There is an increase in the senior population; consider public transportation options for seniors and students; seniors may require relocation closer to Athens if there are no mobility options as they age and cannot drive (consider centrally located hub). • A park and ride facility in Oglethorpe County would be nice to provide service from Crawford to Athens.

These themes and suggestions were considered alongside the technical analyses as part of the identification of potential transportation solutions to address future transportation needs in the County.

6 Goals and Objectives

Goals and objectives are the foundation of the long-range planning process. They guide the development of the Multi-Modal Transportation Plan by providing a basis for evaluating transportation plan improvements and reflecting the intentions that the Plan is meant to achieve. It is necessary to establish long-range goals and objectives to guide the transportation plan development process for Oglethorpe County. The goals represent the general themes and overall direction that Oglethorpe County and its residents envision for the future of the County. The objectives provide additional specificity and focus for each associated goal. Combined, they provide the policy framework for development and implementation of the transportation plan.

The *Transportation Plan* goals and objectives were developed to be consistent with relevant federal, state, and local plans and legislation. Furthermore, they reflect the community's long-term vision based on input from local leadership and the Study Advisory Committee.

6.1 National Goals

The Moving Ahead for Progress in the 21st Century (MAP-21) includes seven performance goals that must be considered when a MPO develops a LRTP. It is understood that Oglethorpe County is not currently an MPO; however, the guidelines for MPOs were followed to provide a strong framework for transportation decisions. Specifically, the LRTP must be designed around the following performance goals:

- **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 April 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.

6.3 Local Goals

The Joint City-County Comprehensive Plan 2005-2025 provided a comprehensive review of the issues and opportunities that will affect the future growth of Oglethorpe County over the next 20 years. The transportation goal established in this comprehensive plan is to provide a safe, efficient, and effective transportation system that keeps pace with growth and integrates a variety of transportation modes, thereby increasing mobility options for all residents.

6.4 Goals and Objectives of This Plan

Based on the review of transportation goals at the national, state, and local levels, as well as the input from County and City officials and local stakeholders, the following goals and objectives were established for the Oglethorpe County Multi-Modal Transportation Plan to guide the transportation decision-making process:

Goal 1: Preserve the County's rural, natural, agricultural and environmentally sensitive areas and enhance the character of the historic and existing communities in the County.

Objective 1.1: Improve the environmental quality of transportation decision making by incorporating context-sensitive solutions and principles in all aspects of the planning and project development process.

Objective 1.2: Consider the overall rural, natural, agricultural, and environmental effects when making transportation decisions.

Objective 1.3: Identify potential environmental impacts early in the transportation decision-making process to protect significant natural, agricultural, historical, and cultural resources.

Goal 2: Optimize utilization of existing infrastructure and maintain a safe, reliable and efficient transportation network that will sustain economic activity and promote economic development.

Objective 2.1: Explore transportation solutions that accommodate growth in travel demand while sustaining economic activity and promoting economic development.

Objective 2.2: Improve the safety of the roadway network by identifying high-crash locations and identifying safety-related funding sources to implement improvements at these locations.

Objective 2.3: Identify projects that improve and enhance access to activity centers and projects that address high-crash locations and other safety-related issues.

Objective 2.4: Focus on system preservation by maintaining and optimizing the utilization of the existing transportation network.

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

Objective 3.1: Review the plan in conjunction with the future land use element of the Oglethorpe County Comprehensive Plan to assess potential impacts to the transportation system.

Objective 3.2: Encourage transportation improvements that are compatible with area development types.

Objective 3.3: As development is permitted, review the impact to the transportation system to ensure mobility is protected as parcel-level development occurs.

Goal 4: Provide a range of mobility options and enhance health and quality of life for all residents.

Objective 4.1: Coordinate transportation and land-use decision making to ensure viability of alternative modes.

Objective 4.2: Enhance and expand mobility options for all Oglethorpe County citizens, especially for the senior and disabled populations.

Objective 4.3: Identify programmatic funding sources for potential public transit, bicycle, and pedestrian improvements.

These goals and objectives are utilized later in the planning process to identify the appropriate performance measures and guide the project evaluation and prioritization.

7 Improvement Needs

Based on the activities summarized in Chapters 1 – 6 of this document, an assessment of future conditions was conducted which identified a series of potential improvements to address Oglethorpe County's transportation needs. Potential improvements were identified in various modes of transportation, including roadway, operations, bridges, bicycle, and pedestrian. Freight and transit were also considered in the evaluation and several recommendations to enhance these modes are also included in the document. These potential improvements were developed in consultation with the Stakeholder Advisory Group and Oglethorpe County citizens as outlined in Chapter 5.

7.1 Roadway Needs

The transportation network in Oglethorpe County was analyzed for three different types of potential roadway improvements: capacity improvements (including new roadways), operational improvements, and intersection improvements. Needs were evaluated through the capacity analysis based on the existing and 2040 travel demand model and safety analysis, discussed in Chapter 4. Stakeholder Advisory input was also considered in the identification of improvements consistent with the goals of the study, discussed in Chapter 5.

Logical Termini

For roadway capacity improvements, logical termini were determined to help link the long range planning process with National Environmental Policy Act 2003 and 2007 (NEPA) regulations. The Federal Highway Administration (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.

Logical termini for each corridor improvement were examined and revised based on the analysis conducted to date.

Capacity Improvements

Based on the existing and future deficiencies identified in Chapter 4, the following capacity improvements are recommended:

- U.S. 78 Widening
  - PI # 132660-: from CR26/Smokey Road to CR166/Whit Davis Road
- Bypass

- PI # 231910-: Crawford/Lexington Bypass

During the 2nd Study Advisory Committee meeting, the potential realignments for both the U.S. 78 widening and bypass were discussed.

For the U.S. 78 widening, a southern alignment was requested to be evaluated further by the Study Advisory Committee. It was found that this alignment was considered during the GDOT Alternative Analysis Process and was screened out due to considerable environmental impacts. The approved northern alignment (PI # 132660-) has the Practical Alternatives Report (PAR) completed. The PAR is a report prepared for those projects that require an individual U. S. Army Corps of Engineers permit, providing an analysis of alternatives to avoid and to minimize harm to the jurisdictional waters of the United States. In addition, FHWA has approved the logical termini at each end of the existing project limits. With these approvals, any alignment shifts will significantly impact and delay the project's existing schedule. Therefore, it is recommended to follow the proposed northern alignment in the PAR for the U.S. 78 widening project.

For the bypass, a 4.2 mile northern alignment as an alternative to the 7.4 mile southern alignment (PI # 231910-) was also requested to be evaluated further by the Study Advisory Committee. The preliminary alignment for the Northern Bypass alternative would begin from roughly the CR 26/Smokey Road and SR 10/U.S. 78 intersection and closely follow the abandoned railroad to the vicinity of Smokey Trail where the bypass would continue in an easterly direction and intersecting with Old Mill Road and Bunker Hill Road, at which point the bypass would continue in a southeastern direction and would intersect with Buddy Faust Road before it rejoined SR 10/U.S. 78 northwest of Lexington. A preliminary technical desktop review and environmental screening was conducted to understand whether there is any fatal flaw for the Northern Bypass alignment. The environmental screening covers the following resources needed for NEPA consideration:

- Protected plant and animal species habitat;
- Jurisdictional wetlands and streams;
- Potential underground storage tank sites;
- Potentially historic resources/structures; and
- Areas of high potential for archaeological sites.

According to the Environmental Screening results, the overall potential for environmental impact of the Northern Bypass alternative is moderate to high, but not critical. Detailed environmental screening process and results can be found in **Appendix D**.

In addition, a capacity analysis of Northern Bypass was conducted for 2040. The operational analysis result shows that the Northern Bypass is expected to operate at LOS D while U.S. 78 east of the bypass is expected to operate at LOS E in 2040. Based on both analyses, the Northern Bypass seems to be feasible; it is recommended that more in-depth evaluation be carried out to further study through the Alternative Analysis process.

Operational Improvements

Operational improvements address geometric concerns and other issues that impact the flow of traffic on an existing roadway facility, and may include the addition of turn lanes or passing lanes, signage improvements, signal timing improvements, 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.

Recommendations for operational improvements are developed based on safety data, roadway characteristics, and Stakeholder Advisory input received during the *Transportation Plan* development process and should be regarded as planning-level. Detailed location-specific traffic analysis will be necessary in order to make specific improvement recommendations.

Passing Lanes

The following roadway is recommended for adding passing lanes:

- Passing lane pair on U.S. 78 from east of Stevens Grove Church Road to east of Beaver Dam Road (Wilkes County) - PI # 222460-

Shoulder Upgrade

The following roadways are recommended for upgraded shoulders:

- SR 77/S. Main Street from south of Hill Street to south of Church Street in Maxeys
- SR 77/Union Point Street from west of Boggs Street to U.S. 78/Atlanta Street in Lexington

Access Management

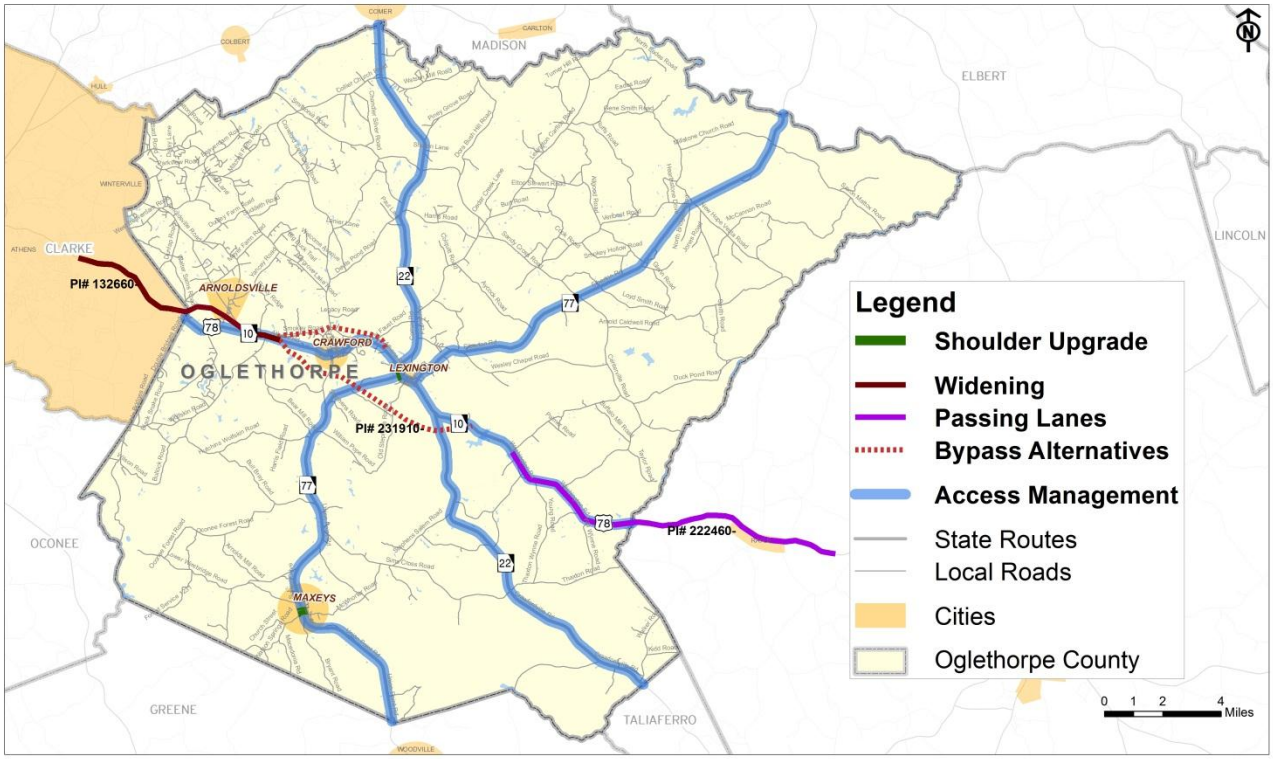
Access management is intended to balance the roadways' role of serving through traffic with the role of providing access to properties. Access management involves the proper planning and design of points of access to the public roadway system. These points of access include interchanges, public road intersections, and driveways. Sound access management can have a positive impact on roadway safety and the ability of roadways to carry traffic efficiently and safely. Ideally, the management policies should be applied when right-of-way is still available, access along the corridor is consolidated, vested interests are not yet well established, and there is the potential to adopt techniques early on that will have a powerful influence on future travel behavior.

It is recommended that further evaluation be carried out based on performance measures. The following roadways are ideal candidates for access management polices to ensure they maintain their appropriate operational levels:

- U.S. 78 (especially the segment from east of Double Bridges Road to SR 22/Crawfordville Road, where the future growth is anticipated and is expected to operate at LOS D or E by 2040)
- SR 22 (especially the segment from Salem Church Road to Harris Road where the future growth is anticipated)
- SR 77 (especially the segment from Hutchins Wolfskin Road to Sandy Cross Road where the future growth is anticipated)

See **Figure 7-1** for a map displaying the recommended roadway improvements including capacity and operational improvements.

FIGURE 7-1: RECOMMENDED ROADWAY IMPROVEMENTS



7.2 INTERSECTION IMPROVEMENTS

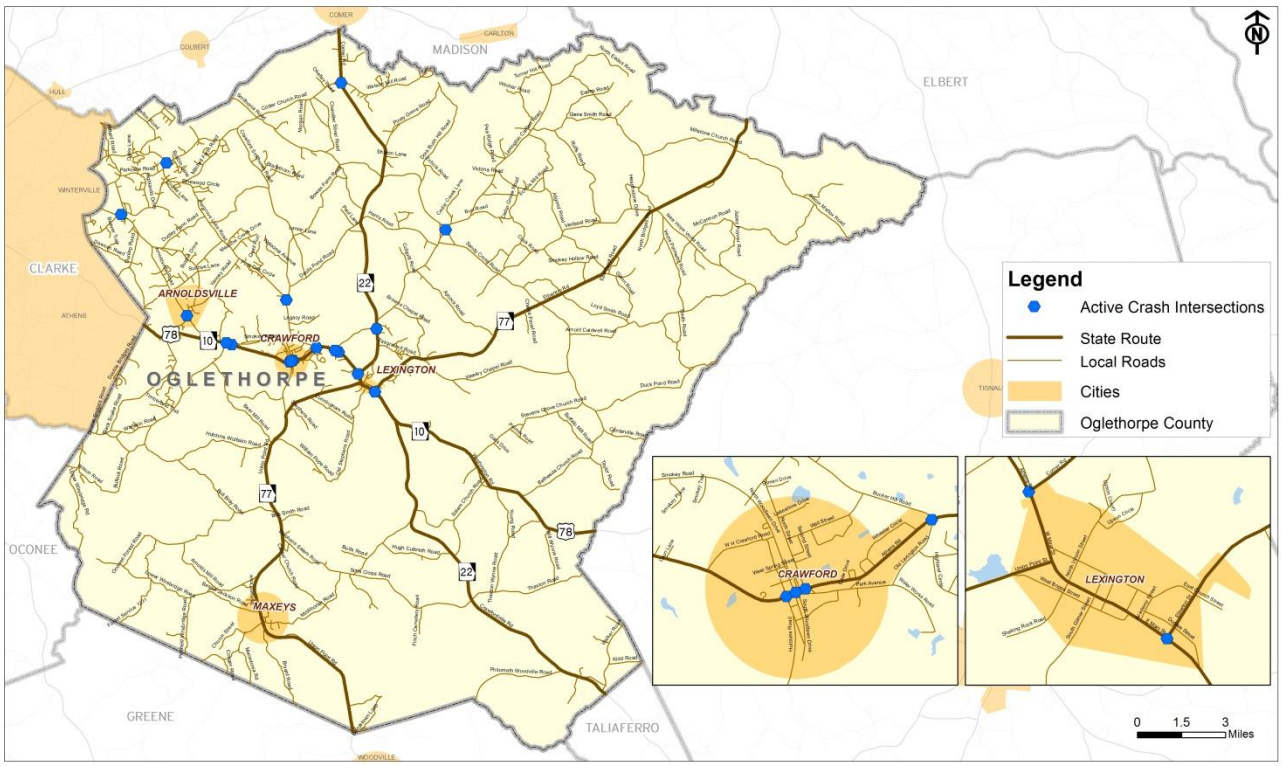
Intersection improvements are proposed to address needs identified based on safety analysis, existing and future traffic volumes, as well as safety concerns raised by the Study Advisory Committee. Improvements may include signage enhancements, upgrades to intersection control, and/or geometric realignment of an intersection. Recommendations for intersection improvements are typically based on planning-level data, and require detailed location-specific analysis by a professional engineer, and/or further review by GDOT District 2 to refine specific project improvement recommendations. Considerations include available right-of-way, traffic volumes, safety, driver expectancy, and the context of the area.

Incorporating technical analysis as well as the public and stakeholder input, the following intersections are recommended for future improvements:

- U.S. 78/Athens Road at SR 22/Comer Road
- U.S. 78/Athens Road at Buddy Faust Road
- U.S. 78/Athens Road at Broad Street
- U.S. 78/Athens Road at Bunker Hill Road
- U.S. 78/Athens Road at Oglethorpe Drive
- U.S. 78/Athens Road at Smokey Road
- U.S. 78/Athens Road at North Street
- U.S. 78/Athens Road at N Woodlawn Drive
- U.S. 78/Atlanta Street at SR 77
- SR 22/ Comer Road at Collier Church Road
- SR 22/ Comer Road at Buddy Faust Road

- Yancey Road at Arnoldsville Road
- Hargrove Lake Road at Arnoldsville Road
- Hargrove Lake Road at Crawford Smithonia Road
- Beaverdam Road at Smithonia Road
- Main Street at Wolfskin Road
- Sandy Cross Road at Lexington Carlton Road

FIGURE 7-2: RECOMMENDED INTERSECTION IMPROVEMENTS



7.3 BRIDGE NEEDS

Based on the sufficiency ratings identified in Section 4.4, bridges were identified as eligible for mid-term and long-term improvement recommendations. Bridges with a sufficiency rating of 50 or below are currently eligible for improvements. Bridges with a sufficiency rating between 50 and 80 are likely eligible for improvement by 2040.

The four bridges with sufficiency ratings below 50 that are eligible for improvement include:

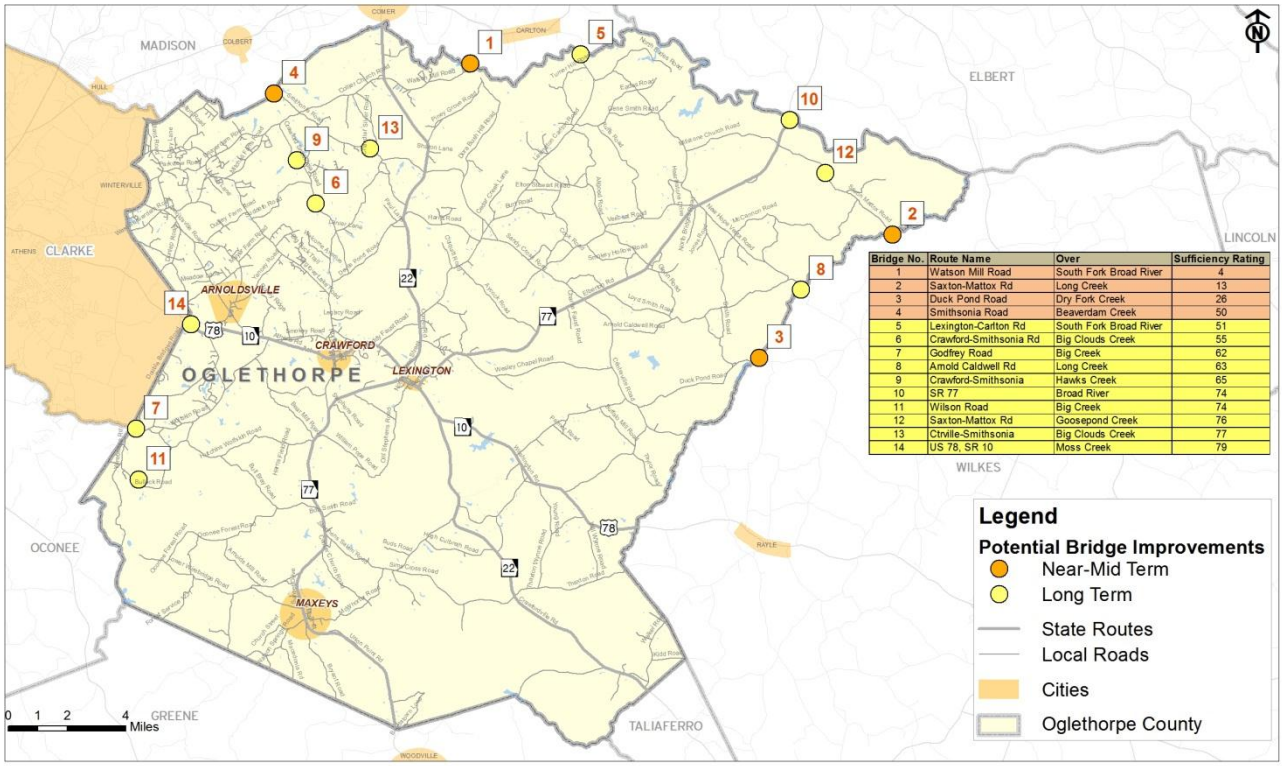
- Watson Mill Road over South Fork Broad River
- Saxton-Mattox Road over Long Creek
- Duck Pond Road over Dry Fork Creek
- Smithonia Road over Beaverdam Creek

Ten bridges were identified with sufficiency ratings between 50 and 80 and are likely eligible for improvement by 2040 which include:

- Lexington-Carlton Road over South Fork Broad River
- Crawford-Smithonia Road over Big Clouds Creek
- Godfrey Road over Big Creek
- Arnold Caldwell Road over Long Creek
- Crawford-Smithonia Road over Hawks Creek
- SR 77 over Broad River
- Wilson Road over Big Creek
- Saxton-Mattox Road over Goosepond Creek
- Carterville-Smithonia Road over Big Clouds Creek
- U.S. 78/SR 10 over Moss Creek

See **Figure 7-3** for a map displaying the recommended bridges for improvement.

FIGURE 7-3: RECOMMENDED BRIDGES FOR IMPROVEMENTS



Bridge No.	Route Name	Over	Sufficiency Rating
1	Watson Mill Road	South Fork Broad River	4
2	Saxton-Mattox Rd	Long Creek	13
3	Duck Pond Road	Dry Fork Creek	26
4	Smithsonia Road	Beaverdam Creek	50
5	Lexington-Carlton Rd	South Fork Broad River	51
6	Crawford-Smithsonia Rd	Big Clouds Creek	55
7	Godfrey Road	Big Creek	62
8	Arnold Caldwell Rd	Long Creek	63
9	Crawford-Smithsonia	Hawks Creek	65
10	SR 77	Broad River	74
11	Wilson Road	Big Creek	74
12	Saxton-Mattox Rd	Goosepond Creek	76
13	Ctrville-Smithsonia	Big Clouds Creek	77
14	US 78, SR 10	Moss Creek	79

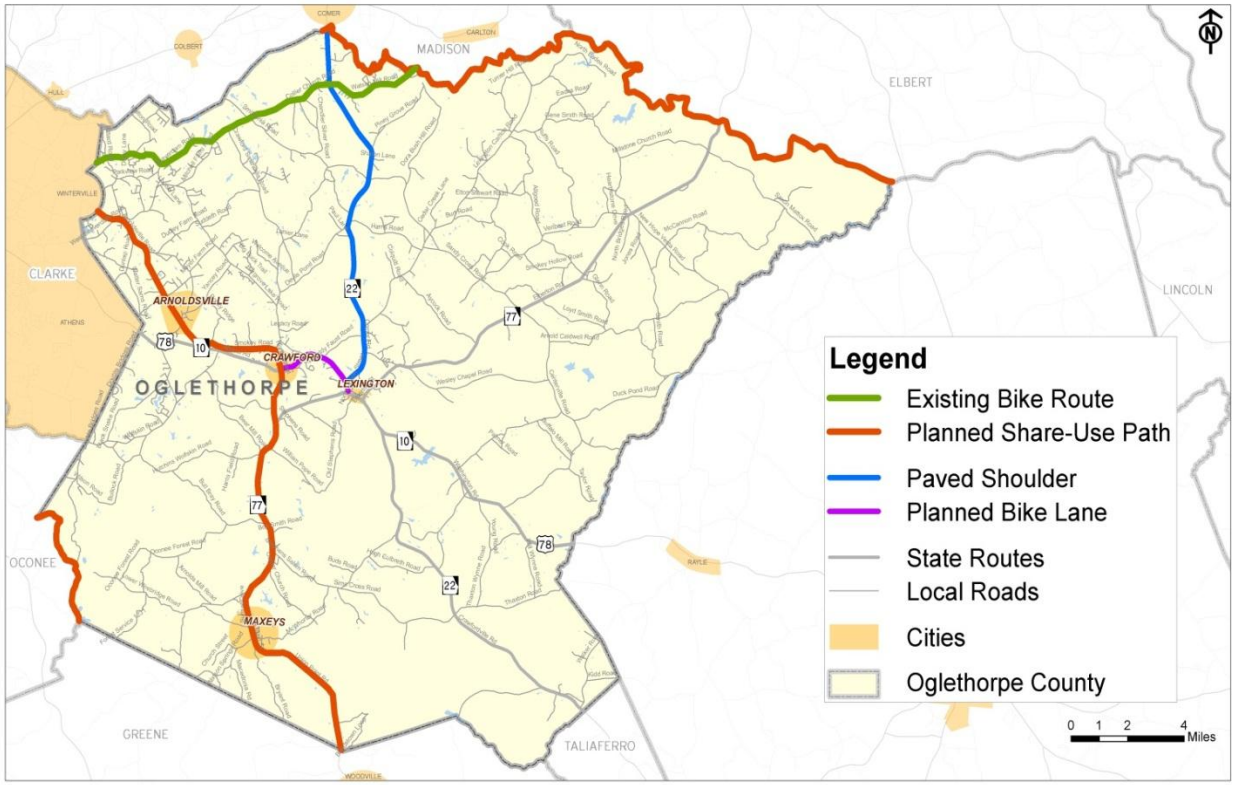
7.4 Bicycle and Pedestrian Needs and Recommendations

Coordination with Northeast Georgia Bike/Pedestrian Plan

In August of 2010, the Northeast Georgia Regional Commission completed the *Northeast Georgia Plan for Bicycling and Walking* that includes Oglethorpe as well as Barrow, Clarke, Elbert, Greene, Jackson, Jasper, Madison, Newton, Oconee, and Walton Counties. The Plan identified existing bicycle and pedestrian facilities and activities in the region and noted that Oglethorpe County is not equipped with any shared-use paths, bike lanes, sharrows, or "share the road" facilities. The Plan identified Critical Focus Areas where demand for bicycle and pedestrian facilities may exist. This was based on examining destinations and activity centers and capturing population within a one-mile "walkshed" and a three-mile "bikeshed" of each destination. This analysis identified Lexington as a Critical Focus Area for bicycle and pedestrian amenity development.

Specific recommendations for Oglethorpe County are depicted below in **Figure 7-4**.

Figure 7-4: NEGRC Regional Bicycle and Pedestrian Plan



Source: NEGRC - Northeast Georgia Plan for Bicycling and Walking, 2010.

Bicycle and Pedestrian Recommendations

During the development of the *Transportation Plan*, additional improvements are developed to improve mobility in Oglethorpe County based on the following:

- Review of existing land use, transportation, and recreation plans;
- Analysis of bicycle and pedestrian crash data;
- Examination of existing facilities;
- Review of current and proposed projects;
- Input from Stakeholder Advisory Group and the Public; and

- Site visits.

In addition to the on-going initiatives mentioned above, the following improvements to the bicycle and pedestrian system should be considered:

- Add Sidewalk(s)
  - U.S. 78 (on both sides) from Oglethorpe Builders Supply to East Elbert in Crawford (0.5 mi.)
  - East side of North Street from U.S. 78 to Bryan Park in Crawford (0.5 mile)
  - North side of U.S. 78 connecting library, senior center, medical center, high school, Bell's Grocery, and Fred's in Lexington (0.6 mi.)
- Pedestrian Signal
  - U.S. 78/North Street Intersection in Crawford
- Restripe
  - Pedestrian crosswalk at Depot in Crawford

The scope of this plan does not include an examination of every local street in the county for bicycle or pedestrian facilities. This plan is intended to evaluate safety problems and identify major bicycle and pedestrian needs and network deficiencies, and to propose potential projects to address those needs. Once the top priorities have been implemented, the plan should be updated to assess the current conditions, new challenges and opportunities, possible solutions and available funding. The development of a more detailed bicycle and pedestrian plan for the County is necessary in order to identify an appropriate community-wide network.

It is important to note that all recommendations, including the specific recommendations identified in the NEGRC Regional Bicycle and Pedestrian Plan, are subject to the available funding. Additional local funding might be required should the County decides to expedite the implementation of these projects.

System-wide Infrastructure and Policy Recommendations

The following recommendations should be considered throughout the County:

- Appropriate bicycle and pedestrian facilities should be included in all roadway improvement projects. The type of facility and level of accommodation will vary depending on need, land use, and other factors.
- Where bike lanes are recommended or planned, and it is later determined during the project development process that bike lanes cannot be accommodated for any reason, then shared lane markings (sharrows) should be used in its place rather than just signage or no facility at all.
- For roads with a rural-typical section (i.e. open drainage, no curb and gutter), construct minimum 6.5' paved shoulders as part of GDOT widening, reconstruction or resurfacing projects, and minimum 4' shoulders on county roads (increase to 6.5' if rumble strips are used).
- Construct and maintain sidewalks on both sides of the road within a ½-mile radius of all schools, as recommended by GDOT's Pedestrian and Streetscape Guide and supported by GDOT's Safe Routes to School Program. These could be implemented as part of roadway construction projects, developments or subdivisions, in order to help with implementation.
- Install fluorescent green-yellow pedestrian crossing warning signs at all trail crossings to warn motorists of bicycle and pedestrian crossings. In addition, install advance warning signage where sight distance is poor.

- Upgrade intersections for pedestrian and bicycle safety anytime a roadway is improved. Intersection treatments may include, but are not limited to: traffic signals, raised medians or crossing islands, crosswalks, advance crosswalk bars, curb ramps (as required by ADA in all roadway alteration projects), pedestrian countdown signal heads, pedestrian or trail crossing signage, "no turn on red" or other restrictive signage, and signal time adjustments. FHWA's PEDSAFE tool and FHWA's "How to Develop a Pedestrian Safety Action Plan" are helpful aides in choosing the right facility:
  - FHWA PEDSAFE tool: http://www.walkinginfo.org/pedsafe/
  - FHWA's "How to Develop a Pedestrian Safety Action Plan": http://www.walkinginfo.org/library/details.cfm?id=229.
- Subdivision and Zoning Codes: Update subdivision and zoning regulations to require that developers 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 non-motorized access to major facilities or other activity centers.

7.5 Transit Needs and Potential Recommendations

The online Survey conducted as part of this Study conveyed a sentiment of unmet public transportation needs in Oglethorpe County. Thirty-eight percent (38%) of Survey respondents identified transportation services for the elderly, disabled, and/or the general public as one of the three highest transportation improvement priorities for the County. The Study Advisory Committee also acknowledged that this need will likely increase as the population of seniors, students, and other transit-dependent populations grow in the County in future years. Thus the County is faced with the challenge to address mobility of these transit-dependent populations in a manner that is efficient and beneficial to it citizens in coming years.

Needs Assessment

Seniors

The growing senior population in Oglethorpe County represents perhaps the largest group of residents potentially seeking public transportation options in future years. The U.S. Census Bureau and the Governor's Office of Planning and Budget show a staggering increase in the percentage and number of seniors in the County by the year 2020 (age-specific projections beyond 2020 are not currently available). This data is shown in **Table 7-1**.

TABLE 7-1: OGLETHORPE COUNTY POPULATION 2010 AND PROJECTIONS FOR 2020

Demographics	2010		2020		Percentage Change (2010 to 2020)
	Count	%	Count	%	
Total Population	14,899	100%	16,708	100%	12%
Persons age 0 to 4 years	877	6%	790	5%	-9%
Persons age 5 to 17 years	2,678	18%	3,062	18%	14%
Persons age 18 to 64 years	9,230	62%	9,767	58.5%	6%
Persons age 65 and Over	2,114	14%	3,089	18.5%	46%

Source: U.S. Census and Governor's Office of Planning and Budget, 2012 Series

For 2010 to 2020, the County's total population growth is projected to slow to 12% but the population of seniors is expected to increase by 46%. The number of seniors age 65 and over is projected to increase to 3,089 persons by the year 2020, up from 2,114 in 2010 and 1,566 in 2000. The growing population of elderly citizens will also mean that the population of disabled citizens (currently 18% of the population in the region) will likewise increase in coming years. While the current senior population is somewhat scattered throughout the County, according to 2010 Census data, the majority of seniors currently live in the northwest (34%) and north central (34%) parts of the County. The City of Crawford also has a number of seniors living in several apartment complexes (Azalea Village, Forrest Hills, and Huntington Villas). Thus the geographical spread of the senior population presents logistical challenges for providing access to public transit.

The County does not currently have any type of retirement village or community that provides independent, assisted living, or nursing home amenities. Such a community would help to somewhat concentrate the population of seniors into one location that could be more efficiently served by the senior center transportation or any kind of future public transportation.

Low Income Population

Nearly 30% of citizens of all ages in the northeast part of the county and 20% of those in the north central portion of the county are currently living below the poverty level, exceeding the national average of 14%. 21% of all seniors residing in the north central part also have incomes below the poverty status. These households are often faced with limited transportation options for traveling to jobs and other activity centers for shopping, medical care, and the like. Without sufficient transportation to jobs, many in this sector will be unable to overcome poverty.

Students

According to the University of Georgia's Office of Institutional Research, for the 2012 fall semester, 89 undergraduate and graduate students reported Oglethorpe County as their primary address of residence. Moreover, the University requires that students live on campus during their first year of undergraduate

attendance; however, they offer exemptions from this requirement if the students live with a parent or legal guardian in Oglethorpe County (as well as other counties adjacent to Clarke County). Thus, students represent another potential user of public transportation both now and in future years.

The General Public

The online Survey results expressed support for public transportation, particularly for elderly, low-income, and disabled citizens. 38% of respondents identified it as one of the three top priorities for the County while only 29% said that they had personally experienced a lack of on-demand transit services. Several survey respondents indicated that they did not necessarily need transit services for themselves but that it would be nice for others. Likewise, the NEGRC Transit Development Plan for Oglethorpe County, completed in 2009, garnered similar sentiment about public transportation in its public survey. 39% of respondents said they would take public transportation to work while 61% would not and over half felt that there was at least somewhat of a need for public transportation services in Oglethorpe County. Thus, both surveys suggest that, aside from some commuters, the general public may not be primary users of a public transit system.

Transit Recommendations

The data presented above, coupled with Survey responses, indicates that the elderly, low-income individuals, students, and some commuters would be the most likely users of public transportation. Below are alternatives and recommendations for addressing these transit needs.

Park-and-Ride/Carpool Lots

Designated park-and-ride/carpool lots can be effective in establishing ride-sharing in the County and can serve as a launch-pad for additional transit services, such as commuter shuttles. Park-and-ride and carpool lots are designated parking lots at which commuters are able to park their personal vehicles to join a carpool/carpool or public transit. The County can develop user agreements or easements with existing lot property owners or can convert publicly owned land into park-and-ride lots.

A park-and-ride lot could initially be located in Crawford and/or Lexington along U.S. 78. This would provide a logical meeting place for workers or students wishing to carpool to Athens. A lot could also potentially be used to enhance current transportation services provided by the Senior Center or could provide independent seniors with a meeting place to coordinate trips to Athens for groceries, medical appointments, and recreation.

A lot located in downtown Crawford would be in close proximity to higher density residential areas and nearby apartment complexes that currently house many seniors (Azalea Village, Forrest Hills, and Huntington Villas). A lot located in the Lexington area would be somewhat closer to the low-income and senior populations residing in the north central and northeast parts of the county. The largest existing parking lot in

Bells Foods on U.S. 78 in Lexington

Lexington is located at Bells Foods on U.S. 78.

Rideshare Programs

With a park-and-ride facility in place, the County can promote rideshare programs on its website. Rideshare programs formally match commuters interested in carpooling or vanpooling to a particular work location or to other destinations. There are a number of online rideshare programs available. GDOT and the Georgia Commute Options (GCO) offer matching assistance and financial incentives for commuters who carpool and vanpool (www.gacommuteoptions.com).

Carpools are often informally organized between commuters working at the same employer. Employers sometimes also offer matching services for workers living in close proximity to each other or to park-and-ride lots. The County can use its website to promote these and other rideshare opportunities.

Commuter Shuttle

Transportation to Athens was the most frequently mentioned transit request by Study Survey respondents. A commuter shuttle that utilizes a County park-and-ride facility, mentioned above, could provide this service. The shuttle could initially be set up to travel to and from the Wal-Mart on U.S. 78, east of Athens. This Wal-Mart also houses an Athens-Transit park-and-ride lot. Three Athens Transit bus routes, Routes 25, 26, and 27, service this lot on weekdays and at limited times on weekends. Shuttle riders could use the service to shop at Wal-Mart or they could continue their trip to Athens on one of the buses. Route 26 makes a direct trip to downtown Athens and the Athens Transit Multi-Modal Station. Routes 25 and Route 27 traverse through the University of Georgia campus before reaching downtown Athens and the Multi-Modal Station. While a separate study would be needed to determine specific time-of-day demand, service levels, and fare structure, such a shuttle between a park and ride facility in Oglethorpe County and the Wal-Mart park-and-ride facility in Athens could provide an effective transit option for students, seniors, workers, as well as the general public.

Human Services Transportation

Given the demand relative to the County's overall population, an on-demand rural transit system, which utilizes vans to provide fare-based pick-up and delivery transportation services for all residents, may not be a viable option for Oglethorpe County at this point. To adequately plan for the changing population and explosive growth in the senior population in future years, the County can take steps to work towards this type of service to meet its future demand. This includes the following:

- The NEGRC organizes and facilitates meetings for the Rural and Human Services Transportation Committee (RHST), a group of county representatives who address rural transit objectives and initiatives for the 12-county region. Oglethorpe County should actively participate in this committee, with its future needs in mind.
- Along with participation in the RHST Committee, the County can look to its neighbors for possibly accomplishing greater efficiencies in providing transit solutions. Currently, Elbert and Jackson Counties have individual on-demand rural transit systems while neighboring Oglethorpe and Madison Counties do not. Oglethorpe County could partner with Madison County to initiate various types of shuttle or transit programs. Oglethorpe County could work with Elbert County to coordinate new services with Elbert's existing rural transit system. Or, the four counties could possibly partner together to provide coordinated on-demand rural transportation services, thereby achieving economies of scale and reducing administrative, service provider, and capital

and vehicle costs. The NEGRC could be used as a resource to facilitate coordination on any initiatives between Oglethorpe and its neighboring counties.

As part of its County and City Comprehensive Land Use Plan Update scheduled for completion in 2015, Oglethorpe County will have the opportunity to re-examine its demographic, economic, and land use data and re-assess its public transit demand and need. If the County seeks to promote development and a lifestyle that would attract retirees to the area, not only it will need to provide living communities conducive to this population but it will need to address the public transportation needs of this sector as well. Well-planned retirement villages or communities that mix various income levels with independent, assisted living, and nursing home care coupled with conveniently located access points to shuttles or vans could be very attractive to retirees desiring a comfortable, rural lifestyle in Oglethorpe County.

7.6 Freight and Rail

Freight Needs

Truck traffic is concentrated on U.S. 78, SR 77, and SR 22. Trucks also take short-cuts on non-GDOT maintained roads such as Wolfskin Road between U.S. 78 and Watkinsville. The Joint City-County Comprehensive Plan, 2005 – 2025, directs future commercial growth and new industry to the U.S. 78 corridor east and west of Crawford. Specifically, the north quadrant of U.S. 78 between Arnoldsville Road and Broad Street and the area west of downtown Crawford to Wheeler Circle are identified for future commercial land use. As new industry locates into these areas, freight truck traffic will also increase. Freight routes, however, are expected to remain somewhat constant, with trucks transporting goods between source industries located in the County to their markets. Freight transport between points of origin in the County and rail just north of the County line is expected to remain minimal.

The online Survey, conducted as part of this Study, queried respondents about problems with heavy truck traffic. While 74% of respondents indicated that they did not experience problems with heavy truck traffic, many responses were provided indicating where heavy truck traffic exists. The U.S. 78 corridor was the overwhelming location mentioned. According to respondents, truck traffic and speed near Oglethorpe County High School on U.S. 78 is problematic. Truck traffic at the intersection of U.S. 78 and SR 22 in the vicinity of the primary, elementary, and middle schools also causes concern. A complete summary of the Survey can be found in **Appendix C**.

Freight Recommendations

Recommendations for future freight movement in Oglethorpe County are below.

- Industrial and commercial development along U.S. 78 through Crawford and Lexington will bear greatly on future truck freight traffic volume. It is recommended that the County guide new industry into appropriate locations, according to the Future Development Map in the County-City Comprehensive Plan. It is also recommended that the County review the impact of anticipated freight traffic generated by new industry so that appropriate traffic and safety measures can be identified and implemented.
- Roadway improvements along the U.S. 78 corridor, particularly west and east of Crawford, will help to mitigate the impact of truck speed and volume. This includes intersection control improvements, turn lanes, and thru-traffic diversion routes around the downtown areas. Specific intersections targeted for improvements include:
  - U.S. 78 at Buddy Faust Road
  - U.S. 78 at Bunker Hill Road

  - U.S. 78 at Old Edwards and Yancey Roads
  - U.S. 78 and SR 22
  - U.S. 78 and SR 77

- Consider paving roads bearing heavy truck traffic to improve the operating condition.

Air Freight

The concept of an air freight terminal was introduced to the County in a consulting report dating several years ago. The terminal was presented as a freight handling operation, similar to the original FedEx freight operation in Memphis, Tennessee. This facility would not handle any air passengers but would serve to move freight traffic out of the Atlanta area. The facility was proposed for the southeast quadrant of the County along the SR 22 corridor. This location would allow direct delivery of freight to the terminal via SR 22 and I-20. The air freight terminal concept is not incorporated into the Oglethorpe County Joint City-County Comprehensive Plan - 2005 – 2025 nor is it included in the Oglethorpe County Short Term Work Program Update 2011.

Rail

Oglethorpe County does not have active rail lines. Thus there are no recommendations for rail improvements.

8 Project Prioritization

In order to aid GDOT and County staff, potential improvement projects identified to address future transportation needs in Oglethorpe County were vetted with the Study Advisory Committee and prioritized based on established criteria consistent with the study goals identified in Chapter 5. This section presents the recommended improvements, the estimated costs associated with these improvements, project prioritization criteria, and the final list of prioritized projects for each improvement category including roadway capacity, intersection, bridge, bicycle and pedestrian.

8.1 Estimated Costs

The GDOT Office of Planning's Right of Way and Utilities Cost Estimation Tool (RUCEST) and a Construction Cost Estimation Tool (CES) were used in the development of planning-level cost estimates for the Oglethorpe County *Transportation Plan*. These tools include area-specific values and the most up-to-date data available for construction lettings in the State of Georgia. 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 may vary depending on a number of factors which include, but are not limited to, the results of more detailed environmental and engineering studies, fluctuations in the cost of land and materials, and the year of expenditure. It is important to note that all planning-level cost estimates should be considered preliminary in nature. More detailed engineering studies are required to identify highly accurate cost estimates based on specific project characteristics and concepts.

Roadway Cost Estimates

Roadway assumptions include the planning-level cost averages of pavement based on GDOT's recommended typical section for the facility type. All capacity related needs were identified within the Department's Program; therefore, the current project costs provided by TPro were used. Shoulder upgrades assumed a cost of $180,000 per mile to upgrade the shoulder in both directions.

Intersection and Operational Improvement Cost Estimates

In the case of intersection and operational improvement recommendations, a micro-level analysis and review by a professional engineer is required to make specific project recommendations. Specific recommendations may include improvements such as adding left turn lanes or right turn lanes off a major arterial, or modifying the geometric design of the road.

For purposes of the Oglethorpe County *Transportation Plan*, the planning-level cost estimate used for operational improvements is a placeholder of $270,000. This 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. 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 cost estimates for these types of improvements should be revisited when a more detailed analysis is conducted.

Bridge Cost Estimates

Bridge improvements were calculated based on the appropriate typical section and square footage of the improved bridge structure with the assumption of a cost of $110 per square foot of bridge deck. Additionally

for State Routes, $1,400,000 was added per bridge approach. This assumes 1/3 mile new roadway construction to access the new bridge being built alongside the old bridge.

Bicycle and Pedestrian Cost Estimates

Pedestrian improvement costs assume 5 feet sidewalks. According to FHWA, sidewalks require a minimum width of 5.0 feet to meet the minimum requirements for people with disabilities. Right-of-way (ROW) costs were factored into sidewalk improvements. Signage and crossing treatments were assumed to occur within existing ROW. Construction costs for 5 feet sidewalks were assumed to be $520,000 per mile. Construction costs for bike lanes were assumed to be $1 million per mile. Minor improvement also included restriping crosswalks which assumed a cost of $1,500.

8.2 Project Prioritization Overview

Qualitative and quantitative evaluation factors were established and applied to potential improvements. The evaluation methodology produces a score for each of the potential projects, 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 operation, intersections, bridges, and bicycle and pedestrian improvements. The project prioritization criteria established as part of the development of the *Transportation Plan* also provides a framework for Oglethorpe County so that the future potential improvements could be evaluated objectively by County staff.

8.3 Roadway Capacity and Operation Project Prioritization

Qualitative Criteria

Qualitative criteria were established to evaluate the deficient corridors based on various conditions or standards established through the study process. The following list documents the qualitative criteria established for the roadway capacity and operation improvement evaluation. These correspond to the vision established in the Goals and Objectives documented in Chapter 6.

- System Preservation
- Corridor Type
- Connectivity
- Protection of Downtowns
- Project Readiness
- Support of Comprehensive Planning Efforts
- Transportation and Land Use Linkage

Potential projects were considered alongside the established criteria and associated scoring presented in **Table 8-1** below. Based on the resulting scores, an initial prioritization list was established. The highest score based on qualitative criteria is 50 points. The qualitative score is combined with the quantitative score documented on the following pages for the ultimate prioritization score.

TABLE 8-1: ROADWAY PROJECT QUALITATIVE PRIORITIZATION CRITERIA

Roadway Project Qualitative Prioritization Criteria	Possible Points	
System Preservation Does the project build on or maximize the use of existing transportation infrastructure?	No Yes	0 10
Corridor Type What is the corridor type and in what level it provides regional connectivity and system reliability?	Local State Route U.S. Route	0 5 10
Connectivity Does the proposed project improve access between activity centers or link existing or proposed projects or provide regional connectivity?	No Yes	0 5
Protection of Downtown Does the proposed project enhance the roadway safety and operations in downtown areas?	No Yes	0 5
Project Readiness Level Which proposed phase or mile stone is the project in? Does the project acquire additional right-of-way (ROW)? Is the project relatively low cost and easy to implement?	Low Moderate High	0 5 10
Support of Comprehensive Planning Efforts Does the proposed project preserve/ enhance the character of existing communities and stimulate economic growth in the County?	No Yes	0 5
Transportation Land Use Linkage Has the proposed project coordinated with, or support, land use decisions in the area?	No Yes	0 5
TOTAL POSSIBLE POINTS	50	

Quantitative Criteria

Quantitative criteria were identified to evaluate deficient corridors based on various measurable conditions. The same criteria were used for corridors being recommended for capacity improvements as with corridors being recommended with operational improvements. The list below documents the quantitative criteria established for the roadway network improvement evaluation.

- Volume to Capacity (V/C) Ratio
  - What is the existing V/C ratio for the roadway segment?
- Ratio of Corridor Crash Rate (Number of Crashes per 100 Million Vehicle Miles Traveled) to Statewide Crash Rate Average
  - How does the crash rate of the roadway segment compared to the average statewide crash rate?
- Number of Fatalities
  - Did a fatality occur along the roadway segment?

Table 8-2 displays the quantitative criteria and the associated scoring. The total points established by the Quantitative Criteria range from 0 to 50 points.

TABLE 8-2: ROADWAY PROJECT QUANTITATIVE PRIORITIZATION CRITERIA

Roadway Prioritization Criteria	Possible Points
Volume to Capacity Ratio	
0.00 - 0.249	4
0.250 - 0.399	8
0.400 - 0.499	12
0.500 - 0.599	16
0.600 - 0.699	20
0.700 - 0.799	24
0.800 - 0.899	28
0.900 - 0.999	32
>1	36
Ratio of Corridor Crash Rate to Statewide Crash Rate	
0.01 - 0.49	1
0.50 - 0.99	2
1.00 - 1.49	4
1.5 - 1.99	6
> 2	8
Number of Fatalities	
1	2
2 or more	6
TOTAL POSSIBLE POINTS	50

The total points that a facility can receive for both the qualitative and quantitative criteria is 100 points. Based upon the identified improvements and the evaluations made during the quantitative and qualitative evaluation, a prioritized list of recommendations was established. The scoring for the corridor capacity related improvements is displayed in **Table 8-3** and the scoring for the corridor operational improvements is displayed in **Table 8-4**.

TABLE 8-3: ROADWAY CAPACITY IMPROVEMENT PRIORITIZATION SCORES

ID	Facility	Qualitative Criteria								Quantitative Criteria				Total Score
		Continuation of Existing Road Widening Project	Governor's Road Improvement Program/National Highway System	Connectivity	Protection of Downtowns	Project Readiness	Supports Comprehensive Planning Efforts	Maintains Transportation and Land Use Linkage	Sub-Total Qualitative Criteria	Volume/Capacity Ratio	Ratio of 100 Million VMT to Statewide Average	Number of Fatalities	Sub-Total Quantitative Criteria	
		0-10	0-10	0-5	0-5	0-10	0-5	0-5		0-36	0-8	0-6		
C-1	U.S. 78 Widening	10	10	5	0	10	5	5	45	24	2	0	26	71
C-2	U.S. 78 Bypass	0	0	5	5	0	0	0	10	20	4	2	26	36

TABLE 8-4: ROADWAY OPERATIONAL IMPROVEMENT PRIORITIZATION SCORES

ID	Facility	Qualitative Criteria								Quantitative Criteria				Total Score
		Continuation of Existing Road Widening Project	Governor's Road Improvement Program/National Highway System	Connectivity	Protection of Downtowns	Project Readiness	Supports Comprehensive Planning Efforts	Maintains Transportation and Land Use Linkage	Sub-Total Qualitative Criteria	Volume/Capacity Ratio	Ratio of 100 Million VMT to Statewide Average	Number of Fatalities	Sub-Total Quantitative Criteria	
		0-10	0-10	0-5	0-5	0-10	0-5	0-5		0-36	0-8	0-6		
O-1	U.S. 78 - Passing Lane	10	10	5	0	10	5	5	40	4	1	0	5	50
O-2	SR 77/S Main Street - Shoulder upgrade	10	5	5	5	10	0	5	40	4	1	0	5	45
O-3	SR 77/Union Point Street - Shoulder upgrade	10	10	5	5	10	0	5	45	4	1	0	5	50
O-4	U.S. 78 – Access Management	10	10	5	5	5	5	5	45	24	6	2	32	77
O-5	SR 22 – Access Management	10	5	5	5	5	5	5	40	8	6	6	20	60
O-6	SR 77 – Access Management	10	5	5	5	5	5	5	40	4	2	2	8	48

The project points 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 GDOT and the County; input from political decision-makers; and public comment.

Based on the existing condition analysis, 47 percent of the total roadways in Oglethorpe County are dirt or gravel. So in addition to prioritizing roadway capacity and operation projects, criteria has been established to evaluate and prioritize dirt and gravel roads to be paved if funding becomes available. The detailed evaluation criteria and analysis results can be found in **Appendix E**.

8.4 Intersection 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.

- How many crashes occurred at the intersection between 2007 and 2011?
- Did a fatality occur at the intersection?
- What is the Average Annual Daily Traffic (AADT) at the intersection?
- Is the intersection currently identified by GDOT or the County?

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. **Table 8-5** below documents the scoring used for the intersection prioritization and **Table 8-6** displays the scoring applied to the proposed intersection improvements.

Table 8-5: Intersection Prioritization Criteria

Intersection Prioritization Criteria	Possible Points
Crashes How many crashes occurred at the intersection between 2007 and 2011?	> 8 = 20 5 - 8 = 12 <5 = 6
Fatality Did a fatality occur at the intersection?	Yes = 20 No = 0
AADT What is the Average AADT at the intersection?	> 5,000 = 30 5,000 - 3,000 = 24 3,000 - 1,000 = 15 < 1,000 = 0
Currently Identified Improvement Is the intersection currently identified by GDOT/County?	Yes = 30 No = 0
Total Possible Points	**100**

TABLE 8-6: INTERSECTION PRIORITIZATION

ID	Location	Rank	Total Crashes (07-11)	Fatality Crashes	2010 AADT	GDOT/County Identified	Total Score
I-1	U.S. 78/Athens Rd at SR 22/Comer Rd	1	12	0	8,790	Yes	80
I-13	U.S. 78/Athens Rd at Buddy Faust Rd	1	14	0	8790	Yes	80
I-14	U.S. 78/Athens Rd at Broad St	1	9	0	8,740	Yes	80
I-10	U.S. 78/Athens Rd at Bunker Hill Rd	4	6	0	8,740	Yes	72
I-9	Yancey Rd at Arnoldsville Rd	5	12	0	1,910	Yes	65
I-25	Hargrove Lake Rd at Arnoldsville Rd	6	5	0	3,590	Yes	60
I-23	SR 22 at Buddy Faust Rd	7	2	0	1,360	Yes	51
I-24	Hargrove Lake Rd at Crawford Smithonia Rd	7	2	0	1,530	Yes	51
I-26	Beaverdam Rd at Smithonia Rd	7	2	0	2,210	Yes	51
I-3	U.S. 78/Athens Rd at Smokey Rd	10	8	0	9,080	No	50
I-5	U.S. 78/Athens Rd at North St	10	12	0	8,740	No	50
I-6	U.S. 78/Athens Rd at N Woodlawn Dr	10	11	0	8,740	No	50
I-28	SR 22/ Comer Rd at Collier Church Rd	13	6	2	1,800	No	47
I-2	U.S. 78/Atlanta St at SR 77	14	8	0	4,580	No	44
I-4	Main St at Wolfskin Rd	15	7	0	9,080	No	42
I-8	Sandy Cross Rd at Lexington Carlton Rd	15	6	0	890	Yes	42
I-12	U.S. 78/Athens Rd at Oglethorpe Dr	15	6	0	8,790	No	42

The prioritization scoring resulted in the following top tier intersection improvements:

- U.S. 78/Athens Road at SR 22/Comer Road
- U.S. 78/Athens Road at Buddy Faust Road
- U.S. 78/Athens Road at Broad Street
- U.S. 78/Athens Road at Bunker Hill Road
- U.S. 78/Athens Road at North Street
- SR 22 at Buddy Faust Road
- SR 22/ Comer Road at Collier Church Road
- Yancey Road at Arnoldsville Road
- Hargrove Lake Road at Crawford Smithonia Road

For those top nine (9) intersections, a through operational and crash analysis was conducted including:

- Physical Condition - summarized the intersection type and lane configuration
- Traffic Characteristics – highlighted turning movement counts (TMC) for both AM and PM peak hours which were collected at all intersections on April 24, 2013.

- Safety Analysis – summarized the safety analysis results which were based on the crash data from the last five years (2007-2011). Safety analysis was used to assist in identifying safety issues and selecting countermeasures to improve the intersection.
- Peak Hour Level of Service Analysis – summarized the operational analysis results for both AM and PM peak hours using Highway Capacity Software (HCS).
- Stakeholder and Public Input – recapped the input from stakeholders and summarized the public survey results.

Based on the results of the operational and crash analysis, a variety of potential small-scale intersection improvements are recommended for each of the top nine (9) intersections to enhance safety and operations. The improvements include advanced warning signs, adjustment in intersection controls, and/or geometric realignment of an intersection.

Improvement recommendations are based on available right-of-way, traffic volumes, safety analysis, driver expectancy, and the context of the area. Specifically, safety analysis was used to assist in identifying safety issues and selecting countermeasures to improve them; driver expectancy, available right-of-way, traffic volumes, and levels of service were used to evaluate the adjustment in intersection controls including uncontrolled intersections, stop controlled intersections, signalized intersections, and roundabouts.

For each improvement, the following information is included:

- Crash Type Addressed – highlighted the crash type to which the proposed improvement is intended to address.
- Benefits – discussed the expected benefits associated with the proposed improvement.
- Timeline for Implementation – referred to the relative approximate time it can take to implement the proposed intersection improvements. Three categories include:
    - Short (< 1 year)
    - Short to Moderate (1 to 3 years)
    - Moderate (> 3 years)
- Estimated Cost – provided categories of planning-level estimated costs of the intersection improvements related to one another. All improvements are considered low cost, low to moderate or moderate cost. Costs could vary considerably due to right-of-way costs.
    - Low (< $100,000)
    - Low to Moderate ($100,000 to $500,000)
    - Moderate (>$500,000)
- Crash Reduction Factor (CRF) – CRFs are the quantitative results from research and/or evaluation studies, indicating the percentage reductions in crashes that can be expected after implementing treatments. Crash Reduction Factors (CRFs) are from FHWA's "Issue Brief 8: Toolbox of Countermeasures and Their Potential Effectiveness for Intersection Crashes" and "Desktop Reference for Crash Reduction Factors".

The detailed Intersection Assessment and Potential Improvements can be found in **Appendix F**.

During the intersection assessment process, a thorough review of the potential improvements was conducted by GDOT District 2 staff and some of the potential improvements have been through the GDOT district and maintenance including the following:

- Bunker Hill Road at U.S. 78, replace (2) 30", R1-1 (stop) signs with (2) 36" signs.

- Install a W2-1 (intersection) sign on U.S. 78 along the eastbound approach, prior to Broad Street.
- Remove and reset the existing sign series associated with the westbound merge on U.S. 78, just prior to Buddy Faust Road.

8.5 Bridge and Ford Prioritization

Bridges with a sufficiency rating of 50 or lower are eligible for improvements, and those with a rating of 80 to 50 are eligible for improvements by 2040. The four bridges with sufficiency ratings below 50 that are eligible for improvement include:

- Waston Mill Road over South Fork Broad River
- Saxton-Mattox Road over Long Creek
- Duck Pond Road over Dry Fork Creek
- Smithonia Road over Beaverdam Creek

In addition to bridge, evaluation criteria are established for prioritizing future improvements for existing fords. The criteria include the following:

- Functional classification of the roadway at which the ford locates;
- Connectivity of the roadway at which the ford locates;
- Within a projected residential growth area;
- Within a commercial/projected employment growth area; and
- County input and priority.

Table 8-7 below documents the scoring used and **Table 8-8** displays the scoring applied for the prioritizing of future improvements for existing fords.

TABLE 8-7: FORD IMPROVEMENT PRIORITIZATION CRITERIA

Ford Improvement Prioritization Criteria	Possible Points	
Roadway Functional Classification What is functional classification of the roadway at which the ford locates?	Local Road Rural Minor Collector	5 10
Connectivity Does the roadway at which the ford locates connect state routes or minor connectors?	Local Road Rural Minor Collector State Route	0 10 20
Projected Residential Growth Area Is the roadway which the ford locates within the projected residential growth area?	No Yes	0 10
Projected Commercial/Employment Growth Area Is the roadway which the ford locates within the projected commercial/employment growth area?	No Yes	0 10
County input and priority Is the ford currently identified by County as a priority?	Low Moderate High	0 15 50
Total Possible Points	**100**	

Table 8-8: Ford Improvement Prioritization

ID	Location	Rank	Roadway Functional Classification	Connect To	Within Projected Residential Growth Area	Within Commercial/ Projected Employment Growth Area	County Priority	Total Score
F-1	Faust Farm Road	2	Local Road	SR 77/Union Point Road	Y	N	High	85
F-2	Bear Mill Road	6	Local Road	SR 77/Union Point Road	N	Y	Moderate	50
F-3	Arnolds Mill Road	12	Local Road	Local Roads	N	N	Low	5
F-4	Glenn Road	9	Local Road	Local Roads	N	N	Moderate	20
F-5	Arnold Caldwell Road	10	Local Road	Centerville Road (Rural Minor Collector)	N	N	Low	15
F-6	Smith Road	5	Local Road	Local Roads	N	N	High	55
F-7	New Hope Vesta Road	7	Rural Minor Collector	SR 77/Elberton Road	N	N	Moderate	45
F-8	Buffalo Mill Road	4	Local Road	Stevens Grove Church Road	N	N	High	59
F-9	Allgood Road	10	Local Road	Veribest Road	N	N	Low	9
F-10	Thaxton Road	3	Local Road	SR 22/Crawfordville Road	N	N	High	75
F-11	Cook Road	8	Local Road	Veribest Road	N	N	Moderate	24
F-12	N Upson Street	1	Local Road	SR 22/Comer Road and U.S. 78/Athens Road	Y	N	High	85

Based on the prioritization rating and further County input, the following fords have top priority for future improvements:

- Godfrey Road over Big Creek
- Faust Farm Road over Barrow Creek
- Buffalo Mill Road over Buffalo Creek
- Thaxton Road over Dry Fork Creek
- Smith Road over Long Creek
- N Upson Street over Troublesome Creek

In addition to constructing a bridge structure or culvert at the ford location, fords can sometimes be improved by the provision of a submerged concrete floor. In such cases a curb is often placed on the downstream side to prevent vehicles slipping off, as growth of algae will often make the slab very slippery. Fords may be also equipped with a post indicating the water depth, so drivers may know if the water is too deep to attempt to cross.

8.6 Bicycle and Pedestrian Project 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 on the goals 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 recommended improvements to the bicycle and pedestrian transportation network were evaluated using the prioritization scoring criteria shown in **Table 8-9**. The prioritization criteria include scoring elements for both existing deficiencies in the network and potential for infrastructure improvements to have a positive impact.

Table 8-9: Bike and Pedestrian Improvement Prioritization Criteria

Project Prioritization Criteria	Possible Points	
Bicycle and Pedestrian Deficiency Factors		
Bicycle/Pedestrian Crashes Have there been bicycle or pedestrian crashes at this location along this corridor, how many, and what severity?	3	No more than one crash along this corridor (but not the project location) in past 3 years
	6	No more than one crash at the project location within last 3 years
	9	2 or more crashes on the corridor, but not at the project location in the past 3 years
	13	2 or more crashes at the project location in the past 3 years
	15	1 or more injuries or fatalities at the project location or along the corridor in the past 3 years
Existing Facilities Is this project replacing an existing facility or do none currently exist?	3	If purely a cosmetic upgrade of existing facility
	6	Existing bike/ped facilities but in poor condition
	9	Existing bike/ped facilities but many gaps or discontinuous
	12	No facilities currently on one side of road
	15	No facilities currently exist on either side of the road, or no street crossing facilities
Traffic Factors 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.	3	Project location is on a quiet, 2-lane residential street with low speeds and low traffic volumes
	9	Project location is on a street with moderate traffic volumes and speeds, no more than 3 lanes of traffic (not including on-street parking)
	15	Project location is on a major street with high speeds, high traffic volumes, multiple traffic lanes, wide intersections, and few crossing locations
Bicycle and Pedestrian Potential Factors		
Need Is there evidence of existing demand (bike/pedestrian counts, worn paths along roadside), current or	3-15	On a scale of 1-to-5, with 1 being the least demand and 5 being the highest demand for bicycle and pedestrian facilities

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.		
Bike/Ped Priority Area 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 1/2 mile radius of schools, parks, libraries or community facilities (such as senior center, YMCA, community health clinic, etc.).	0, 9, or 15	0 = No 9 = Partially 15 = Yes
Connectivity Does the proposed project provide a direct connection to: • Major employment or activity centers • Downtown Commercial Business Districts • 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?	0 - 15	0 = No connectivity On a scale of 1-to-15, with 1 providing very little connectivity and 15 providing the greatest connectivity to multiple destinations
Previously Identified Improvement Was the proposed project previously identified in a community plan (STIP, CRC Bike/Ped Plan, Comprehensive Plan, Land Use Plan, Recreation Plan, etc.)?	0 or 10	0 = No 10 = Yes
TOTAL POSSIBLE POINTS	**100**	

Regarding deficiencies, each recommendation was first examined to assess its ability to address a safety need. This evaluation included a review of bicycle or pedestrian crash history in the vicinity of each recommended improvement. If a recommendation creates a new bicycle or pedestrian transportation system element, it was given a higher score than an improvement to upgrade an existing facility. Improvements in locations with higher traffic volumes and speeds received a higher score than improvements in areas with low traffic volume and speed.

To evaluate the potential for a recommendation to have a positive impact to the bicycle or pedestrian system, the need for connection of people to desirable land uses was examined. Those recommendations providing connection to schools, parks, libraries, employment centers, and other community facilities received a higher score. Projects identified in a previously completed community or transportation plan also received a higher score. Finally, all of the scores in each individual category were combined resulting in an overall project prioritization score. The results of the prioritization process are shown in **Table 8-10.**

TABLE 8-10: BIKE AND PEDESTRIAN IMPROVEMENT PRIORITIZATION

ID	Location	Type of Improvement	Project Length (in miles)	Crashes (3-15)	Existing Facilities (3, 9 or 15)	Traffic Factors (3, 9 or 15)	Need (3-15)	Priority Area (0, 9, or 15)	Connectivity (0 – 15)	Previously Identified (0 or 10)	Score (Possible pts = 100)
P-1	U.S. 78 in Crawford From Oglethorpe Builders Supply to East Elbert	Sidewalks on both sides	0.5	6	15	15	12	15	15	0	78
P-2	North Street in Crawford from US 78 to Bryan Park	Sidewalks on east side	0.5	6	15	9	12	15	15	0	72
P-3	US 78/North Street Intersection in Crawford	Pedestrian Signals	N/A	6	15	15	15	15	15	0	81
P-4	Pedestrian Crosswalk at Depot in Crawford	Restripe	N/A	3	6	15	15	15	15	3	79
P-5	U.S. 78 in Lexington from Library to Fred's	Sidewalk on north side	0.6	3	15	15	15	15	15	0	78
B-1	SR 22 in Oglethorpe Co.	Paved Shoulder	12.8	6	15	9	9	9	3	3	61
B-2	US 78 from Crawford to Lexington	Bike Lane	4.3	6	15	15	12	15	15	3	88
B-3	Broad River Madison-Elbert-Oglethorpe from Clarke County Line to Elbert County Line	Greenway	27.2	3	15	3	3	0	3	3	37
B-4	Clarke-Oglethorpe-Greene Firefly Trail from Clarke County Line to Greene County Line	Rail-Trail	39.3	3	15	3	3	9	6	3	49
B-5	Oconee River Clarke-Oconee-Oglethorpe-Greene from Clarke County Line to Greene County Line	Greenway	22.5	3	15	3	3	0	3	3	37

Besides the on-going initiatives mentioned above, the top five bicycle and pedestrian improvements in Oglethorpe County are:

- Bicycle Lanes on U.S. 78 from Crawford to Lexington
- Pedestrian signals at the intersection of U.S. 78 and North Street in Crawford
- Sidewalks on both sides of U.S. 78 from Oglethorpe Builders Supply to East Elbert
- Crosswalk restriping at the Depot in Crawford
- Sidewalks on the north side of U.S. 78 from the library to Fred's in Lexington

8.7 Summary of Recommended Improvements

Based on the analysis completed as part of this study, a listing of recommended projects was created for Oglethorpe County. This information is presented in Table 8-11 on the next page. For each recommendation, several informational elements were produced including: facility; limits; existing and improved configuration; comments; source; improvement type; need; and cost. For successful implementation of these projects, additional detailed engineering studies and environmental analysis are required to determine the most appropriate alignment, design, and cost of each project. Additionally, successful project implementation will require identified funding mechanisms, political support, and public recognition of the project need and benefit. This *Transportation Plan* provides a basis for each of these achievements, but more work is necessary in order to advance and ultimately build each project.

Table 8-11: Prioritized Recommended Improvements

Project Ref. No.	Facility	Segment Limits From	Segment Limits To	Existing Configuration	Improved Configuration	Notes/Comments	Source	Improvement Type	Need	Estimated Cost	Prioritization Score
CAPACITY IMPROVEMENTS AND NEW ROADWAYS with Anticipated Benefits of Increased Capacity and Improved Safety											
C-1 (PI # 132660-)	U.S. 78	CR26 / Smokey Road	CR166 / Whit Davis Road	2-lane highway with one passing lane in some segments	4-lane highway	3.47 miles	GDOT/Analysis	Roadway Widening	Capacity Deficiency	$ 34,203,100	71
C-2 (PI # 231910-)	U.S. 78	Smokey Road	East of Oneal Rd	None	Bypass	7.4 miles Southern Bypass aligment. Northern alignment (4.2 mile) warrants further study.	GDOT/Analysis	New Bypass	Capacity Deficiency & Protection of Downtown	$ 44,342,000	50
									Sub-Total	**$ 78,545,100**	
OPERATIONAL IMPORVEMENTS with Anticipated Benefits of Improved Capacity and Safety											
O-4	U.S. 78	County Boundary	County Boundary	2-lane undived rural principal arterial	Maintain access management standards	18.5 miles	Analysis	Operational Improvements	Operational & Safety Issues	$ 370,000	77
O-5	SR 22	County Boundary	County Boundary	2-lane rural major collector	Maintain access management standards	25.7 miles	Analysis	Improvements	Operational & Safety Issues	$ 514,000	60
O-1 (PI # 222460-)*	U.S. 78	East of Stevens Grove Church Road	East of Beaver Dam Road (Wilkes County)	2-lane undivided rural principal arterial	Passing lane pair	12.6 miles	GDOT/Analysis	Operational Improvements	Operational & Safety Issues	$ 9,189,400	50
O-3	SR 77/Union Point Street	West of Boggs Street	U.S. 78/Atlanta Street in Lexington	2-lane rural minor arterial with 1' paved shoulder	Upgrade shoulders	0.2 miles	Analysis	Operational Improvements	Operational & Safety Issues	$ 27,000	50
O-6	SR 77	County Boundary	County Boundary	2-lane rural minor arterial	Maintain access management standards	32.7 miles	Analysis	Improvements	Operational & Safety Issues	$ 654,000	48
O-2	SR 77/S Main Street	South of Hill Street	South of Church Street in Maxeys	2-lane rural minor arterial without identifiable shoulder	Upgrade shoulders	0.3 miles	Analysis	Operational Improvements	Operational & Safety Issues	$ 45,000	45
									Sub-Total	**$ 10,799,400**	
INTERSECTION IMPROVEMENTS with Anticipated Benefits of Improved Capacity and Safety											
I-1	U.S. 78 / Athens Road	At SR 22 / Comer Road		One-way stop controlled	Further study (Potential improvements identified)	12 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	80
I-13	U.S. 78 / Athens Road	At Buddy Faust Road		One-way stop controlled	Further study (Potential improvements identified)	14 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	80
I-14	U.S. 78 / Athens Road	At Broad Street		Two-way stop controlled	Further study (Potential improvements identified)	9 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	80
I-10	U.S. 78 / Athens Road	At Bunker Hill Road		Two-way stop controlled	Further study (Potential improvements identified)	6 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	72
I-9	Yancey Road	At Arnoldsville Road		Two-way stop controlled	Further study (Potential improvements identified)	12 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	65
I-23	SR 22 / Comer Road	At Buddy Faust Road		One-way stop controlled	Further study (Potential improvements identified)	2 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	51
I-24	Hargrove Lake Road	At Crawford Smithonia Road		One-way stop controlled	Further study (Potential improvements identified)	2 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	51
I-5	U.S. 78 / Athens Road	At North Street		Signalized	Further study (Potential improvements identified)	11 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	50
I-28	SR 22 / Comer Road	At Collier Church Road		Two-way stop controlled	Further study (Potential improvements identified)	11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	47
									Sub-Total	**$ 2,430,000.00**	
BRIDGE IMPORVEMENTS with Anticipated Benefits of Improved Safety and Operations											
B-1	Waston Mill Road	Over South Fork Broad River		4,480 sq ft of deck		4 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 493,000	96
B-2	Saxton-Mattox Road	Over Long Creek		645 sq ft of deck		13 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 71,100	87
B-3	Duck Pond Road	Over Dry Fork Creek		365 sq ft of deck		26 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 40,300	74
B-4	Smithonia Road	Over Beaverdam Creek		3,365 sq ft of deck		50 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 370,300	50
B-5	Levington-Garlston Road	Over South Fork Broad River		10,560 sq ft of deck		51 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 1,161,700	49
B-6	Crawford-Smithonia Road	Over Big Clouds Creek		3,000 sq ft of deck		55 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 330,100	45
B-7	Godfrey Road	Over Big Creek		4,095 sq ft of deck		62 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 450,500	38
B-8	Arnold Caldwell Road	Over Long Creek		5,360 sq ft of deck		63 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 589,700	37
B-9	Crawford-Smithonia	Over Hawks Creek		970 sq ft of deck		65 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 106,800	35
B-10	SR 77	Over Broad River		12,606 sq ft of deck		74 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 1,386,700	26
B-11	Wilson Road	Over Big Creek		2,006 sq ft of deck		74 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 220,700	26
B-12	Saxton-Mattox Road	Over Goosepond Creek		480 sq ft of deck		76 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 52,800	24
B-13	Road	Over Big Clouds Creek		4,352 sq ft of deck		77 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 478,800	23
B-14	U.S. 78 / SR 10	Over Moss Creek		694 sq ft of deck		79 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 76,400	21
									Sub-Total	**$ 5,828,900**	
BIKE/PED IMPORVMENETS with Anticipated Benefits of Enhanced Multi-Modal System											
B-2	U.S. 78	Crawford	Lexington	No bike lanes	Add bike lanes	3.2 miles	Analysis	Expand Bike Lanes	Bike/Ped Facilities	$ 3,200,000	88
P-3	U.S. 78 @ North Street	In Crawford		No pedestrian signals	Install pedestrian signals	0.0 miles	Analysis	Install Signals	Bike/Ped Facilities	$ 7,000	81
P-4	Depot	In Crawford		No crosswalk strip	Crosswalk restriping	0.0 miles	Analysis	Upgrade Crossing	Bike/Ped Facilities	$ 1,500	79
P-1	U.S. 78	Oglethorpe Builders Supply	East Elbert	No sidewalk	Add sidewalks on both sides	0.5 miles	Analysis	Expand Sidewalks	Bike/Ped Facilities	$ 520,000	78
P-5	U.S. 78	Library	Fred's in Lexington	No sidewalk on the north side	Add sidewalks on the north side	0.6 miles	Analysis	Expand Sidewalks	Bike/Ped Facilities	$ 312,000	78
									Sub-Total	**$ 4,040,500**	
									Total	***$ 101,643,900***	

1. Operational and intersection improvements recommendations are planning level and require further study for specific solutions and refined costs.
2. Intersection costs assume a placeholder cost of $270,000 where further study is required.
3. Cost estimates are in current year dollars (uninflated dollars).
4. Cost estimates are planning-level, based on best available data and assumptions.

* Estimated cost is for the full length of the passing lane project, which includes 7.37 miles in Wilkes County.

9 Funding and Implementation

9.1 Funding Sources

Several funding sources have the potential to be utilized to implement the 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 Oglethorpe County are either operated by GDOT or the County. Should the County desire to accelerate projects on state owned and maintained facilities, it is highly likely that overmatching of local funds could accelerate the process.

Funding for most transportation projects in the County has historically come in part through GDOT. To understand the ability of the Department to continue to provide funds to Oglethorpe County, it is useful to understand the components of GDOT funding. Key components include:

- Federal Title I Apportionments;
- State Motor Fuel Taxes; and
- Local Funds.

While detailed analysis of these funding sources is beyond the scope of this study, it is useful to point out that all of the revenue streams identified as key components of GDOT funding have traditionally positive growth rates. However, it should be noted that past trends are not a guarantee of future expectations moving forward.

While GDOT funding components have positive growth rates, the Department is experiencing some funding challenges. There are currently more transportation needs in the state than there are dollars to fund projects. In addition, construction costs have fluctuated considerably over the past three years, forcing the Department to continually assess which projects it can reasonably fund. GDOT's Project Prioritization Study, completed in 2008, formulated a prioritization methodology for all projects in the state based upon GDOT's statewide goals and objectives for the performance of the transportation system. Every project eligible for Federal or State funding may be subject to this process, which helps to identify the projects that bring the state the most benefit for the investment. Local funding sources are becoming more significant and will continue to be significant in the future for the successful implementation of projects. A review of project implementation shows that locations with a Special Purpose Local Option Sales Tax (SPLOST) have been in the best position to leverage funds and ultimately construct projects.

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 U.S. Congress authorizes federal transportation funding to the states and other public entities generally every six years. The previous authorization was known as the "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users" or SAFETEA-LU. The reauthorization of SAFETEA-LU passed by Congress in July 2012 is known as the "Moving Ahead for Progress in the 21st Century Act" (MAP-21) which authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 2-year period of 2012 through 2014. According to the U.S. DOT, funding levels for major highway transportation programs and apportionments allocated to Georgia over the two-year time frame total approximately $3.7 billion out of a total of $113 billion. These lump sum funds are apportioned throughout the state.

Federal funding for the majority of highway system improvements (excluding interstate highways) planned in Oglethorpe County is expected to come from the Surface Transportation Program (STP) and Minimum Guarantee Program. 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.

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 Enhancement Program (TE Funds). Currently, the TE Grant Program provides federal transportation funds through GDOT to local governments through a competitive process for non-highway projects. Eligible projects include bicycle and pedestrian facilities, multi-use trails, the preservation of historic sites related to transportation, etc.

Federal Funds for Public Transportation

As the population of Oglethorpe 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. Commuter-oriented public transportation services such as vanpooling programs and transit facilities, such as park and ride lots can begin to be considered in the area. Park and ride facilities can be developed with local use agreements or easements in partnerships with property owners. Park and ride facilities can also possibly be funded with federal grants from the Federal Transit Administration's Section 5309–Bus and Bus Facilities Program which provides funding for transit capital investments, such as park and ride lots. Funding in this program is generally earmarked for specific projects; however, unallocated or discretionary funds are sometimes available.

The County should continue to monitor its needs for local and regional public transportation services and identify potential opportunities to tap into available federal sources for these programs. On-demand rural transit and commuter shuttle services can both be implemented utilizing funding from the Federal Transit Administration's Section 5311-Formula Grants for Other Than Urbanized Areas Program. The Section 5311 program, administered by GDOT, provides funding to rural localities with populations of less than 50,000. Funds may be used for capital expenses (vehicles, fare boxes, communications equipment, wheelchair lifts, and computer and office equipment) as well as operating assistance, including administrative costs. The local government must provide a 20 percent match against eligible capital and administrative costs and a 50 percent match for operating costs. Coordination of rural transit across county lines is essential for counties wanting to undertake on-demand rural transit programs in the NEGRC Region. Such coordination would create significant cost savings for counties, such as Oglethorpe County, and would enable a more extensive area of coverage and service within the NEGRC Region.

Other federal funding sources are available to assist rural local communities with transit needs. The FTA Section 5316-Job Access and Reverse Commute (JARC) Program was established to address the unique transportation challenges faced by welfare recipients and low-income persons seeking to obtain and maintain employment. The funding can be used for planning and operating expenses for projects that transport low income individuals to and from jobs and activities related to employment. To be eligible for funding, localities must meet needs-formula requirements as well have their projects identified in a locally developed, coordinated public transit-human services transportation plan. The FTA Section 5310–Enhanced Mobility of Seniors and Individuals with Disabilities Program provides funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act (ADA) complementary paratransit services. Funds are apportioned for rural areas based on

the number of seniors and individuals with disabilities. For both 5316 and 5310, the local government must provide a match of 20 percent of eligible capital and administrative costs and 50 percent of operating costs.

State Funding Sources for Transportation

State funding for transportation projects in Georgia is derived mostly from state tax on motor fuels (7.5 cents per gallon). The state tax on motor fuels accounts for approximately 98% of the State's transportation funding allotted for projects;

It is also useful to note that Georgia currently has one of the nation's lowest state motor fuel taxes, excluding sales taxes. Even when including the additional 4 percent sales tax, Georgia's motor fuel taxes are the third lowest in the U.S.

Local Funding Sources for Transportation

Local governments (cities and counties) receive revenues from a number of sources to support the public facilities and services they provide to citizens. These sources include federal and state funds, "own source" funds, such as property tax revenues and other monies, and discretionary grant funds from federal and/or state agencies.

9.2 Historical Funding Level

Oglethorpe County's Historical Local Maintenance & Improvement Grant (LMIG) Funding

The Local Maintenance and Improvement Grant (LMIG) is a GDOT Local Assistance Program that is funded by the State Motor Fuel Tax. In FY 2013, GDOT revised the LMIG program to expand the list of eligible projects to include a broader range of roadway and bridge improvement activities. This list includes:

- Preliminary engineering;
- Construction supervision and inspection;
- Utility adjustments/replacements;
- Patching and resurfacing;
- Grading and drainage;
- Replacing storm drain pipe or culverts;
- Intersection improvements;
- Turn lanes;
- Bridge repair and replacement;
- Sidewalks adjacent to public roadways;
- Roadway signs;
- Striping and guardrail installation;
- Signal installation or improvement; and
- Aggregate surface course for dirt road maintenance.

LMIG funds cannot be used for right-of-way acquisition, street lighting, beautification and streetscapes, walking trails and tracks, landscaping, or administrative services.

The match component of LMIG is based on and in accordance with the new TIA legislation. Local jurisdictions in a TIA-approved region are required to contribute a 10% match for LMIG projects. Local jurisdictions in a region that did not pass TIA legislation must provide a 30% match for LMIG projects.

LMIG is a formula-based grant program. Between 10% and 20% of the State's previous year motor fuel collections are set aside for LMIG funding. Each jurisdiction's share of available LMIG funds is based on their population (weighted one-third) and their centerline miles (weighted two-thirds). Thus, a local government formula amount is calculated for each jurisdiction providing their allotted LMIG funds each year.

A local government must submit an application and list of eligible projects to GDOT at the beginning of the year that is equal to or exceeds its LMIG formula allotment plus its required local match amount. GDOT reviews the application and list and then forwards the allotted funds to the local government. At the end of the year, each local government must submit a certification of work to ensure that projects are completed within a three-year timeframe.

The Northeast Region voters did not pass the TIA referendum and thus Oglethorpe County and its cities must provide a 30% match for its LMIG projects. **Table 9-1** below shows the historical unmatched LMIG Funds Allocations for Oglethorpe County and the Cities of Arnoldsville, Crawford, Lexington, and Maxeys from 2011 to 2013 as well as the allotted formula amounts for 2014.

TABLE 9-1: UNMATCHED LMIG FUNDS ALLOCATIONS (2011 - 2014)

Jurisdiction	2011	2012	2013	2014
Unincorporated Oglethorpe County	$309,104	$321,186	$388,635	$425,282
Arnoldsville	$1,994	$5,619	$5,942	$6,116
Crawford	$5,040	$7,199	$8,307	$8,933
Lexington	$2,366	$2,916	$3,399	$3,586
Maxeys	$2,180	$4,798	$5,630	$6,647
Total	**$320,684**	**$341,718**	**$411,913**	**$450,564**

Source: Georgia Department of Transportation

9.3 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 2040. A combination of sources will increase the likelihood for project implementation.

9.4 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 in order to advance projects into GDOT's Project 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 2 for Oglethorpe 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. The information included in the long-range plan and the project sheet, in addition to any supporting information resulting from additional study, is included in this package.

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.

10 Conclusion and Next Steps

The Georgia Department of Transportation's (GDOT) Office of Planning initiated the Oglethorpe County Multi-Modal Transportation Plan to assess needs and identify multi-modal transportation improvement opportunities that will help Oglethorpe County address transportation issues through the plan's horizon year of 2040. Recommended projects for Oglethorpe County were identified through analysis of existing and future transportation deficiencies, and selected and prioritized based on local goals and objectives with the intent of enhancing the quality of life for County residents and visitors. Efforts were taken to ensure that proposed projects negatively impacted the community as little as possible while providing maximum benefits. As part of this effort, existing and future operating conditions were documented for the following modes: highways and bridges, bicycle and pedestrian and transit. Ultimately, the study identified a prioritized list of projects for implementation.

GDOT coordinated with Oglethorpe County and the Cities of Arnoldsville, Crawford, Lexington, and Maxeys, the Northeast Georgia Regional Commission, MACORTS, area residents and business leaders, and other local partners in the planning, development, and review of potential improvements. Additionally, a public survey was developed and distributed which ensured that alternative transportation improvements were not only coordinated with various governments, but afforded individual citizens and interested groups the opportunity to provide their input in developing and evaluating potential improvements to the County's transportation network.

The end product for this study is this Long Range Transportation Plan document. If implemented, its solutions address future needs and provide for the efficient movement of people and goods within and through Oglethorpe County through the horizon year of this study, 2040. This document should be reviewed and updated periodically to ensure that the planning factors and other assumptions are still relevant and effectively address transportation needs. In addition, this document should serve as the foundation for Oglethorpe County's transportation planning efforts and a starting point for addressing future transportation needs.