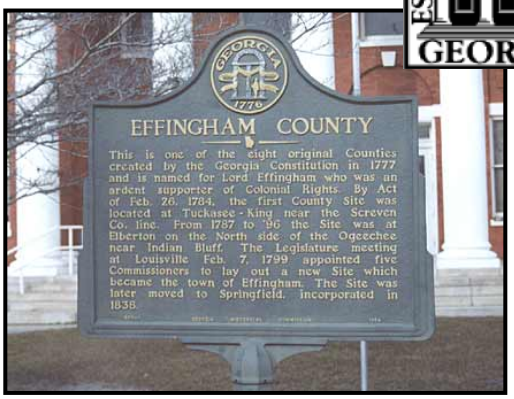
Multi-Modal Transportation Study

for Effingham County



EFFINGHAM COUNTY
EST. 1777
GEORGIA

FINAL REPORT

July 2008

Prepared for: GDOT Keeping Georgia on the Move
Office of Planning

by JACOBS Carter Burgess

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Glossary of Acronyms

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
CARE	Critical Analysis Reporting Environment
CAT	Chatham Area Transit
CID	Community Improvement District
CMAQ	Congestion Mitigation and Air Quality
CZM	Coastal Zone Management
DCA	Department of Community Affairs
DHR	Department of Human Resources
DNR	Department of Natural Resources
DRI	Development of Regional Impact
E+C	Existing plus Committed
EDA	Economic Development Authority (Effingham)
EJ	Environmental Justice
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GDOT	Georgia Department of Transportation
GIS	Geographic Information Systems
HOV	High Occupancy Vehicle
ISTEA	Intermodal Surface Transportation Efficiency Act (1991)
ITS	Intelligent Transportation System
LOS	Level of Service
MMTS	Multi-Modal Transportation Study
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
NBI	National Bridge Inventory
NHRP	National Register of Historic Places
PACES	Pavement Condition Evaluation System
PIP	Public Involvement Plan
RDC	Regional Development Center
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005)
SOV	Single Occupant Vehicle
SPLOST	Special Purpose Local Option Sales Tax
SRTA	State Road and Tollway Authority (Georgia)
STAA	Surface Transportation Assistance Act (1982)
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TAD	Tax Allocation District
TDM	Travel Demand Management
TDR	Transfer of Development Rights
USDOT	United States Department of Transportation
V/C	Volume to Capacity

1. Introduction

Transportation is fundamental to a prosperous economy and quality of life for residents, visitors, and businesses in Effingham County. As emphasized by current SAFETEA-LU legislation, the movement of people and goods is dependent on a safe, accountable, flexible and efficient transportation system, which takes into the account the needs of all users and the environment.

The Georgia Department of Transportation (GDOT), in cooperation with Effingham County, initiated a multi-modal transportation study for the county and the cities of Guyton, Rincon, and Springfield. The study is made necessary by the projected growth that will take place over the next twenty-five years of approximately 30,000 new residents and 15,000 new jobs.

The objective of this Mutli-Modal Transportation Study (MMTS) is to improve access and mobility, with improved safety and security, for people and goods throughout the county and as part of the rapidly-growing Georgia Coastal Region. The MMTS supports, and was developed in coordination with, the 2007 update to the Effingham County Comprehensive Plan.

This study provides an assessment of transportation inventory and needs, and the policy and strategy framework to help Effingham County Officials select and prioritize future transportation programs and projects through the year 2030. The MMTS includes a detailed inventory and analysis of multiple aspects of the transportation network, including roads and bridges, bicycles and pedestrian facilities, public transportation, and freight, and can be used as a guide in creating an official financially-constrained Effingham County Comprehensive Transportation Plan.

Overview of Planning Area

Effingham is a rapidly growing county located in southeast Georgia. Georgia's Coastal Region comprises 10 counties, with Effingham being one of four that are inland. Effingham is bordered by Chatham County to the south, the Ogeechee River to the west, Screven County to the north, and the Savannah River to the east. Bulloch and Bryan Counties lie to the west of the Ogeechee, while the South Carolina counties of Hampton and Jasper are across the Savannah River. Sizeable cities in neighboring counties include Savannah, Statesboro, and Hilton Head, South Carolina. Fort Stewart and Hunter Army Air Force base are also close by.

In Colonial days, Effingham County was referred to as St. Matthews Parish, of which the historic settlement of Ebenezer was the center. Following the Revolutionary War, the legislature named Effingham County as one of the eight original counties in Georgia in 1777. Ebenezer

Figure 1.1 Ten-County Coastal Georgia Region

Source: coastalgeorgiardc.org

was the home of Georgia's first governor, John Adam Treutlen, who had represented Ebenezer at the Georgia Provincial Congress in 1775 and was on the drafting committee of Georgia's first Constitution.

Today the county covers approximately 480 square miles and includes the incorporated cities of Springfield, Rincon and Guyton which are surrounded by unincorporated areas of Effingham County. With 4.7% annual growth, Effingham was the 57th fastest-growing county in the nation between July 1st 2004 and July 1st 2005[1]. The county and the cities of Guyton, Rincon, and Springfield all experienced a higher rate of growth than the State of Georgia as a whole, and ranked among the highest in the fast-growing coastal region.

Guyton

Guyton is located in west central Effingham County and is the smallest of the county's three cities in terms of both land area and population. Originally known as "Whitesville", Guyton began as a 250-acre land grant to a squire, following his service in the Revolutionary War. In 1838, the Effingham County Commission seized the land due to non-payment of taxes and proceeded to survey it, plat streets and property boundaries, and auction off lots. Additional streets were laid out when the city was incorporated in 1886. During its heyday in the early 1900's, Guyton saw up to 10 trains a day and was a thriving center of commerce for local farmers. After a period of decline following the 1960's abandonment of the prominent railroad running through the center of town, Guyton grew and prospered again, and has gained new residents at an increasing rate in recent years. In 2005, there were approximately 1,700 residents in the city, which now covers an area of 1.2 square miles. The downtown area has the most historic buildings of the three cities and is considered a historic district.

Rincon

Rincon is situated approximately 20 miles north of Savannah in southern Effingham. It is the youngest of the three cities, having been established in 1890 by the Southbound Railroad Company. As is typical of Georgia's "railroad strip communities"[2], Rincon is bisected by a railroad and its main street runs parallel to the tracks. Surrounding streets are arranged in a grid pattern. In 1955, Rincon was incorporated and over the next fifty years saw an increase of over 5,000 residents, to the current 2005 estimate of 6,850 people. Much of this growth occurred from 1980 onwards, spurred on by proximity to Savannah and employment opportunities at nearby industrial firms and utilities. The city limits cover approximately 6.7 square miles, making it the largest city in Effingham.

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[1] U.S. Census Bureau, Top 100 Fastest Growing Counties, Table HU-EST2005-05

[2] *Georgia Community Development and Morphology of Community Types,* Georgia Department of Natural Resources, Historic Preservation Section (1989)

Springfield

Located north of Rincon, Springfield was selected as the county seat for Effingham County in 1799. Little more than a "stagecoach stop" at first, Springfield was laid out by surveyors based on a "square town plan" in 1821, with squares and parks reserved for public use.[3] In the aftermath of General Sherman's "March to the Sea" during the Civil War, Springfield waned but rose from the ashes to become a bustling railroad town by the early 1900's. Passenger rail service has since been discontinued, but an active freight line still runs through the city and various historic structures and businesses are still found in Springfield. Over the past few decades, Springfield experienced steady population growth. By 2005, 2,300 residents called the city home.

Relationship of Effingham County to the Coastal Region

Effingham is part of the Georgia Coastal Region, which covers 10 counties and 35 cities and is the second fastest growing region in the state, second only to Atlanta. The 2000 Census records the regional population at approximately 560,000 within a 5,110 square mile area. In 2005, Effingham contributed a population of 47,000.

Effingham plays an important role in the coastal community, both as a destination and as a thoroughfare for people and freight traveling to destinations such as Savannah and South Carolina or connecting with I-95 or I-16 for longer distance journeys. The region is well served with strategic transportation connections, including interstates I-16 and I-95; several major highways such as US 80, SR 21, SR 119, and SR 17; as well as rail and the port of Savannah. These facilities are important drivers of physical and economic growth. Effingham County's Economic Development Authority (EDA), in cooperation with the Chamber of Commerce, has attracted over $1 billion of new investment since 2000.

Plans and Agencies

Planning Agencies and Regions

The Georgia Department of Transportation (GDOT) plans, constructs, maintains, and improves the state's roads and bridges. In addition, GDOT provides planning and financial support for other types of transportation facilities and services including bicycle paths, mass transit, and airports. Effingham County and the Cities of Guyton, Rincon, and Springfield are eligible to receive state and federal transportation funds through GDOT.

The Coastal Georgia Regional Development Center (RDC) works with and serves governments in the coastal region, including Effingham County and the Cities of Guyton, Rincon, and Springfield. The Coastal

[3] Effingham County Comprehensive Plan (2007), Natural and Cultural Resources Data Appendix

Georgia RDC is the regional planning agency for Coastal Georgia and all planning activities in Effingham County should be consistent with regional plans produced by the RDC.

The Georgia Department of Community Affairs (DCA) serves as an advocate for local governments. State policies are often articulated through DCA which provides extensive resources in the areas of building codes, coordinated planning, housing, and more. DCA's mission is "partnering with communities to help create a climate of success for Georgia's families and businesses." Formal programs include comprehensive planning guidance and Development of Regional Impact (DRI) review.

Within Effingham County, several agencies and private organizations are engaged in planning activities. The county and each of the three incorporated cities have planners on staff. In 2007, county and city planners collaborated with each other and relevant agencies to update Effingham's countywide Comprehensive Plan. The independent EDA is responsible for industrial recruitment and economic development throughout the county. The EDA is composed of representatives from each of the cities and the county commission districts. It works closely with the Chamber of Commerce which supports the business community with special focus on small business development.

Existing Plans Review

In preparing this Multi-Modal Transportation Study, multiple other related planning documents were consulted in order to maintain continuity, as listed in **Table 1.1.** Current ongoing planning efforts also have an impact on the development of this Multi-Modal Transportation Study. In 2005, collaborative efforts were initiated with Department of Human Resources (DHR) and the Georgia Department of Transportation (GDOT) to design a Regional Plan for Rural and Coordinated Public Transportation. The concept of the regional plan is to merge the funding and resources of the DHR with GDOT to bring about a seamless regional system providing transportation to DHR consumers and the general public simultaneously in Bryan, Bulloch, Camden, Chatham, Effingham, Glynn, Liberty, Long, McIntosh, and Screven counties. Described in more detail in later chapters, the Regional Plan for Rural and Coordinated Public Transportation is scheduled to be completed in Summer 2008, with implementation of services in Effingham beginning in July 2008.

Table 1.1 Resources Consulted During Planning Process

Planning Documents	Geography	Sponsor
Effingham Comprehensive Plan - Community Assessment and Technical Appendix (2007) - Public Participation Plan (2007) - Community Agenda (November 2007)	Effingham County	Coastal Georgia RDC
Municipal Code and Ordinances	Effingham County	Effingham County Government
Historic Effingham - Ebenezer Scenic Byway Georgia Scenic Byways Map (June 2006)	Effingham County	Effingham County
Developments of Regional Impact, various plans and documents (ongoing)	Effingham County, selected sites	Georgia DCA
Coastal Georgia Regional Plan (June 1998, updated November 2004)	9-County Coastal Region (Bryan, Bulloch, Camden, Chatham, Effingham, Glynn, Liberty, Long, and McIntosh)	Coastal Georgia RDC
Coastal Georgia Regional Bicycle and Pedestrian Plan (May 2005)	10-County Coastal Region (Same as above + Screven)	Coastal Georgia RDC
Regional Plan for Rural and Coordinated Public Transportation, Phase I (November 2005)	10-County Coastal Region	Coastal Georgia RDC
2005 – 2035 Georgia Statewide Transportation Plan	State of Georgia	Georgia DOT
2008-2011 Georgia Statewide Transportation Improvement Plan (STIP)	State of Georgia	Georgia DOT
2005 – 2035 Georgia Statewide Freight Plan	State of Georgia	Georgia DOT
Georgia Coastal Comprehensive Plan - Community Agenda (October 2007)	Chatham, Bryan, Liberty, McIntosh, Glynn, Camden	Georgia DCA
Metropolitan Planning Organization 2030 Long Range Transportation Plan (September 2004)	Savannah and Chatham County	Savannah-Chatham MPO
Chatham County Comprehensive Plan - Community Assessment (2007)	Savannah and Chatham County	Savannah-Chatham MPO

2. Goals and Objectives

Thoughtful goals and objectives assist in recognizing deficiencies and appropriate solutions. This Multi-Modal Transportation Study (MMTS) builds on the transportation elements of the 2007 Effingham County Comprehensive Plan, providing a more detailed analysis of each transportation mode and offering specific potential improvements in response to identified needs. The process of developing a strategic plan must also recognize that the plan does not exist in isolation. A robust and realistic plan should be informed by, and seek to inform, the goals and objectives of other related plans.

Effingham's 2007 Comprehensive Plan, the policy basis of this study, is composed of three documents: a Community Assessment, a Community Participation Plan, and a Community Agenda. The Community Assessment portion of the plan was completed in early 2007, and provides an overview of Effingham County – its people, history, environment, infrastructure, services, and industry. Undertaken concurrently was the Community Participation Plan that identified local stakeholders and solicited public input to the planning process. The Community Agenda was completed in November 2007 and defines the vision, issues and opportunities, and implementation program for Effingham County and its three cities of Guyton, Rincon, and Springfield. As required by the DCA, it covers the following eight elements: population change, economic development, natural and cultural resources, community facilities and services, housing, land use, transportation, and intergovernmental coordination. In addition to the required eight elements, a ninth "community character" element is also present due to the volume of public comment received relating to the design of public spaces in Effingham County.

Though this Multi-Modal Transportation Study focuses on providing a more in-depth assessment of Effingham's transportation infrastructure, transportation affects and is affected by all of the aforementioned elements discussed in the 2007 Comprehensive Plan, especially land use. Recognition of planning element interdependency is present throughout the Community Agenda and is reflected in the vision and policies set forth by it. In the interest of truly comprehensive, cooperative, and continuing planning, these guiding principles serve to create a foundation for this Multi-Modal Transportation Study as well.

Vision

Exhibiting common themes in their visions, Effingham and its cities desire to be inclusive, sustainable communities that preserve their natural environment and history, while guiding growth and investing in appropriate infrastructure so that old and new residents alike experience a high quality of life. In support of these ideals, a number of goals and objectives were established according to the nine DCA elements previously described. Transportation and supportive land use goals, which were generally the same for the county and its cities, are reproduced on the pages that follow. Taken directly from the Effingham County Comprehensive Plan, the following goals are the basis of this Multi-Modal Transportation Study.

Transportation Goals

Transportation Planning

- Develop a long-range transportation plan for the county.
- Promote comprehensive, long-range transportation planning in conjunction with comprehensive planning.
- Promote alternative modes of transportation, such as walking, bicycling and public transit.

Accessibility and mobility

- Encourage mixed-use development and design standards that are pedestrian-oriented to promote mobility and access for all citizens.
- Ensure that new and reconstructed roadways will support multiple modes of transportation and enhance the aesthetics of the community.
- Support access management strategies to improve the safety and aesthetics of commercial corridors.

Network connectivity

- Ensure connectivity between road network, public transit, and pedestrian/ bike paths.
- Promote higher-density and mixed-use developments in areas conducive to walking and bicycling.
- Promote a continuous network of bicycle routes and provide bicycle facilities (e.g., parking racks) at destinations throughout the county.
- Promote pedestrian and bicycle mobility and circulation in and between residential subdivisions and surrounding commercial uses.

Public transportation

- Promote county participation in a regional bus system, such as commuter routes to Chatham County and rural routes between populated areas of the county.
- Identify potential linkages with social service agencies and proposed rural transit to provide transportation for those with special needs.
- Protect opportunities for the future re-use of railroad infrastructure for public transit.

Aesthetics and scenic corridors

- Reduce the visual impact of the automobile in both commercial and residential areas of the county/city
- Protect scenic corridors including preservation of existing trees within the right-of-way.
- Create a "sense of place" along the county's gateways and entrance corridors.
- Adopt and enforce a signage ordinance to minimize the negative aesthetic impacts of inappropriate signage on the landscape.
- Evaluate the entryways into the community and develop landscaping, signage, etc., at all points of entry in conjunction with private landowners and the Georgia Department of Transportation.
- Develop a vision for the aesthetic quality of future arterial highways, gateway interchanges, and collector streets.

Land Use and Related Goals

General policies

- Address compatible land uses in all districts, especially industrial and commercial uses adjacent to residential.
- Coordinate future land use with transportation.
- Allow greater residential densities in areas where water/sewer infrastructure already exists.
- Protect residential areas from intrusion of incompatible and conflicting non-residential land uses.
- Promote efficient use of land by creating well designed, pedestrian-friendly development patterns that contain a mix of uses [where people have easy access to schools, parks, residences and businesses through walkways, bike paths and other pedestrian-friendly infrastructure.]
- Target reinvestment in declining, existing neighborhoods to further encourage private sector redevelopment and accommodate future growth.
- Encourage efficient land use.
- Promote the development of mixed-uses and the redevelopment/revitalization of existing and underutilized commercial and industrial areas over development of new land for commercial purposes.
- Encourage innovative land use planning techniques to be used in building higher density and mixed-use developments, as well as infill developments.
- Accommodate new development while enhancing existing local assets.
- Promote mixed-use development by right in appropriate areas.

Existing infrastructure and services

- Encourage development in areas where infrastructure and services already exist to maximize efficiency of services and reduce costs associated with sprawling development patterns.
- Promote increases in residential densities in areas that meet community design standards, environmental constraints and available infrastructure and service capacities.

Unincorporated Effingham County also had a number of land use policies regarding farmland and rural preservation. These are detailed within the Community Agenda.

3. Public Involvement

A public involvement plan (PIP) was developed in the early stages of the planning process for this study. The PIP established the framework for public outreach and describes some of the tools and techniques to be utilized. It also highlights the multiple opportunities for citizen participation in the process and provides the foundation on which future engagement opportunities will build.

This approach is in accordance with the GDOT policy on public involvement in transportation planning and decision-making "to reach out to Georgians of all walks of life and to invite and encourage them to participate in transportation decision-making."

It is also consistent with Federal Executive Order 12898 (Environmental Justice), which sets forth the requirement where federal transportation funds are used "to involve appropriate agencies and all citizens in transportation planning regardless of race, ethnicity, income, or education level."

Some specific goals of the PIP are to:

- Build public awareness and understanding of the transportation planning process
- Gain an understanding of the public's transportation needs and priorities
- Engage as many citizens as possible—including representatives from the cities and unincorporated Effingham County as well as traditionally under-represented communities—using a broad range of outreach techniques.
- Encourage public and stakeholder consensus around the most effective and efficient transportation solutions to meet Effingham County's current and future mobility needs

Outreach effort and description

In October 2007, the Study Team conducted one-on-one briefings/interviews with key stakeholders in the study area to ensure that stakeholders and community leaders in the county and cities had a working knowledge of the Multi-Modal Transportation Study, including its purpose and need, and had a chance to provide input into the process. The list of stakeholders included local government agency representatives as well as leaders of the business community, faith and community-based organizations, homeowners associations, and others. **Appendix A** describes public involvement activities in more detail and includes a summary of stakeholder comments.

Study Website

During the study, an internet website was launched to provide an accessible repository of information for this Multi-Modal Transportation Study. It is hosted by GDOT at:

http://www.dot.ga.gov/informationcenter/programs/studies/Pages/Effingham.aspx

The website provides information on the study, such as fact sheets, frequently asked questions, public meeting schedules, maps and analysis findings.

Public Meetings and Surveys

A citizen questionnaire was prepared during Fall 2007 to seek opinions on such matters as the long-term vision for the county and the cities, transportation elements and/or needs requiring immediate attention, and opinions of alternative transportation modes such as transit or bicycling. The questionnaire is available on the study website, and has been distributed at public meetings. A summary of questionnaire results is contained in **Appendix A**.

Public meetings are held in locations convenient to the largest number of people and scheduled to coincide with major study milestones. Various methods are utilized to promote the meetings, including newspapers, email notification of stakeholders, and information on the study's GDOT web page. The first meeting was held on December 13, 2007 at Ebenezer Middle School and was attended by about 40 people. This meeting focused on the transportation needs assessment process and preliminary findings. A second public meeting was held April 3, 2008 at Effingham High School and was attended by 35 members of the community. Preliminary potential project maps were displayed, following a discussion of the planning process to date and analytical basis of recommendations, by mode. At both meetings, GDOT and Jacobs Carter Burgess staff answered questions posed by the public, who were also able to utilize written comment forms created for the occasion.

Fact sheets and meeting flyers are posted on the study website, with hard copies available at city and county government facilities. In addition, stakeholders are provided with copies of the fact sheet and meeting notes to inform those they know about public input opportunities. Outreach to traditionally underserved communities included local contacts such as Reverend Delmons White and Homer Lee Wallace of the NAACP, who distributed extra fact sheets and questionnaires and helped promote public meetings. The initial screening process for potentially underserved areas indicated that Clyo, Egypt, Marlow, and the northern part of the county were among this group.

Issues and Opportunities Identified

Both identified stakeholders and the public provided valuable qualitative insight regarding Effingham's transportation system. Their contributions are summarized in the next sections.

Stakeholder Interviews

The overarching themes included the county's population growth, the balance and geographic spread of people/housing and jobs, traffic congestion, the existing transportation system, and truck traffic.

Interviewees voiced strong support for potential projects such as Effingham Parkway, upgrading the I-16 Interchange at Old River Road, enhancing Old Augusta Road, implementing corridor improvements on SR 21, and expanding Ft. Howard Road to accommodate future area subdivisions. A summary of the findings can be found in **Appendix A.**

Public Consultation

Fifteen questionnaires were received following the first public meeting (December 2007) and through the study web page. The questionnaires asked respondents to identify:

- their goals and visions for Effingham County
- critical problems the County was likely to face in the next 25 years
- transportation problems they face moving about the county on a day-to-day basis
- areas in the existing transportation network they felt needed immediate attention, and
- the most critical transportation needs in Effingham County

A broad range of issues was highlighted in response to the questions. In their vision for the county, residents wanted to see job and physical growth that occurred in a sustainable and controlled manner. Respondents also desired to see more cultural, shopping, and leisure opportunities, including a shopping mall and more public parks.

"Inadequate clean water" and growing pains from "too many people" were the most popular views on the problems the county is likely to face over the next 25 years, and traffic and congestion was an almost unanimous response to the problems people faced on a daily basis.

Comments received at the second public meeting (April 2008) highlighted the need for countywide transit services, expressed support for bicycle and pedestrian facilities, and were generally supportive of proposed potential improvements in all transportation modes. Some community members expressed concern over the future alignment of the proposed Effingham Parkway and also questioned the impact of large-scale DRI development projects on existing transportation facilities such as SR 21.

Previous findings from the 2007 Comprehensive Plan

Detailed issues and opportunities in Effingham County were first identified by community stakeholders during a series of Comprehensive Plan workshops held in Summer 2006. The nine previous DCA planning elements were addressed and, at the county-level, transportation issues and opportunities are described as follows:

Issues:

- **Reliance on automobiles** – Most residents must rely on their vehicles for traveling to and from their destinations. Most residents understand that traffic congestion will likely worsen as the population increases. Alternatives to the automobile – walking, bicycling, and public transit – will offer residents more mobility choices and reduce automobile dependency.
- **Inter-parcel connectivity and points of conflict** – Commercial development of single parcels has resulted in "strip development" and segregated business activities. Each parcel or

development that has a separate access creates a potential point of traffic conflict and reduces the efficiency of arterial roads. Roadway design and access management should ensure that new transportation facilities provide greater connectivity, better travel efficiency, and reduction of hazardous conditions.

- **Disconnected subdivisions** – Accessibility between residential subdivisions is typically restricted to vehicle travel along collector roads, as many subdivisions are isolated and only have single entrances and exits. To promote greater accessibility and mobility options and increase efficient delivery of services, subdivisions should be linked with a network of shared roads that allow movement through and between subdivisions. Such linkages shorten travel distances, improve public safety, and promote walking and bicycling between residential areas and other nearby uses.
- **Lack of public transportation** – For residents with limited means, or for those who would like an alternative to the auto commute, there are currently few options in the county. A rural transit system would introduce public transportation into the county. Regional bus routes – for example, linking Effingham County with Savannah – may also reduce automobile commutes. However, long-term public transportation solutions may require a more permanent and sustainable system than rural transit. As the county continues to grow, transportation alternatives should be continually re-evaluated. The county should also be prepared to participate in a regional commuter rail plan should one emerge.

Opportunities:

- **Creation of a long-range transportation plan** – The county currently lacks a long-range transportation plan. In cooperation with the cities, the county should create a long-range transportation plan to address proposed long-range mobility in the county. The plan should also take into account regional transportation demands, traffic forecasts, and the plans of surrounding jurisdictions. Future land uses and development patterns, as mentioned previously, should be intimately linked to the transportation plan. Also in conjunction with the land use plan, the transportation plan should be updated regularly to reflect new initiatives, funding opportunities, and public needs. The county is taking pro-active steps in promoting regional transportation through the development of the Effingham Parkway and this regional, long-term planning should continue.
- **Creation of pedestrian routes and bicycle networks** – Several bicycle routes through the county already exist, but they do not form a continuous network that links residential and commercial areas. Extending these networks and providing bicycle facilities will provide a valuable alternative mode of transit in the county, especially at the southern end where development is becoming increasingly contiguous along major roads. In areas where commercial developments are located near housing, sidewalks and pedestrian amenities along the public right-of-way should also be provided.

- **Designation of scenic corridors** – The county's scenic roads, along with its natural resources and historic sites, are irreplaceable components which together form the area's unique character. Honey Ridge Road and Old Louisville Road, for example, are regarded by many residents as valuable aesthetic and historic corridors that need to be protected from inappropriate development, obstructive signage, and clear-cutting. Designation of these corridors as scenic resources will help guide an appropriate level of development while retaining the qualities that make them unique.

The three cities also identified issues regarding automobile dependency and a lack of connectivity between destinations by multiple modes of travel. Immediate opportunities observed by each city include the creation and promotion of multi-use paths within and between city limits.

4. Planning Context

A transportation system cannot be studied in isolation from the environment in which it exists, the people it serves, and the industries whose development it facilitates. Evaluating context is crucial in determining how well a transportation system is performing and what current or future demands on it might be present. For instance, the intensity and arrangement of land development in a place directly relate to the types of transportation services and facilities that can be effectively implemented. Concentrations of jobs, services, and residences allow a wider range of viable multimodal options, especially public transit and walking. Dispersed development patterns do not readily support public transit and increase dependency on automobiles to satisfy mobility needs.

Because a variety of land development patterns may be desirable to the community, transportation solutions must be tailored towards the character of each area. Conversely, land use decisions must also be tailored towards the type of transportation infrastructure that is or can be effectively implemented. The various economic, social, and land development considerations that influence travel demand are presented in this section. Knowledge and analysis of these considerations were essential in planning an integrated transportation system for Effingham County.

Built and Natural Environment

Effingham draws much of its character from the combination of rapidly growing historic cities, the large areas of rural land, the Savannah and Ogeechee Rivers along county borders, and the proximity to Georgia's beautiful coastline.

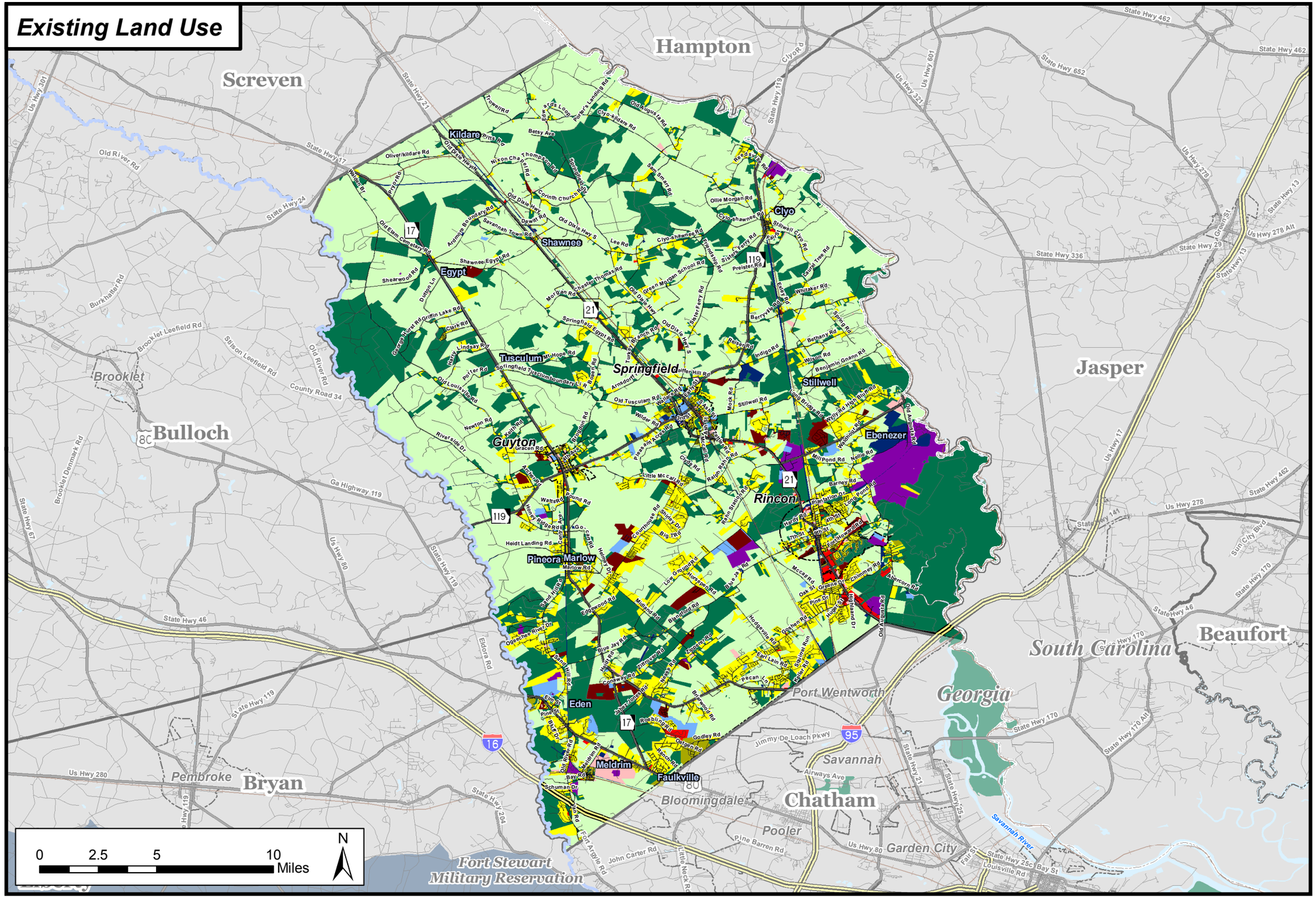
It is therefore an important balancing act to ensure that transportation infrastructure does not detract from the historic character, adversely affect sensitive environments such as the county's wetlands, or take away from the sense of place in a community. It must respect this wide diversity of character while also providing residents and businesses with the high quality, modern transportation system that they deserve. It is vital that transportation systems and the built environment are designed with mutual respect for one another, and remain sensitive to the natural environment around them.

Land Use

The current parcel-level land use of Effingham County can be seen in **Figure 4.1**. **Table 4.1** shows the percent distribution of land uses in the entire county, as aggregated from city and unincorporated county data in the Community Assessment.

Effingham County Transportation Plan

Existing Land Use



Regional Inset

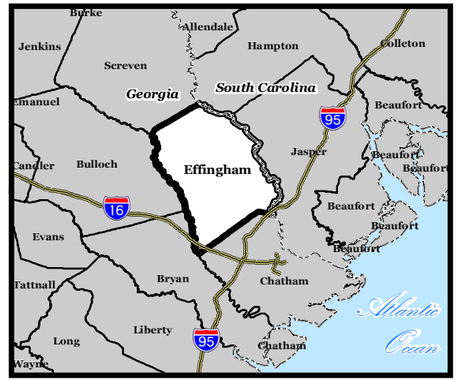


Figure 4.1

Legend

Existing Land Use

- Agriculture / Silviculture
- Conservation / Parks / Recreation / Forested / Woodland
- Greyfield
- Industrial
- Single Family Residential
- Manufactured Home Park
- Multi-Family
- Office / Private Commercial
- Service / Retail Commercial
- Public / Institutional
- Transitional
- Transportation / Utilities

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Railroads

Source: Effingham County, GDOT, and Jacobs Carter Burgess

This map is intended for planning purposes only.

July 2008

Table 4.1 Land Use Distribution in Effingham County
Source: Effingham County Community Assessment

General Land Use	Number of Parcels	Total Acres (rounded)	Percent of Area	Percent of Parcels	average parcel size (acres)
Agriculture/Silviculture	3,717	196,500	63.9%	16.3%	52.9
Commercial	479	2,200	0.7%	2.1%	4.5
Conservation/Recreation	359	43,600	14.2%	1.6%	121.4
Industrial	64	5,200	1.7%	0.3%	80.9
Public/Institutional	451	3,500	1.1%	2.0%	7.8
Residential	15,427	32,800	10.7%	67.5%	2.1
Transportation/Utilities	379	7,100	2.3%	1.7%	18.7
Undeveloped	1,964	16,600	5.4%	8.6%	8.5
TOTAL	**22,840**	**307,500**	**100.0%**	**100.0%**	**13.5**

Agriculture and silviculture (tree farming) are undertaken on approximately 2/3 of all county land. Another 14% of land has been set aside for conservation or parks, leaving slightly over 20% of land that is designated for residential, industrial, commercial, civic, and infrastructure use. "Undeveloped" land has been zoned, typically for residential subdivisions, but is still free of structures.

Differing land uses generate different types of travel demand in terms of traffic quantity and mode. Commercial uses tend to have the highest trip generation rates, followed by residential and industrial uses. Industrial, agricultural, and some commercial areas can generate more truck traffic, which has an impact on area roadway operations. Heterogeneous land uses within a relatively small area allow more walking and bicycling trips, while concentrations of activities (employment, cultural, shopping, etc) and direct routes between activity centers are amenable to transit. Multi-acre homogeneous zoning (of any type) and ample parking encourage the use of personal vehicles to fulfill travel requirements. Ultimately, the spatial distribution and quality of land uses, down to the site level, dictate the nature of travel demand even more than the simple quantity of activity generators present.

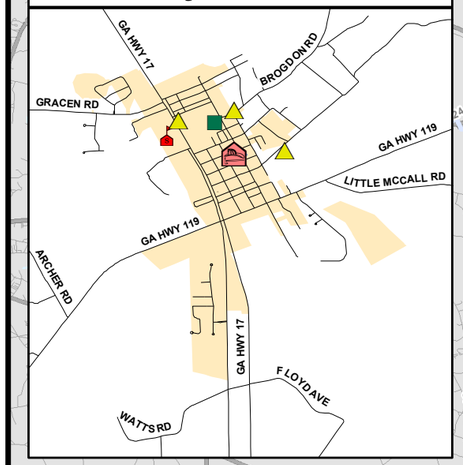
Activity Centers and Community Facilities

Activity Centers are important community focal points and feature in land use planning policies at regional and local levels. Three cities and a number of unincorporated communities serve as primary activity centers within Effingham County. Additionally, activity centers are found at crossroads areas and locations along key corridors connecting the cities and counties that have some commercial development. Community facilities are individual buildings or amenities (parks, etc) that serve as destinations, but are not necessarily contained within an activity center. **Figure 4.2** depicts these potential travel generators.

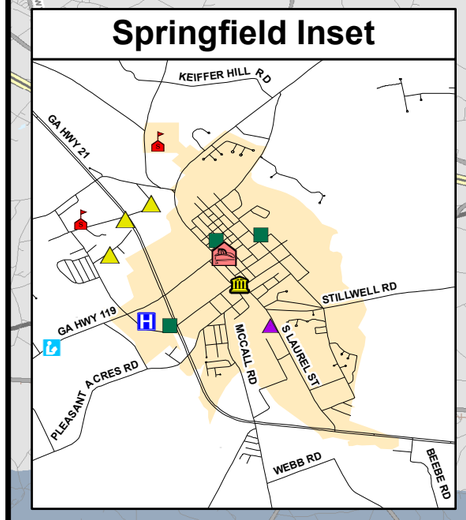
Effingham County Transportation Plan

Activity Centers and Community Facilities

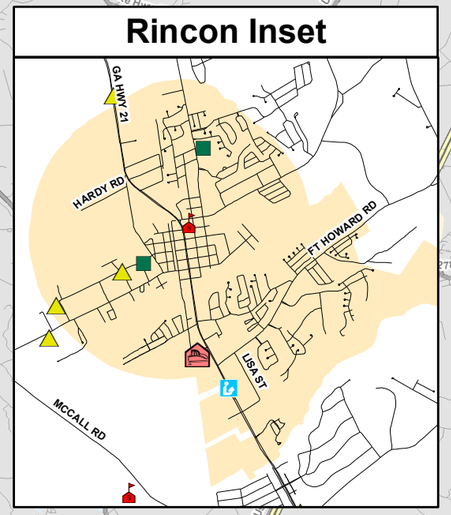
Guyton Inset



Springfield Inset



Rincon Inset



Regional Inset

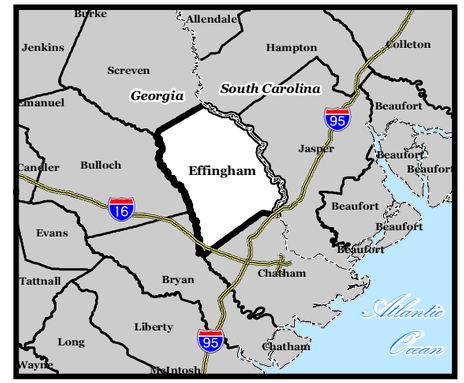


Figure 4.2

Legend

Community Facilities and Activity Centers

- Schools (K-12)
  - Elementary School = Red
  - Middle School = Orange
  - High School = Yellow
- Library
- Park
- Landing
- Hospital
- Fire Station
- Police Department
- Church

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: Effingham County, GDOT, and Jacobs Carter Burgess

This map is intended for planning purposes only.

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Future Zoning and Land Use

Comprehensive Planning is required by the State of Georgia as defined in the 1989 Georgia Planning Act. When the Comprehensive Planning effort for Effingham County was undertaken in 2007, a future development map delineating "character areas" was developed. This map is shown in **Figure 4.3**. According to the DCA, character areas are simply portions of counties and cities that "have unique or special characteristics, have potential to evolve into a unique area when provided specific and intentional guidance, or require special attention due to unique development issues". In effect, character areas are defined to serve as the basis for detailed and geography-specific small-area plans. All parts of Effingham County were assigned to character areas, whose unique qualities were agreed upon through an extensive public involvement process. For each character area, a description and vision were provided as well as implementation measures to achieve the vision. The descriptions make it clear what types, forms, styles, and patterns of development are to be encouraged in the area. Several character areas were specific to transportation corridors, and are seen in **Table 4.2.**

Table 4.2 Description of Transportation Facility Character Areas
Source: Effingham County Community Assessment

Character Area, Description, and Location	Vision	Implementation Measures
Regional Connectors		
Arterial roads that provide high capacity access to adjoining counties and states. From a regional transportation standpoint, generally considered the main access routes in or out of the county.(SR 17, 21, and 119)	These gateway corridors should portray a high quality image of the community through protection and enhancement of vegetation, appropriate signage, accommodations for pedestrians and bicycles, and proper access management. These corridors should continue to support an efficient transportation network.	• Maintain a vegetated buffer along the corridor. • All new development should be set-back behind this buffer, with access roads, shared driveways or inter-parcel road connections providing alternate access to these developments and reducing curb cuts and traffic on the main highway. • Encourage landscaped, raised medians to provide vehicular safety, aesthetics, and also pedestrian crossing refuge. • Provide pedestrian facilities. • Provide paved shoulders that can be used by bicycles or as emergency breakdown lanes. • Coordinate land uses and bike/pedestrian facilities with transit stops, if applicable. • Manage access to keep traffic flowing.

Table 4.2 Description of Transportation Facility Character Areas, Continued.

Primary Commercial Corridor		
Developed or undeveloped land paralleling the route of a street or highway in town that is already or likely to experience uncontrolled strip development if growth is not properly managed. Characterized by high degree of access by vehicular traffic; on-site parking; low degree of open space. (SR 21, south of SR 119)	This corridor will support attractive commercial uses that meet the needs of the community, promote multi-modal accessibility (vehicular, bicycle and pedestrian) and provide development that promotes a sense of place through compatible signage, architecture and landscaping.	• Develop an access management program to improve safety and maintain mobility along these corridors. • Focus on appearance with appropriate signage, landscaping and other beautification measures. • Manage access to keep traffic flowing; using directory signage to clustered developments. • Encourage infill and redevelopment of unattractive strip centers to improve the quality along the corridor
Scenic Corridors:		
These corridors provide visual and aesthetic benefits to the community, and are an important part of the county's cultural heritage. They are remarkable for their rural and agricultural landscapes, tree canopy, and views of open fields and spaces. (SR 119, SR 17, Ebenezer Road, Rincon-Stillwell Road, Long Bridge Road, Stillwell-Clyo Road)	To protect, enhance and share the cultural, natural, archeological, historic and recreational qualities of this county through the preservation, beautification and presentation of our unique heritage for present and future generations.	• Increase enforcement of ordinances to address old cars, abandoned properties, and debris along the route. • Designate routes as Scenic Byways. • Create corridor management plans to address the preservation of cultural and aesthetic character. • Market the cultural and historical features that the scenic byway encompasses. • Continue to manage and regulate signage along the corridors.

Every other character area also specifically addressed the provision and style of transportation facilities. Further details are listed within the Community Agenda portion of the 2007 Comprehensive Plan.

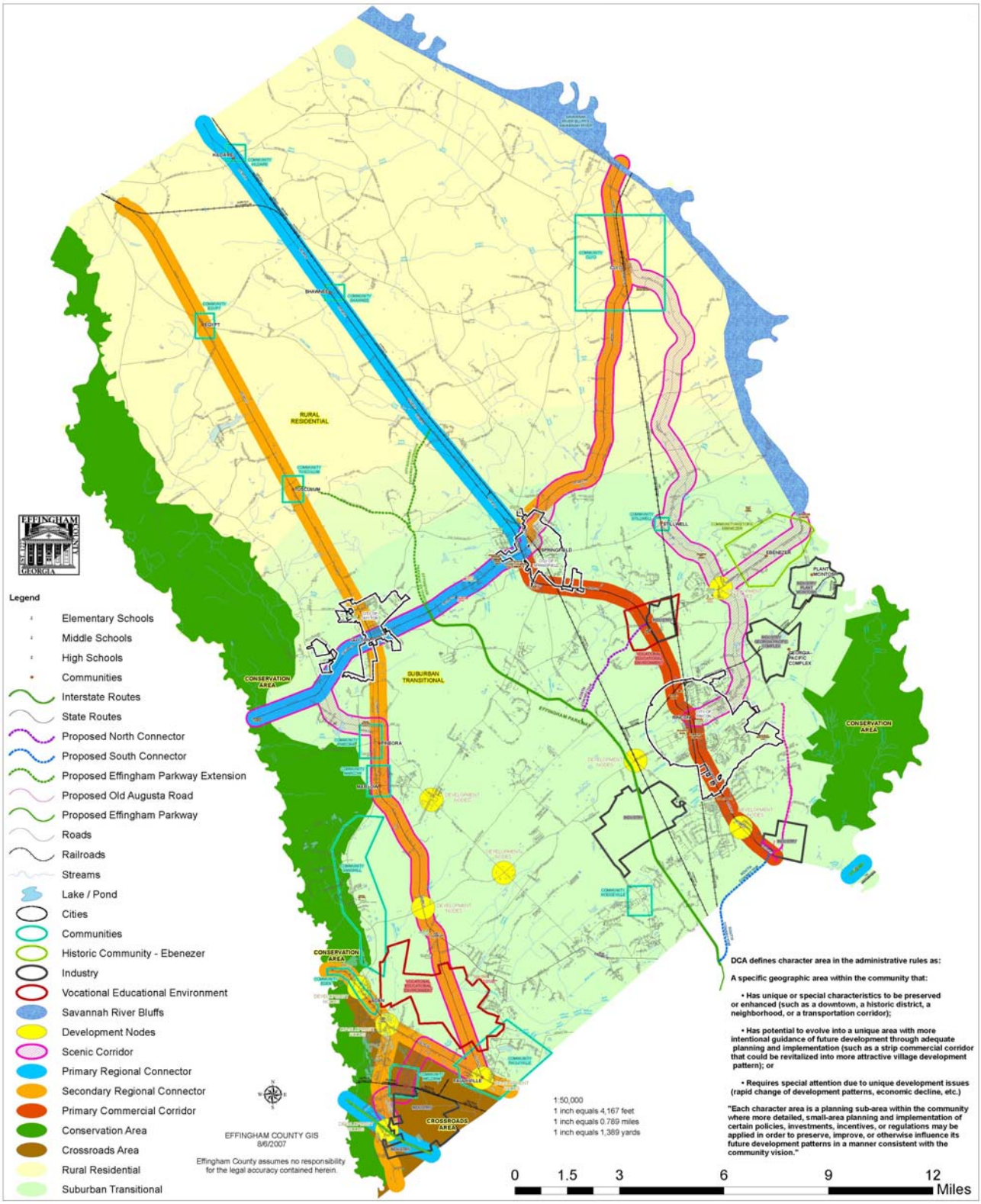


Figure 4.3 Effingham County Future Development Map from Comprehensive Plan

Historic Sites

Effingham County has a rich history as one of the original eight counties in the state of Georgia, home to numerous Native American peoples and settled by Europeans in the late 18th century. There are museums, historic buildings and streets celebrating Effingham's Revolutionary War, Civil War, and Native American heritage. The National Historic Preservation Act of 1966 requires that federally funded transportation projects identify historic properties and avoid or mitigate adverse impact.

The National Register of Historic Places (NRHP) contains six sites in Effingham County: Jerusalem Lutheran Church at Ebenezer Townsite, Effingham County Courthouse, Effingham County Jail, Guyton Historic District, New Hope AME Church, and the Reiser-Zoller Farm. The Comprehensive Plan notes that the Coastal Georgia RDC database of local historic sites contains 83 local sites potentially eligible for the NRHP. The plan also mentions that there are twelve properties, including six historic districts, prioritized for nominating to the prestigious Register. **Figure 4.4** depicts places on the NRHP.

Wetlands

Federal law and the Georgia Planning Act also require protection of wetlands and other natural resources from adverse impact. As such, the Georgia Department of Natural Resources maintains a database that defines, identifies, and maps the categories of freshwater wetlands and aquatic habitats. **Table 4.3** shows the acreage of wetlands in the county, totaling 38% of the county area. **Figure 4.5** depicts the geographic distribution of wetlands.

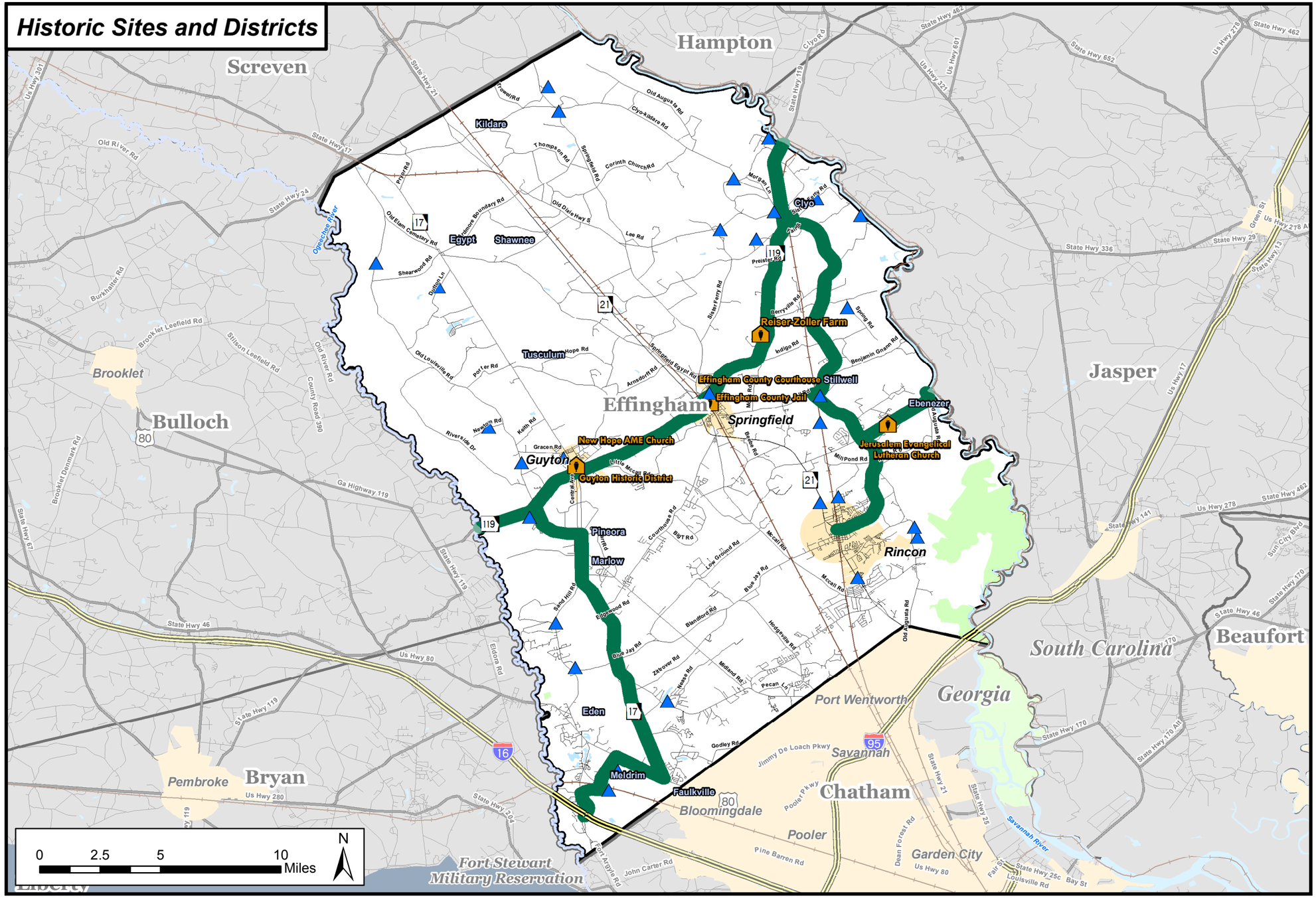
Table 4.3 Wetland Area in Cities and County
Source: Effingham County Community Assessment

Place	Area in Wetlands (Acres)
Rincon	1,799
Springfield	262
Guyton	189
Unincorporated Effingham County	114,770
Entire County	**117,020**

As a coastal county, Effingham has substantially more wetland coverage than most other Georgia counties, and thus faces unique challenges relating to development impacts. Through the Comprehensive Plan, the county is also working to adopt the Georgia Planning Act's Wetlands Environmental Planning Criteria, as well as the Groundwater Recharge Environmental Planning Criteria, and the Protected River Environmental Planning Criteria.

Effingham County Transportation Plan

Historic Sites and Districts



Regional Inset

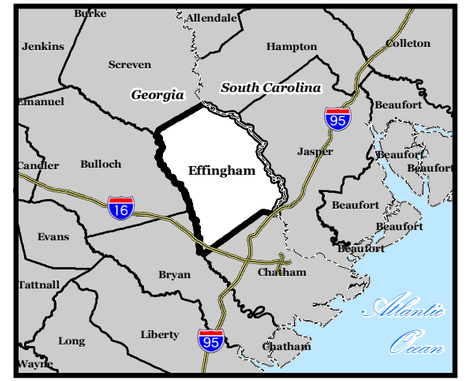


Figure 4.4

Legend

Historic Sites and Districts

- Historic Site
- Cemetery
- Scenic Corridors

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: NRHS (2006), GDOT, and Jacobs Carter Burgess

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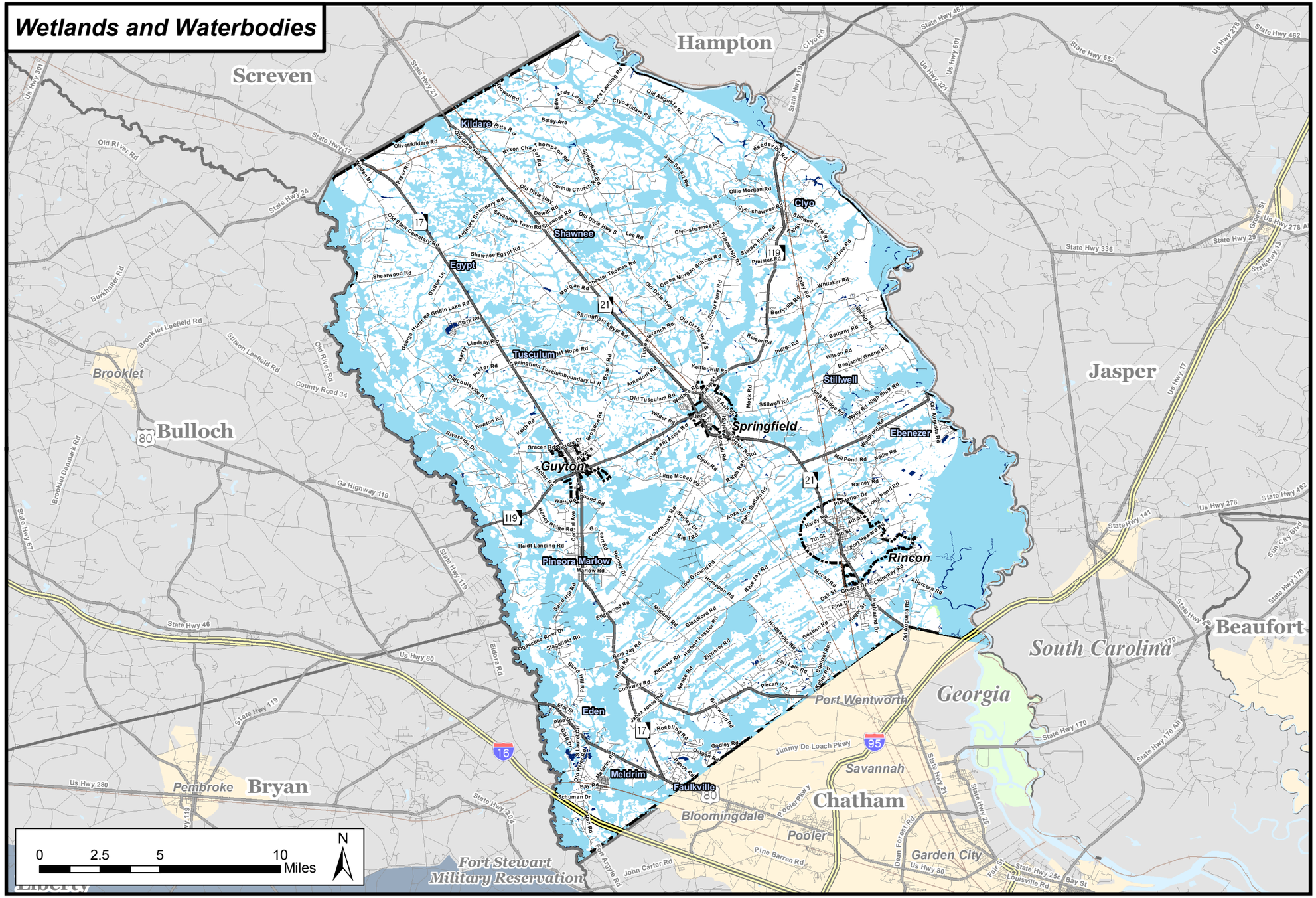
Effingham County Transportation Plan

Wetlands and Waterbodies



Regional Inset

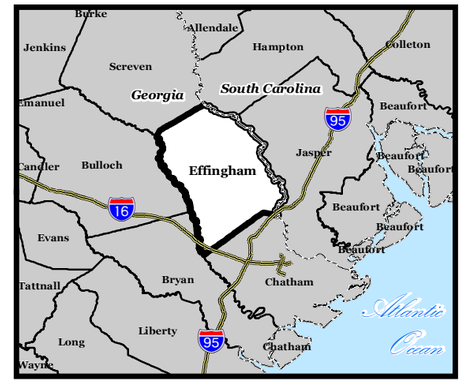


Figure 4.5

Legend

Wetlands and Waterbodies

- Freshwater Wetlands
- Lakes / Ponds / Rivers

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water (Outside Effingham County)
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: NWI, Effingham County, GDOT, and Jacobs Carter Burgess

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Residents and Businesses

Between 1990 and 2006, the number of residents and jobs in Effingham County each doubled. Over the next 20 to 25 years, it is anticipated that population and employment will increase over 60 and 180 percent, respectively, from present-day levels. Approximately 80,000 people and 24,000 jobs are expected in the year 2030. Proximity to Savannah, a well-regarded county school system, and an abundance of scenic rural land are factors that contribute to this growth. The Economic Development Authority and Chamber of Commerce have also been quite active in working to attract employment to the county, which has resulted in over $1 billion of new investment since 2000. Much of this investment has occurred in designated industrial parks and, as such, manufacturing and logistics-related businesses make up a relatively large segment of the local economy, though a more diverse industry mix is anticipated to arise in the near future.

Population

In 1970, less than 14,000 people lived in Effingham County. By 2005, another 33,000 residents called Effingham home, giving a total of 47,000 people. By 2030, 33,000 more are expected to move in. According to Coastal Georgia RDC population estimates, Effingham will have 79,935 residents in 2030 as seen in **Figure 4.6**. The predicted geographic distribution of the population is detailed in **Appendix B**, and is based on the future development map. While growth may seem inevitable, it is possible to manage it so that new residents are perceived as an asset to the community rather than a burden.

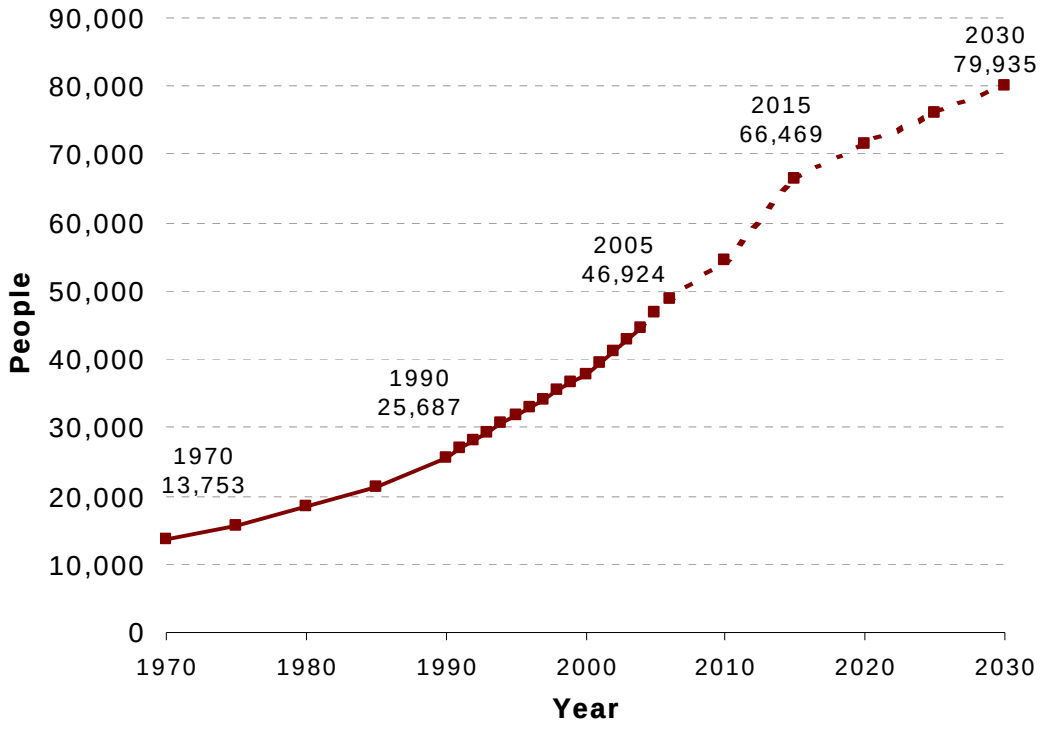


Figure 4.6 Historic and Projected Population, 1970-2030

Source: Coastal Georgia RDC Population Estimates

A number of significant demographic changes have accompanied the population growth in Effingham County. For example, the median age has increased steadily since 1980 going from 28 years of age in 1980 to 33.6 in 2000. County school enrollment data from the past ten years shows total enrollment increasing by about 25% between fall 1994 and spring 2000 and increasing by approximately 19.5% between fall 2000 and spring 2006. The strong growth in school enrollment numbers, approximately 52% over the 12-year period, is no surprise given rapid population growth experienced by the county during this time.

Employment

Until 1990, Effingham was a very rural county, with less than 20,000 people and relatively little in-county employment. The period between 1990 and 2005 saw accelerated employment growth, particularly in manufacturing and port-related industries, and by 2005, there were 8,412 jobs in the county. The top five private sector employers in Effingham County in 2006 were Georgia Pacific (1500), Wal-Mart (350), Flint River Services (150), Doncasters, Inc. (135), and International Paper (125). The major public sector employers were the Board of Education (1703), Effingham County (280), and Effingham Hospital (224). Savannah Electric, a utility, employed 593 people in Effingham County. Together, these nine places currently provide two-thirds of the jobs in Effingham.

While 4,000 new jobs were added between 1990 and 2005, 20,000 new residents came during the same time period. Thus, it is likely that business growth will continue to accelerate into the future as commercial investment follows the residential market. Based on detailed trend forecasting methods and the presence of new industrial parks planned in the county, the number of jobs in the county is expected to increase almost three-fold, to 23,850 by 2030. This will result in population to employment ratio of 3.35 to 1, a more balanced number than the current 5.58 residents for every job. The employment forecasting process is further explained in **Appendix B**. **Figure 4.7** shows historic and projected employment in Effingham.

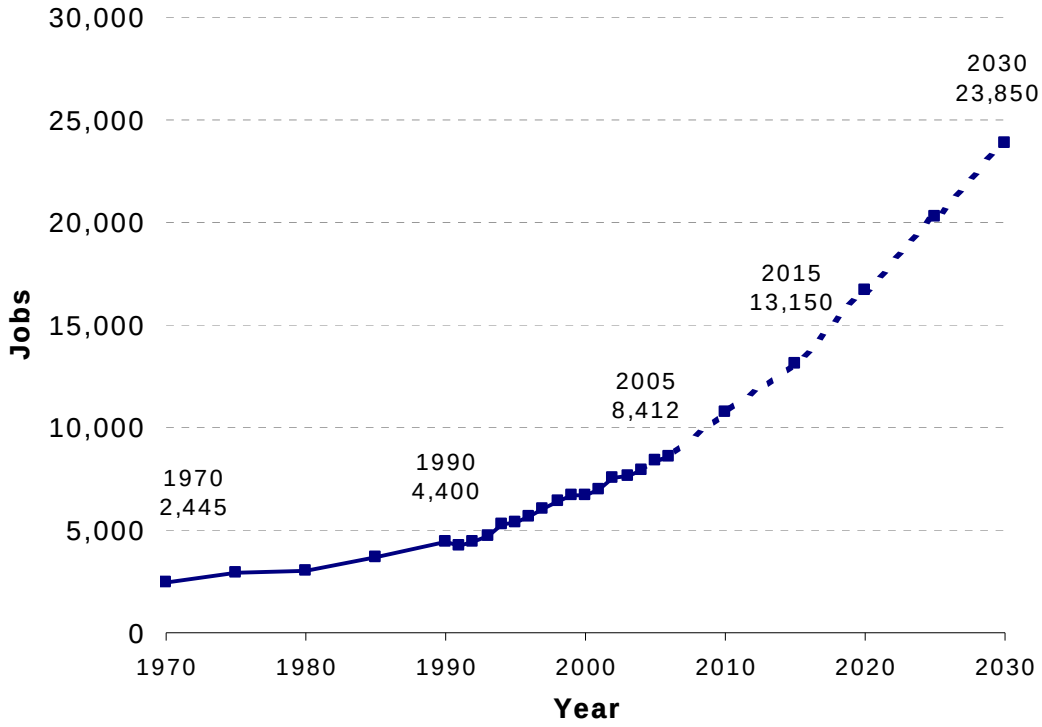


Figure 4.7 Historic and Projected Employment, 1970-2030

Source: Jacobs Carter Burgess, as described in Appendix B

Despite the growing number of jobs in the county, two-thirds of the labor force still works in other places, including Chatham County, Fort Stewart, and Hilton Head, South Carolina.[4] In 2000, the labor force was approximately 17,200 people; 2006 statistics from the Georgia Department of Labor imply that there are 25,000 workers, just over half of the population.

According to the 2000 US Census, Effingham County had the highest percentage (83.5%) of its labor force driving alone to work of any county in the Coastal Region.[5] Approximately 14.1% of workers carpooled, while the remainder (2.4%) commuted using other forms of transportation or worked at home. Seventy percent of workers left home between 6-9 AM. This reliance on inter-county peak-time solo commuting does not make the most efficient use of existing transportation facilities.

[4] US Census Longitudinal Employment Household Dynamics (LEHD), 2002-04

[5] US Census, 2000, SF3 Table P30

Environmental Justice Communities

Among populations, there are certain groups of people who have been historically marginalized in decision-making processes or who have borne disproportionate negative effects from various programs or sitings of locally unwanted land uses or facilities. The term "Environmental Justice" (EJ) refers to a series of federal regulations requiring that human health and environmental impacts (negative or positive) from programs and activities are distributed equitably throughout the population. It involves significant components of public outreach and analysis of the nature, extent, and incidence of various impacts on a community.

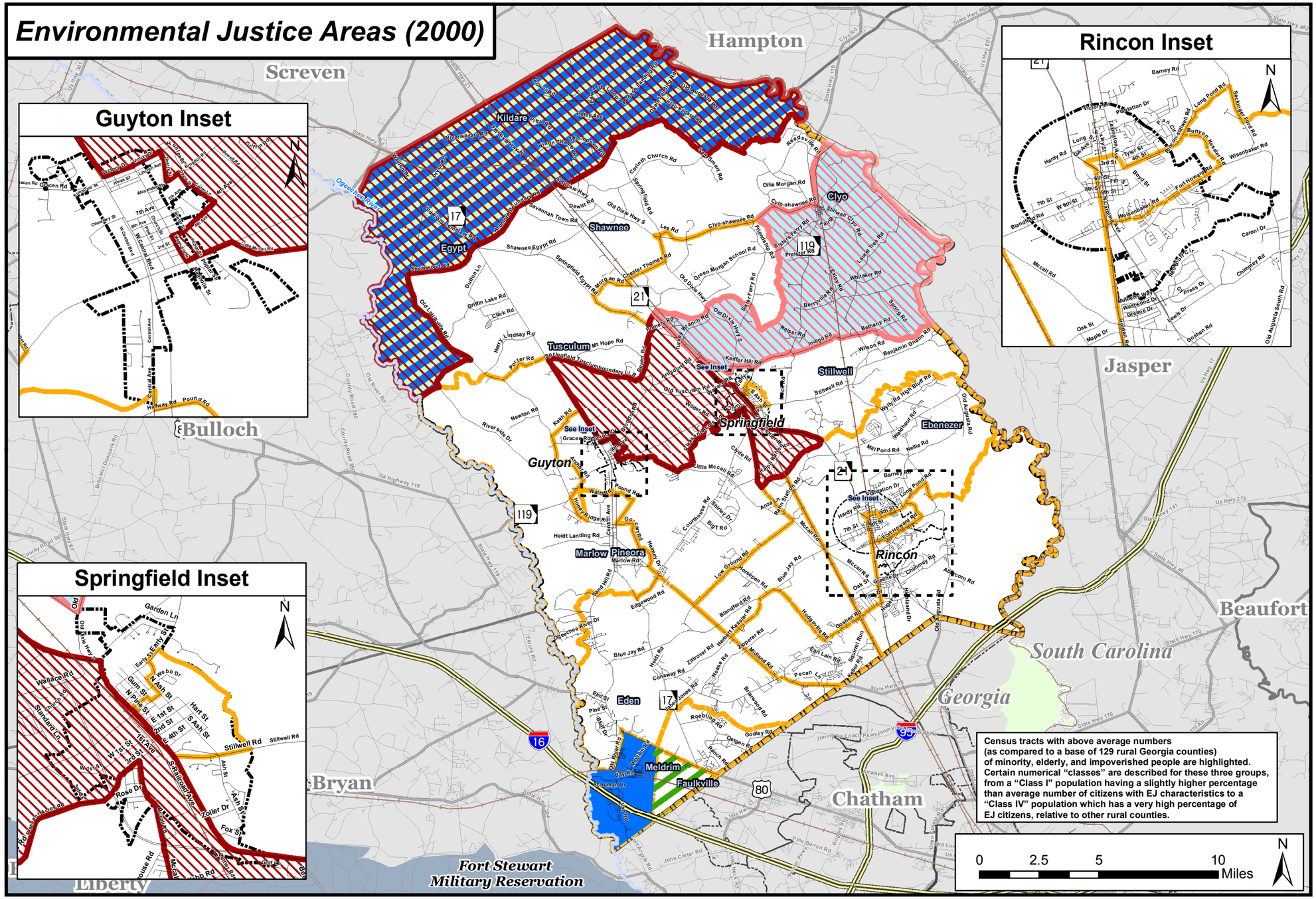
The initial step in addressing potential EJ issues is to identify EJ target populations in the study area. The target populations include low-income (below poverty level), minority (non-white), elderly (over age 65), young (under age 15), and disabled residents. For financial, cultural, legal, or physical reasons, all of these groups display more propensity or need to utilize alternative modes of transportation than the general population. "Alternative" refers to all modes of transportation except personal vehicles. People without access to a personal vehicle would also benefit from increased attention to their needs during the planning process. Approximately four percent of Effingham households lack a personal vehicle, including ten percent of all renter households.

The following **Figure 4.8** depicts the locations of EJ populations in Effingham County. Census tracts with above average numbers (as compared to a base of 129 rural Georgia counties) of minority, elderly, and impoverished people were highlighted. Certain numerical "classes" were described for these three groups, from a "Class 1" population having a slightly higher percentage than average number of citizens with EJ characteristics to a "Class 4" population which has a very high percentage of EJ citizens, relative to other rural counties.[6] Because disability levels are so variable and special support services typically exist for handicapped individuals, no specific thresholds were devised for this particular group of people. Thus, they are not depicted specifically in Figure 4.8, but are assumed to reside throughout the county, especially in areas of more concentrated population. During the public involvement process described in the previous chapter, concentrated effort was made to solicit input from EJ groups. As transportation improvement alternatives were evaluated, the effects on the aforementioned populations were considered.

[6] Methodology based on "Environmental Justice Identification and Proposed Outreach Report", for the Georgia Department of Transportation by Sycamore Consulting, Inc., December 2006.

Multi-Modal Transportation Study for Effingham County

Environmental Justice Areas (2000)



Guyton Inset

Springfield Inset

Rincon Inset

Regional Inset

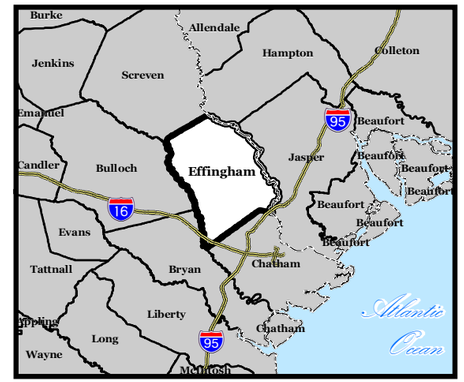


Figure 4.8

Legend

Environmental Justice Areas by Census Block Group for Effingham County (2000)

Areas With Greater Proportion of African American Population (Rural Georgia Average: 23.9%)

- Class I (23.9 - 36.2 %)
- Class II (36.2 - 49.0%)

Areas With Greater Proportion of Population Below Poverty (Rural Georgia Average: 15.5%)

- Class I (15.5 - 20.2%)
- Class II (20.2 - 25.7%)

Areas With Greater Proportion of Population 65+ Years (Rural Georgia Average: 11.8%)

- Class I (11.8 - 13.5%)
- Class II (13.5 - 15.6%)

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Blockgroups
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: GDOT, Sycamore Consulting and Jacobs Carter Burgess

This map is intended for planning purposes only.

5. Existing and Future Conditions Analysis

In order to prepare for the future, it is necessary to examine past and present trends. This section provides an inventory of the transportation network according to mode and describes the usage, characteristics, and performance of the system now and in the future.

Roadway

Effingham's roadway network is the backbone of its multi-modal transportation system. It provides mobility for residents to get to dispersed destinations expeditiously and also provides access to activity centers for drivers, walkers, bicyclists, and transit users. The next sections review the following topics relating to the roadway system: functional classification, safety, level of service, surface and bridge conditions, intersections and operations, parking, and emergency use.

Functional Classification

Functional classification refers to the design, capacity, and role of a facility within the roadway network hierarchy. There are three basic types of roads: arterial, collector, and local. As defined by the Federal Highway Administration (FHWA), a spectrum of roadway function exists with through movement at one end and access on the other. As seen in **Figure 5.1**, Interstates (a type of principal arterial) provide a high level of mobility, while local roads provide the most access to abutting destinations at lower design speeds. Arterials and collectors fall in the middle of the spectrum, and each roadway is either "rural" or "urban" depending on whether adjacent land has been formally designated as in an urbanized area by the U.S. Census.

The functional classification of a roadway can change over time as improvements are made to the facility or as the surrounding area urbanizes. To be eligible for federal money for improvements, rural roadways must be designated as a major collector or above, and urban roadways must be collectors or above. Though Effingham is currently predominantly rural, it is anticipated that the southern portion of the county will be folded into the urban Savannah Metropolitan Statistical Area (MSA) during the 2010 Census. Thus, Effingham County will contain both "urban" and "rural" roadway classifications in the future.

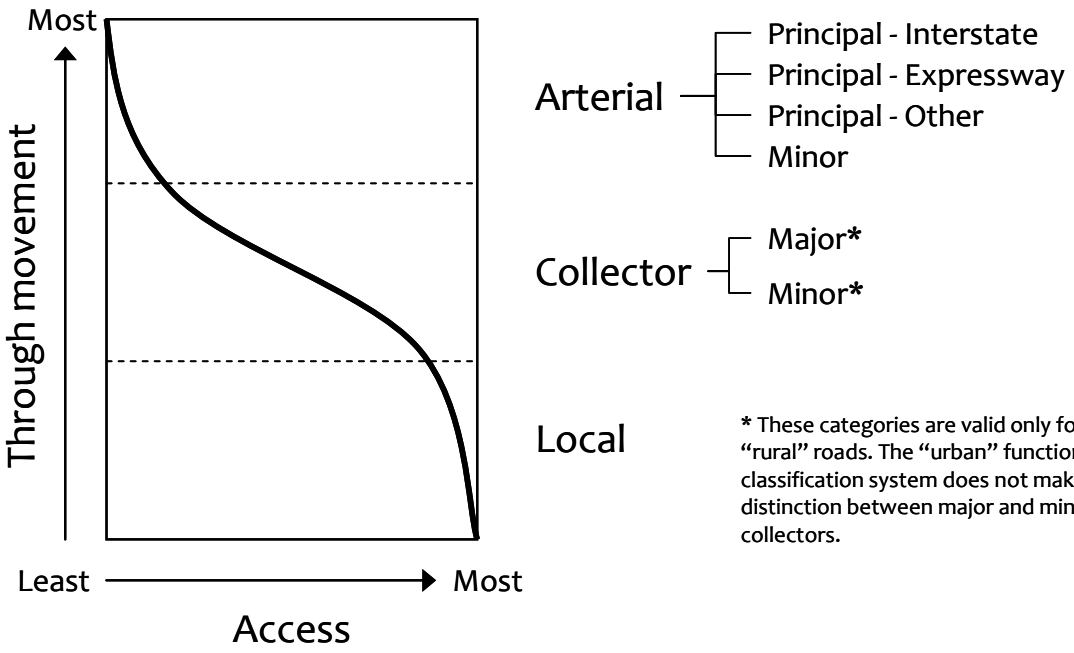


Figure 5.1 Roadway Functional Classification System Diagram

There are 737 miles of roadway in Effingham County, including 79 miles of (non-Interstate) arterials, 74 miles of major collectors, 121 miles of minor collectors, 459 miles of local roads, 11 miles of unclassified roads, and small portions of interstates in the southwest and southeast corners. **Figure 5.2** depicts the current functional classification of county roadways. **Figure 5.3** shows the average annual daily traffic as obtained from traffic count stations throughout the county. **Table 5.1** depicts the recommended percentage of roadway miles by type and distribution of roadway miles by functional class in Effingham. As Effingham grows, it will likely need to upgrade some of its collectors to arterial status, providing greater mobility, and also construct more local roads for greater accessibility to abutting land.

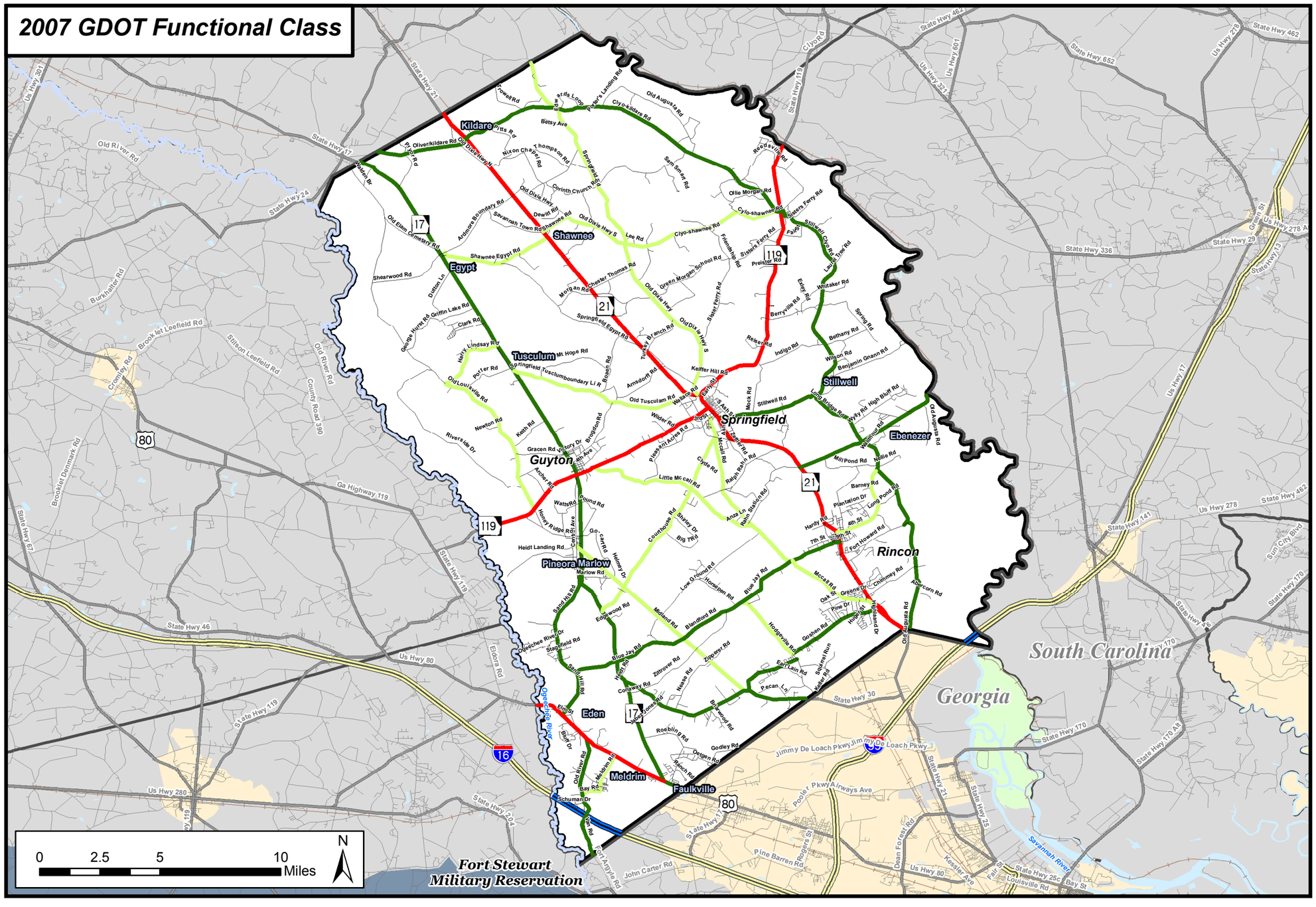
Table 5.1 Roadway Type and Utilization

Source: FHWA Functional Classification Guidelines: Concepts, Criteria and Procedures (http://www.fhwa.dot.gov/planning/fcsec2_1.htm)

Functional Classification	FHWA recommended (rural)	FHWA recommended (urban)	Effingham County (rural)
Interstates and Expressways	2 – 4%	5 – 10%	3 %
Principal (other) and Minor Arterials	6 – 12%	15 – 25%	10.8%
Major and Minor Collectors	20 – 25%	5 – 10%	26.5%
Local Roads	65 – 75%	65 – 80%	62.3 %

Effingham County Transportation Plan

2007 GDOT Functional Class



Regional Inset

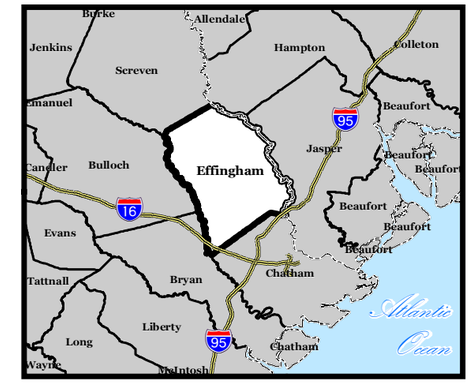


Figure 5.2

Legend

GDOT Roadway Functional Classification (2007)

- Interstate
- Minor Arterial
- Major Collector
- Minor Collector
- Local
- Unclassified (Paved)
- Unclassified (Unpaved)

Road Network

- Interstate (Outside Effingham County)
- Other State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: GDOT RC File (2007), and Jacobs Carter Burgess

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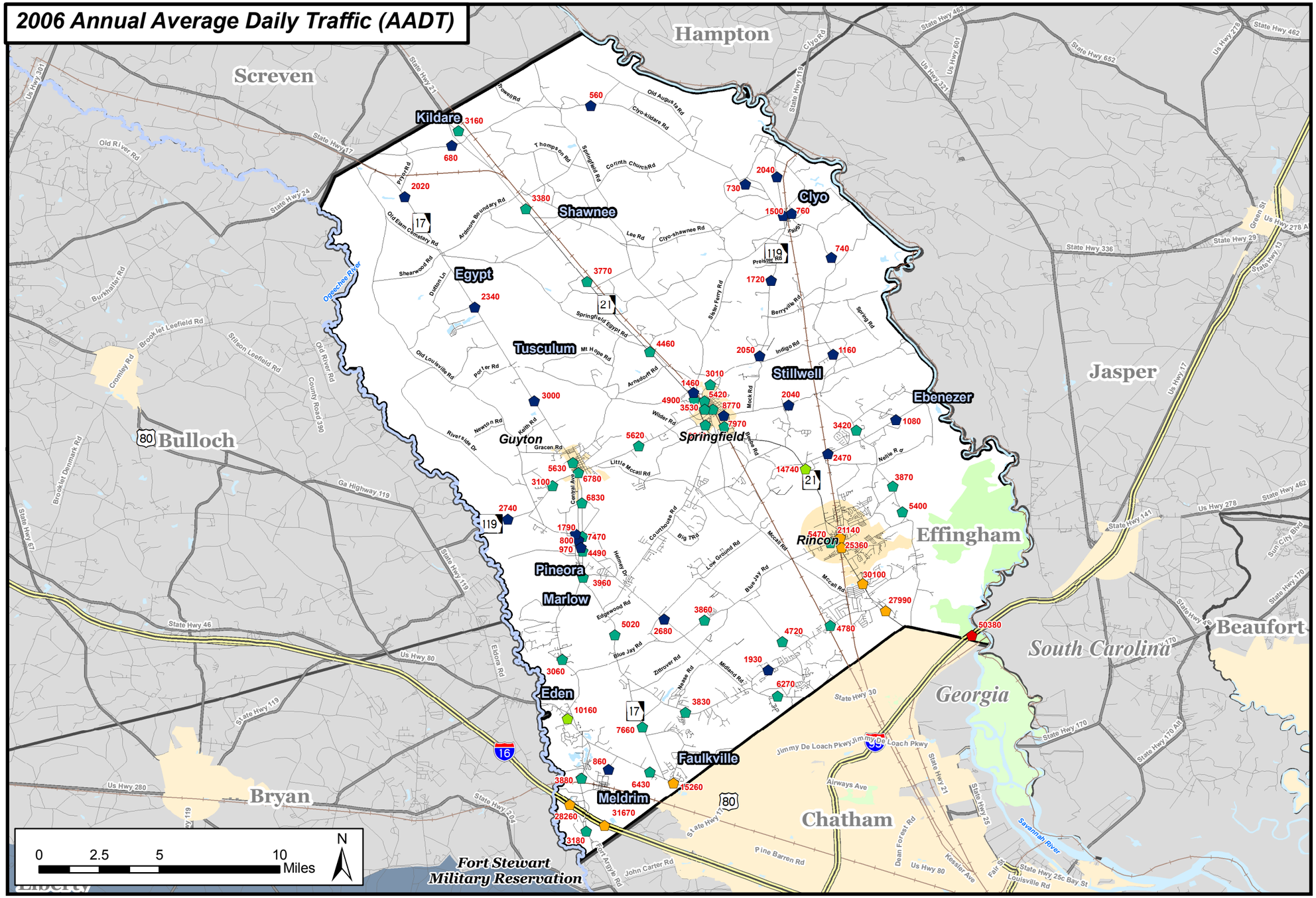
Effingham County Transportation Plan

2006 Annual Average Daily Traffic (AADT)



Regional Inset

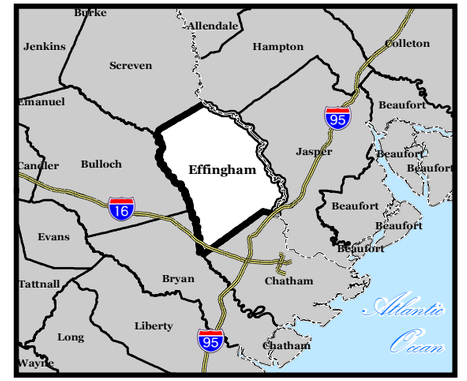


Figure 5.3

Legend

2006 Traffic Count Stations with AADT

- 35,001 and Above
- 15,001 to 35,000
- 10,001 to 15,000
- 3,001 to 10,000
- 3,000 and Below

Road Network

- Interstate (Outside Effingham County)
- Other State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: STARS (2006) and Jacobs Carter Burgess

This map is intended for planning purposes only.

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Safety

Assessing the safety of the roadway system is a critical component of a transportation plan, and incident statistics can help identify key locations where safety improvements would be most beneficial. To perform a safety analysis, GDOT crash data and the Critical Analysis Reporting Environment (CARE) incident database were used to map incident locations and provide crash rates for road segments and intersections throughout Effingham County.

Between January 1st, 2004 and December 31st, 2006, the most recent available data, a total of 3,310 traffic incidents were reported in Effingham County, resulting in an average of over 1,000 crashes a year as seen in **Table 5.2**. These incidents involved 5,254 vehicles and resulted in 24 fatalities and 1,310 injuries. Nine fatalities occurred during single vehicle crashes, which made up almost half of all incidents.

Figure 5.4A shows the combined number of crashes occurring at intersections and along roadway segments, with fatal crash locations called out. **Figure 5.4B** depicts crash rates on ½ mile roadway segments experiencing three or more crashes between 2004 and 2006.

Table 5.2 Crash Statistics by Year
Source: CARE Incident Database, GDOT

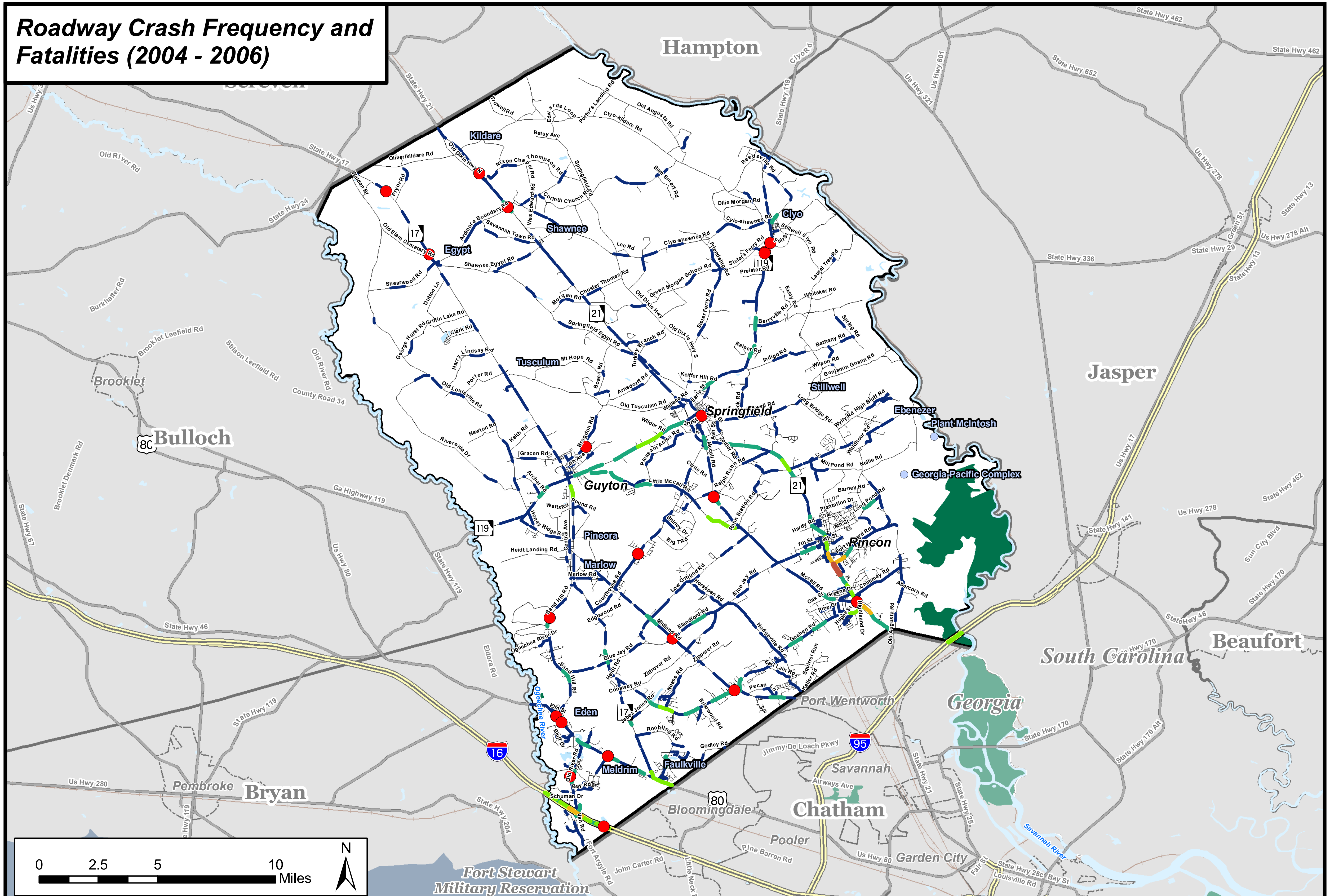
Year	Number of Crashes	Number of Fatalities	Number of Injuries	Number of Vehicles Involved	Crash Rate per 1,000 population
2004	1,012	5	433	1,616	22.7
2005	1,196	9	409	1,889	25.5
2006	1,102	10	468	1,749	22.5
TOTAL	**3,310**	**24**	**1,310**	**5,254**	**23.6**

Of the 21 fatal crashes (one crash resulted in four deaths), almost half occurred between 4-9 pm, and 17 (81%) occurred on roadways with a speed limit of 55mph or over, primarily minor arterials and major collectors. Driver age did not seem to be a factor and only three were confirmed to be under the influence of alcohol or drugs. While not unusual for rural counties, dark unlighted conditions were more prevalent in Effingham's crashes than they were in the rest of the state, as were off-roadway collisions. Fatal single-vehicle incidents typically resulted from failure to negotiate a curve. From analysis of fatal incident data, it appears that targeted improvements on county arterials and collectors would have the most beneficial safety impacts. Street lighting and wider shoulders in sections of difficult roadway geometry may decrease the number of fatal crashes. SR 119 near Laurel Hill Road in Clyo is a hotspot that deserves further investigation, having had three fatal incidents occur within half a mile of this location.

Keeping Georgia on the Move
Office of Planning

Effingham County Transportation Plan

Roadway Crash Frequency and Fatalities (2004 - 2006)



Regional Inset

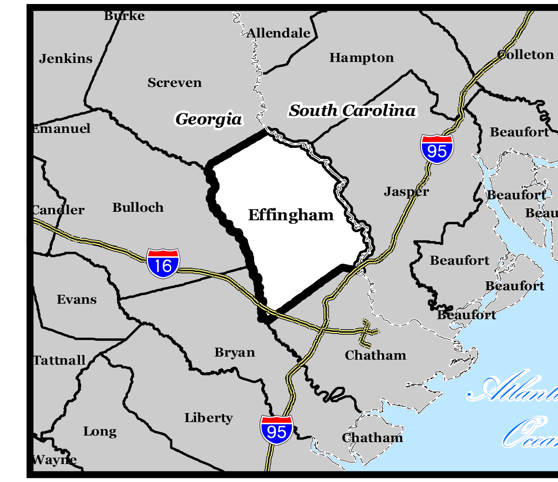


Figure 5.4A

Legend

Roadway Crash Frequency and Fatalities (CARE Data)

- Fatal Crash
- 51 or More Crashes
- 26 to 50 Crashes
- 11 to 25 Crashes
- 6 to 10 Crashes
- 1 to 5 Crashes

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Railroads

Source: University Alabama CARE and Jacobs Carter Burgess

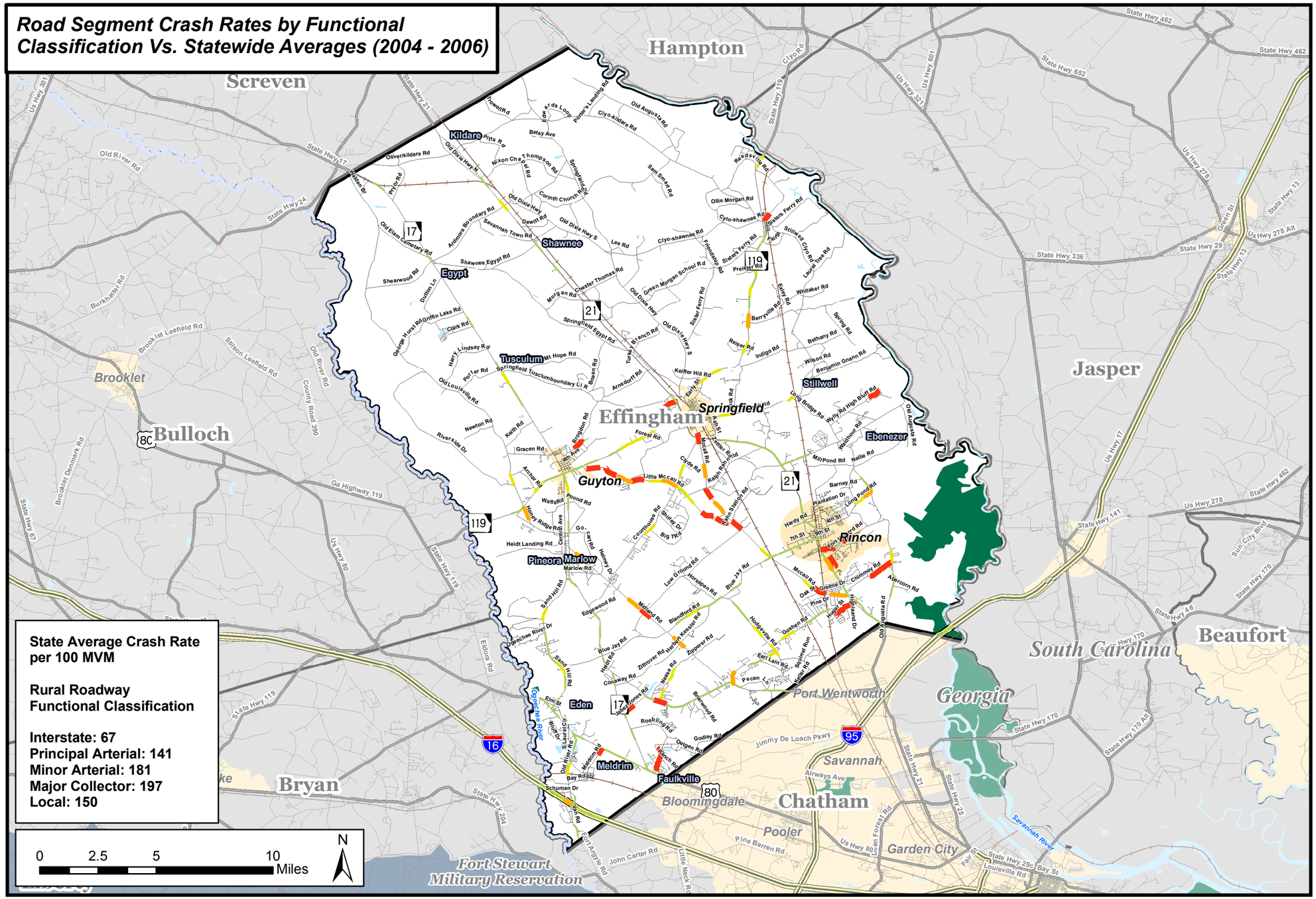
This map is intended for planning purposes only.

July 2008

JACOBS Carter Burgess

Effingham County Transportation Plan

Road Segment Crash Rates by Functional Classification Vs. Statewide Averages (2004 - 2006)



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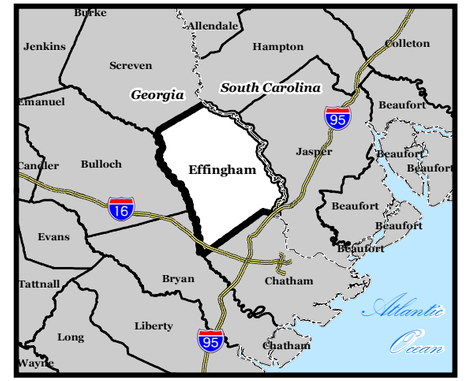


Figure 5.4B

Legend

Percent of State Average Crash Rate

- Greater than 400%
- 251 to 400%
- 151 to 250%
- 0 to 150%

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Railroads

Note:
Crash rates are only shown for roadways experiencing three or more incidents between 2004-2006.

Source: University Alabama CARE and Jacobs Carter Burgess

This map is intended for planning purposes only.

There were 873 injury crashes (including the aforementioned 21 fatal crashes) in Effingham over the three-year period of 2004 to 2006. According to the time-of-day chart, seen in **Figure 5.5**, it appears that many of the incidents are associated with evening and morning commute activity, with an additional spike in early afternoon. Cross-tabulating driver age with time-of-day, teenage drivers account for a disproportionate share of crashes occurring between 3-4 pm, though 35-44 year-old drivers also see their highest incident share during this time period. Data seems to indicate that transporting children from school via personal vehicles could result in higher crash exposure and extra attention should be paid to safety mitigation measures in the vicinities of elementary, middle, and high schools.

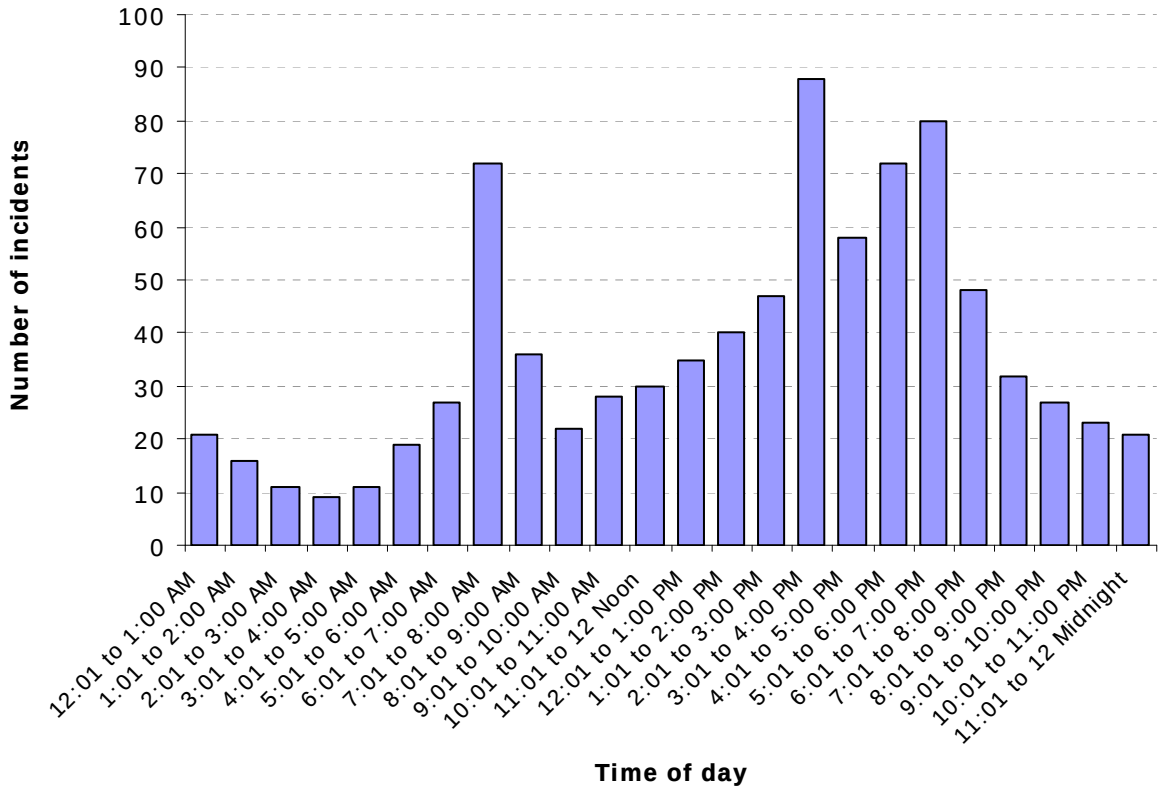


Figure 5.5 Vehicular Incidents by Time of Day

Two-thirds of injury crashes occur on roadway segments, whereas the remainder occurs at or near intersections. Some roads experiencing frequent incidents include a seven-mile stretch of SR 21 between the Effingham-Chatham county line to just north of Rincon, SR 119, SR 17 approaching the intersection of US 80, and Old River Road at I-16. Intersections with the highest crash frequency in the county are

- SR 21 at Ebenezer Road
- SR 21 at Chimney Road
- SR 17 at US 80
- SR 17 at Blue Jay Road
- Blue Jay Road at Midland Road, and
- US 80 at Sandhill Road.

Each intersection saw 20 to 50 incidents over three years. According to the most recent 2004-2006 crash rate data, Little McCall Road, McCall Road, Fort Howard Road, and Chimney Road have experienced crash rates significantly higher than the statewide average for their functional classification.

Level of Service

Level of Service (LOS) is a measure of how well a facility is performing given its function and use. For roads, LOS is typically a function of the roadway volume-to-capacity (v/c) ratio that provides a quantitative measure of network congestion. The following definitions of LOS are used here:

- LOS A – C: Conditions where traffic is moving relatively freely, corresponding to $v/c \leq 0.7$
- LOS D: Conditions where vehicle speed and freedom of movement is beginning to decline slightly due to increasing volume, where $0.7 < v/c \leq 0.85$
- LOS E: Conditions where traffic volume is at or close to capacity, resulting in delays. $0.85 < v/c \leq 1.00$
- LOS F: Conditions where the demand for space exceeds the capacity of the roadway ($v/c > 1.00$) and a breakdown in vehicular flow occurs

At the planning level, GDOT strives to provide service at LOS C, though in some cases, LOS D is considered acceptable due to the impacts required to obtain LOS C. Though slightly congested, traffic is still flowing at LOS D. Created using the travel demand model described in **Appendix C**, **Figure 5.6** depicts the expected level of service on existing and committed roads in 2030. "Existing" roads refer to present-day facilities, while "committed" projects are those planned and budgeted in the GDOT 2006 6-year construction work program. Typically, roadway projects are programmed in phases, including preliminary engineering and design, right-of-way acquisition, and construction. "Committed" projects have financial resources allocated to one or more of these phases between 2006 and 2012.

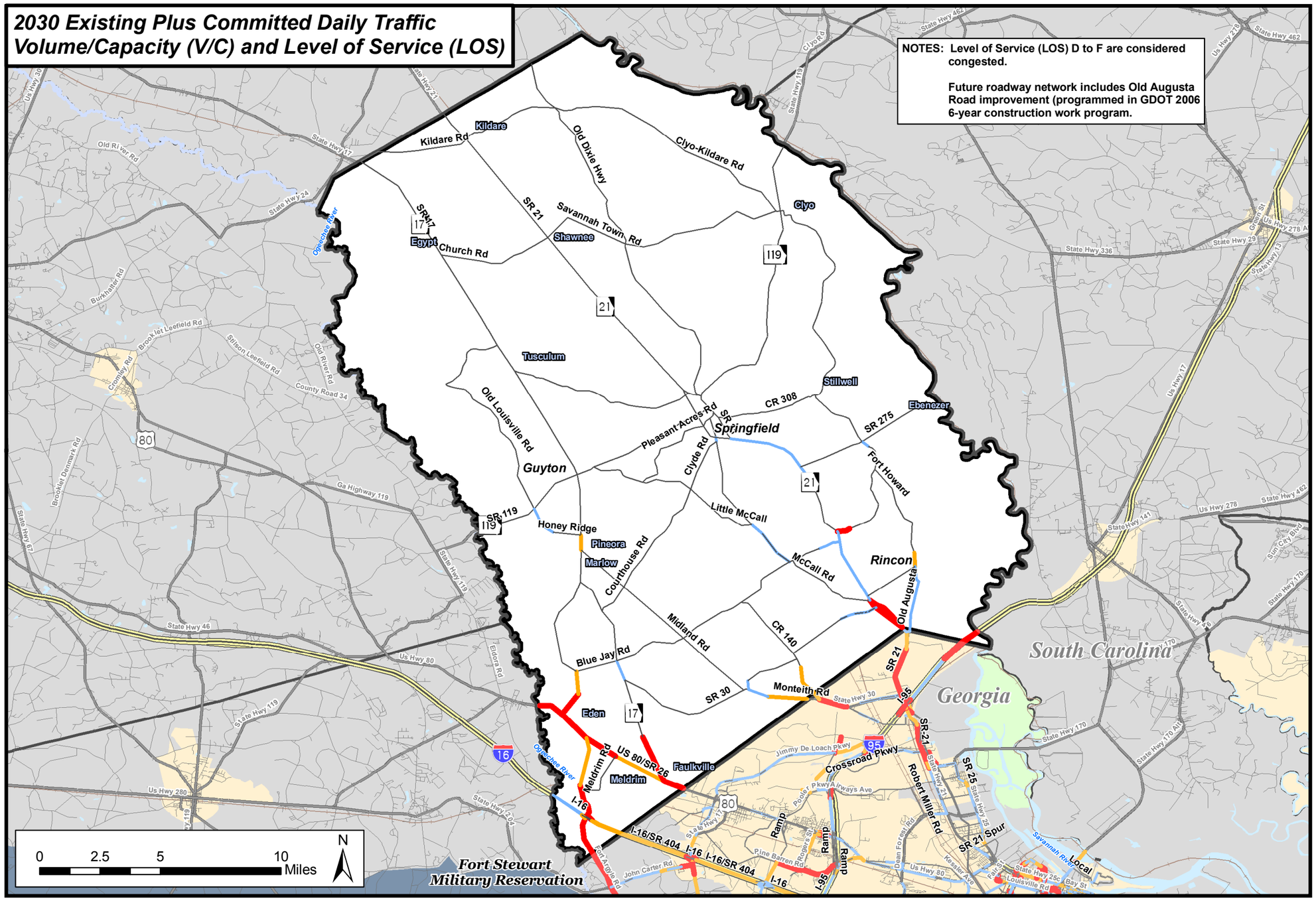
The 2030 E+C network includes scheduled operational, capacity, and maintenance improvements. According to preliminary analysis, most of the county roadways are expected to be operating at acceptable levels of service in 2030. However, several locations are seen to experience unacceptable levels of congestion during peak periods, including US 80, SR 17, Old River Road, and the southern portion of SR 21. This congestion is due primarily to commuter movement into and out of Chatham County. In the case of SR 21, its difficult interchange with I-95 in Chatham is a cause of problems further upstream. In addition to the corridors identified in the year 2030 analysis, observation of current traffic conditions indicates congestion along SR 119 between Springfield and Guyton during school start and finish times. This results in significant queuing and delay for travel along the corridor and turning movements accessing the schools. These conditions are likely to worsen with increasing daily traffic volumes projected along SR 119.

Effingham County Transportation Plan

2030 Existing Plus Committed Daily Traffic Volume/Capacity (V/C) and Level of Service (LOS)

NOTES: Level of Service (LOS) D to F are considered congested.

Future roadway network includes Old Augusta Road improvement (programmed in GDOT 2006 6-year construction work program.



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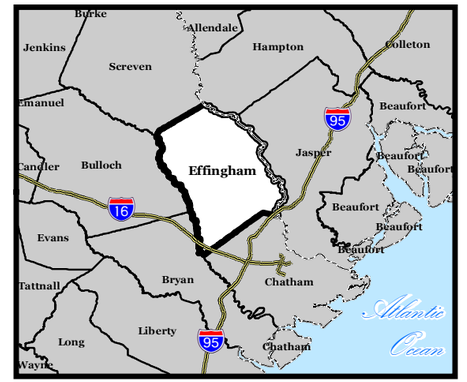


Figure 5.6

Legend

2030 Daily V/C Ratios

- V/C Ratio: > 1.0 (LOS F)
- V/C Ratio: 0.86 - 1.0 (LOS E)
- V/C Ratio: 0.71 - 0.85 (LOS D)
- V/C Ratio: <= 0.70 (LOS A to C)

Road Network

- Interstate (Outside Effingham County)
- Other State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: CUTS, and Jacobs Carter Burgess

This map is intended for planning purposes only.

July 2008

Road Surface and Bridge Conditions

ROAD SURFACE

Slightly less than two-thirds of Effingham County's roads are paved. 128 centerline miles of roads are dirt, while an additional 71 miles are covered in ash. As traffic volume has increased in parts of the county from population growth, ash and dirt roads have become more difficult to maintain. Future development and freight movement will necessitate the paving of ash and more heavily traveled dirt roads, particularly in southern Effingham. Areas of northern Effingham, where connectivity between paved roads is limited, will also need to resurface some roads in order to better accommodate residents and emergency vehicles. Improved pavement conditions will help in terms of safety, as well as continuing maintenance responsibilities**. Figure 5.7** displays the surface status of Effingham's roads.

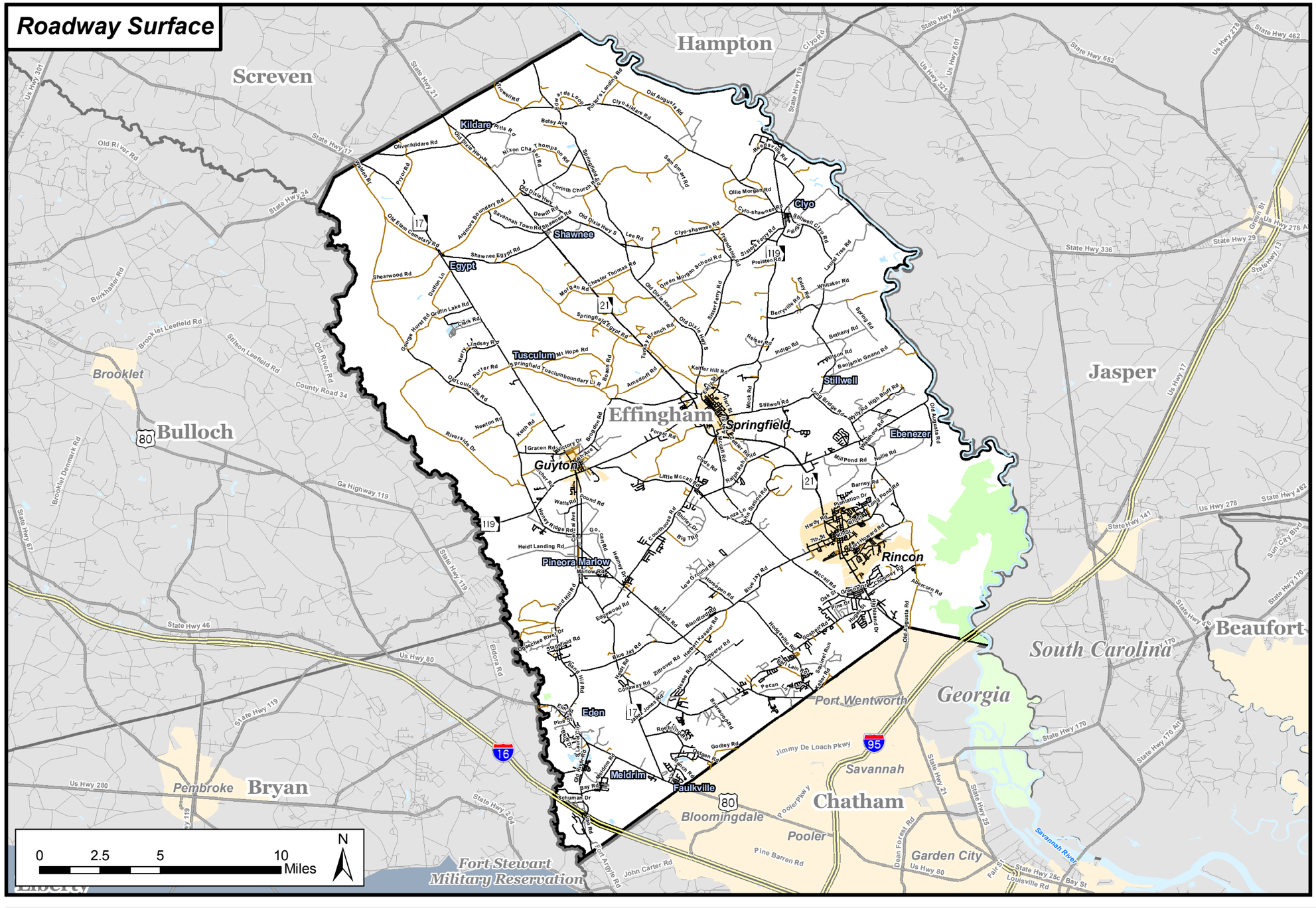
BRIDGES

There are 72 bridges in Effingham, 36 of which are maintained by the county. Keeping bridges in good condition is important for safety as well as to avoid delays created by diversions when bridges are closed or have weight limit postings. The Federal Highway Administration (FHWA) established the National Bridge Inventory (NBI) to monitor the condition of bridges on public roads. The NBI identifies bridge characteristics including age, sufficiency and composition. The National Bridge Inspection Standards require that all bridges carrying public roads be inspected and evaluated for safety biennially. Additionally, each bridge must be rated for its safe load capacity. If the maximum legal load exceeds the operating load, the bridge must be immediately strengthened, closed, or posted.

The calculated NBI sufficiency rating, on a scale of 0 to 100, is indicative of the fitness of the bridge to remain in service. A rating of 50 or less signifies that a bridge structure is eligible to receive funding for near-term replacement. The general characteristics and sufficiency ratings of county bridges is shown in **Table 5.3.** Overall, Effingham's 72 bridges have an average sufficiency rating of 87.2. Prioritization of repairs and allocation of moneys (a lump sum is usually set aside for maintenance) is conducted by county officials.

Effingham County Transportation Plan

Roadway Surface



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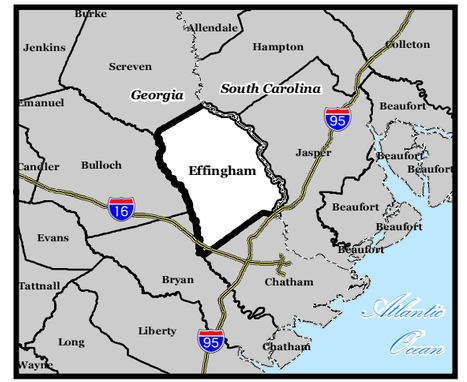


Figure 5.7

Legend

Roadway Surfaces
- Ash Surface
- Dirt Surface
- Paved Surface

Road Network
- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers
- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas (Outside Effingham County)

Source: Effingham County, GDOT, and Jacobs Carter Burgess

This map is intended for planning purposes only.

JACOBS Carter Burgess

Table 5.3 Bridge Conditions
Source: National Bridge Inventory

Facility Carried by Structure	Features Intersected	Location	Sufficiency Rating	Maintenance Responsibility	Functional Class of Route	Year Built	Year Reconstructed	AGE (2008)	Age(2008) inc reconstruction	Average Daily Traffic	Historical significance	Posting Status	STRAHNET Highway Designation
BUNYAN KESSLER RD	DASHER CREEK	2 MI E OFRINCON	100.0	2	9	2001	-	7	7	100	0	A	0
LOG LANDING ROAD	EBENEEZER CREEK	4 MI N OF RINCON	100.0	2	9	2002	-	6	6	100	0	A	0
CLYO-KILDARE ROAD	EBENEZER CREEK	13 MI N OF SPRINGFIELD	99.9	2	7	1996	-	12	12	600	0	A	0
SPRINGFIELD-TUSCLU	JACKS BRANCH	1 MI NW OFSPRINGFIELD	99.9	2	8	1997	-	11	11	800	0	A	0
LITTLE McCALL ROAD	LITTLE EBENEZER CREEK	5 MI NW OF RINCON	99.6	2	8	1995	-	13	13	3020	0	A	0
LONG BRIDGE ROAD	LOCKNER CREEK	3 MI E OF RINCON	99.6	2	7	1996	-	12	12	2400	0	A	0
McCALL ROAD	LITTLE EBENEZER CREEK	3 MI S OF SPRINGFIELD	99.6	2	8	1983	-	25	25	3020	0	A	0
SR 21 (NBL)	LITTLE EBENEZER BRANCH	3 MI N OF RINCON	99.5	1	6	1996	-	12	12	9800	0	A	0
SR 21 (NBL)	CSX RAILROAD	.75 MI OF SPRINGFIELD	99.5	1	6	1997	-	11	11	9800	N	A	0
SR 21 (NBL)	JACKS BRANCH	1 MI E OF SPRINGFIELD	99.5	1	6	1996	-	12	12	9800	0	A	0
SR 21 (SBL)	CSX RAILROAD	.75 MI S OF SPRINGFIELD	99.5	1	6	1997	-	11	11	9800	N	A	0
SR 21 (SBL)	JACKS BRANCH	1 MI E OF SPRINGFIELD	99.5	1	6	1997	-	11	11	9800	0	A	0
SR 21 (SBL)	LITTLE EBENEZER BRANCH	3 MI N OF RINCON	99.4	1	6	1959	1996	49	12	13900	0	A	0
SECKINGER FORD RD	DASHER CREEK	1.5 MI E OF RINCON	99.3	2	7	1986	-	22	22	5000	0	A	0
SR 119	JACKS BRANCH	IN SPRINGFIELD CITY LIMIT	99.3	1	9	1964	-	44	44	5300	0	A	0
OLD AUGUSTA ROAD	SWEIGOFFER CREEK	2 MI SE OF RINCON	99.2	2	7	1991	-	17	17	3020	0	A	0
OLD LOUISVILLE ROA	SHRIMP CREEK	1.5 MI NW OF GUYTON	98.9	2	8	1974	-	34	34	3020	0	A	0
STANDARD LANE	JACKS BRANCH	1 MI W OF SPRINGFIELD	98.9	2	9	1997	-	11	11	1050	0	A	0
SR 21	COW PEN CREEK	14 MI N OF SPRINGFIELD	97.4	1	6	1986	-	22	22	3300	0	A	0
SR 119	OGEECHEE RIVER O/F	3.5 W OF GUYTON	94.6	1	6	1992	-	16	16	2800	0	A	0
SR 21	CSX RAILROAD (635128B)	IN RINCON CITY LIMITS	94.0	1	6	1960	1989	48	19	13900	N	A	0
I-95 (NBL)	SAVANNAH RIVER	4 MI N OF JCT SR 21	93.7	1	1	1976	-	32	32	48720	1	A	1
I-95 (SBL)	SAVANNAH RIVER	4 MI N OF JCT SR 21	93.7	1	1	1976	-	32	32	48720	1	A	1
SR 119	WHITE DEER BRANCH	1 MI W OF SPRINGFIELD	93.7	1	6	1989	-	19	19	5000	0	A	0
MILL POND ROAD	POLLY CREEK	2.5 MI NE OF RINCON	92.5	2	9	1967	-	41	41	100	0	A	0
OLD DIXIE HIGHWAY	COW PEN CREEK	2 MI NE OF SHAWNEE	92.5	2	9	1950	-	58	58	100	0	A	0
PRYOR ROAD	JINK FORD BRANCH	15 MI N OF GUYTON	92.5	2	9	1950	-	58	58	100	0	A	0
RACE PATH ROAD	LITTLE EBENEZER CREEK	3 MI S OF SPRINGFIELD	92.5	2	9	1950	-	58	58	90	0	A	0
RIVERSIDE DRIVE	SHRIMP CREEK	3 MI E OF GUYTON	92.5	2	9	1957	-	51	51	100	0	A	0
SHEAROUSE SPUR RD	WHITE DEER BRANCH	2 MI W OF SPRINGFIELD	92.5	2	9	1950	-	58	58	100	0	A	0
SPRINGFIELD-EYGPT	HEIDT BRANCH	6 MI NE OF SPRINGFIELD	92.5	2	9	1950	-	58	58	100	0	A	0
CENTRAL AVENUE	MILL CREEK	2 MI S OF GUYTON	92.4	2	9	1950	-	58	58	530	0	A	0
EARLY STREET	JACKS BRANCH	CTY LMT OF SPRINGFIELD	92.4	2	9	1970	-	38	38	740	0	A	0
STILLWELL-CLYO RD	GROOVER BRANCH	4 MI E OF SPRINGFIELD	92.4	2	7	1955	-	53	53	1000	0	A	0
SR 17	MILL CREEK	1 MI S OF GUYTON	91.7	1	7	1960	-	48	48	5300	0	A	0
OLD DIXIE HIGHWAY	TURKEY BRANCH	4 MI N OF SPRINGFIELD	91.6	2	8	1950	-	58	58	3020	0	A	0
OLD DIXIE HIGHWAY	TURKEY BRANCH O/F	4 MI N OF SPRINGFIELD	91.6	2	8	1950	-	58	58	3020	0	A	0
SISTERS FERRY	EBENEZER CREEK	6 MI NE OF SPRINGFIELD	91.5	2	9	1978	2003	30	5	100	0	P	0
HONEY RIDGE ROAD	MILL CREEK	4 MI S OF GUYTON	91.4	2	8	1950	-	58	58	1900	0	A	0
SR 119	DEEP BRANCH	2 MI S OF CLYO	91.3	1	6	1963	-	45	45	2600	0	A	0
SR 26 - US 80	LITTLE OGEECHEE CREEK	8 MI S OF GUYTON	90.9	1	6	1926	-	82	82	8000	0	A	0
SR 26 - US 80	LITTLE OGEECHEE CRK O/F	8.5 S OF GUYTON	90.9	1	6	1926	-	82	82	8000	0	A	0

Table 5.3 Bridge Conditions, Continued

Facility Carried by Structure	Features Intersected	Location	Sufficiency Rating	Maintenance Responsibility	Functional Class of Route	Year Built	Year Reconstructed	AGE (2008)	Age(2008) inc reconstruction	Average Daily Traffic	Historical significance	Posting Status	STRAHNET Highway Designation
SR 17	OGEECHEE CREEK	11 MI S OF GUYTON	90.6	1	7	1960	-	48	48	4100	0	A	0
SR 26 - US 80	MELDRIM BRANCH	7.5 MI S OF GUYTON	90.0	1	6	1926	-	82	82	8000	0	A	0
SR 17	LITTLE BLOCK CREEK	6 MI N OF GUYTON	89.8	1	7	1951	-	57	57	2100	0	A	0
SR 26 - US 80	REDDING BRANCH	8 MI S OF GUYTON	89.5	1	6	1926	-	82	82	7300	0	A	0
SR 26 - US 80	REDDING BRANCH	8 MI S OF GUYTON	89.5	1	6	1926	-	82	82	7300	0	A	0
SR 30	MONTIETH CREEK	3 MI NE INT US 80 & SR 17	89.5	1	7	1955	-	53	53	3400	0	A	0
LEWIS RAHN ROAD	LITTLE EBENEZER CREEK	4 MI N OF RINCON	86.4	2	9	1996	-	12	12	100	0	A	0
ARNSDORFF LOOP RD	TURKEY BRANCH TRIB.	5 MI N OF SPRINGFIELD	81.5	2	9	1955	-	53	53	100	0	A	0
LEXINGTON AVE EXT.	POLLY CREEK	1.5 MI N OF RINCON	81.5	2	9	1950	-	58	58	100	0	A	0
MORGAN ROAD	TURKEY BRANCH	7 MI NE OF SPRINGFIELD	81.4	2	9	1950	-	58	58	100	0	A	0
OLD AUGUSTA ROAD	DEVILS BRANCH	12 MI NE OF SPRINGFIELD	80.3	2	8	1978	2005	30	3	1470	0	A	0
SR 21	TURKEY BRANCH	4 MI N OF SPRINGFIELD	80.0	1	6	1986	1998	22	10	4400	0	A	0
SR 119	EBENEEZER CREEK	1 MI NE OF SPRINGFIELD	78.0	1	6	1963	-	45	45	2890	0	A	0
SR 26 - US 80	STILL BRANCH	9 MI S OF GUYTON	77.5	1	6	1944	-	64	64	7300	0	A	0
SISTERS FERRY	TURKEY BRANCH	4.5 MI N OF SPRINGFIELD	76.7	2	9	1993	-	15	15	740	0	P	0
I-16 (WBL)	OGEECHEE RIVER O/F	16 MI S OF GUYTON	74.7	1	1	1966	2004	42	4	22400	0	A	1
I-16 (EBL)	OGEECHEE RIVER O/F	16 MI S OF GUYTON	74.5	1	1	1966	2004	42	4	25410	0	A	1
CLYO-SHANNEE ROAD	EBENEZER CREEK	8 MI NE OF SPRINGFIELD	72.9	2	8	1975	2003	33	5	3020	0	A	0
OLD AUGUSTA ROAD	LOCKNER CREEK	6 MI NE OF RINCON	71.4	2	9	1974	-	34	34	740	0	A	0
SR 21	POLLY CREEK	IN CITY LIMITS OF RINCON	70.4	1	6	1931	1998	77	10	13900	0	A	0
LONG BRIDGE ROAD	EBENEZER CREEK	4 MI E OF SPRINGFIELD	68.8	2	7	1968	-	40	40	2800	0	A	0
CAROLINA AVENUE	DASHER BRANCH	CITY LIMIT OF RINCON	64.3	4	9	1960	-	48	48	740	0	P	0
SR 21	DASHER CREEK	IN CITY LIMITS OF RINCON	63.8	1	6	1931	1989	77	19	23800	0	A	0
SR 21	SWEIGOFFER CREEK	1 MI S OF RINCON	62.5	1	6	1960	1990	48	18	28700	0	A	0
STILLWELL ROAD	EBENEZER CREEK	SPRINGFIELD CITY LIMITS	61.3	2	7	1959	-	49	49	1500	0	P	0
SR 26 - US 80	OGEECHEE RIVER O/F	9 MI S OF GUYTON	47.4	1	6	1944	-	64	64	7300	0	A	0
LOG LANDING ROAD	EBENEZER CREEK	4 MI N OF RINCON	47.1	2	9	1978	-	30	30	100	0	P	0
OLD RIVER ROAD	I-16 (SR 404)	15 MI S OF GUYTON	47.1	1	7	1966	-	42	42	3500	N	A	0
CSX RR (620047G)*	SR 21 SPUR	.5 MI N OF SPRINGFIELD	0.0	0	6	1936	-	72	72	1400	0	0	0
I-16*	S-1868 OLD RIVER ROAD	15 MI S OF GUYTON	0.0	0	1	1966	-	42	42	22300	0	0	1
TOTAL	**72 Bridges**	**Average:**	**87.2**					**41 years**	**36 years**	**6,315 vehicles**	**2 Significant**	**5 Posted**	

Key:

Sufficiency Rating (0-100): Less than 50 signifies potential short-term need for replacement or repairs

Maintenance Responsibility: 1 = GDOT, 2 = Effingham County, 4 = Municipality, 0 = not coded

Functional Class: 1 = Interstate Highway, 2 = Principal Arterial (rural), 6 = Minor Arterial (rural), 7 = Major Collector (rural), 8 = Minor Collector (rural), 9 = Local Road (rural)

Average Daily Traffic: Average number of vehicles crossing bridge each day

Historical Significance: 1 = National Register of Historic Places, 0 = not on NRHP or being considered for it

Posting Status: A = Open with no weight restriction, P = Posted for reduced load

STRAHNET Designation: 0 = not a STRAHNET highway, 1=on an interstate STRAHNET route

* not included in totals or statistical calculations due to incomplete data

Intersections and Operations

Effingham County has 14 signalized intersections, seven of which are located in incorporated areas as seen in **Figure 5.8**. Numerous other intersections exist, most of which are controlled by an all-way stop sign, while some have two-way stops and/or flashing lights. (The latter accounts for two of the afore-mentioned signalized intersections.) The presence of intersections in a road network impacts mobility, connectivity, and safety. Closely spaced intersections with traffic control devices can significantly slow down vehicle through-movements, though coordination of electronic signals can improve traffic flow. Either effect may be desirable depending on the character of roadway where devices are installed.

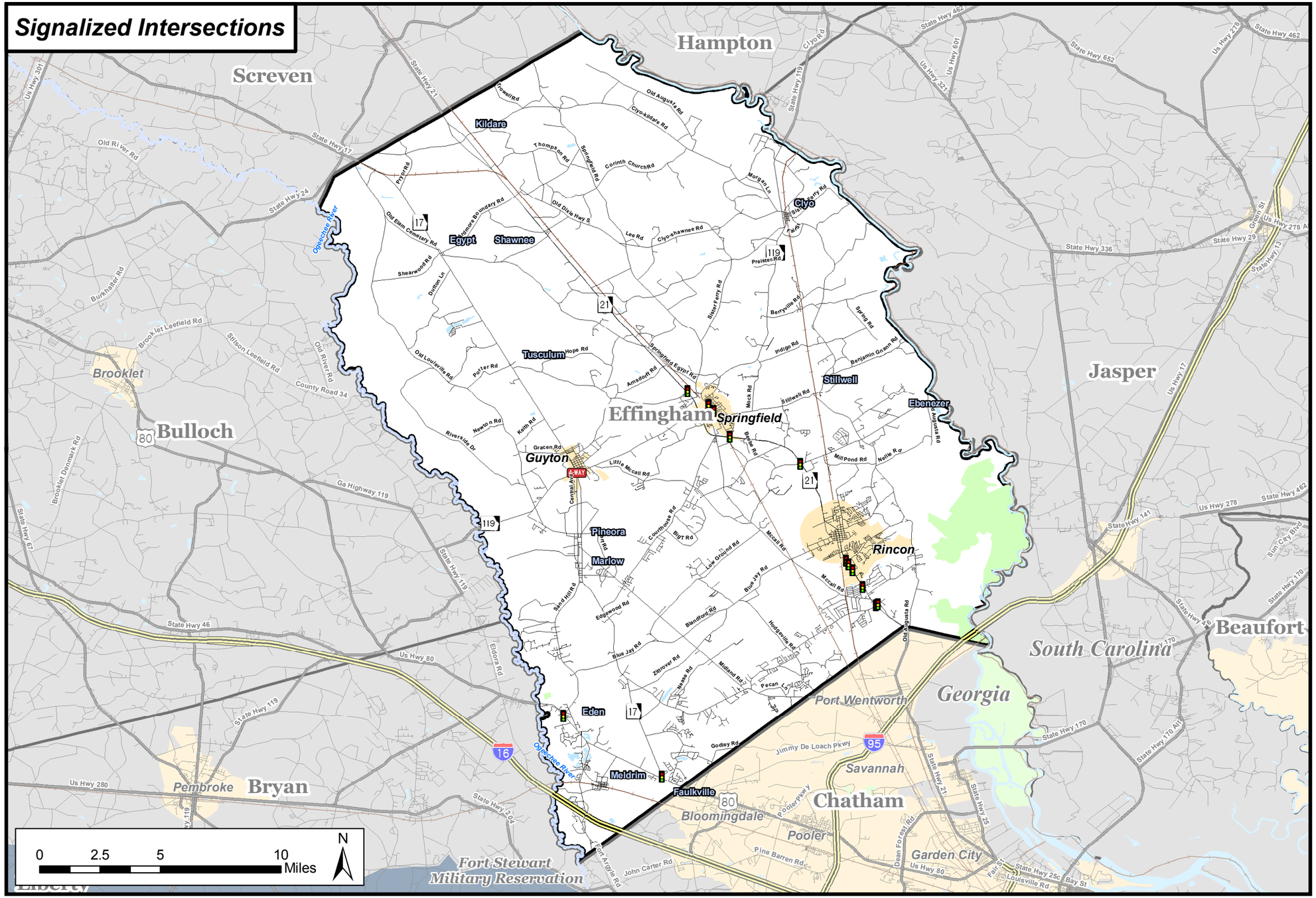
A higher number of intersections in a given area leads to improved connectivity and access to destinations. This is especially beneficial for users of non-motorized travel modes or public transit, though local businesses also gain from increased vehicular accessibility to their locations. Where speed and hierarchy differentials exist at intersections (such as a local road bisecting an arterial), it is crucial to provide appropriate traffic control devices and geometric design features such as adequate sight distance or turn lane channelization to maintain safety. Redundant warning devices, including rumble strips, signage, and flashing lights may need to be installed at intersections experiencing frequent or severe vehicular crashes.

Because roadway capacity improvements are expensive and federal, state, and local financial resources are limited, it is important to make as efficient use as possible of the existing transportation system before widening or adding roads. Controlling operations through coordinated signal timing or other Intelligent Transportation System (ITS) technologies will increase efficiency. Implementing access management techniques can also improve efficiency by reducing congestion and safety issues.

Access management refers to a number of techniques used to provide or manage access to land development while simultaneous preserving roadway capacity, speed, and safety. It is typically incorporated on roadways accommodating a high volume of through traffic or commercial vehicles. Access management techniques include limiting abutting driveways through zoning (both commercial and residential), installing medians, providing or improving signalized intersections, and generally pursuing roadway enhancements that decrease the number of potential conflict points occurring on travel routes. SR 21, the most heavily traveled surface road in Effingham County, currently employs some access management techniques though application is inconsistent. The prominently featured grassy median helps to enhance the corridor aesthetics in addition to controlling access and turning movements.

Effingham County Transportation Plan

Signalized Intersections



Regional Inset

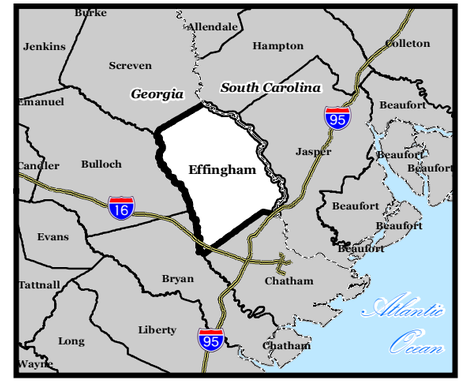


Figure 5.8

Legend

Signalized Intersection

- Signal
- 4 Way Stop

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water (Outside Effingham County)
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: GDOT, and Jacobs Carter Burgess

This map is intended for planning purposes only.

July 2008

Parking

The quantity, location, and design of automobile parking facilities affect the character and function of public space. Providing too little parking at businesses or other destinations may cause patrons who drove there to park their vehicles in places not originally intended to accommodate them. Conversely, providing too much parking, particularly if visible from public rights-of-way, degrades the aesthetic quality of the corridor, inhibits pedestrian and bicycle access to destinations, and increases water quality problems due to stormwater runoff from impervious pavement. The costs associated with constructing off-street parking can also pose a barrier to market entry for small businesses wishing to locate in a community if too many spaces are required by local zoning and development codes.

Observations and interviews with local officials indicated no parking shortages anywhere in Effingham County, including the historic centers of Guyton, Rincon, and Springfield. On-street parking is available in cities while off-street parking facilities are seen throughout the county. Newer commercial developments have tended to provide exclusively off-street lots in strip-mall type layouts. In revitalizing historic downtown areas in coming years, it may be necessary to provide parking exemptions or require parking to be located on-street or behind buildings if the community wishes to preserve the existing small-town character of these locations. Directional signage can be installed to direct drivers to parking lots, if necessary.

Emergency Vehicles and Evacuation Routes

Emergency vehicles such as police cars, ambulances, and fire trucks depend on well-maintained and accessible transportation infrastructure to reach those in need in an acceptable amount of time. It is thus important to provide a grid of paved roads throughout the county. Currently, connectivity problems exist in northern Effingham forcing emergency vehicles to navigate circuitous dirt roads and slowing emergency response time, particularly for east-west travel movements. There is a need to pave dirt roads, align intersections, and add new roads in selected locations to benefit public safety. Signal preemption for ambulances transporting severely sick or injured patients to Savannah hospitals would also be beneficial; this technology is already implemented in Chatham County.

Natural disasters also put stress on the transportation system. In a coastal region, it is imperative to provide hurricane evacuation routes leading inland to higher ground. Interstates and arterials provide the greatest capacity for vehicles, with I-16, US 80, and SR 21 being designated official Atlantic hurricane evacuation routes through Effingham County. I-16 has the ability to handle accommodate contra-flow traffic, thus doubling its capacity. Effingham should continue to uphold the highest performance standards for these roadways, which accommodate not only Effingham residents, but also numerous people from other southern coastal counties during natural disasters.

Summary of Roadway Needs

Based on public and stakeholder input, as well as quantitative safety and travel demand analysis, significant capacity and operational improvements are needed to accommodate 2030 travel demand in the southern part of Effingham County. Additional roadway improvement needs include:

- Paving of some ash and dirt roads to decrease maintenance needs associated with higher volumes of traffic and to aid in emergency vehicle travel
- Constructing new local roads in places where connectivity is lacking at a variety of scales (intra-county trips to interparcel access)
- Addressing roadway and intersection characteristics in places experiencing a high number or relatively severe vehicular crashes
- Improving operations through safety and ITS enhancements, particularly on roads experiencing a high commuter and truck volume
- Adding capacity to address deficiencies along key corridors and interstate access roads
- Upgrading bridges as needed according to inspection results
- Implementing access management on existing or potential arterials while providing alternatives to their use through adequate supportive infrastructure (i.e. parallel local routes)
- Reviewing and revising parking regulations, particularly in commercial or mixed-use areas

Freight Movement

Understanding and planning for goods movement has been a part of metropolitan and statewide transportation planning requirements since ISTEA in 1991. Commercial operators within the private sector manage freight movement, which is a complex, multimodal endeavor. The distribution of goods has become a field of its own; called logistics, it is the systematic process of moving a shipment from its origin to its destination. One shipment of consumer goods may move via ship, train, airplane, and/or truck from the manufacturer to the retail outlet. Therefore, not only are the means for transporting goods important (waterways, roadways, air routes, and railways), but so are the connections between the modes, known as the intermodal junctions.

In Georgia, freight is moved primarily by truck (86%) and rail (11%), based on weight. Water and air modes transport an additional three percent of freight tonnage.[7] For shorter freight routes (less than 500 miles), trucking tends to be the dominant freight mode for economic reasons. For longer journeys, rail is utilized to a greater extent. The Port of Savannah is the nation's fastest growing container port and is

[7] "Statewide Truck-Only Lanes Needs Identification Study", GDOT and HNTB. Data is from 2004.

the fourth busiest in the United States[8]; much of this freight travels through Effingham County via Interstates and rail. Because I-16 and I-95 have very little mileage within county boundaries, rail freight movement and smaller routes used for local trucking or access to the Interstates are of primary concern in this Multi-Modal Transportation Study. Effingham has no public air or seaports used for freight movement, but the conditions of truck and rail facilities are detailed in the following sections.

Truck

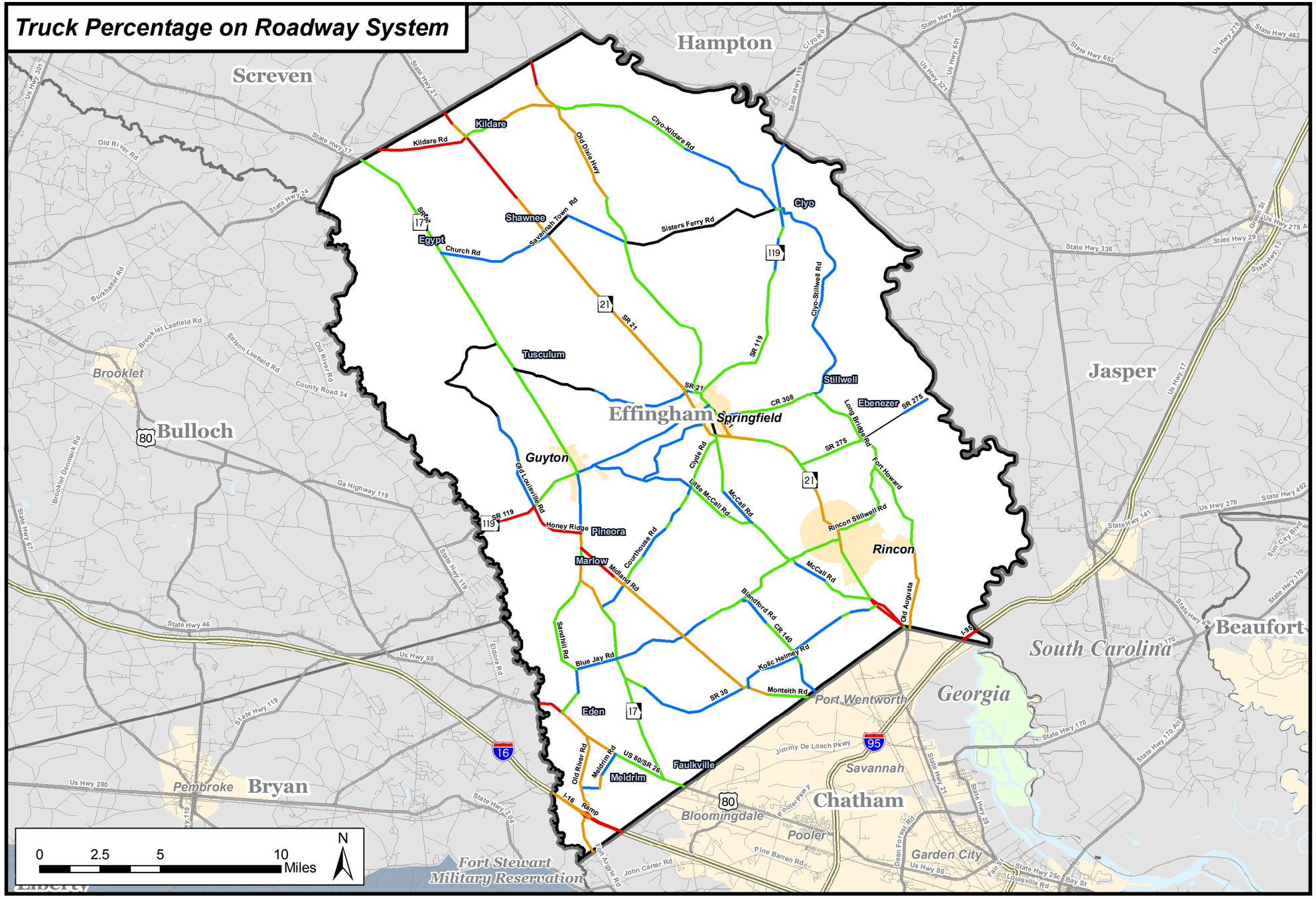
To facilitate traffic flow, improve safety, and offer economic development incentives, governments often regulate truck use of public roadways. It is imperative that industrial sites, which are important to the economic well-being of a community, are served by appropriate roadways designed, constructed, and designated for truck use. Connectivity to interstate highways and other regional arterials is essential to attract and retain industrial users. However, large trucks may hinder the operation and maintenance of local roads built for use by automobiles and light trucks. Heavier vehicles take more time than lighter vehicles to accelerate and decelerate, negatively affecting traffic flow and causing significantly more damage to roadway facilities.

Specific routes for oversized trucks are designated by the Surface Transportation Assistance Act of 1982 (STAA), a federal highway program administered by GDOT. All interstates are considered freight routes, including I-16 and I-95 in Effingham County. Additionally, United States and Georgia State highways are intended to accommodate large trucks given their generous geometric design standards and purpose of aiding regional mobility. In Effingham, US 80, SR 21, SR 119, SR 17 are de facto truck routes. **Figure 5.9** shows truck usage on the entire roadway network. As freight movement via trucks is expected to double in the future, it will become increasingly important to ensure that routes typically used by trucks can safely accommodate them in addition to local traffic.

[8] "US Port Rankings Report," Georgia Ports Authority, 6/18/08. http://www.gaports.com

Effingham County Transportation Plan

Truck Percentage on Roadway System



Regional Inset

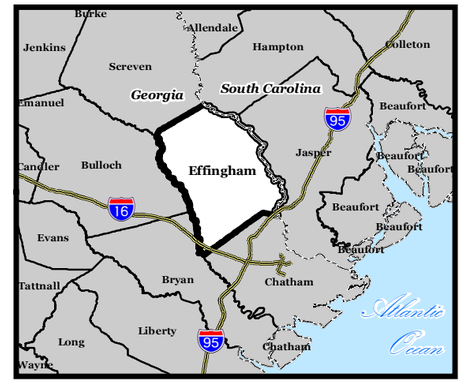


Figure 5.9

Legend

Truck Percentage on Roadway System
(From 2001 Effingham County Model Network)

- > 15 %
- 10 to 15 %
- 5 to 10 %
- Less than 5 %
- Unknown

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water (Outside Effingham County)
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: Effingham County, GDOT, and Jacobs Carter Burgess

This map is intended for planning purposes only.

Rail

During much of Effingham's history, railways fueled its population growth and commerce. Thriving communities were prominently located along several major rail lines (see **Figure 5.10**), two of which are still in operation today. Norfolk-Southern owns one north-south line in the central portion of the county, connecting Savannah to Springfield and Shawnee before continuing on to Screven County. It is used exclusively for freight movement. CSX owns a rail line on the eastern side of the county, connecting Savannah to Denmark, SC via Rincon and Clyo. This line is used primarily for freight movement, but also accommodates daily Amtrak service. Several spur lines from each set of railroad tracks exist to accommodate local power and manufacturing plants in the county. A small length of spur track in the northern part of the county is owned by GDOT.

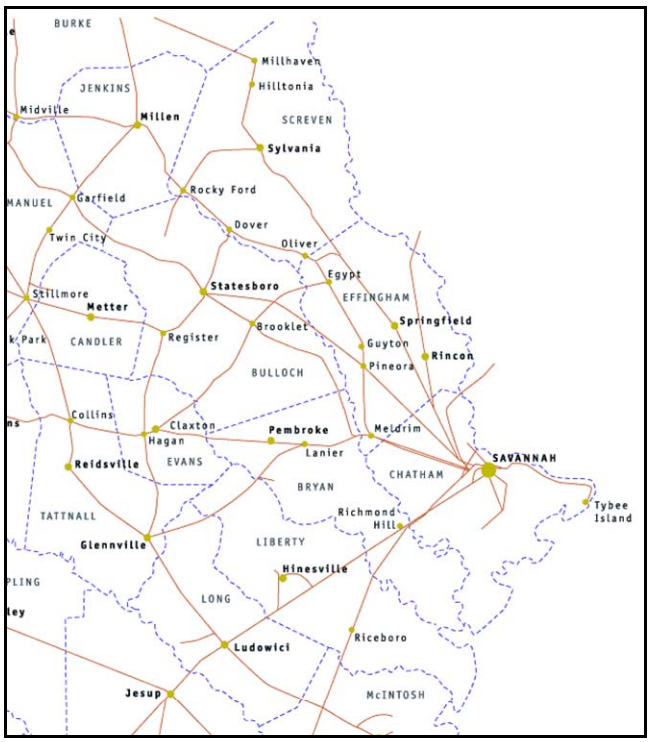


Figure 5.10 Past and Current Railroad lines in Effingham

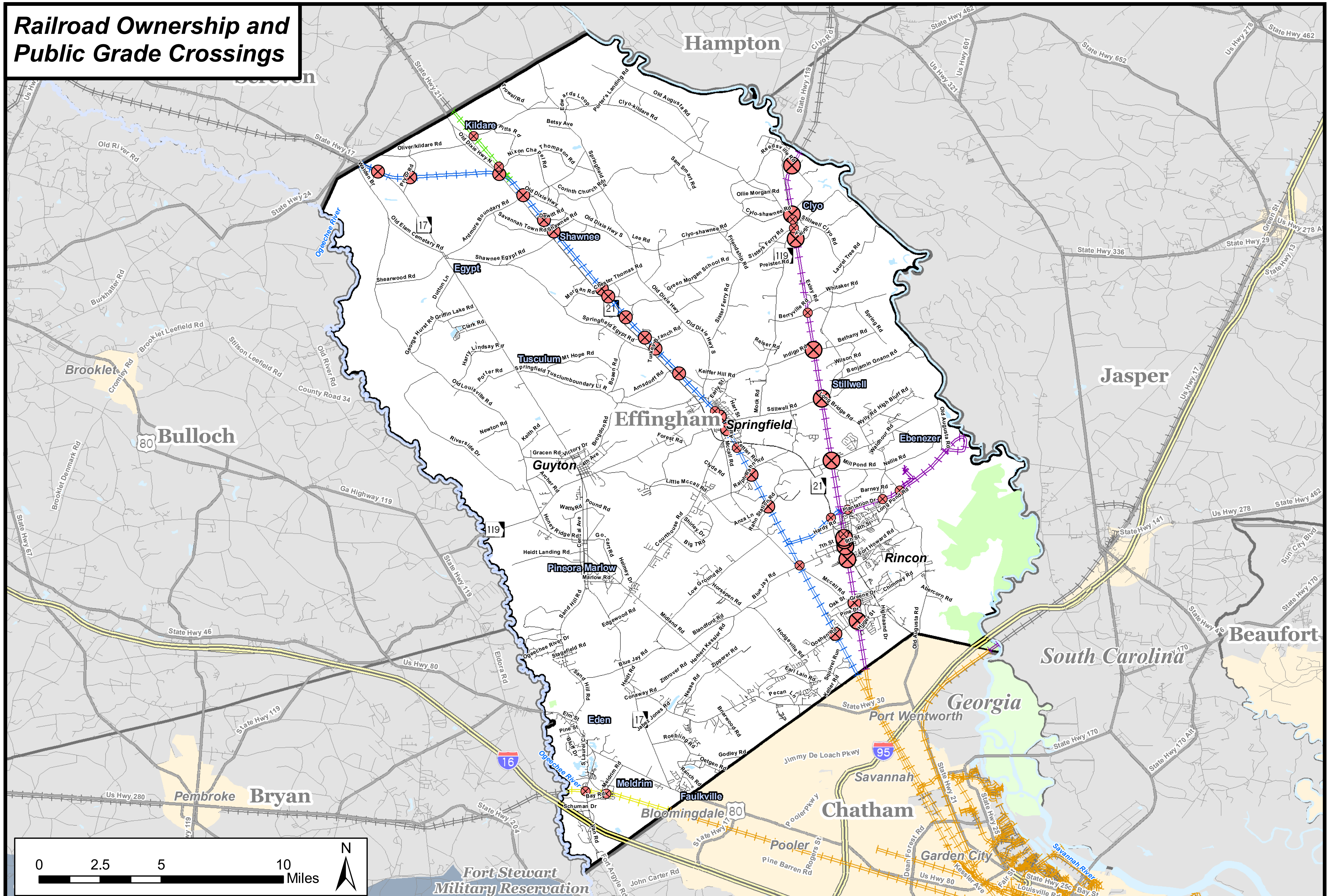
Source: www.garail.com

Because most railroads are privately owned, they have latitude regarding the manner in which they conduct their operations. Thus, the primary role of Effingham County is to ensure safety at crossings and maintain access to future intermodal facility locations. There are currently 82 rail crossings in the county, 48 of which are at-grade crossings on public roads. The others are on private land and/or are grade-separated. All of these railroad crossings have signage or signal warnings, though only two-thirds of the crossings (31) are on paved roads. The number of daily trains at each site varies between 0 and 21, with thirteen crossings experiencing almost one train per hour. **Figure 5.11** shows Effingham's rail infrastructure and public grade crossings.

Office of Planning
Keeping Georgia on the Move

Effingham County Transportation Plan

Railroad Ownership and Public Grade Crossings



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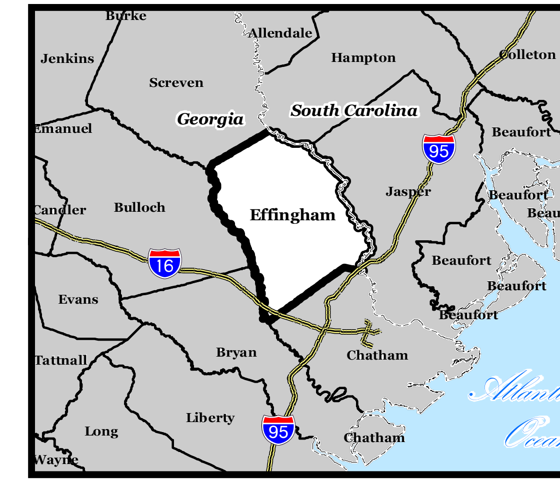

Figure 5.11

Legend

Trains per Day at Crossing

- Greater than 15 Trains
- 8 to 14 Trains
- 1 to 7 Trains

Railroad Ownership

- CSX-T Railroad
- Georgia Central Railway
- Georgia Department of Transportation
- Norfolk Souothern
- Chatham Railroad
- Surrounding County Railroad

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas (Outside Effingham County)

Source: Effingham County, GDOT, and Jacobs Carter Burgess

This map is intended for planning purposes only.

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From 2000 to 2007, there were six collisions between trains and motor vehicles at railroad crossings resulting in two injuries. An additional incident that did not involve motor vehicles resulted in a fatality. Three incidents took place at W Johnson Street in Rincon, while single incidents occurred at crossings at W 9th Street in Rincon, Indigo Road north of Stillwell, and Rahn Station Road south of Springfield. Due to safety concerns, it is the general policy of the federal government and major railroad owners to discourage the construction of new at-grade crossings. Existing crossings experiencing train incidents may need additional warning signals or barriers installed. It may also be wise to consider new or alternative roadways to avoid at-grade crossings. At this time, several of these crossings are slated for enhancement in the county's Capital Improvement Program.

Summary of Freight Needs

The Port of Savannah is one of the largest container ports in the United States and handles over 15 million tons of freight each year which is distributed inland mostly via truck and railroad. Logistics sector employment spills over into Effingham, which offers a number of comparative advantages including inexpensive large tracts of land set aside by the Economic Development Authority, access to major state routes, and amenities important to employees and their families such as high-quality schools and housing opportunities.

The Port of Savannah has plans for expansion to accommodate even more container movement and larger vessels. This will certainly impact Effingham as more truck and rail traffic will be distributed through the county. New jobs created by the port expansion will also increase the number of commuters from Effingham to Chatham County. Both impacts necessitate adequate north-south roadway and rail transportation facilities. In addition, the increased commuter volume may generate need for public transportation options to relieve stress on the network.

Designating some roads as official truck routes may help to better contain truck traffic, while installing more warning devices at problematic railroad crossings can increase the safety of car-train interactions. On the land use side, it is imperative that the county provide freight access to the industrial parks it is developing, first to provide stimulus for in-county employment, but second to channel trucks away from roadways that are used by a high volume of local traffic.

Pedestrian and Bicycle

Bicycle and pedestrian infrastructure provide a safe environment for making short trips between home, school, work, recreational, and other destinations. Because of the marginal cost involved and the need to provide transportation choice, it is the policy of the USDOT to incorporate bicycle and pedestrian facilities in all new transportation projects unless exceptional circumstances exist[9]. Further, for roadways that may need to accommodate transit in the future, setting aside right-of-way or space for shelters ahead of time will increase the possibility that transit can be easily implemented, if warranted, with minimized costs. Ensuring that roadways are designed to accommodate pedestrians, bicyclists, and transit vehicles in addition to automobiles is known as providing "complete streets".

Existing Pedestrian Conditions

GIS data on existing sidewalks in Effingham do not yet exist, but field surveys and interviews with local officials revealed the general locations of sidewalks in Effingham County. They are primarily located in the historic areas of incorporated cities, in some subdivisions, and along portions of roads experiencing relatively recent development activity. Most county roadways completely lack sidewalks, and where sidewalks do exist, they are often narrow and present on just one side of the road. High-speed and high-volume roads are a major barrier to pedestrian activity due to crossing difficulties. Sidewalks are not required by Effingham County regulations, and therefore are not included in many developments.

Summary of Pedestrian Needs

Areas of pedestrian need were identified by creating ½ mile walking distance buffers around community facilities (including schools, parks, libraries, civic buildings, and hospitals) and along various road types according to FHWA guidelines.[10] **Table 5.4** shows the FHWA sidewalk recommendations as classified by roadway types and adjacent development.

[9] **Accommodating Bicycle and Pedestrian Travel: A Recommended Approach** is a policy statement adopted by the United States Department of Transportation. The Policy Statement was drafted by the U.S. Department of Transportation in response to Section 1202 (b) of the Transportation Equity Act for the 21st Century (TEA-21) with the input and assistance of public agencies, professional associations and advocacy groups. (http://www.fhwa.dot.gov/environment/bikeped/design.htm)

[10] *Designing Sidewalks and Trails for Access. Part II of II: Best Practices Design Guide*, FHWA (2001)

Table 5.4 FHWA Sidewalk Guidelines

Source: FHWA. Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide, 2001 (http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks204.htm)

Roadway Classification and Land Use	Sidewalk Requirements	Future Phasing
Highway (rural)	Min. of 60 inch shoulders required.	Secure/preserve ROW for future sidewalks.
Highway (rural/suburban - less than 1 d.u./acre)	One side preferred. Min. of 60 inch shoulders required.	Secure/preserve ROW for future sidewalks.
Suburban Highway (1 to 4 d.u./acre)	Both sides preferred. One side required.	Second side required if density becomes greater than 4 d.u./acre.
Major Arterial (residential)	Both sides required.	
Collector and Minor Arterial (residential)	Both sides required.	60 inch
Local Street (Residential - less than 1 d.u./acre)	One side preferred. Minimum of 60 inch shoulders required.	Secure/preserve ROW for future sidewalks.
Local Street (Residential - 1 to 4 d.u./acre)	Both sides preferred. One side required.	Second side required if density becomes greater than 4 d.u./acre
Local Street (Residential - more 4 d.u./acre)	Both sides required.	
All Streets (commercial areas)	Both sides required.	
All Streets (industrial areas)	Both sides preferred. One side required.	

Note: d.u. stands for dwelling unit.

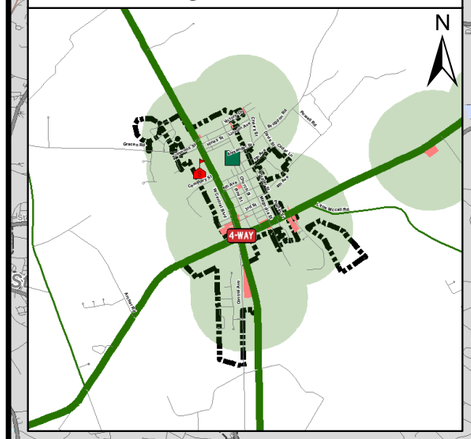
Based on GIS analysis, **Figure 5.12** displays areas and roadways that would benefit most from the addition and/or maintenance of sidewalks. For Effingham County, all roadways in the vicinities of commercial areas are shown as needing sidewalks on both sides of the streets. All arterials and collectors are identified for pedestrian needs with potential improvements ranging from right-of-way preservation to implementing sidewalks. Although FHWA guidelines suggest sidewalks along local roads, many communities prefer to focus their resources on collector and arterial roads first, allowing pedestrians to make use of the street on lower volume residential roads.

If sidewalk improvements are to be prioritized, clusters of ½ mile "need buffers", commercial areas, and the highest functional classes of roadways should obtain sidewalks first. New roadway capacity projects (widened or new roads, including those located in subdivisions) should require sidewalks or otherwise preserve right-of-way. In making pedestrian travel accessible and attractive, installation of sidewalk ramps, marked crosswalks, and possibly pedestrian signals in appropriate places is needed to ensure safety. Sidewalks are an essential part of the public realm and their use links people to community facilities on a scale that promotes social interaction. In addition, studies have documented the health benefits of regular walking for transportation and recreation.

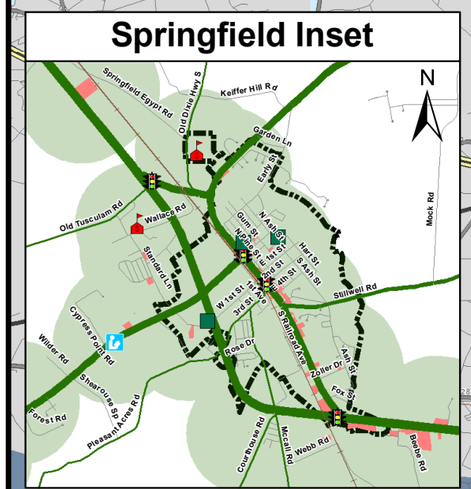
Effingham County Transportation Plan

Pedestrian Needs Analysis

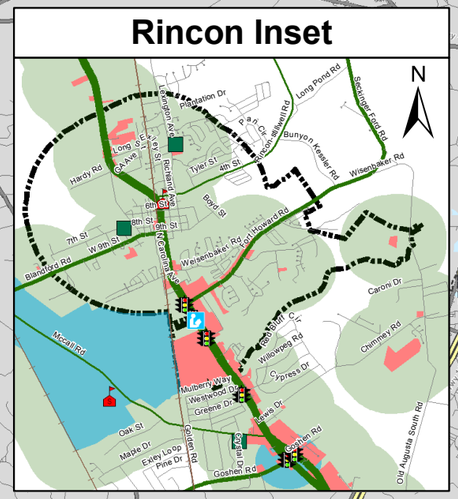
Guyton Inset



Springfield Inset



Rincon Inset



Regional Inset

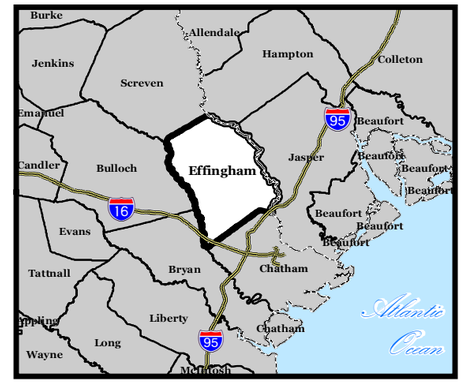


Figure 5.12

Legend

Pedestrian Needs Analysis

- Roads Identified For Pedestrian Improvements (thicker lines are higher roadway functional class)
- 1/2 Mile Buffer of Community Facilities
- Schools (K-12)
  - Elementary School = Red
  - Middle School = Orange
  - High School = Yellow
- Library
- Park
- Landing
- City Hall
- Police Department
- Post Office
- Community or Senior Center
- Park & Ride Lot
- Commercial Zoning
- Future Development Nodes

Signal Type

- Signalized Intersection
- 4-Way Stoplight

Road Network

- Interstate (Outside Effingham County)
- Other State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits (Inside Effingham County)
- City Limits (Outside Effingham County)
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: GDOT, Effingham County, and Jacobs Carter Burgess

This map is intended for planning purposes only.

July 2008

JACOBS Carter Burgess

Existing Conditions for Bicycle Transportation

Over half of all car trips are less than 5 miles in length, and approximately one quarter of car trips are less than 2 miles in length.[11] While areas that are more rural may experience somewhat higher average trip lengths, bicycles can provide convenient transportation for destinations 1 to 5 miles away. More experienced riders may be comfortable commuting up to 20 miles provided there are adequate facilities.

According to the American Association of State Highway and Transportation Officials (AASHTO), there are three types of bicycle facility:

- Bicycle Routes, where route is defined as "a system of bikeways designated by the jurisdiction having authority with appropriate directional and informational route markers, with or without specific bicycle route numbers. Bike routes should establish a continuous routing, but may be a combination of any and all types of bikeways"
- Bicycle Lanes, where lane is defined as "a portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists"
- Shared Use Paths, where shared use path is defined as "a bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users"

Any of these facilities may be implemented in Effingham, depending on their predicted users, coordination with automobile traffic, and several other factors. On-road bicycle lanes (both sides) are generally preferred because they allow higher bicycle speeds and cross over the ends of fewer driveways. Shared-use paths are useful for children and relaxed recreational riders who are uncomfortable sharing the road with automobiles. Just as for sidewalks, connectivity in the bicycle network is very important. Riders of all abilities should be able to use the network.

There are sizeable portions of three State bicycle routes in Effingham, two existing and one proposed by the Coastal Georgia Regional Bicycle and Pedestrian Plan: Coastal route 95, Savannah River Run route 85, and a proposed route on SR 21 that provides direct access to Savannah and connects existing State Bike Routes. All are on-road facilities demarcated solely by signage. The Coastal route (95) runs from Florida to South Carolina via Camden, Glynn, McIntosh, Liberty, Bryan, Chatham, and Effingham counties. The Savannah River Run (85) connects Savannah to North Carolina along the eastern border of the state. Both of these routes utilize GA 17 and GA 119 in Effingham. The proposed new route begins at Jimmy DeLoach Parkway and SR 21 in Chatham, travels north along SR 21, and terminates in Springfield at

[11] National Household Travel Survey (2001), Bureau of Transportaiton Statistics

Coastal route 95. Small lengths of two other State bicycle routes utilize US 80 in the southwest corner of Effingham, connecting Chatham to Bulloch County.

Besides designated State bicycle routes, there are is one other existing bicycle facility in Effingham County. A striped county bike lane runs the length of Ebenezer Road, connects to a boat landing, and circles into Springfield as depicted in **Figure 5.13**. Built several years ago, the bike lane is poorly maintained. Lastly, a planned shared-use trail and park is located along an abandoned rail bed in the center of Guyton. Funded by a $750,000 Transportation Enhancement grant, it is approximately one mile long, but it could be extended as the rail bed spans the length of the county.

Despite the general lack of formal bicycle facilities in the county, residents still use bicycles for recreation and have, on occasion, suffered injuries in bicycle/car collisions. Between 2000 and 2006, eighteen incidents were recorded, two of which resulted in fatalities. Based on the incident data, approximately half the bicycle victims were under the age of 20, and many accidents occurred in the afternoon and early evening. Additional bicycle facilities could enhance cycling safety while providing for recreational bicyclists, especially children, throughout the county.

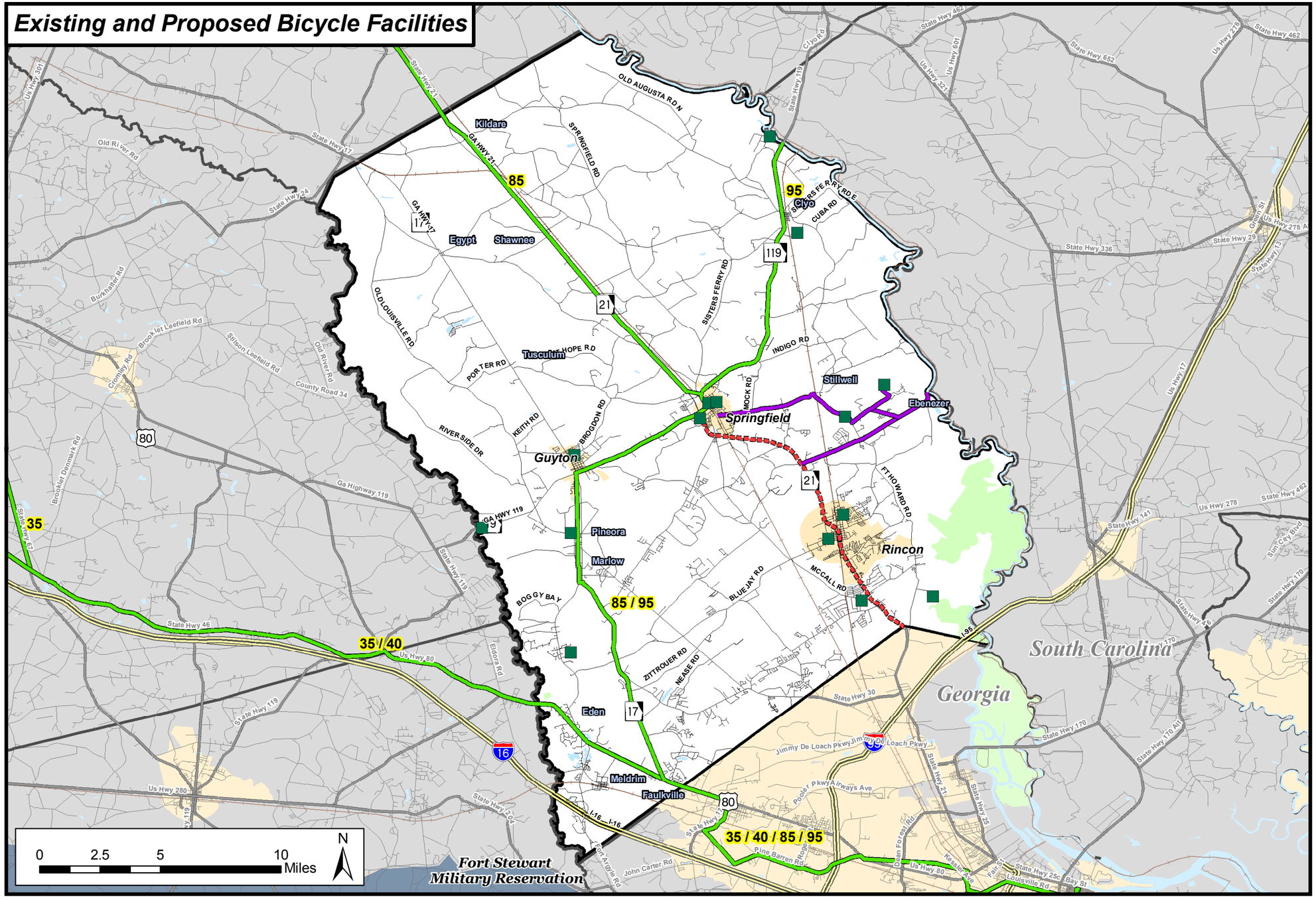
Summary of Bicycle Needs

Though the existing and proposed routes connect to each other and provide recreational opportunities for citizens, there is a need to upgrade these facilities and add others so that bicycling is a viable and accessible transportation option in Effingham County. It is recognized by the Coastal Georgia Regional Bicycle and Pedestrian Plan that existing and proposed on-road routes utilizing state routes present some danger to cyclists due to the volume and proximity of high-speed motor vehicle traffic.

Providing dedicated facilities, either marked lanes or off-roadway shared-use paths as described by AASHTO, and better maintaining these facilities would be beneficial to cyclists. New facilities are needed connecting activity centers, especially schools and parks, as well as existing bicycle routes to provide a comprehensive network for current and potential cyclists. Consideration regarding placement of bicycle facilities should take into account the potential level of service, which is based on a variety of factors, including outside lane width, traffic volume, grade, pavement conditions, and truck percentage on shared or adjacent roadways.

Effingham County Transportation Plan

Existing and Proposed Bicycle Facilities



Regional Inset

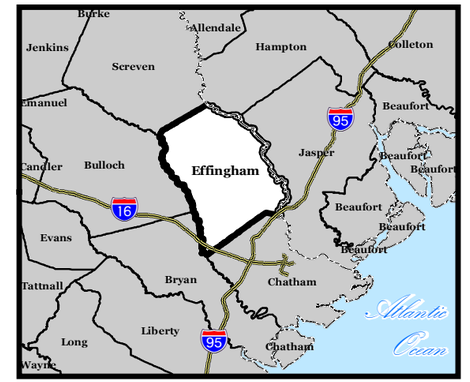


Figure 5.13

Legend

Existing and Proposed Bicycle Facilities

- 00 Bicycle Route Number
- Existing State Bicycle Route
- Existing County Bicycle Route
- Proposed State Bicycle Route

Road Network

- Interstate (Outside Effingham County)
- Other State Route / U.S. Highway
- Other Roads

Other Layers

- Parks
- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: GDOT, Effingham County, and Jacobs Carter Burgess

This map is intended for planning purposes only.

Transit

The purpose of the transportation system is to move people and goods from place to place. If people and goods are spread out among many vehicles, congestion results when there are more vehicles vying for space than there is roadway capacity. In order to increase the efficiency of the transportation system, public transit vehicles can be utilized to simultaneously accommodate the many people who are taking similar routes to common destinations. Public transit can also be used to provide assistance to those who are unable to drive, walk, or bicycle to the destinations they wish to reach. Commuters as well as the one-third of Americans who do not drive for various physical, legal, or financial reasons can benefit from having increased travel choices in the county.

Commuter Routes and Park and Ride Lots

Though approximately half of Effingham's labor force undertakes daily commutes to Chatham County for work, no regional bus routes exist to provide an alternative to commuting in a personal vehicle. As a result, peak period congestion is a common occurrence in the southern portion of the county where the road network is not developed enough to handle demand from so many individual vehicles.

To provide a central meeting place for car/vanpool formation and future commuter bus stops, there are two park-and-ride lots in Effingham. One lot has 20 spaces in downtown Guyton and the other has 53 spaces at the Effingham County Courthouse in Springfield. There are currently no formal programs to increase the knowledge and utilization of these lots. Additionally, there are no formal Park-and-Ride locations in the vicinity of Rincon, where a large percentage of Effingham's population lives.

Paratransit

Paratransit is a flexible alternative to fixed route/schedule traditional transit, and utilizes vehicles such as shuttle buses, vans, and taxis. Paratransit services range from those allowing pick-up/drop-off along a defined route by passenger request to those which offer on-demand door-to-door service within a given geographic area. Both public and private operators may provide paratransit; typical users include elderly and disabled citizens. When traditional transit services are not financially feasible in a place or do not serve desired destinations, paratransit fills an important niche in helping customers maintain their health, independence, and self-sufficiency.

Rural demand-response paratransit providers do have a presence in the county. The Coastal Georgia RDC contracts with the Georgia Department of Human Resources (DHR) for provision of coordinated transportation services. It administers the DHR transportation contract and subcontracts with various providers throughout the region for provision of coordinated transportation services for the Division of Aging Services; the Department of Family and Children Services; the Division of Mental Health, Developmental Disabilities, and Addictive Diseases; and the GoodWorks Program.

Potential for Commuter or Regional Rail Service

The CSX tracks are used primarily for freight movement, but Amtrak also operates daily passenger service on them via its Silver Star route connecting New York to Miami. Though the tracks go through central Rincon, there are currently no stops in Effingham County on this route; the nearest passenger terminal is located in northwest Savannah. The CSX tracks and Amtrak route are part of the National High Speed Rail Corridor connecting Florida to Maine. Regional commuter service to nearby cities could also be implemented along existing rail rights-of-way when demand is sufficiently high to justify capital and operational investments. In the interim, it is the policy of Effingham and its cities to protect these rights-of-way from development.

Present Regional Transit Planning and Programming Efforts

103 counties in Georgia have some form of rural public transportation, including three of the ten counties in the Coastal Region. Each coastal county is currently operating independently of one another. Due to the inherent inefficiencies of this setup, and the fact that there are at least seven underserved counties, the Coastal Georgia RDC is undertaking a regional transit planning and service delivery effort.

Initiated in 2005, the *Regional Plan for Rural and Coordinated Public Transportation* has just concluded its study to develop a program for seamless regional transit service. Phase I, which explored the need for service based on public input and census data, determined that Effingham had an estimated minimum demand of almost 25,000 annual transit trips.[12]

Phase II commenced upon receipt of a $75,000 grant from *United We Ride*, an interagency Federal initiative that supports states and their localities in developing coordinated human service delivery systems. Implementation measures for the 10-county region were developed, including a potential fare schedule, allocation of services, and marketing campaign. The Coastal Georgia RDC is currently pursuing county commitments for the local operating match and plans to begin offering demand-response and vanpool operations in Summer 2008.

Summary of Transit Needs

In addition to providing commuter service to Chatham, a need exists to transport citizens to hospitals, community facilities, and other non-work destinations as indicated by public and stakeholder feedback. In areas with low or geographically dispersed populations, however, a fixed route transit system is often not financially feasible and other alternatives such as taxis, vanpools, and paratransit must fill in the gap. This study supports the ongoing efforts of the Coastal Georgia RDC and *Regional Plan for Rural and Coordinated Public Transportation.*

[12] Regional Plan for Rural and Coordinated Public Transportation. Presentation: Final Report, November 30, 2005. Coastal Georgia RDC.

6. Recommended Projects and Policies

A list of recommended projects and policies to be implemented between 2008 and the horizon year of 2030 was developed by building on information gleaned from the processes described in previous chapters. The rationale behind project identification, evaluation, and prioritization by mode is described in the following sections.

Roadway Recommendations

First and foremost, recommended roadway improvements were designed to conform to the stated goals of the transportation element of the Effingham County Comprehensive Plan: providing increased accessibility, mobility, and connectivity. In addition, the Future Development Map character area implementation measures were used to guide the type of improvements recommended in specific geographic areas. Input from stakeholder interviews and the general public was instrumental in the project identification process, as well as technical analyses such as travel demand modeling, vehicle crash location examination, spatial analysis via Geographic Information Systems (GIS), and on-site field surveys (**Appendix D**).

Several types of roadway projects are proposed: construction of new roads, paving of existing roads, addition of turning or through lanes, shoulder increases, intersection enhancements, and operational improvements. Care was taken to minimize impacts to wetlands and existing structures for major roadway capacity improvements (lane addition or new roads). Potential new roadways were drawn, to the greatest possible extent, along existing corridors used for transportation and crossed through the smallest feasible number of land parcels.

New roadway alignments and paving projects were identified throughout the county to provide a certain level of macro-connectivity in the form of a 1-2 mile resolution grid system, enhancing local, freight, and emergency vehicle movement. Shorter strategic connections were fashioned to provide rear access to properties developed along arterials as well as alternative access routes to some schools and activity centers in more populated areas. Multi-modal accommodations were identified in conjunction with motor vehicle oriented improvements wherever feasible, resulting in a network of future "Complete Streets." Complete Streets are those that allow safe movement and crossing opportunities for all users: automobiles, pedestrians, bicyclists, and transit riders.

Along some roadways, the travel demand model and local input indicated a need for increased capacity in the form of new travel lanes or additional turning lanes to improve the facility's level of service. In particular, parts of SR 21, SR 119, US 80, Blue Jay Road, Fort Howard Road, Old River Road, and Sand Hill Road were judged to have insufficient capacity in relation to their importance in the transportation network and current or projected traffic volumes. **Figure 6.1** depicts 67 recommended roadway segment projects by type.

Proposed intersection improvements include recommendations to add traffic signals to intersections experiencing relatively high levels of incidents, cross-street traffic, unprotected vehicular turning

movements, or pedestrian activity. In other locations, geometric design changes and supplementary warning devices such as rumble strips will increase safety and performance. Along arterials, operational improvements are addressed at both a physical and policy level: interconnected coordinated signal systems, access management strategies, and stricter land development guidelines are proposed. **Figure 6.2** depicts 14 intersection improvement projects. All projects are described in detail in **Appendix E** at the end of this report.

Bicycle Recommendations

In identifying potential bicycle improvements, emphasis was placed on creating a continuous countywide network that served both recreational riders and those wishing to access specific destinations in a safe and timely manner. Special attention was given to developing bicycle facilities that connected residential areas to schools, parks, and activity centers as suggested by the Comprehensive Plan. Dedicated bicycle facilities such as multi-use paths and lanes are recommended especially in the vicinity of high schools and middle schools to provide a safe and viable alternative to long bus rides, parental pick-up/drop-off, or reliance on inexperienced teenage drivers for school-related mobility needs. Near the two county high schools, it is possible to utilize a powerline easement or new woodland path to provide direct non-motorized rear access to school property.

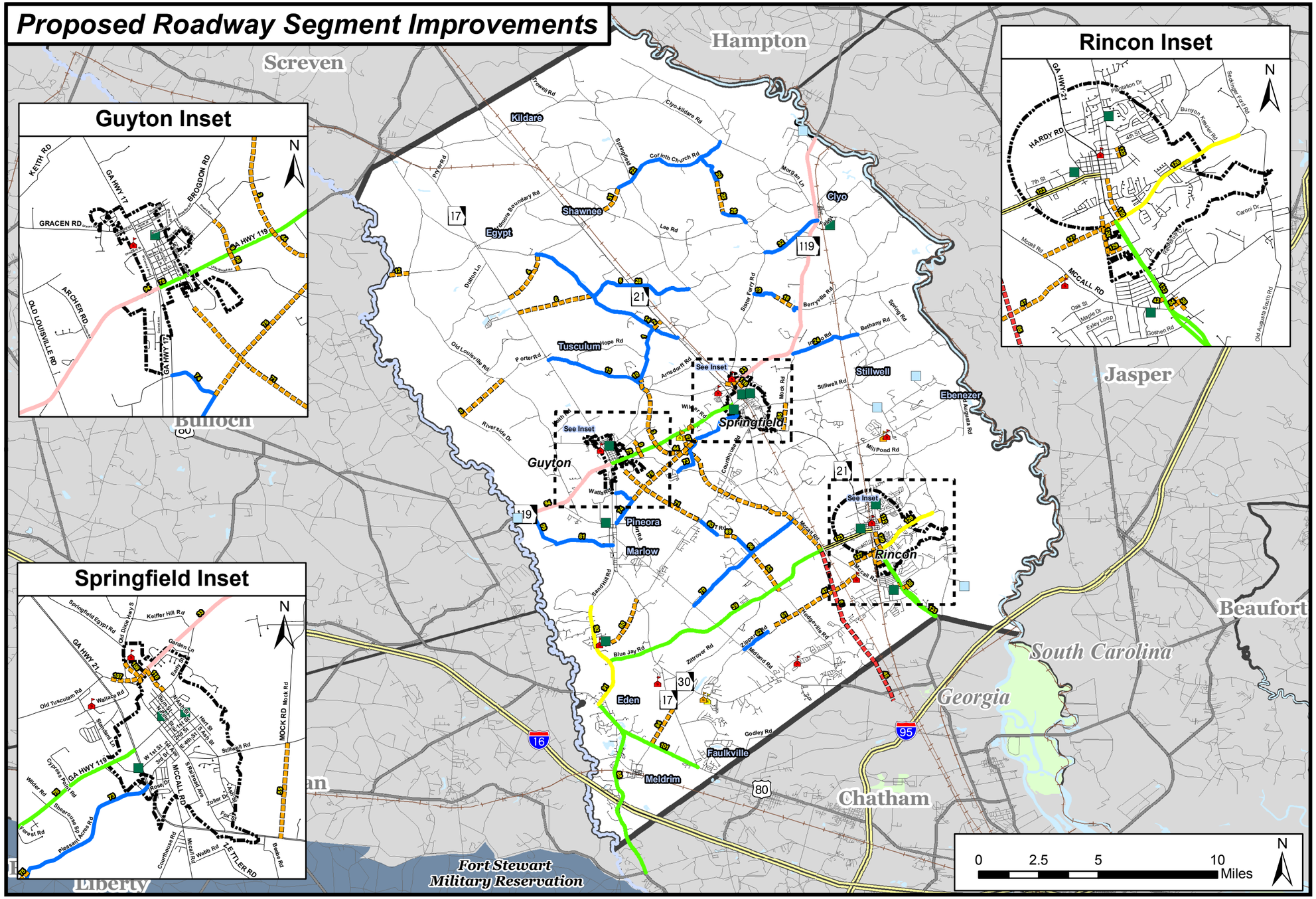
Arterial and collector roads form some of the most direct routes in the county to get from place to place. The five State Bicycle Routes (four existing and one proposed) all make extensive use of the highway network to traverse the county and state. As traffic volume has increased along these high-speed roads, it is less safe for bicyclists to share roadway lanes with motor vehicle traffic. Thus, the majority of the arterial and collector network designated as current or proposed State Bicycle Routes is recommended for upgrade to include dedicated facilities such as bike lanes or multi-use paths. In the less developed northern part of Effingham and along the scenic Old Augusta Road, wide shoulders should suffice for safe long-distance bicycle movement. To supplement a network of dedicated facilities, almost 50 miles of potential signage-only rural routes along low-volume roads are identified as well.

For inexperienced and recreational riders, separated bicycle facilities are likely to get more use than wide shoulders or bicycle lanes. In the western part of the county, an undeveloped abandoned railbed provides an opportune right-of-way for a multi-use path, which will help to preserve it from development. Approximately one mile of this railbed is being converted to a trail and park in downtown Guyton. To increase its feasibility in providing transportation alternatives in addition to recreational opportunities, it is recommended that the southern end of this railroad right-of-way also be converted to a trail that connects Guyton to Meldrim via the communities of Pineora, Marlow, and Eden. Rerouting State Bicycle Routes 85 and 95 to follow this alignment rather than SR 17 should also be considered.

Figure 6.3 depicts 49 recommended bicycle network improvements, including multi-use paths, marked lanes, and widened shoulders, as well as identification of a strategic rural route network. Since recommended projects are classified by facility segment rather than mode, detailed descriptions and justification of bicycle improvements can also be found in the aforementioned **Appendix E**.

Multi-Modal Transportation Study for Effingham County

Proposed Roadway Segment Improvements



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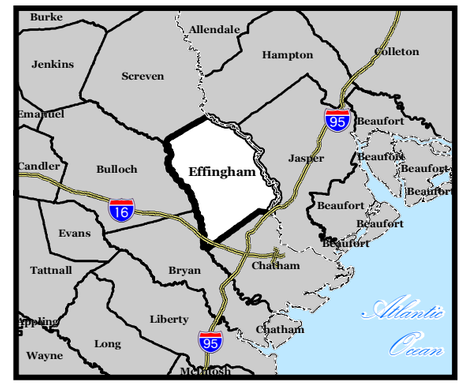

Figure 6.1

Legend

Roadway Improvement Type

- 00 Project Number
- Extension / New Road (4 Lanes)
- Extension / New Road (2 Lanes)
- Paving
- Widening
- Additional Turning Lane With Widening
- Shoulder Increase
- Turn Lanes

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Schools (K-12)
  Elementary School = Red
  Middle School = Orange
  High School = Yellow
- Park
- Landing
- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: GDOT and Jacobs Carter Burgess

This map is intended for planning purposes only.

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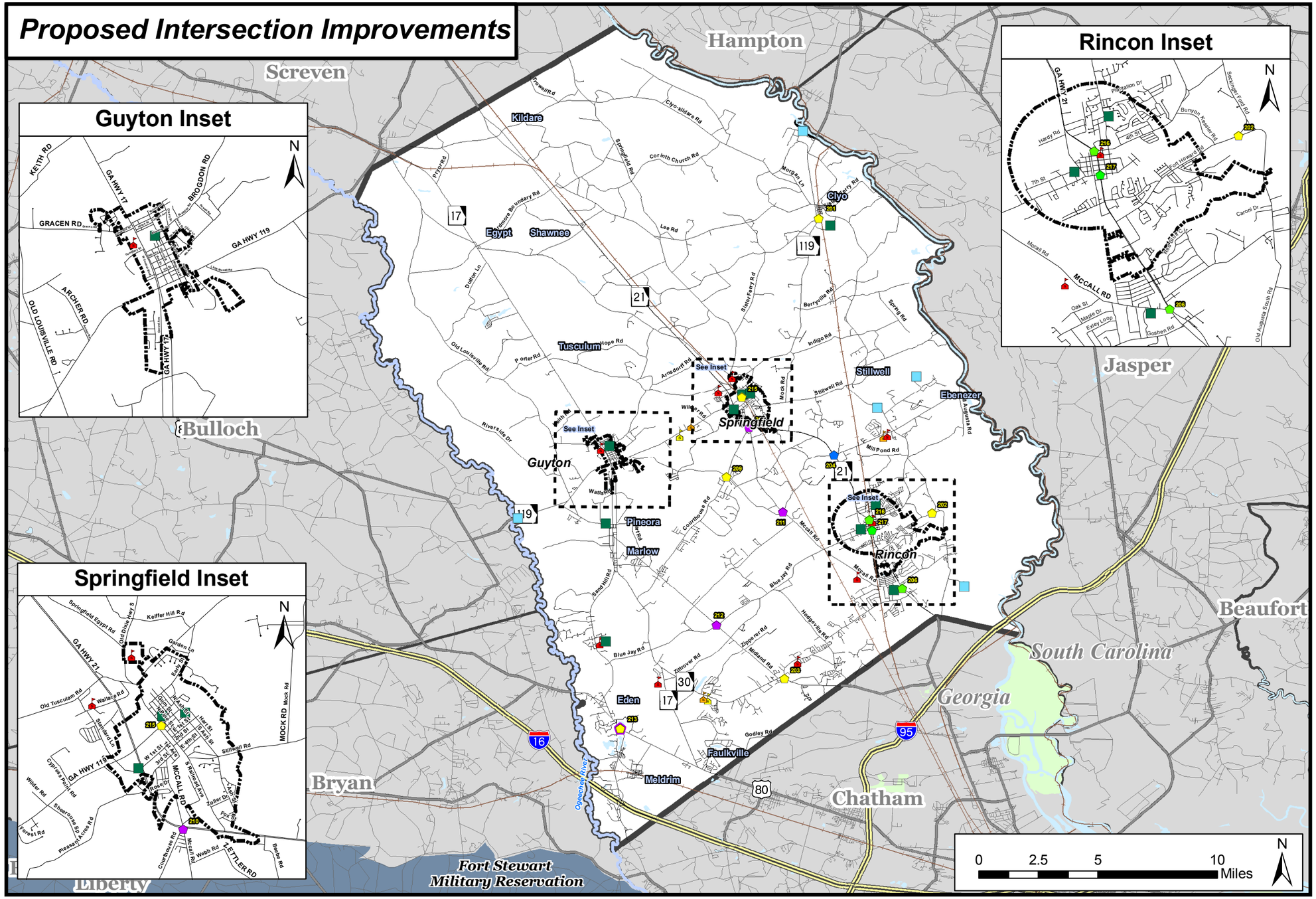
Multi-Modal Transportation Study for Effingham County

Proposed Intersection Improvements



Guyton Inset

Rincon Inset

Springfield Inset

Regional Inset

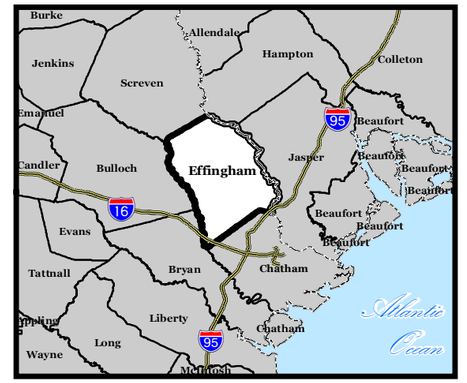


Figure 6.2

Legend

Intersection Improvement Type

- 00 Project Number
- Geometry, Road Markings, or Signage
- New Signal
- Crosswalk Timers
- New Signal with Crosswalk Timers

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Schools (K-12)
  Elementary School = Red
  Middle School = Orange
  High School = Yellow
- Parks
- Landings
- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: GDOT and Jacobs Carter Burgess

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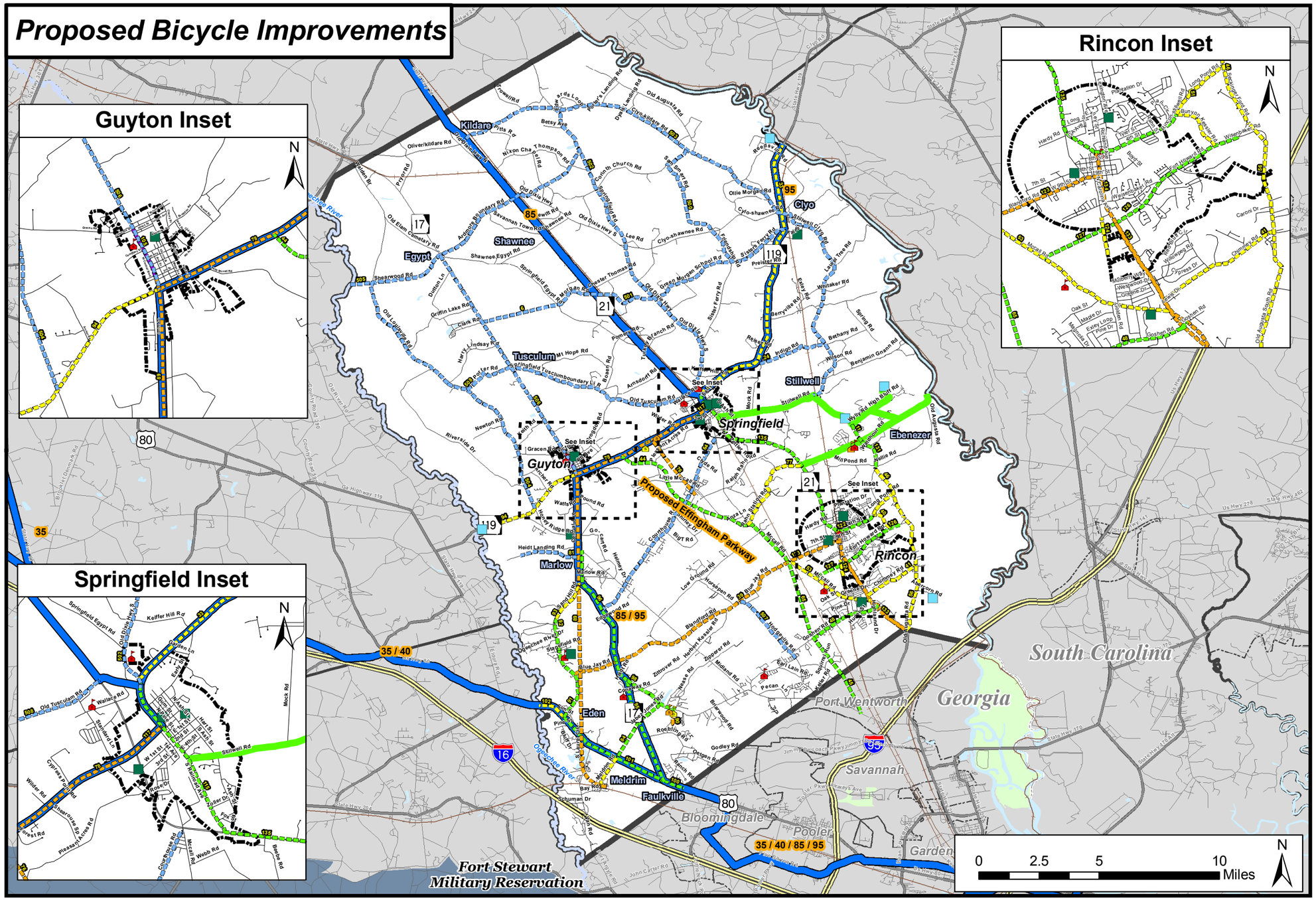
Multi-Modal Transportation Study for Effingham County

Office of Planning

Proposed Bicycle Improvements



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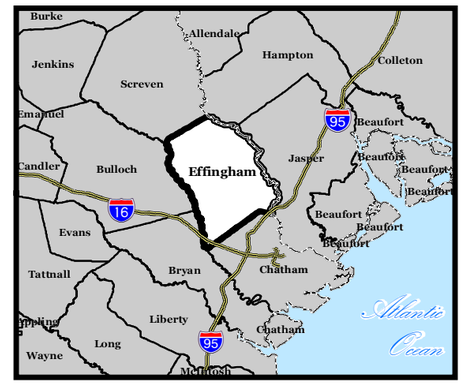

Figure 6.3

Legend

Existing and Proposed Bicycle and Multi-Use Facilities

- Project Number
- 00 Bicycle Route Number
- Existing State Bicycle Route
- Existing County Bicycle Lanes
- Planned Multi-Use Path
- Proposed Multi-Use Path
- Proposed Bicycle Lanes
- Proposed Wide Shoulder Lane
- Proposed Rural Route

Road Network

- Interstate (Outside Effingham County)
- Other State Route / U.S. Highway
- Other Roads

Other Layers

- Schools (K-12)
  Elementary School = Red
  Middle School = Orange
  High School = Yellow
- Parks
- Landings
- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: GDOT, Effingham County, and Jacobs Carter Burgess

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Pedestrian Recommendations

Proposed sidewalk locations were identified based on proximity and connection to activity centers and community facilities such schools, parks, community centers, and hospitals. Consideration of FHWA recommendations concerning the need for sidewalks by type of road also resulted in the identification of projects on stretches of most arterial and collector roads in more populated areas of the county. The goal of providing "Complete Streets," which accommodate multiple modes of transportation, meant that pedestrian facilities were considered in combination with every general roadway project proposed.

Within the city limits of Guyton, Rincon, and Springfield, streets that provided direct connections to parks, schools, commercial areas, or other important transportation facilities were deemed crucial pieces of an integrated pedestrian network. While cities may elect to provide sidewalks on every street within their jurisdiction, projects on identified street segments should be placed at the top of the priority list. Due to a lack of accurate local data on existing sidewalk locations, it is possible that some proposed routes within cities already have sidewalks; thus, the city-based sidewalk recommendations serve as a conceptual guide.

Along some existing or potential transportation corridors, multi-use paths are recommended instead of separate sidewalks and/or bike lanes. In these cases, a need for both pedestrian and bicycle facilities was identified, but certain characteristics of the corridor (high speed, high volume, or utilizing nature paths) necessitated non-roadway solutions for reasons of safety or feasibility.

Figure 6.4 shows the locations of 75 proposed sidewalk and multi-use path projects throughout Effingham County. In addition, a number of intersections are proposed to receive crosswalks and pedestrian signals, as seen in the previous Figure 6.2. The cities of Rincon, Springfield, and Guyton should use these recommendations as a launching point to undertake their own block-by-block pedestrian and bicycle studies within city limits. The County should also undertake a complete sidewalk inventory. Pedestrian facility recommendations are detailed in **Appendix E**.

Multi-Modal Transportation Study for Effingham County

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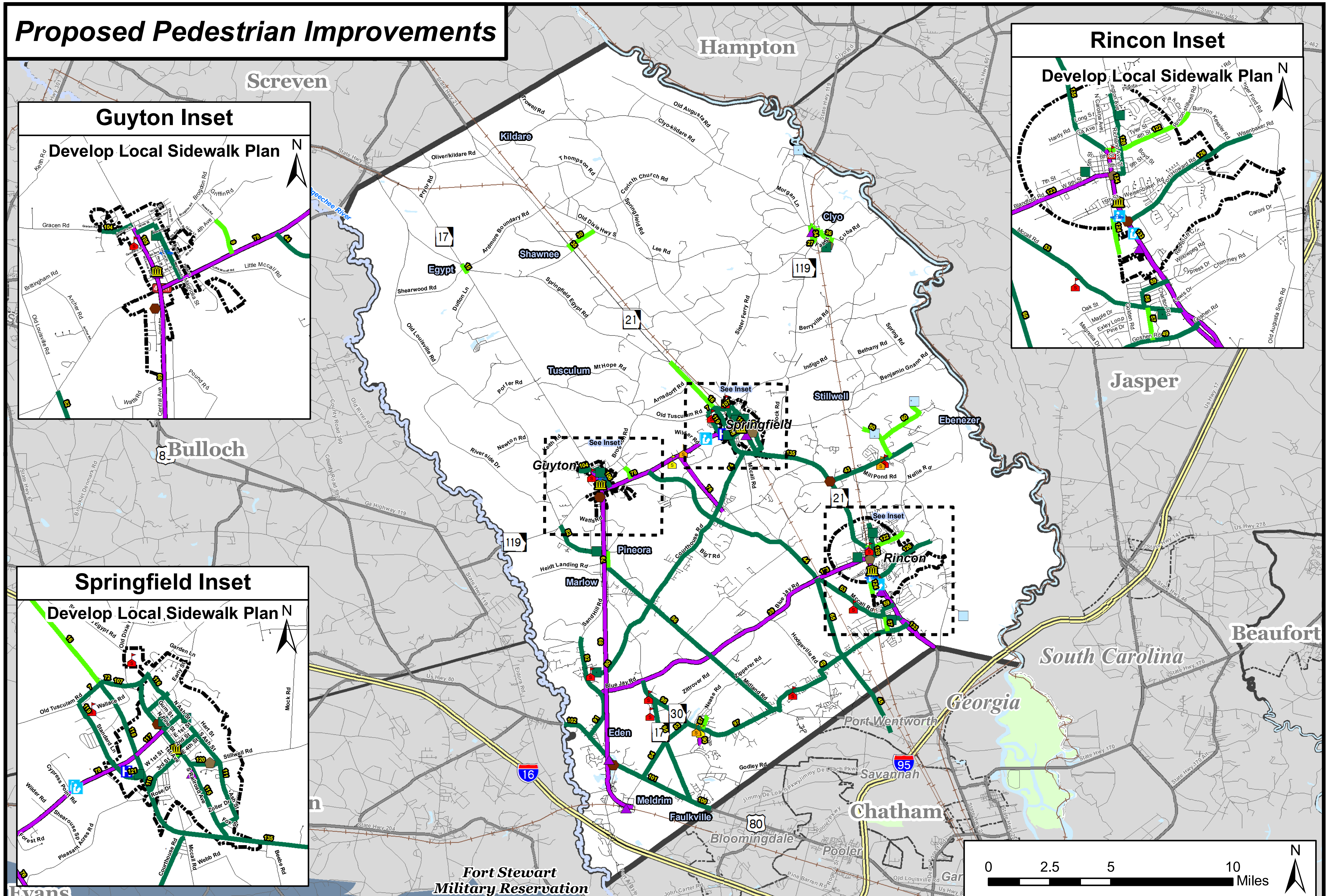
Proposed Pedestrian Improvements



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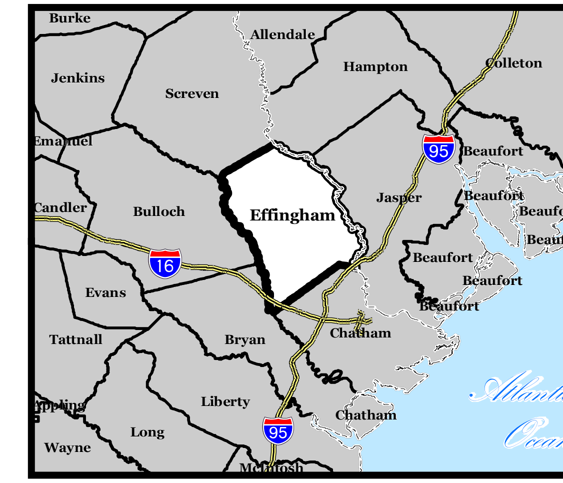

Figure 6.4

Legend

Multi-Use Trails and Sidewalks

- 00 Project Number
- 🟪 Multi-Use Path
- 🟩 Sidewalks (Both Sides)
- 🟩 Sidewalks (One Side)

Pedestrian Needs Analysis

- Schools (K-12)
  Elementary School = Red
  Middle School = Orange
  High School = Yellow
- Library
- 🟩 Park
- ▢ Landing
- City Hall
- Police Department
- ▲ Post Office
- ⬟ Community or Senior Center
- ⬢ Park & Ride Lot

Road Network

- Interstate (Outside Effingham County)
- Other State Route / U.S. Highway
- Other Roads

Other Layers

- Effingham County Boundary
- Other County Boundary
- City Limits
- Water
- Fort Stewart Military Reservation
- Conservation Areas
- Railroads

Source: GDOT, Effingham County, and Jacobs Carter Burgess

This map is intended for planning purposes only.

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Transit Recommendations

The Coastal Georgia RDC has applied for federal funding and, if funding is received, will operate transit on a regional basis based on a feasibility and implementation study performed over the last three years. They are thus responsible for procuring vehicles and defining routes, headways, fares, and other operating characteristics. The recommendations here serve to supplement their analysis in reference to Effingham County, and help County officials and interested parties determine where different types of transit services might be most helpful.

Though there are not enough population or employment concentrations in Effingham County at present to support high-frequency fixed-route local circulator buses, both commuter programs and paratransit services are likely to be feasible. Vanpools and peak-hour express buses could be used to assist commuters in getting back and forth to work. Vanpools must be arranged between groups of employees, whereas express buses or shuttles would serve a more generalized labor force. Both types of transit could utilize park-and-ride lots as common pick-up/drop-off points. There are two existing park-and-ride lots in the county; three more (two in Rincon, one in Eden) are recommended to provide additional support to ridesharing commuters. If fixed-route peak-hour transit were implemented in the future, potential highway-based express routes that stop at park-and-ride lots have been identified.

An arguably more pressing need in Effingham is for demand-response paratransit that provides door-to-door service between residences and destinations such as hospitals, grocery stores, and other community facilities. Although available to anyone, paratransit is typically targeted towards disabled and elderly populations. Hybrid services such as route-based paratransit (demand-response transit within a particular geography or distance from a defined route) are also an option. To assist in defining potential paratransit service areas, a planning exercise was undertaken to identify census blockgroups with higher than average concentrations (compared to other rural Georgia counties) of low-income, elderly, and non-white residents, as these populations display a greater propensity for transit usage. There are also a number of disabled individuals who live throughout the county; in absolute numbers they are likely to be found in areas of concentrated population such as the cities and southern part of the county.

Figure 6.5 depicts the locations of the two current and three proposed park-and-ride lots and three potential commuter routes between Effingham and Chatham County. The previous Figure 4.8 shows blockgroups with above average percentages of likely transit users, which could serve as a launching point to identify likely service areas. Ultimately, citizen requests to the Coastal Georgia RDC as regional paratransit operations get underway will reveal where and what type of demand-response services are most needed.

Effingham County Georgia

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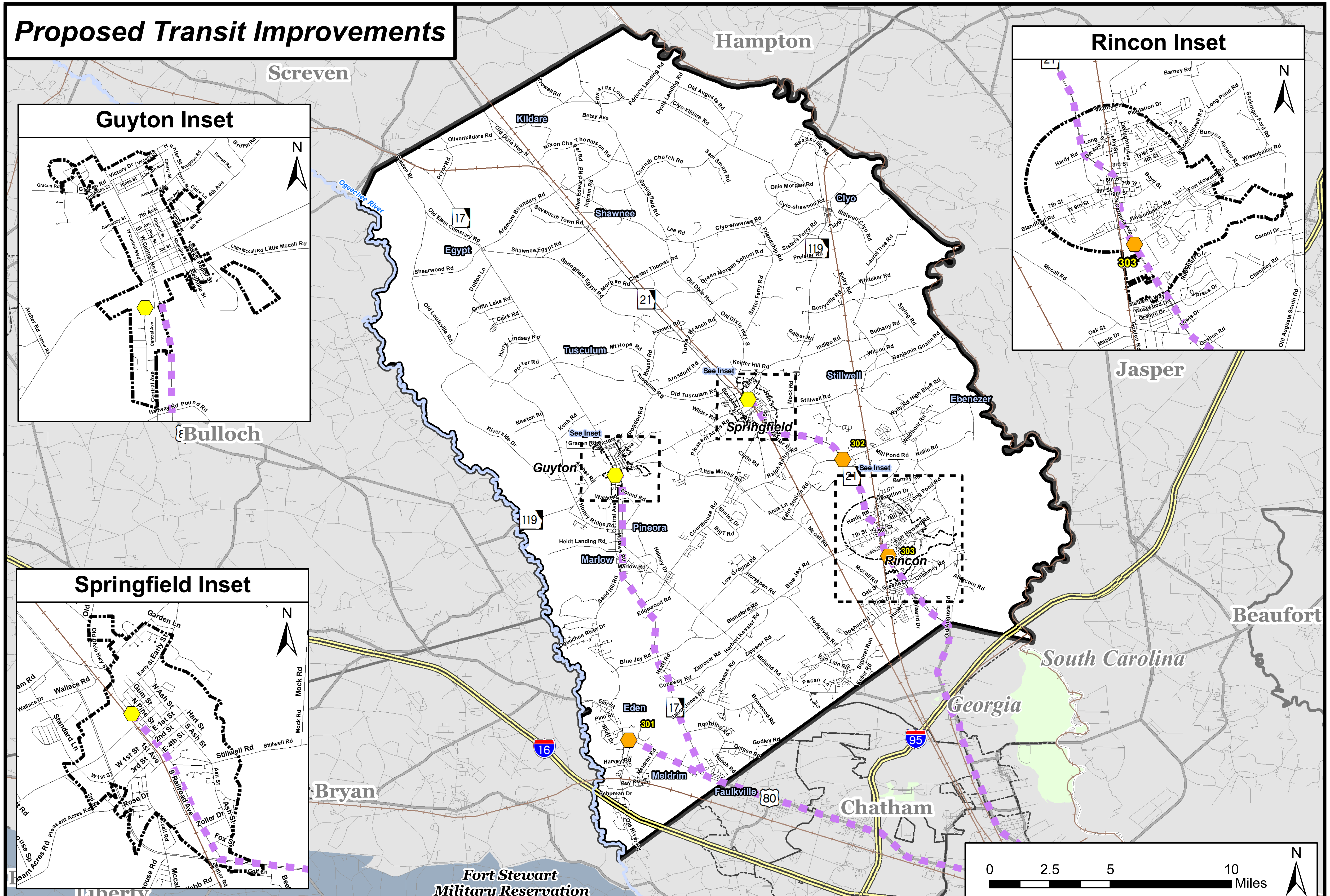
Multi-Modal Transportation Study for Effingham County

Proposed Transit Improvements



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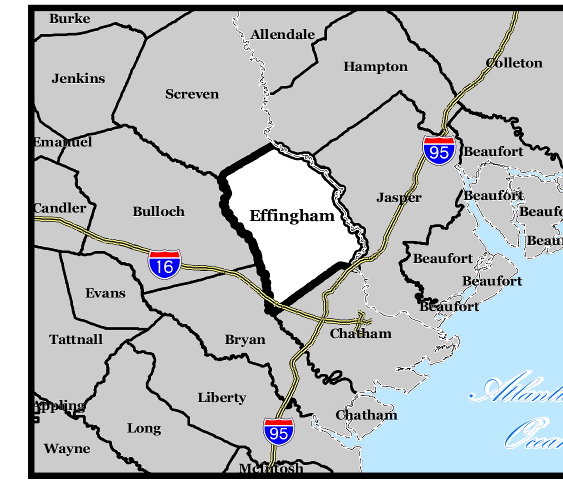

Figure 6.5

Legend

Existing and Proposed Park and Ride Lots and Rapid Transit Lanes

- 00 Project Number
- Proposed*
- Existing
- Potential Commuter Bus Route

Road Network

- Interstate
- State Route / U.S. Highway
- Other Roads

Other Layers

- Other County Boundary
- City Limits
- Fort Stewart Military Reservation
- Conservation Areas
- River
- Railroads

*Note:
Proposed locations are suggestions only, and require further study to determine final location

Source: GDOT and Jacobs Carter Burgess

This map is intended for planning purposes only.

July 2008

JACOBS Carter Burgess

Project Costs

Project costs were estimated using the Atlanta Regional Commission's Transportation Project Costing Tool. Assuming reasonable expenditure for activities such as right-of-way acquisition, grading, paving, drainage, and curb and gutter construction, **Table 6.1** shows the per-mile cost of various types of transportation improvements. These unit costs were multiplied by the length of each project, in miles, to provide an estimate of the financial obligation of undertaking particular improvements.

Table 6.1 Assumed Per-mile Cost of Various Types of Transportation Improvements

Improvement Type	Est. Cost per Mile
New Construction	
2 lanes, no sidewalk	$ 2,960,000
2 lanes, one sidewalk	$ 3,200,000
2 lanes, wide shoulder, one sidewalk	$ 3,450,000
Roadway Improvement	
Paving of two-lane road	$ 610,000
Center turn lane	$ 1,960,000
Divided roadway with occasional left and right turn lanes	$ 2,400,000
Occasional right turn lanes	$ 710,000
Widen shoulders, 16'	$ 760,000
Bike lane	$ 1,050,000
Sidewalk, one side	$ 435,000
Sidewalks, both sides	$ 870,000
Widen, 2 new lanes with bike lanes and sidewalk	$ 4,800,000
Widen with median and 8' multi-use path on both sides	$ 5,390,000
Turn lane with 8' multi-use path on both sides	$ 2,600,000
Intersection	
Geometric realignment	$ 2,880,000
Turn lanes	$ 750,000
Signalization	$ 120,000
ITS coordination of signals	$ 50,000
4 crosswalks and 4 pedestrian signals	$ 25,000
Rumble strips, signage	$ 20,000
Crosswalks only (each)	$ 500
Multi-Use Path (Bike/Ped)	
8', both sides of roadway	$ 1,100,000
12', with additional ROW	$ 1,000,000
12', without additional ROW	$ 600,000

In sum, 135 roadway segment projects, 14 intersection improvements, and 3 park-and-ride lots were recommended in Effingham County. Most roadway segments had multiple types of proposed improvements, including those supporting automobiles, pedestrians, or bicyclists. **Figure 6.6** depicts a cost breakdown by mode. *The overall planning-level cost of all proposed projects is approximately $461.7 million in 2008 dollars. Intersection improvements account for $7.2 million of that sum.*

Transit is not included in costs since it is being managed by the Coastal Georgia RDC. Because the region has a stronger hand than individual counties in applying for federal funding sources, it is currently pursuing Rural Public Transit (5311), Job Access and Reverse Commute (5316), and New Freedom Initiative Funding (5317). With these grants, Effingham County would be responsible for a 10 percent local farebox match plus 50 percent of the net operating deficit. Preliminary estimates show that it would cost Effingham County approximately $40,000 to begin implementing vanpools and regional paratransit services. The Coastal Georgia RDC plans on subsidizing the capital costs associated with vanpools.

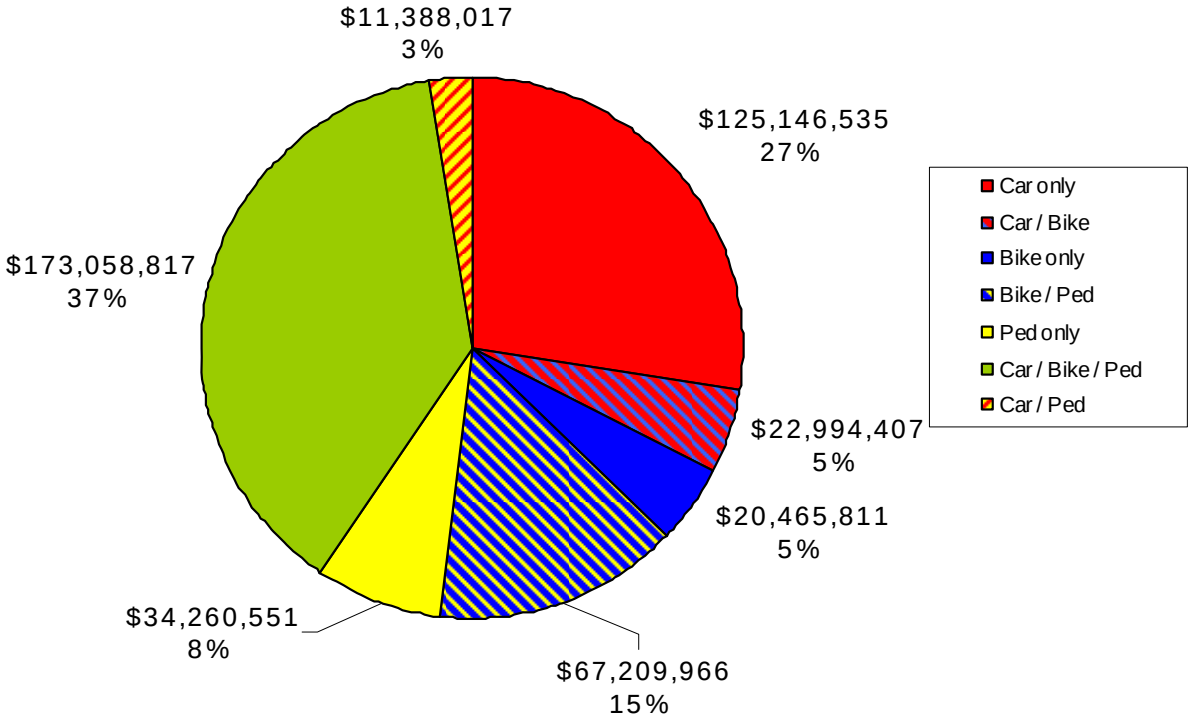

Figure 6.6 Estimated Cost of Roadway Segment Improvements Benefitting Each Mode

(Note: Transit, carpool, and vanpool recommendations are not included in this estimate)

Improvements along a total of 278.5 miles of new or existing transportation corridors are detailed in the project list. **Figure 6.7** displays the number of miles associated with various kinds of transportation improvements. Since most projects benefit multiple modes, they are included within multiple columns.

Fifty-five percent of project miles benefit automobile travel, while seventy-two percent are recommended to include pedestrian or bicycle improvements, typically alongside existing motor vehicle facilities. With the recent, and likely permanent, steep rise in energy costs, it is increasingly important to retrofit roadways to accommodate more energy-efficient forms of transportation than single or multi-occupant personal vehicles. Pedestrian and bicycle infrastructure, valuable for non-motorized transport, is also necessary to support successful public and paratransit services.

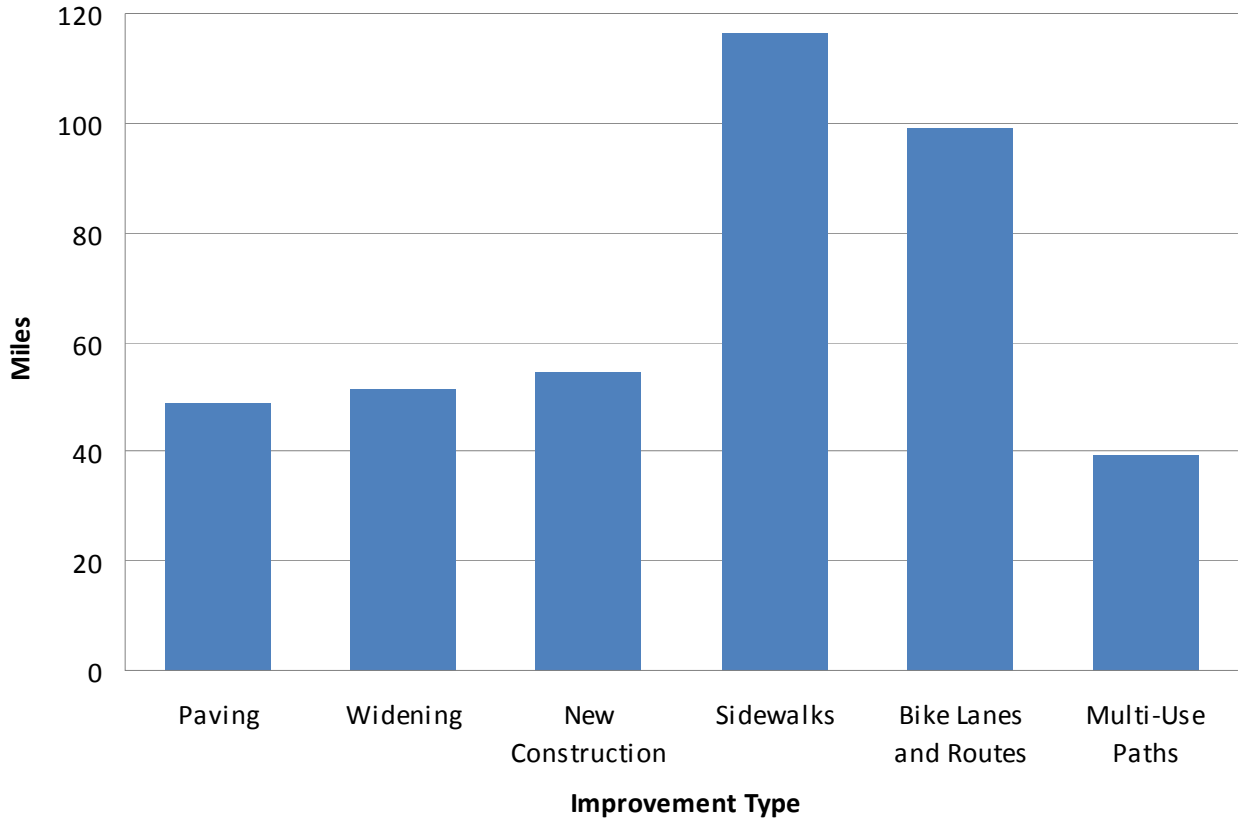

Figure 6.7 Number of Miles of Roadway Recommended for Various Types of Improvements

Project Evaluation and Prioritization

Recommended projects were evaluated according to a number of quantitative and qualitative factors. The evaluation factors are as follows:

- Conformance to the goals of the Comprehensive Plan: multimodal accessibility, connectivity, and mobility; support of public transportation; character and aesthetics
- Increase in Level of Service based on travel demand modeling results (**Appendix C**)
- Potential to reduce number or severity of vehicular incidents
- Support of economic development and freight movement

- Aid in emergency vehicle response or evacuation (categorized under "Mobility" and "Level of Service")
- General importance in transportation network (arterial and collector projects as well as those potentially supporting future transit services)
- Benefit to local community via proximity to community facilities
- Steering committee and public feedback

Points were systematically assigned to each factor based on professional judgment to assist in determining potential project phasing and prioritization. **Table 6.2** shows the list of evaluation factors, how points were assigned to these factors, and eligible project types as necessary.

Prioritization, of the overall project list and by mode (automobile, bicycle, and pedestrian), was based on the sum of numerical scores associated with each factor. While cost was calculated, the project list is not financially constrained. Thus, this study is aspirational and should be used primarily for guidance when creating an official Comprehensive Transportation Plan or when considering implementing transportation improvement projects through 2030.

An overview of all prioritized projects can be seen in **Table 6.3**. The complete project list is sorted in a descending manner based on the sum of "roadway", "bicycle", "pedestrian", and "general" evaluation factor scores. Because they garner points in the most categories, "Complete Streets" projects with multi-modal improvements tend to have the highest scores. **Tables 6.4 through 6.6** display ranked projects by mode, sorted first by the sum of the modal and general score, and then by the overall score. In the event of a tie, projects were then listed according to their identification numbers. Project identification numbers were assigned based solely on their geographic location. The detailed version of the project list and prioritization scores is seen in Appendix E, sorted by project ID.

Table 6.2 Evaluation Factors and Associated Points

Evaluation Factor	Maximum Points Per Category				Max. Pts Per Project	Notes
	Roadway	Bike	Ped.	General		
Accessibility	5	5	5	0	15	The following project types receive points: Roadway (new construction), Bicycle, Pedestrian.
Connectivity	7.5	5	5	0	17.5	The following project types receive points: Roadway (new construction or paving), Bicycle, Pedestrian.
Mobility	4	3	3	0	10	The following project types receive points: Roadway (new construction, paving, or widening), Bicycle, Pedestrian.
Level of Service / Congestion	10	0	0	0	10	The following project types receive points: Roadway (paving or widening).
Safety	10	5	5	0	20	Projects located in the vicinity of hotspots (Figures 5.4A & 5.4B) as well as those providing dedicated facilities for bicycles or pedestrians (bike lanes, sidewalks, multi-use paths) receive points.
Economic Development	6	0	4	0	10	Roadway (new construction or widening) projects that enhance freight movement as well as pedestrian projects in cities or near commercial areas receive points.
Supports Public Transit	0	2.5	5	0	7.5	All projects with bicycle and pedestrian components receive points.
Character - Multi-Use Path	0	5	0	0	5	Minimal impact multi-use paths receive points.
Character - Scenic Corridor	0	0	0	2.5	2.5	Projects along designated scenic corridors receive points.
Local Benefit - Located on arterial or collector	0	0	0	2.5	2.5	Projects along high-volume direct routes (arterials and collectors) receive points.
Local Benefit - Proximity to Community Facilities	0	0	0	10	10	All projects are assumed to provide some local benefit. Projects within 500 feet of a park, 1/2 mile of an elementary school, or 1 mile of a middle school or high school receive more points.
Feedback from Stakeholders or Public	0	0	0	10	10	Projects specifically requested or supported by stakeholders and the general public during the public involvement process were given points.
TOTAL	**42.5**	**25.5**	**27**	**25**	**120**	-

Prioritized Project Lists by Mode

Table 6.3 Prioritized List of All Recommended Potential Projects (Overview)

ID	Facility Name	Extents	Roadway Improvement	Bicycle Improvement	Pedestrian Improvement	Score
44	Effingham Parkway, Segment 2	Blue Jay Road to SR 119	New Two-Lane Road	Marked Bicycle Lanes	Sidewalks on Both Sides	**101**
133	SR 21, Segment 1	Old Augusta to Ft Howard Road	Widen (4-->6 Lanes)	Multi-Use Path	Multi-Use Path	**99**
126	Fort Howard Road, Segment 2	SR 21 to Old Augusta Road	Widen (+ turn lane)	Marked Bicycle Lanes	Sidewalks on Both Sides	**99**
47	Research Forest E-W connector	McCall Road to Hodgeville Road (in DRI)	New Two-Lane Road	Marked Bicycle Lanes	Sidewalks on Both Sides	**96**
78	SR 119, Segment 2	SR 17 to SR 21	Widen (2-->3 Lanes)	Multi-Use Path	Multi-Use Path	**92**
123	Blue Jay / Blandford Road	SR 21 to McCall Road	Occasional Right Turn Lanes	Multi-Use Path	Multi-Use Path	**89**
45	Effingham Parkway (Chatham)	Chatham County Line to vicinity of Monteith Road (Chatham)	New Four-Lane Road	Marked Bicycle Lanes	Sidewalks on Both Sides	**89**
65	Effingham Parkway, Segment 1	County Line to Blue Jay Road	New Four-Lane Road	Marked Bicycle Lanes	Sidewalks on Both Sides	**89**
101	US 80, Segment 2	SR 17 to Sandhill Road	Widen (2-->4 Lanes)	Marked Bicycle Lanes	Sidewalks on Both Sides	**87**
91	Sand Hill Road, Segment 1	US 80 to Stagefield Road	Widen (+ turn lane)	Marked Bicycle Lanes	Sidewalks on Both Sides	**86**
89	Rails-to-Trails	Downtown Guyton to Meldrim @ 2nd Street	None	Multi-Use Path	Multi-Use Path	**83**
92	Sand Hill Road, Segment 2	Stagefield Road to Boggy Road	Widen (+ turn lane)	Marked Bicycle Lanes	Sidewalks on Both Sides	**82**
127	Fort Howard Road, Segment 3	SR 21 to McCall Road	New Two-Lane Road	Marked Bicycle Lanes	Sidewalks on Both Sides	**81**
84	Meldrim - Jabez Jones Connector	US 80 to Jabez Jones Road	New Two-Lane Road	Marked Bicycle Lanes	Sidewalks on Both Sides	**81**
39	Blue Jay Road	McCall Road to SandHill Road	Widen (2-->3 Lanes)	Multi-Use Path	Multi-Use Path	**80**
134	SR 21, Segment 2	Ft Howard Road to 4th Street (Rincon)	None	Multi-Use Path	Multi-Use Path	**79**
135	SR 21, Segment 3	4th St (Rincon) to Laurel St (Springfield)	None	Marked Bicycle Lanes	Sidewalks on Both Sides	**79**

Table 6.3 Prioritized List of All Recommended Potential Projects (Overview), Continued

ID	Facility Name	Extents	Roadway Improvement	Bicycle Improvement	Pedestrian Improvement	Score
122	4th Street / Rincon Stillwell Road	SR 21 to Bunyan Kessler Road	None	Marked Bicycle Lanes	Sidewalks on One Side	**75**
124	Carolina Avenuenue (South)	W 17th Street to N Ridge Drive	New Two-Lane Road	Wide Shoulder	Sidewalks on One Side	**75**
95	SR 17, Segment 1	US 80 to Blue Jay Road	None	Marked Bicycle Lanes	Sidewalks on Both Sides	**74**
48	Goshen Road	SR 21 to Effingham Parkway	None	Marked Bicycle Lanes	Sidewalks on Both Sides	**72**
98	SR 30, Segment 2	SR 17 to Nease Road	None	Marked Bicycle Lanes	Sidewalks on Both Sides	**70**
76	Multi-Use Path along power line easement	Courthouse Road to SR 119	None	Multi-Use Path	Multi-Use Path	**69**
83	Jabez Jones Road	SR 17 to SR 30	None	Marked Bicycle Lanes	Sidewalks on Both Sides	**69**
100	US 80, Segment 1	SR 17 to Chatham County Line	None	Marked Bicycle Lanes	Sidewalks on Both Sides	**65**
115	S Laurel Street	SR 21 to SR 119/SR 21 Realign	None	Marked Bicycle Lanes	Sidewalks on Both Sides	**64**
53	McCall Road	SR 21 to Blue Jay Road (Blanford Rd)	None	Wide Shoulder	Sidewalks on Both Sides	**64**
105	Guyton Rails-To-Trails (underway)	Downtown Guyton	None	Multi-Use Path	Multi-Use Path	**63**
117	SR 119, Segment 3	SR 21 to Laurel St	None	Multi-Use Path	Multi-Use Path	**61**
107	119/21 Realignment in Springfield	SR 119 at school driveway to Old Tusculsum Road	New Two-Lane Road	None	Sidewalks on Both Sides	**61**
9	Powell Road Extension	4th Avenue to SR 119 (intersect w/ Little McCall Realignment)	New Two-Lane Road	None	Sidewalks on One Side	**61**
102	US 80, Segment 3	Sandhill Road to Bulloch County Line	None	Wide Shoulder	Sidewalks on Both Sides	**60**
116	Springfield Elementary School Drive Extension	Early Street to Spring ES driveway entrance	New Two-Lane Road	None	Sidewalks on Both Sides	**60**
33	SR 119, Segment 4	SR 21 realign (Springfield) to SC State Line	Shoulder Increase	Wide Shoulder	None	**59**
90	S Effingham High School woodland path	Richmond Drive to back of HS (between baseball and football field)	None	Multi-Use Path	Multi-Use Path	**59**

Table 6.3 Prioritized List of All Recommended Potential Projects (Overview), Continued

ID	Facility Name	Extents	Roadway Improvement	Bicycle Improvement	Pedestrian Improvement	Score
94	SR 119, Segment 1	SR 17 to Bulloch County Line	Shoulder Increase	Wide Shoulder	None	**57**
80	Courthouse Road	SR 17 to Stagecoach Avenue	New Two-Lane Road	None	Sidewalks on Both Sides	**56**
64	Courthouse Road	SR 21 to SR 17	None	Rural Route - Signage Only	Sidewalks on Both Sides	**52**
82	Honey Ridge Road	SR 17 to SR 119	None	None	Sidewalks on Both Sides	**52**
128	Lexington Avenuenue	9th Street to Madison Oaks Drive (Rincon)	None	None	Sidewalks on Both Sides	**52**
49	Goshen/Hodgeville/Kolick Helmey Roads	Effingham Parkway to SR 30	None	None	Sidewalks on Both Sides	**49**
43	Ebenezer Road	SR 21 to Waldhour Road (by powerlines)	None	None	Sidewalks on Both Sides	**48**
118	SR 21, Segment 4	SR 21@ S Laurel Street to SR 119/SR 21 Realign	None	None	Sidewalks on Both Sides	**48**
73	Pleasant Acres Road	SR 21 to Little McCall Road (or powerline easement)	Paving	None	None	**48**
130	Richland Avenuenue Extension	10th Street (Rincon) to Fort Howard Road	New Two-Lane Road	None	None	**48**
60	Wylly /High Bluff/ Tommy Long Road	Long Bridge Road to End	None	None	Sidewalks on One Side	**47**
119	Standard Lane	SR 119 to Old Tusculum Road	None	None	Sidewalks on Both Sides	**47**
24	Indigo Road	Mock Road to Stillwell-Clyo Road	Paving	Rural Route - Signage Only	None	**47**
81	Heidt Landing Road	Central Avenue to existing rd connecting to SR 119	Paving	Rural Route - Signage Only	None	**47**
88	Old River Road	US 80 to John Carter Road	Widen (2-->4 Lanes)	None	None	**46**
16	SR 21, Segment 5	Old Tusculum to Springfield-Egypt Road	None	None	Sidewalks on One Side	**44**
15	SR 17, Segment 4	Old Elam Cemetary Road to 1300 ft S of Egypt Ardmore Road	None	None	Sidewalks on One Side	**43**
56	Old Augusta Road	SR 21 to Ft Howard Road	None	Wide Shoulder	None	**43**
87	Nease Road	SR 30 to St. Matthew's Road	None	None	Sidewalks on One Side	**43**

Table 6.3 Prioritized List of All Recommended Potential Projects (Overview), Continued

ID	Facility Name	Extents	Roadway Improvement	Bicycle Improvement	Pedestrian Improvement	Score
3	Effingham Parkway - Northeastern	119 to Boaen Road@Sawmill Road	New Two-Lane Road	None	None	**43**
21	Clyo-Kildare Road	SR 119 to Marion Avenue	None	None	Sidewalks on One Side	**42**
27	Marion Avenue	SR 119 to Clyo-Kildare Road	None	None	Sidewalks on One Side	**42**
86	Midland Road	SR 30 to Rails-to-Trails	None	None	Sidewalks on Both Sides	**42**
131	Rincon Stillwell Road	Ft Howard Road to Ebenezer Road	None	Marked Bicycle Lanes	None	**42**
6	Morgan Road Extension	Springfield-Egypt Road to SR 17	New Two-Lane Road	Rural Route - Signage Only	None	**42**
97	SR 30, Segment 1	Nease Road to Kolic Helmey Road	None	None	Sidewalks on Both Sides	**39**
57	Stephens Drive	Goshen Road to McCall Road	None	None	Sidewalks on One Side	**38**
59	Westwood Drive	Vale Royal Dr to SR 21	None	None	Sidewalks on Both Sides	**38**
1	Boaen Road	Springfield-Egypt Road to Sawmill Road	Paving	None	None	**38**
5	Morgan Road	SR 21 to Springfield-Egypt Road	Paving	None	None	**38**
10	Sawmill Drive	Springfield-Tusculum Road to Boaen Road	Paving	None	None	**38**
14	Springfield-Egypt Road	Shawnee-Egypt Road to SR 21	Paving	None	None	**38**
20	Bark Drive	SR 119 to end	Paving	None	None	**38**
22	Corinth Church Road	Clyo-Kildare Road to Bird Road	Paving	None	None	**38**
29	Sam Smart Road	Corinth Church Road to end	Paving	None	None	**38**
42	Chimney - Busch Connector	Busch Road to SR 21	New Two-Lane Road	None	None	**38**
70	Low Ground Road	McCall Road to Midland Road	Paving	None	None	**38**
74	Pound Road / Floyd Road	Entire length of both roads (to SR 17)	Paving	None	None	**38**

Table 6.3 Prioritized List of All Recommended Potential Projects (Overview), Continued

ID	Facility Name	Extents	Roadway Improvement	Bicycle Improvement	Pedestrian Improvement	Score
96	SR 17, Segment 2	Blue Jay Road to Midland Road	None	Marked Bicycle Lanes	None	**37**
46	Fort Howard Road, Segment 1	Old Augusta Road to Rincon-Stillwell Road	None	Wide Shoulder	None	**37**
103	Anderson Street	SR 17 to Magnolia Street	None	None	Sidewalks on Both Sides	**37**
104	Gracen Road	SR 119 to Summer Place	None	None	Sidewalks on Both Sides	**37**
106	Magnolia Street	SR 119 to Anderson Street	None	None	Sidewalks on Both Sides	**37**
111	Ash Street / Ash Street Extension	S Laurel Street to Early Street	None	None	Sidewalks on Both Sides	**37**
112	E Madison Street	Laurel Street to N Ash Street	None	None	Sidewalks on Both Sides	**37**
121	W 1st Street Extension	SR 21 to SR 119	None	None	Sidewalks on Both Sides	**37**
125	E 9th Street (Rincon)	SR 21 to Lexington Avenue	None	None	Sidewalks on Both Sides	**37**
108	119/21 Realignment in Springfield	Laurel Street to Old Dixie Highway	New Two-Lane Road	None	None	**34**
34	SR 119, Segment 5	Marion Avenue to Clyo-Kildare Road	None	None	Sidewalks on One Side	**33**
35	SR 21, Segment 6	Shawnee Egypt Road to 500 ft N of Shawnee Road	None	None	Sidewalks on One Side	**33**
79	SR 17, Segment 3	Midland Road to Pound Road	None	None	Sidewalks on One Side	**33**
7	Old Tusculum Road, Segment 2	SR 21 to Standard Lane	None	None	Sidewalks on Both Sides	**33**
11	Long Bridge Road	Ebenezer Road to Wylly Road	None	Marked Bicycle Lanes	None	**33**
50	Long Bridge Road	Ebenezer Road to 4000 ft N of Wylly Road	None	None	Sidewalks on One Side	**33**
51	Long Pond Road	Ft Howard Road to Rincon Stillwell Road	None	Wide Shoulder	None	**33**
58	Vale Royal Drive	McCall Road to Westwood Drive	None	None	Sidewalks on Both Sides	**33**
72	Old Tusculum Road, Segment 1	SR 21 to SR 119 realign (GDOT)	None	None	Sidewalks on Both Sides	**33**

Table 6.3 Prioritized List of All Recommended Potential Projects (Overview), Continued

ID	Facility Name	Extents	Roadway Improvement	Bicycle Improvement	Pedestrian Improvement	Score
67	HS Access (to Deerfield Road)	Pleasant Acre Road (straightened) to SR 119 between HS and MS	New Two-Lane Road	None	None	**33**
75	Pound Road - Pleasant Acres Connector	End of Pound Road to Pleasant Acres Road in vicinity of powerline easement	New Two-Lane Road	None	None	**33**
129	North Ridge Road	end of current road to Carolina Avenue extension parallel to RR Tracks (Rincon)	New Two-Lane Road	None	None	**33**
132	Smith Avenuenue Extension	Smith Avenue to E 4th Street (Rincon)	New Two-Lane Road	None	None	**33**
17	4th Street	Marion Avenue to Stillwell-Clyo Road	None	None	Sidewalks on One Side	**32**
23	Fair Street	Clyo-Stillwell Road to community center	None	None	Sidewalks on One Side	**32**
30	Shawnee Road, Segment 1	SR 21 to Old Dixie Highway	None	None	Sidewalks on One Side	**32**
36	Stillwell-Clyo Road	4th Street to Fair Street	None	None	Sidewalks on One Side	**32**
109	2nd Street	Ash Street to RR Avenue	None	None	Sidewalks on Both Sides	**32**
110	3rd Street	SR 21 to S Laurel Street	None	None	Sidewalks on Both Sides	**32**
113	Early Street	Laurel Street to "Springfield ES Drive Ext" between Ash Street and Lake Dr	None	None	Sidewalks on Both Sides	**32**
114	Railroad Avenue	W 2nd Street to W 3rd Street	None	None	Sidewalks on One Side	**32**
120	Stillwell Road	Laurel Street to Ash Street	None	None	Sidewalks on Both Sides	**32**
40	Bunyan Kessler Road	Rincon-Stillwell Road to Fort Howard Road	None	Wide Shoulder	None	**31**
41	Chimney Road	SR 21 to Old Augusta Road	None	Wide Shoulder	None	**31**
77	Rahn Station Road	SR 21 to McCall Road at Effingham Parkway	None	Wide Shoulder	None	**31**
85	Meldrim Road	Central Avenue (Meldrim) to US 80	None	Wide Shoulder	None	**31**

Table 6.3 Prioritized List of All Recommended Potential Projects (Overview), Continued

ID	Facility Name	Extents	Roadway Improvement	Bicycle Improvement	Pedestrian Improvement	Score
2	Boaen Road Extension	Springfield-Egypt Road to SR 21	New Two-Lane Road	None	None	**28**
4	Griffin Lake Road Extension	SR 17 to Springfield-Egypt Road	New Two-Lane Road	None	None	**28**
8	Porter Road	Old Louisville Road to Riverside Drive	New Two-Lane Road	None	None	**28**
12	Shearwood Road	Old Louisville Road to Ogeechee River	New Two-Lane Road	None	None	**28**
13	Springfield-Tusculum Road	SR 17 to Brogdon Road	Paving	None	None	**28**
18	Angus Exley Road Extension	End of Angus Exley Road to Bark Dr	New Two-Lane Road	None	None	**28**
19	Angus Exley Road	Sister's Ferry Rd to End	Paving	None	None	**28**
25	Josiah Morgan - Sam Smart Connector	Connect Josiah Morgan Road to Sam Smart Road (at ends)	New Two-Lane Road	None	None	**28**
26	Josiah Morgan Road	Clyo-Shawnee Road to JM/SS Connector (new)	Paving	None	None	**28**
28	Lorenzo Hurst / Elbert Arnsdorff	SR 21 to Old Dixie Highway	Paving	None	None	**28**
31	Shawnee Road, Segment 2	Old Dixie to Corinth Church Road	New Two-Lane Road	None	None	**28**
32	Sisters Ferry Road	SR 119 to Green Morgan School Road	Paving	None	None	**28**
38	Azalea - Commercial Connector	end of Azalea Avenue to Goshen Commercial Park Dr	New Two-Lane Road	None	None	**28**
52	Low Ground - Blue Jay Connector	end of Hodgeville Road (realign to be perpendicular to Blue Jay) to just E of Sagepoint Road	New Two-Lane Road	None	None	**28**
54	McCall Road Extension	SR 21 to Azalea-Commercial Connector (New)	New Two-Lane Road	None	None	**28**
55	Mock Road Extension	SR 21 to Stillwell Road (Springfield)	New Two-Lane Road	None	None	**28**
61	Zipperer - Hodgeville Connector	Zipperer Paddock (end) to Hodgeville Road	New Two-Lane Road	None	None	**28**
62	Zipperer Road	Midland Road to end	Paving	None	None	**28**

Table 6.3 Prioritized List of All Recommended Potential Projects (Overview), Continued

ID	Facility Name	Extents	Roadway Improvement	Bicycle Improvement	Pedestrian Improvement	Score
63	Big T Road	Courthouse Road to Shirley Road	Paving	None	None	**28**
66	Existing private road Off Low Ground Road	Low Ground Road to LowGround-Shirley Connector (new)	Paving	None	None	**28**
68	Little McCall Road north terminus realign	north end of road to SR 119	New Two-Lane Road	None	None	**28**
69	Low Ground - Shirley Connector	Shirley Road to end of #66	New Two-Lane Road	None	None	**28**
71	Magnolia - Big T Connector	Magnolia Street Ext to Courthouse Road (E of Indica Pl)	New Two-Lane Road	None	None	**28**
99	Unknown road between Honey Ridge Road and Ogeechee River on 119	Entire length	Paving	None	None	**28**
93	Sand Hill Road, Segment 3	Boggy Road to railbed	None	Wide Shoulder	None	**24**
37	4th Street / Rincon-Stillwell Road	Bunyan Kessler Road to Long Pond Road	None	Wide Shoulder	None	**23**

Table 6.4 Ranked List of Recommended Potential Roadway Projects

Note: Does not include recommended paving projects

Rank	Map ID	Facility Name	Extents	Details / Justification	Roadway Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Roadway +General
1	44	Effingham Parkway, Segment 2	Blue Jay Road to SR 119	Building a primary N-S roadway in the south central part of Effingham County would support high-impact economic development opportunities, serve as a truck bypass (to SR 21), and greatly increase regional connectivity. Effingham Parkway is listed in both the STIP and Capital Improvement Plan.	New Two-Lane Road	7.85	**101.0**	**32.5**	**25.5**	**23.0**	**20.0**	**52.50**
2	47	Research Forest E-W connector	McCall Road to Hodgeville Road (in DRI)	If Research Forest Industrial Park is developed, E-W connectivity between McCall Road and SR 21 (and optimally Hodgeville Road) is needed. Coordinate planning and construction of this road with the Research Forest Site Plan and eventually Effingham Pkwy. Construct as "Complete Street" with pedestrian and bike facilities.	New Two-Lane Road	2.65	**96.0**	**32.5**	**25.5**	**23.0**	**15.0**	**47.50**
3	130	Richland Avenuenue Extension	10th Street (Rincon) to Fort Howard Road	Parallel/Rear access to development along SR 21 from residential Rincon. Requested by Rincon city planner. Increases connectivity, mobility, and access.	New Two-Lane Road	0.77	**47.5**	**32.5**	**0.0**	**0.0**	**15.0**	**47.50**
4	126	Fort Howard Road, Segment 2	SR 21 to Old Augusta Road	Roadway operations and access to residential development would be improved with turn lanes. This road is the primary means of access to Rincon and SR 21 for many residents, and dedicated pedestrian and bicycle facilities are recommended to give all residents transportation choice. Fort Howard Road is also a key segment of an integrated bicycle network to the east of Rincon	Widen (+ turn lane)	2.51	**98.8**	**30.0**	**25.5**	**23.0**	**16.3**	**46.25**
5	133	SR 21, Segment 1	Old Augusta to Ft Howard Road	Widening to 6 lanes (from I-95 through the City of Rincon) is justified by this study's travel demand model to provide adequate automobile capacity for Level of Service C or above in 2030, based on current travel behavior. However, any widening of SR 21 within Rincon city limits would negatively impact the existing urban character and future corridor revitalization efforts. Thus, Fort Howard Road is recommended as the northernmost potential terminus of this roadway widening project. Based on the preliminary environmental review, there are also a number of properties and structures along SR 21 between Goshen Road and Fort Howard Road in unincorporated Effingham that would be potentially impacted by a roadway widening. First implementing appropriate ITS and operational improvements (access management, channelized right turn lanes) on SR 21 in Chatham County could delay the need for widening of SR 21 north of the Effingham/Chatham County Line or Goshen Road. Regardless of improvements implemented for automobile movement, safe pedestrian and bicycle access is necessary along this corridor. Due to high adjacent traffic volume and speeds, a multi-use path on each side of SR-21 is recommended to separate walkers and bicyclists from cars.	Widen (4-->6 Lanes)	3.60	**98.8**	**30.0**	**25.5**	**23.0**	**16.3**	**46.25**
6	88	Old River Road	US 80 to John Carter Road	Operational improvements and widening are needed along Old River Road, which connects to the only Interstate exit in Effingham County. Directional signage pointing from US 80 to Old River Road is also necessary.	Widen (2-->4 Lanes)	4.09	**46.3**	**30.0**	**0.0**	**0.0**	**16.3**	**46.25**
7	78	SR 119, Segment 2	SR 17 to SR 21	A center turning lane along with right turn bays along this length of road as well as bike/pedestrian accommodation (multi-use path) is recommended to improve traffic operations and provide greater accessiblity through mode choice. 2030 travel demand model runs do not show excessive congestion to warrant additional through-lanes by 2030. If local input still shows desire for eventual 4-lane road, however, a multi-use path must be placed far enough from road to preserve adequate future ROW. A multi-use path, rather than bike lanes and sidewalks, is recommended due to the probable use of the facility by schoolchildren. Widening recommendations are in the Capital Improvement Plan.	Widen (2-->3 Lanes)	5.02	**92.3**	**30.0**	**25.5**	**23.0**	**13.8**	**43.75**
8	33	SR 119, Segment 4	SR 21 realign (Springfield) to SC State Line	This winding segment of SR 119 lacks a shoulder and has experienced several fatal crashes. Adding an improved shoulder (to standards of other State Route segments in the County) will help with safety in the area. Additionally adding roadside reflectors will reduce incidents based on failure to navigate turns at night.	Shoulder Increase	11.65	**59.3**	**30.0**	**15.5**	**0.0**	**13.8**	**43.75**
9	3	Effingham Parkway - Northeastern	119 to Boaen Road@Sawmill Road	First segment of potential Northeastern extension of Effingham Parkway. Though currently considered a "county project" due to relatively low traffic volumes projected by the study's travel demand model, completing this segment will allow Effingham Parkway traffic to channel back to SR 21 north of Springfield (via additional projects #1 and #2), rather than completely loading on to SR 119. Undertaking project #13 in addition to this one will enable vehicle movement to SR 17 north of Guyton, rather than directing offloading traffic through the center of Guyton.	New Two-Lane Road	3.00	**42.5**	**32.5**	**0.0**	**0.0**	**10.0**	**42.50**

Table 6.4 Ranked List of Recommended Potential Roadway Projects, Continued

Rank	Map ID	Facility Name	Extents	Details / Justification	Roadway Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Roadway +General
10	94	SR 119, Segment 1	SR 17 to Bulloch County Line	Adding an improved shoulder (to standards of other State Route segments in the County) will help with safety in the area. It will also allow recreational bicyclists to travel more easily between proposed multi-use paths and a bike route located in Bulloch County (119/Stilson Road) which eventually leads to Statesboro. A river recreation area is accessed from SR 119 at the county line.	Shoulder Increase	4.23	**56.8**	**30.0**	**15.5**	**0.0**	**11.3**	**41.25**
11	45	Effingham Parkway (Chatham)	Chatham County Line to vicinity of Monteith Road (Chatham)	This segment of Effingham Parkway (project #44) is located in Chatham County and is a necessary link in connecting the potential parkway to a southern terminus that can handle a high potential volume of vehicles.	New Four-Lane Road	1.76	**88.5**	**25.0**	**25.5**	**23.0**	**15.0**	**40.00**
12	65	Effingham Parkway, Segment 1	County Line to Blue Jay Road	Building a major N-S roadway in the south central part of Effingham County would support high-impact economic development opportunities, serve as a truck bypass (to SR 21), and greatly increase regional connectivity. Effingham Parkway is listed in both the STIP and Capital Improvement Plan.	New Four-Lane Road	5.11	**88.5**	**25.0**	**25.5**	**23.0**	**15.0**	**40.00**
13	101	US 80, Segment 2	SR 17 to Sandhill Road	Continuation of widening from Chatham County, terminate at Sand Hill Road (or Old River Road). State bike route. provide facilities (lanes/sidewalks) on all of US 80 within Effingham. Four state bike routes utilize this stretch of road and should have dedicated facilities for safety. All arterials should have sidewalks.	Widen (2-->4 Lanes)	4.48	**87.3**	**30.0**	**25.5**	**23.0**	**8.8**	**38.75**
14	9	Powell Road Extension	4th Avenue to SR 119 (intersect w/ Little McCall Realignment)	Constructing this road will allow local vehicular and pedestrian access to the residential areas of Guyton without forcing vehicular traffic through the busy SR 119 / SR 17 intersection in downtown Guyton. Would be most effective in combination with project # 78 (realignment of Little McCall Road intersection with SR 119).	New Two-Lane Road	0.54	**60.5**	**32.5**	**0.0**	**23.0**	**5.0**	**37.50**
15	42	Chimney - Busch Connector	Busch Road to SR 21	Creating an official road in place of the existing parking lot will allow area residents to access the current traffic signal at Chimney Road and SR 21, reducing reliance on McCall Road until the intersection there can be upgraded.	New Two-Lane Road	0.07	**37.5**	**32.5**	**0.0**	**0.0**	**5.0**	**37.50**
16	123	Blue Jay / Blandford Road	SR 21 to McCall Road	Blue Jay is the primary E-W connector south of SR 119 and should have dedicated pedestrian and bicycle facilities. Occasional right turn lanes will improve traffic flow, though additional vehicular through-lanes are not justified by the study's travel demand model at this time.	Occasional Right Turn Lanes	1.89	**88.8**	**20.0**	**25.5**	**23.0**	**16.3**	**36.25**
17	91	Sand Hill Road, Segment 1	US 80 to Stagefield Road	Adding turn lanes will improve mobility and safe vehicular access to neighborhoods. Pedestrian and bicycle facilities will help residents access schools and recreational areas, as well as potential commuter bus stops along US 80 and SR17. Segment in Capital Improvement Plan.	Widen (+ turn lane)	3.11	**86.3**	**20.0**	**25.5**	**23.0**	**13.8**	**33.75**
18	92	Sand Hill Road, Segment 2	Stagefield Road to Boggy Road	Adding turn lanes will improve mobility and safe vehicular access to neighborhoods. Pedestrian and bicycle facilities will help residents access schools and recreational areas, as well as potential commuter bus stops along US 80 and SR17.	Widen (+ turn lane)	1.31	**82.3**	**20.0**	**25.5**	**23.0**	**13.8**	**33.75**
19	107	119/21 Realignment in Springfield	SR 119 at school driveway to Old Tusculsum Road	GDOT has finished the design phase for this project, which will lead to more optimal truck movement in the area. However, sidewalks should be added to this roadway segment to connect west and east Springfield to each other, as well as a nearby school. In STIP.	New Two-Lane Road	0.52	**60.8**	**22.5**	**0.0**	**23.0**	**11.3**	**33.75**
20	108	119/21 Realignment in Springfield	Laurel Street to Old Dixie Highway	GDOT has finished the design phase for this project, which will lead to more optimal truck movement in the area. In STIP.	New Two-Lane Road	0.34	**33.8**	**22.5**	**0.0**	**0.0**	**11.3**	**33.75**
21	84	Meldrim - Jabez Jones Connector	US 80 to Jabez Jones Road	Constructing a facility to connect Meldrim Road and Jabez Jones Road will greatly aid in regional connectivity and increased safety for area residents (especially in Meldrim). It will improve access to highways and schools, and reduce volumes at the intersections of SR 17 with US 80 and SR 30. Construct as a "Complete Street" with sidewalks and bike lanes in addition to automobile travel lanes. It may be necessary to signalize the intersection of US 80 with this project, based on traffic volume.	New Two-Lane Road	1.70	**81.0**	**22.5**	**25.5**	**23.0**	**10.0**	**32.50**
22	116	Springfield Elementary School Drive Extension	Early Street to Spring ES driveway entrance	Extending Ash St northward (to the left side of the Armory) to Early Street will provide a direct connection between homes and residences in the area and downtown Springfield. This is an essential link in creating a more connected street network on the northern side of town and reducing dependency on automobiles for local trips.	New Two-Lane Road	0.33	**59.5**	**22.5**	**0.0**	**23.0**	**10.0**	**32.50**
23	80	Courthouse Road	SR 17 to Stagecoach Avenue	Extending Courthouse Road to the Stagecoach Avenue off of Sand Hill Road will provide greater regional connectivity, allowing better citizen access to a major recreation center.	New Two-Lane Road	2.34	**55.5**	**22.5**	**0.0**	**23.0**	**10.0**	**32.50**

Table 6.4 Ranked List of Recommended Potential Roadway Projects, Continued

Rank	Map ID	Facility Name	Extents	Details / Justification	Roadway Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Roadway +General
24	6	Morgan Road Extension	Springfield-Egypt Road to SR 17	Extending Morgan Road between Springfield-Egypt Road and SR 17 will improve high-level connectivity in the Northern part of the county, aiding in emergency vehicle movement. E-W connectors between SR 17 and SR 21 north of Guyton were specifically requested by public safety officials. This improvement would be most effective in combination with Projects #5 and #14, and is already recorded in the Effingham Capital Improvement Plan.	New Two-Lane Road	2.74	**41.5**	**22.5**	**9.0**	**0.0**	**10.0**	**32.50**
25	67	HS Access (to Deerfield Road)	Pleasant Acre Road (straightened) to SR 119 between HS and MS	This roadway connection allows Effingham Middle and High Schools to be accessed from the rear, thus reducing pressure on SR 119.	New Two-Lane Road	0.71	**32.5**	**22.5**	**0.0**	**0.0**	**10.0**	**32.50**
26	75	Pound Road - Pleasant Acres Connector	End of Pound Road to Pleasant Acres Road in vicinity of powerline easement	Building a new road in this location would aid local and regional connectivity, reducing reliance on primary city roads for local traffic.	New Two-Lane Road	3.39	**32.5**	**22.5**	**0.0**	**0.0**	**10.0**	**32.50**
27	129	North Ridge Road	end of current road to Carolina Avenue extension parallel to RR Tracks (Rincon)	Needed for continuation of connectivity (project #124) and providing local alternative to SR 21.	New Two-Lane Road	0.23	**32.5**	**22.5**	**0.0**	**0.0**	**10.0**	**32.50**
28	132	Smith Avenuenue Extension	Smith Avenue to E 4th Street (Rincon)	This segment is a continuation of Rincon's residential grid system. At a minimum, preserve right-of-way for transportation improvement as a part of new development.	New Two-Lane Road	0.20	**32.5**	**22.5**	**0.0**	**0.0**	**10.0**	**32.50**
29	39	Blue Jay Road	McCall Road to SandHill Road	This road is a primary E-W connector and should up upgraded to have better functionality. It can be initially widened by providing a center turning lane or otherwise adding occasional left and right turn bays in necessary places. Long-term, a four-lane road may be called for but is not currently justified by travel demand model volume projections. Blue Jay Road should also have bike lanes as it is a critical direct E-W bike link south of 119. In Capital Improvement Plan.	Widen (2-->3 Lanes)	9.36	**79.8**	**20.0**	**25.5**	**23.0**	**11.3**	**31.25**
30	127	Fort Howard Road, Segment 3	SR 21 to McCall Road	Ft Howard is an important E-W connector and should be continued west to provide direct access to employment center. Develop road (and RR crossing) as part of DRI. Construct "Complete Street" with bike lanes and sidewalks. Eventually this and parallel roads should connect to future Effingham Parkway.	New Two-Lane Road	1.29	**81.3**	**22.5**	**25.5**	**23.0**	**6.3**	**28.75**
31	124	Carolina Avenuenue (South)	W 17th Street to N Ridge Drive	This project provides rear access to Lowe's and other development along SR 21 from residential Rincon, reducing the need for local traffic to utilize arterials. It was specifically requested by the Rincon planning department.	New Two-Lane Road	0.69	**75.0**	**22.5**	**20.5**	**23.0**	**5.0**	**27.50**
32	2	Boaen Road Extension	Springfield-Egypt Road to SR 21	This road segment provides a short connector from the existing Boaen Road to SR 21, continuing from the intersection of Boaen Road and Springfield-Egypt Road. It forms the final segment of a potential Northeastern extension of Effingham Parkway, providing a convenient terminus at SR 21.	New Two-Lane Road	0.42	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
33	4	Griffin Lake Road Extension	SR 17 to Springfield-Egypt Road	Extending Griffin Lake Road to Springfield-Egypt/Shawnee-Egypt Road will improve high-level connectivity in the Northern part of the county, aiding in emergency vehicle movement. E-W connectors between SR 17 and SR 21 north of Guyton were specifically requested by public safety officials. This segment can form a part of a near continuous improved route from Old Louisville Road to Clyo-Kildare Road (in combination with projects #31 and #22).	New Two-Lane Road	2.20	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
34	8	Porter Road	Old Louisville Road to Riverside Drive	Constructing this roadway extension will aid in better access to existing or potential river-based recreation activities and emergency vehicle movement.	New Two-Lane Road	2.12	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
35	12	Shearwood Road	Old Louisville Road to Ogeechee River	This project is in the Capital Improvement Plan, and also provides access to potential outdoor recreation area & boat launch.	New Two-Lane Road	0.78	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
36	18	Angus Exley Road Extension	End of Angus Exley Road to Bark Dr	Extending Angus Exley Road to Bark Drive will cost-effectively aid in regional connectivity by utilizing existing roadways (coordinate with projects #19 and #20). Other potential connections in vicinity between SR 119 and Sister's Ferry Road can be undertaken if this extension is not feasible.	New Two-Lane Road	0.88	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
37	25	Josiah Morgan - Sam Smart Connector	Connect Josiah Morgan Road to Sam Smart Road (at ends)	Building a new road between Josiah Morgan Road and Sam Smart Road will cost-effectively aid in regional connectivity by utilizing existing roadways (coordinate with projects #26 and #29). It is an important local N-S link between SR 21 and SR 119 in northeastern Effingham County.	New Two-Lane Road	1.33	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**

Table 6.4 Ranked List of Recommended Potential Roadway Projects, Continued

Rank	Map ID	Facility Name	Extents	Details / Justification	Roadway Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Roadway +General
38	31	Shawnee Road, Segment 2	Old Dixie to Corinth Church Road	This segment is part of a continuous E-W route in the northern part of the county. Improving the road will enhance local connectivity and emergency vehicle access. Would be most effective if improved at the same time as project #22.	New Two-Lane Road	1.12	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
39	38	Azalea - Commercial Connector	end of Azalea Avenue to Goshen Commercial Park Dr	This parallel new road would provide a local alternative to SR 21 so that area businesses could be accessed from a low-speed rear access road rather than a high-speed high-volume arterial. It provides a terminus to a McCall Road eastern extension (#54) and increases area connectivity.	New Two-Lane Road	0.26	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
40	52	Low Ground - Blue Jay Connector	end of Hodgeville Road (realign to be perpendicular to Blue Jay) to just E of Sagepoint Road	This segment extends Hodgeville Road northwards and aids in macro-connectivity. A smaller project than the parallel Effingham Parkway, it can have more immediate benefit by being part of a direct route between Guyton and southern Effingham County/ Coordinate with projects #69, #66, #71, #63.	New Two-Lane Road	1.73	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
41	54	McCall Road Extension	SR 21 to Azalea-Commercial Connector (New)	Extending McCall road across SR 21 will enhance local connectivity and decrease reliance on SR 21. Having a signalized four-way intersection here can mitigate turning-related safety issues at intersection of McCall Road and SR 21. The junction of McCall Road and SR 21 was specifically mentioned by public safety officials in relation to school bus movement.	New Two-Lane Road	0.18	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
42	55	Mock Road Extension	SR 21 to Stillwell Road (Springfield)	Constructing this roadway segment aids in regional connectivity, allowing local through-travelers to access 119 E from 21 N (or vice versa) without going through Springfield. If desired, add truck route restrictions to this project and enforce usage of SR 21 and SR 119 for area freight movement.	New Two-Lane Road	1.17	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
43	61	Zipperer - Hodgeville Connector	Zipperer Paddock (end) to Hodgeville Road	This project is a general recommendation of primary E-W connectivity for IDA Research Forest so that it meshes better with surrounding areas and transportation network. The final alignment should be coordinated with Research Forest and project #47.	New Two-Lane Road	1.03	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
44	68	Little McCall Road north terminus realign	north end of road to SR 119	Realign Little McCall Road at SR 119 to help mitigate intersection-related safety issues. Continue north to Powell St and provide access to Guyton residential area. Aids in local connectivity.	New Two-Lane Road	0.30	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
45	69	Low Ground - Shirley Connector	Shirley Road to end of #66	Constructing this road in combination with improvement projects #66, #63, #71, #52 will aid in macro-connectivity, and local and emergency vehicle movement. There are a number of more recent developments in the area that would benefit from being able to travel on roadways besides Midland Road and McCall Road which have relatively high crash rates in some locations.	New Two-Lane Road	1.25	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**
46	71	Magnolia - Big T Connector	Magnolia Street Ext to Courthouse Road (E of Indica Pl)	A new roadway segment in this location will aid connectivity by creating another access point to and from the City of Guyton that does not depend on SR 119. It will be especially beneficial for residences along Courthouse Road.	New Two-Lane Road	3.42	**27.5**	**22.5**	**0.0**	**0.0**	**5.0**	**27.50**

Table 6.5 Ranked List of Recommended Potential Bicycle Projects

Note: Does not include Signage-Only Rural Routes

Rank	Map ID	Facility Name	Extents	Details / Justification	Bicycle Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Bicycle +General
1	44	Effingham Parkway, Segment 2	Blue Jay Road to SR 119	Building a primary N-S roadway in the south central part of Effingham County would support high-impact economic development opportunities, serve as a truck bypass (to SR 21), and greatly increase regional connectivity. Effingham Parkway is listed in both the STIP and Capital Improvement Plan.	Marked Bicycle Lanes	7.85	**101.0**	**32.5**	**25.5**	**23.0**	**20.0**	**45.50**
2	89	Rails-to-Trails	Downtown Guyton to Meldrim @ 2nd Street	Prime opportunity for recreational and mobility-oriented multi-use path. Using old railbeds as low-impact trails is a method to preserve railroad right-of-way in event of future passenger train service to area.	Multi-Use Path	13.62	**82.5**	**10.0**	**25.5**	**23.0**	**20.0**	**45.50**
3	126	Fort Howard Road, Segment 2	SR 21 to Old Augusta Road	Roadway operations and access to residential development would be improved with turn lanes. This road is the primary means of access to Rincon and SR 21 for many residents, and dedicated pedestrian and bicycle facilities are recommended to give all residents transportation choice. Fort Howard Road is also a key segment of an integrated bicycle network to the east of Rincon	Marked Bicycle Lanes	2.51	**98.8**	**30.0**	**25.5**	**23.0**	**16.3**	**41.75**
	133	SR 21, Segment 1	Old Augusta to Ft Howard Road	Widening to 6 lanes (from I-95 through the City of Rincon) is justified by this study's travel demand model to provide adequate automobile capacity for Level of Service C or above in 2030, based on current travel behavior. However, any widening of SR 21 within Rincon city limits would negatively impact the existing urban character and future corridor revitalization efforts. Thus, Fort Howard Road is recommended as the northernmost potential terminus of this roadway widening project. Based on the preliminary environmental review, there are also a number of properties and structures along SR 21 between Goshen Road and Fort Howard Road in unincorporated Effingham that would be potentially impacted by a roadway widening. First implementing appropriate ITS and operational improvements (access management, channelized right turn lanes) on SR 21 in Chatham County could delay the need for widening of SR 21 north of the Effingham/Chatham County Line or Goshen Road. Regardless of improvements implemented for automobile movement, safe pedestrian and bicycle access is necessary along this corridor. Due to high adjacent traffic volume and speeds, a multi-use path on each side of SR-21 is recommended to separate walkers and bicyclists from cars.	Multi-Use Path	3.60	**98.8**	**30.0**	**25.5**	**23.0**	**16.3**	**41.75**
5	123	Blue Jay / Blandford Road	SR 21 to McCall Road	Blue Jay is the primary E-W connector south of SR 119 and should have dedicated pedestrian and bicycle facilities. Occasional right turn lanes will improve traffic flow, though additional vehicular through-lanes are not justified by the study's travel demand model at this time.	Multi-Use Path	1.89	**88.8**	**20.0**	**25.5**	**23.0**	**16.3**	**41.75**
6	134	SR 21, Segment 2	Ft Howard Road to 4th Street (Rincon)	Continue to implement multi-use paths along SR 21 to provide multi-modal access to school, downtown, residential areas. SR 21 is a key segment of an integrated multimodal network.	Multi-Use Path	1.37	**78.8**	**10.0**	**25.5**	**23.0**	**16.3**	**41.75**
	135	SR 21, Segment 3	4th St (Rincon) to Laurel St (Springfield)	Construct dedicated bicycle and pedestrian facilities along SR 21 to provide a direct multi-modal connection between Rincon and Springfield. This roadway segment is a proposed State Bike Route and also provides access to employment centers at Ebenezer Road and SR 21 as well as schools and recreational opportunities.	Marked Bicycle Lanes	6.01	**78.8**	**10.0**	**25.5**	**23.0**	**16.3**	**41.75**
8	47	Research Forest E-W connector	McCall Road to Hodgeville Road (in DRI)	If Research Forest Industrial Park is developed, E-W connectivity between McCall Road and SR 21 (and optimally Hodgeville Road) is needed. Coordinate planning and construction of this road with the Research Forest Site Plan and eventually Effingham Pkwy. Construct as "Complete Street" with pedestrian and bike facilities.	Marked Bicycle Lanes	2.65	**96.0**	**32.5**	**25.5**	**23.0**	**15.0**	**40.50**
9	45	Effingham Parkway (Chatham)	Chatham County Line to vicinity of Monteith Road (Chatham)	This segment of Effingham Parkway (project #44) is located in Chatham County and is a necessary link in connecting the potential parkway to a southern terminus that can handle a high potential volume of vehicles.	Marked Bicycle Lanes	1.76	**88.5**	**25.0**	**25.5**	**23.0**	**15.0**	**40.50**
	65	Effingham Parkway, Segment 1	County Line to Blue Jay Road	Building a major N-S roadway in the south central part of Effingham County would support high-impact economic development opportunities, serve as a truck bypass (to SR 21), and greatly increase regional connectivity. Effingham Parkway is listed in both the STIP and Capital Improvement Plan.	Marked Bicycle Lanes	5.11	**88.5**	**25.0**	**25.5**	**23.0**	**15.0**	**40.50**

Table 6.5 Ranked List of Recommended PotentialBicycle Projects, Continued

Rank	Map ID	Facility Name	Extents	Details / Justification	Bicycle Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Bicycle +General
11	78	SR 119, Segment 2	SR 17 to SR 21	A center turning lane along with right turn bays along this length of road as well as bike/pedestrian accommodation (multi-use path) is recommended to improve traffic operations and provide greater accessiblity through mode choice. 2030 travel demand model runs do not show excessive congestion to warrant additional through-lanes by 2030. If local input still shows desire for eventual 4-lane road, however, a multi-use path must be placed far enough from road to preserve adequate future ROW. A multi-use path, rather than bike lanes and sidewalks, is recommended due to the probable use of the facility by schoolchildren. Widening recommendations are in the Capital Improvement Plan.	Multi-Use Path	5.02	**92.3**	**30.0**	**25.5**	**23.0**	**13.8**	**39.25**
12	91	Sand Hill Road, Segment 1	US 80 to Stagefield Road	Adding turn lanes will improve mobility and safe vehicular access to neighborhoods. Pedestrian and bicycle facilities will help residents access schools and recreational areas, as well as potential commuter bus stops along US 80 and SR17. Segment in Capital Improvement Plan.	Marked Bicycle Lanes	3.11	**86.3**	**20.0**	**25.5**	**23.0**	**13.8**	**39.25**
13	92	Sand Hill Road, Segment 2	Stagefield Road to Boggy Road	Adding turn lanes will improve mobility and safe vehicular access to neighborhoods. Pedestrian and bicycle facilities will help residents access schools and recreational areas, as well as potential commuter bus stops along US 80 and SR17.	Marked Bicycle Lanes	1.31	**82.3**	**20.0**	**25.5**	**23.0**	**13.8**	**39.25**
14	48	Goshen Road	SR 21 to Effingham Parkway	Many residences are located in the vicinity of Goshen Road, which is part of the southernmost continuous E-W route in Effingham County. A bike lane is necessary to safely connect area residents to destinations along SR 21. Road improvements along Goshen Road are in the Capital Improvement Plan.	Marked Bicycle Lanes	2.82	**72.3**	**10.0**	**25.5**	**23.0**	**13.8**	**39.25**
15	122	4th Street / Rincon Stillwell Road	SR 21 to Bunyan Kessler Road	Key segment of integrated bicycle/pedestrian network, connects residential neighborhoods with downtown Rincon and Elementary School	Marked Bicycle Lanes	1.49	**75.0**	**10.0**	**25.5**	**23.0**	**12.5**	**38.00**
16	131	Rincon Stillwell Road	Ft Howard Road to Ebenezer Road	Part of scenic route system, key segment of bicycle network, provides access from residential areas in Rincon to Ebenezer Middle School and High School and ind park. Build in conjunction with Ft Howard, Rincon Stillwell, and 4th St bicycle facilities.	Marked Bicycle Lanes	1.40	**42.0**	**0.0**	**20.5**	**0.0**	**17.5**	**38.00**
17	39	Blue Jay Road	McCall Road to SandHill Road	This road is a primary E-W connector and should up upgraded to have better functionality. It can be initially widened by providing a center turning lane or otherwise adding occasional left and right turn bays in necessary places. Long-term, a four-lane road may be called for but is not currently justified by travel demand model volume projections. Blue Jay Road should also have bike lanes as it is a critical direct E-W bike link south of 119. In Capital Improvement Plan.	Multi-Use Path	9.36	**79.8**	**20.0**	**25.5**	**23.0**	**11.3**	**36.75**
18	95	SR 17, Segment 1	US 80 to Blue Jay Road	Bike/pededestrian facilities are needed in the vicinity of schools and future activity centers. SR 17 is a current state bike route, but is not safe due to the lack of dedicated facilities providing a buffer between bicyclists and fast-moving automobiles. All major roads should have sidewalks on them, especially if they have community facilities located alongside them.	Marked Bicycle Lanes	5.30	**73.8**	**10.0**	**25.5**	**23.0**	**11.3**	**36.75**
19	98	SR 30, Segment 2	SR 17 to Nease Road	Many residents in area need to access middle and high schools. Busy road requires separate pedestrian facilities for safety. This is an important link in a continuous pedestrian network.	Marked Bicycle Lanes	2.12	**69.8**	**10.0**	**25.5**	**23.0**	**11.3**	**36.75**
20	115	S Laurel Street	SR 21 to SR 119/SR 21 Realign	One of several streets highlighted in Springfield to provide N-S city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Springfield, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Marked Bicycle Lanes	2.19	**63.8**	**0.0**	**25.5**	**23.0**	**11.3**	**36.75**
21	84	Meldrim - Jabez Jones Connector	US 80 to Jabez Jones Road	Constructing a facility to connect Meldrim Road and Jabez Jones Road will greatly aid in regional connectivity and increased safety for area residents (especially in Meldrim). It will improve access to highways and schools, and reduce volumes at the intersections of SR 17 with US 80 and SR 30. Construct as a "Complete Street" with sidewalks and bike lanes in addition to automobile travel lanes. It may be necessary to signalize the intersection of US 80 with this project, based on traffic volume.	Marked Bicycle Lanes	1.70	**81.0**	**22.5**	**25.5**	**23.0**	**10.0**	**35.50**
22	76	Multi-Use Path along power line easement	Courthouse Road to SR 119	This multi-use path project provides a scenic non-vehicular connection between a large residential area and nearby middle and high schools via a power line easement. The segment of SR 119 adjacent to the two schools has a spike in vehicular incidents at times corresponding to the start and end of the school day. Providing more non-automobile options to get to school will improve the safety of students, their parents, and other drivers utilizing SR 119 between Springfield and Guyton.	Multi-Use Path	2.76	**68.5**	**10.0**	**25.5**	**23.0**	**10.0**	**35.50**

Table 6.5 Ranked List of Recommended Potential Bicycle Projects, Continued

Rank	Map ID	Facility Name	Extents	Details / Justification	Bicycle Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Bicycle +General
	83	Jabez Jones Road	SR 17 to SR 30	Adding pedestrian and bicycle facilities will help neighborhood kids get to the middle school and high school without having to navigate local highways by car. This is a safety improvement as well as an integral part of the overall bicycle and pedestrian network.	Marked Bicycle Lanes	1.04	**68.5**	**10.0**	**25.5**	**23.0**	**10.0**	**35.50**
24	105	Guyton Rails-To-Trails (underway)	Downtown Guyton	This project is already under construction, and provides an exciting recreational opportunity in the middle of the City of Guyton. Expanded southward into Meldrim, this rails-to-trails project also constitutes a viable bicycle commuter route.	Multi-Use Path	0.74	**62.5**	**0.0**	**25.5**	**23.0**	**10.0**	**35.50**
25	90	S Effingham High School woodland path	Richmond Drive to back of HS (between baseball and football field)	Adding a path through the woods would connect neighborhoods to middle and high school without forcing teenagers to drive on state highways, thus improving roadway safety. Consider pursuing this as a local project, potentially utilizing a boardwalk to traverse any area wetlands.	Multi-Use Path	0.35	**58.5**	**0.0**	**25.5**	**23.0**	**10.0**	**35.50**
26	101	US 80, Segment 2	SR 17 to Sandhill Road	Continuation of widening from Chatham County, terminate at Sand Hill Road (or Old River Road). State bike route. provide facilities (lanes/sidewalks) on all of US 80 within Effingham. Four state bike routes utilize this stretch of road and should have dedicated facilities for safety. All arterials should have sidewalks.	Marked Bicycle Lanes	4.48	**87.3**	**30.0**	**25.5**	**23.0**	**8.8**	**34.25**
27	117	SR 119, Segment 3	SR 21 to Laurel St	This recommended multi-use path along this roadway segment provides safe, direct multi-modal access to Downtown Springfield, and is a continuation of project #78. It also accommodates a State Bike Route.	Multi-Use Path	0.43	**61.3**	**0.0**	**25.5**	**23.0**	**8.8**	**34.25**
28	56	Old Augusta Road	SR 21 to Ft Howard Road	Paving this road will increased connectivity and reduced maintenance costs. It is also recommended to use Old Augusta Road as a scenic bicycle route. Construction has already begun on southern end. In Capital Improvement Plan.	Wide Shoulder	4.87	**43.0**	**10.0**	**15.5**	**0.0**	**17.5**	**33.00**
29	11	Long Bridge Road	Ebenezer Road to Wylly Road	Adding bike lanes to this road will connect existing county bike lanes to Old Augusta Road and Fort Howard Road (with implementation of #131 and #46), in addition to providing eventual access to SR 21 business and Downtown Rincon. It is a key segment of an integrated bicycle network, providing safe, direct transportation and recreation opportunities.	Marked Bicycle Lanes	0.10	**33.0**	**0.0**	**20.5**	**0.0**	**12.5**	**33.00**
30	127	Fort Howard Road, Segment 3	SR 21 to McCall Road	Ft Howard is an important E-W connector and should be continued west to provide direct access to employment center. Develop road (and RR crossing) as part of DRI. Construct "Complete Street" with bike lanes and sidewalks. Eventually this and parallel roads should connect to future Effingham Parkway.	Marked Bicycle Lanes	1.29	**81.3**	**22.5**	**25.5**	**23.0**	**6.3**	**31.75**
31	100	US 80, Segment 1	SR 17 to Chatham County Line	Four state bike routes utilize this stretch of road and should have dedicated facilities for safety. Additionally, all arterials should have sidewalks as they provide direction connections between many origins and destinations.	Marked Bicycle Lanes	0.78	**64.8**	**10.0**	**25.5**	**23.0**	**6.3**	**31.75**
32	53	McCall Road	SR 21 to Blue Jay Road (Blanford Rd)	McCall Road is a fairly high traffic volume road with a number of residences, schools, and nearby recreational and commercial destinations. Bicycle and pedestrian facilities are needed to safely connect neighborhoods to elementary school and park. McCall road has higher vehicular crash rate than other roads of identical functional class and the addition of wide shoulders and sidewalks can potentially help to make the road safer via mode substitution for short and mid-length trips.	Wide Shoulder	3.38	**63.5**	**10.0**	**20.5**	**23.0**	**10.0**	**30.50**
33	33	SR 119, Segment 4	SR 21 realign (Springfield) to SC State Line	This winding segment of SR 119 lacks a shoulder and has experienced several fatal crashes. Adding an improved shoulder (to standards of other State Route segments in the County) will help with safety in the area. Additionally adding roadside reflectors will reduce incidents based on failure to navigate turns at night.	Wide Shoulder	11.65	**59.3**	**30.0**	**15.5**	**0.0**	**13.8**	**29.25**
34	102	US 80, Segment 3	Sandhill Road to Bulloch County Line	Arterials should have sidewalks for multi-modal safety and accessibility. Additionally, facilities for a long distance state bike route are needed as the route continues into Bulloch County to connect with their greenway plan.	Wide Shoulder	1.09	**59.8**	**10.0**	**20.5**	**23.0**	**6.3**	**26.75**
	94	SR 119, Segment 1	SR 17 to Bulloch County Line	Adding an improved shoulder (to standards of other State Route segments in the County) will help with safety in the area. It will also allow recreational bicyclists to travel more easily between proposed multi-use paths and a bike route located in Bulloch County (119/Stilson Road) which eventually leads to Statesboro. A river recreation area is accessed from SR 119 at the county line.	Wide Shoulder	4.23	**56.8**	**30.0**	**15.5**	**0.0**	**11.3**	**26.75**
36	46	Fort Howard Road, Segment 1	Old Augusta Road to Rincon-Stillwell Road	Putting bicycle facilities along Fort Howard Road will connect large residential subdivisions to the City of Rincon, SR 21, area schools, and existing county bike lanes. It is a key segment of an integrated bicycle network.	Wide Shoulder	2.30	**36.8**	**10.0**	**15.5**	**0.0**	**11.3**	**26.75**

Table 6.5 Ranked List of Recommended Potential Bicycle Projects, Continued

Rank	Map ID	Facility Name	Extents	Details / Justification	Bicycle Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Bicycle +General
	96	SR 17, Segment 2	Blue Jay Road to Midland Road	The State Bike Route present along this road segment should be upgraded to include dedicated facilities due to volume and speed of adjacent traffic. Because a nearby rails-to-trails conversion (#89) may be costly or take some time to plan, SR 17 should be upgraded to accommodate multiple modes.	Marked Bicycle Lanes	4.96	**36.8**	**10.0**	**20.5**	**0.0**	**6.3**	**26.75**
38	124	Carolina Avenuenue (South)	W 17th Street to N Ridge Drive	This project provides rear access to Lowe's and other development along SR 21 from residential Rincon, reducing the need for local traffic to utilize arterials. It was specifically requested by the Rincon planning department.	Wide Shoulder	0.69	**75.0**	**22.5**	**20.5**	**23.0**	**5.0**	**25.50**
39	93	Sand Hill Road, Segment 3	Boggy Road to railbed	Adding turn lanes will improve mobility and safe vehicular access to neighborhoods. Pedestrian and bicycle facilities will help residents access schools and recreational areas, as well as potential commuter bus stops along US 80 and SR17.	Wide Shoulder	1.70	**24.3**	**0.0**	**15.5**	**0.0**	**8.8**	**24.25**
40	51	Long Pond Road	Ft Howard Road to Rincon Stillwell Road	In tandem with projects #122, #46, and #11, bicycle facilities along this roadway segment allow Rincon residents to access schools, recreation areas, and existing/proposed bike lanes.	Wide Shoulder	0.97	**33.0**	**10.0**	**15.5**	**0.0**	**7.5**	**23.00**
41	37	4th Street / Rincon-Stillwell Road	Bunyan Kessler Road to Long Pond Road	This is a key segment of an integrated bicycle network and would be most effective built in conjunction with projects #122 and #51.	Wide Shoulder	0.24	**23.0**	**0.0**	**15.5**	**0.0**	**7.5**	**23.00**
42	40	Bunyan Kessler Road	Rincon-Stillwell Road to Fort Howard Road	Adding a shoulder to Bunyon Kessler Road will help bicyclists travel north and south just outside of Rincon. It is a key segment of an integrated bicycle network and increases safety and connectivity.	Wide Shoulder	0.91	**30.5**	**10.0**	**15.5**	**0.0**	**5.0**	**20.50**
	41	Chimney Road	SR 21 to Old Augusta Road	Chimney Road has many residences located along it and is the first E-W connector between SR 21 and Old Augusta Road when entering Effingham County from the south. It is a critical link for adding bicycle facilities, which will enable children to get to school and parks more easily as well as generally increasing non-vehicular access to commercial destinations along SR 21.	Wide Shoulder	2.13	**30.5**	**10.0**	**15.5**	**0.0**	**5.0**	**20.50**
	77	Rahn Station Road	SR 21 to McCall Road at Effingham Parkway	Rahn Station Road is one of four recommended E-W bike routes in the southern half of the county. A facility on this road will connect existing lanes along Ebenezer Road to new lanes along Effingham Parkway, providing a decent level of large-scale bicycle network connectivity in the area.	Wide Shoulder	3.60	**30.5**	**10.0**	**15.5**	**0.0**	**5.0**	**20.50**
	85	Meldrim Road	Central Avenue (Meldrim) to US 80	This project provides greater opportunity for Meldrim residents to access the highway and community facilities by bike.	Wide Shoulder	1.28	**30.5**	**10.0**	**15.5**	**0.0**	**5.0**	**20.50**

Table 6.6 Ranked List of Recommended Potential Pedestrian Projects

Rank	Map ID	Facility Name	Extents	Details / Justification	Pedestrian Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Pedestrian +General
1	44	Effingham Parkway, Segment 2	Blue Jay Road to SR 119	Building a primary N-S roadway in the south central part of Effingham County would support high-impact economic development opportunities, serve as a truck bypass (to SR 21), and greatly increase regional connectivity. Effingham Parkway is listed in both the STIP and Capital Improvement Plan.	Sidewalks on Both Sides	7.85	**101.0**	**32.5**	**25.5**	**23.0**	**20.0**	**43.00**
2	89	Rails-to-Trails	Downtown Guyton to Meldrim @ 2nd Street	Prime opportunity for recreational and mobility-oriented multi-use path. Using old railbeds as low-impact trails is a method to preserve railroad right-of-way in event of future passenger train service to area.	Multi-Use Path	13.62	**82.5**	**10.0**	**25.5**	**23.0**	**20.0**	**43.00**
3	126	Fort Howard Road, Segment 2	SR 21 to Old Augusta Road	Roadway operations and access to residential development would be improved with turn lanes. This road is the primary means of access to Rincon and SR 21 for many residents, and dedicated pedestrian and bicycle facilities are recommended to give all residents transportation choice. Fort Howard Road is also a key segment of an integrated bicycle network to the east of Rincon	Sidewalks on Both Sides	2.51	**98.8**	**30.0**	**25.5**	**23.0**	**16.3**	**39.25**
	133	SR 21, Segment 1	Old Augusta to Ft Howard Road	Widening to 6 lanes (from I-95 through the City of Rincon) is justified by this study's travel demand model to provide adequate automobile capacity for Level of Service C or above in 2030, based on current travel behavior. However, any widening of SR 21 within Rincon city limits would negatively impact the existing urban character and future corridor revitalization efforts. Thus, Fort Howard Road is recommended as the northernmost potential terminus of this roadway widening project. Based on the preliminary environmental review, there are also a number of properties and structures along SR 21 between Goshen Road and Fort Howard Road in unincorporated Effingham that would be potentially impacted by a roadway widening. First implementing appropriate ITS and operational improvements (access management, channelized right turn lanes) on SR 21 in Chatham County could delay the need for widening of SR 21 north of the Effingham/Chatham County Line or Goshen Road. Regardless of improvements implemented for automobile movement, safe pedestrian and bicycle access is necessary along this corridor. Due to high adjacent traffic volume and speeds, a multi-use path on each side of SR-21 is recommended to separate walkers and bicyclists from cars.	Multi-Use Path	3.60	**98.8**	**30.0**	**25.5**	**23.0**	**16.3**	**39.25**
5	123	Blue Jay / Blandford Road	SR 21 to McCall Road	Blue Jay is the primary E-W connector south of SR 119 and should have dedicated pedestrian and bicycle facilities. Occasional right turn lanes will improve traffic flow, though additional vehicular through-lanes are not justified by the study's travel demand model at this time.	Multi-Use Path	1.89	**88.8**	**20.0**	**25.5**	**23.0**	**16.3**	**39.25**
6	134	SR 21, Segment 2	Ft Howard Road to 4th Street (Rincon)	Continue to implement multi-use paths along SR 21 to provide multi-modal access to school, downtown, residential areas. SR 21 is a key segment of an integrated multimodal network.	Multi-Use Path	1.37	**78.8**	**10.0**	**25.5**	**23.0**	**16.3**	**39.25**
	135	SR 21, Segment 3	4th St (Rincon) to Laurel St (Springfield)	Construct dedicated bicycle and pedestrian facilities along SR 21 to provide a direct multi-modal connection between Rincon and Springfield. This roadway segment is a proposed State Bike Route and also provides access to employment centers at Ebenezer Road and SR 21 as well as schools and recreational opportunities.	Sidewalks on Both Sides	6.01	**78.8**	**10.0**	**25.5**	**23.0**	**16.3**	**39.25**
8	49	Goshen/Hodgeville/ Kolick Helmey Roads	Effingham Parkway to SR 30	Many residences are located in the vicinity of this corridor, which is the southernmost continuous E-W route in Effingham County. Sidewalks are necessary to safely connect area residents to a number of schools as well as destinations along SR 21. Adding sidewalks to this corridor is a critical link in the pedestrian network.	Sidewalks on Both Sides	3.75	**49.3**	**10.0**	**0.0**	**23.0**	**16.3**	**39.25**
9	47	Research Forest E-W connector	McCall Road to Hodgeville Road (in DRI)	If Research Forest Industrial Park is developed, E-W connectivity between McCall Road and SR 21 (and optimally Hodgeville Road) is needed. Coordinate planning and construction of this road with the Research Forest Site Plan and eventually Effingham Pkwy. Construct as "Complete Street" with pedestrian and bike facilities.	Sidewalks on Both Sides	2.65	**96.0**	**32.5**	**25.5**	**23.0**	**15.0**	**38.00**
10	45	Effingham Parkway (Chatham)	Chatham County Line to vicinity of Monteith Road (Chatham)	This segment of Effingham Parkway (project #44) is located in Chatham County and is a necessary link in connecting the potential parkway to a southern terminus that can handle a high potential volume of vehicles.	Sidewalks on Both Sides	1.76	**88.5**	**25.0**	**25.5**	**23.0**	**15.0**	**38.00**
	65	Effingham Parkway, Segment 1	County Line to Blue Jay Road	Building a major N-S roadway in the south central part of Effingham County would support high-impact economic development opportunities, serve as a truck bypass (to SR 21), and greatly increase regional connectivity. Effingham Parkway is listed in both the STIP and Capital Improvement Plan.	Sidewalks on Both Sides	5.11	**88.5**	**25.0**	**25.5**	**23.0**	**15.0**	**38.00**
12	82	Honey Ridge Road	SR 17 to SR 119	Sidewalks are necessary along Honey Ridge Road to safely access the recreation area and better separate pedestrians (including neighborhood children) from adjacent truck movement as this road is currently used as a shortcut from SR 17 to SR 119 to avoid their intersection in Guyton.	Sidewalks on Both Sides	2.25	**52.0**	**10.0**	**0.0**	**23.0**	**15.0**	**38.00**
13	128	Lexington Avenuenue	9th Street to Madison Oaks Drive (Rincon)	Lexington Avenuenue is a key segment of an integrated pedestrian network. It connects residential areas with downtown Rincon, a ballpark, and an elementary school.	Sidewalks on Both Sides	1.44	**52.0**	**10.0**	**0.0**	**23.0**	**15.0**	**38.00**

Table 6.6 Ranked List of Recommended Potential Pedestrian Projects, Continued

Rank	Map ID	Facility Name	Extents	Details / Justification	Pedestrian Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Pedestrian +General
14	78	SR 119, Segment 2	SR 17 to SR 21	A center turning lane along with right turn bays along this length of road as well as bike/pedestrian accommodation (multi-use path) is recommended to improve traffic operations and provide greater accessiblity through mode choice. 2030 travel demand model runs do not show excessive congestion to warrant additional through-lanes by 2030. If local input still shows desire for eventual 4-lane road, however, a multi-use path must be placed far enough from road to preserve adequate future ROW. A multi-use path, rather than bike lanes and sidewalks, is recommended due to the probable use of the facility by schoolchildren. Widening recommendations are in the Capital Improvement Plan.	Multi-Use Path	5.02	**92.3**	**30.0**	**25.5**	**23.0**	**13.8**	**36.75**
15	91	Sand Hill Road, Segment 1	US 80 to Stagefield Road	Adding turn lanes will improve mobility and safe vehicular access to neighborhoods. Pedestrian and bicycle facilities will help residents access schools and recreational areas, as well as potential commuter bus stops along US 80 and SR17. Segment in Capital Improvement Plan.	Sidewalks on Both Sides	3.11	**86.3**	**20.0**	**25.5**	**23.0**	**13.8**	**36.75**
16	92	Sand Hill Road, Segment 2	Stagefield Road to Boggy Road	Adding turn lanes will improve mobility and safe vehicular access to neighborhoods. Pedestrian and bicycle facilities will help residents access schools and recreational areas, as well as potential commuter bus stops along US 80 and SR17.	Sidewalks on Both Sides	1.31	**82.3**	**20.0**	**25.5**	**23.0**	**13.8**	**36.75**
17	48	Goshen Road	SR 21 to Effingham Parkway	Many residences are located in the vicinity of Goshen Road, which is part of the southernmost continuous E-W route in Effingham County. A bike lane is necessary to safely connect area residents to destinations along SR 21. Road improvements along Goshen Road are in the Capital Improvement Plan.	Sidewalks on Both Sides	2.82	**72.3**	**10.0**	**25.5**	**23.0**	**13.8**	**36.75**
18	122	4th Street / Rincon Stillwell Road	SR 21 to Bunyan Kessler Road	Key segment of integrated bicycle/pedestrian network, connects residential neighborhoods with downtown Rincon and Elementary School	Sidewalks on One Side	1.49	**75.0**	**10.0**	**25.5**	**23.0**	**12.5**	**35.50**
19	39	Blue Jay Road	McCall Road to SandHill Road	This road is a primary E-W connector and should up upgraded to have better functionality. It can be initially widened by providing a center turning lane or otherwise adding occasional left and right turn bays in necessary places. Long-term, a four-lane road may be called for but is not currently justified by travel demand model volume projections. Blue Jay Road should also have bike lanes as it is a critical direct E-W bike link south of 119. In Capital Improvement Plan.	Multi-Use Path	9.36	**79.8**	**20.0**	**25.5**	**23.0**	**11.3**	**34.25**
20	95	SR 17, Segment 1	US 80 to Blue Jay Road	Bike/pededestrian facilities are needed in the vicinity of schools and future activity centers. SR 17 is a current state bike route, but is not safe due to the lack of dedicated facilities providing a buffer between bicyclists and fast-moving automobiles. All major roads should have sidewalks on them, especially if they have community facilities located alongside them.	Sidewalks on Both Sides	5.30	**73.8**	**10.0**	**25.5**	**23.0**	**11.3**	**34.25**
21	98	SR 30, Segment 2	SR 17 to Nease Road	Many residents in area need to access middle and high schools. Busy road requires separate pedestrian facilities for safety. This is an important link in a continuous pedestrian network.	Sidewalks on Both Sides	2.12	**69.8**	**10.0**	**25.5**	**23.0**	**11.3**	**34.25**
22	115	S Laurel Street	SR 21 to SR 119/SR 21 Realign	One of several streets highlighted in Springfield to provide N-S city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Springfield, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on Both Sides	2.19	**63.8**	**0.0**	**25.5**	**23.0**	**11.3**	**34.25**
23	107	119/21 Realignment in Springfield	SR 119 at school driveway to Old Tusculsum Road	GDOT has finished the design phase for this project, which will lead to more optimal truck movement in the area. However, sidewalks should be added to this roadway segment to connect west and east Springfield to each other, as well as a nearby school. In STIP.	Sidewalks on Both Sides	0.52	**60.8**	**22.5**	**0.0**	**23.0**	**11.3**	**34.25**
24	43	Ebenezer Road	SR 21 to Waldhour Road (by powerlines)	New sidewalks along Ebenezer Road are critical in safely connecting nearby residential areas to a county middle school and elementary school.	Sidewalks on Both Sides	3.28	**48.3**	**10.0**	**0.0**	**23.0**	**11.3**	**34.25**
	118	SR 21, Segment 4	SR 21@ S Laurel Street to SR 119/SR 21 Realign	One of several streets highlighted in Springfield to provide N-S city street connectivity. This segment provides direct access to the primary County Hospital and Veterans Park. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Springfield, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on Both Sides	2.65	**48.3**	**10.0**	**0.0**	**23.0**	**11.3**	**34.25**
26	16	SR 21, Segment 5	Old Tusculum to Springfield-Egypt Road	Adding a sidewalk provides opportunity for area residents to access the highway and community facilities in Springfield. Implement in combination with projects # 72, #118, #117, and #115.	Sidewalks on One Side	2.46	**44.3**	**10.0**	**0.0**	**23.0**	**11.3**	**34.25**
27	84	Meldrim - Jabez Jones Connector	US 80 to Jabez Jones Road	Constructing a facility to connect Meldrim Road and Jabez Jones Road will greatly aid in regional connectivity and increased safety for area residents (especially in Meldrim). It will improve access to highways and schools, and reduce volumes at the intersections of SR 17 with US 80 and SR 30. Construct as a "Complete Street" with sidewalks and bike lanes in addition to automobile travel lanes. It may be necessary to signalize the intersection of US 80 with this project, based on traffic volume.	Sidewalks on Both Sides	1.70	**81.0**	**22.5**	**25.5**	**23.0**	**10.0**	**33.00**

Table 6.6 Ranked List of Recommended Potential Pedestrian Projects, Continued

Rank	Map ID	Facility Name	Extents	Details / Justification	Pedestrian Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Pedestrian +General
28	76	Multi-Use Path along power line easement	Courthouse Road to SR 119	This multi-use path project provides a scenic non-vehicular connection between a large residential area and nearby middle and high schools via a power line easement. The segment of SR 119 adjacent to the two schools has a spike in vehicular incidents at times corresponding to the start and end of the school day. Providing more non-automobile options to get to school will improve the safety of students, their parents, and other drivers utilizing SR 119 between Springfield and Guyton.	Multi-Use Path	2.76	**68.5**	**10.0**	**25.5**	**23.0**	**10.0**	**33.00**
	83	Jabez Jones Road	SR 17 to SR 30	Adding pedestrian and bicycle facilities will help neighborhood kids get to the middle school and high school without having to navigate local highways by car. This is a safety improvement as well as an integral part of the overall bicycle and pedestrian network.	Sidewalks on Both Sides	1.04	**68.5**	**10.0**	**25.5**	**23.0**	**10.0**	**33.00**
30	53	McCall Road	SR 21 to Blue Jay Road (Blanford Rd)	McCall Road is a fairly high traffic volume road with a number of residences, schools, and nearby recreational and commercial destinations. Bicycle and pedestrian facilities are needed to safely connect neighborhoods to elementary school and park. McCall road has higher vehicular crash rate than other roads of identical functional class and the addition of wide shoulders and sidewalks can potentially help to make the road safer via mode substitution for short and mid-length trips.	Sidewalks on Both Sides	3.38	**63.5**	**10.0**	**20.5**	**23.0**	**10.0**	**33.00**
31	105	Guyton Rails-To-Trails (underway)	Downtown Guyton	This project is already under construction, and provides an exciting recreational opportunity in the middle of the City of Guyton. Expanded southward into Meldrim, this rails-to-trails project also constitutes a viable bicycle commuter route.	Multi-Use Path	0.74	**62.5**	**0.0**	**25.5**	**23.0**	**10.0**	**33.00**
	116	Springfield Elementary School Drive Extension	Early Street to Spring ES driveway entrance	Extending Ash St northward (to the left side of the Armory) to Early Street will provide a direct connection between homes and residences in the area and downtown Springfield. This is an essential link in creating a more connected street network on the northern side of town and reducing dependency on automobiles for local trips.	Sidewalks on Both Sides	0.33	**59.5**	**22.5**	**0.0**	**23.0**	**10.0**	**33.00**
33	90	S Effingham High School woodland path	Richmond Drive to back of HS (between baseball and football field)	Adding a path through the woods would connect neighborhoods to middle and high school without forcing teenagers to drive on state highways, thus improving roadway safety. Consider pursuing this as a local project, potentially utilizing a boardwalk to traverse any area wetlands.	Multi-Use Path	0.35	**58.5**	**0.0**	**25.5**	**23.0**	**10.0**	**33.00**
34	80	Courthouse Road	SR 17 to Stagecoach Avenue	Extending Courthouse Road to the Stagecoach Avenue off of Sand Hill Road will provide greater regional connectivity, allowing better citizen access to a major recreation center.	Sidewalks on Both Sides	2.34	**55.5**	**22.5**	**0.0**	**23.0**	**10.0**	**33.00**
35	60	Wylly /High Bluff/ Tommy Long Road	Long Bridge Road to End	A sidewalk on this road allows nearby residents to safely access both schools and recreational opportunities in the area without a vehicle.	Sidewalks on One Side	2.34	**47.0**	**10.0**	**0.0**	**23.0**	**10.0**	**33.00**
36	119	Standard Lane	SR 119 to Old Tusculum Road	This roadway segment is recommended to include sidewalks as it will provide direct pedestrian connectivity between neighborhoods, a school, hospital, and park.	Sidewalks on Both Sides	0.91	**47.0**	**10.0**	**0.0**	**23.0**	**10.0**	**33.00**
	87	Nease Road	SR 30 to St. Matthew's Road	This sidewalk will allow neighborhood children to safely walk down a neighborhood through-street to access the nearby high school and middle school.	Sidewalks on One Side	0.55	**43.0**	**10.0**	**0.0**	**23.0**	**10.0**	**33.00**
38	103	Anderson Street	SR 17 to Magnolia Street	This is a key segment of integrated pedestrian network in Guyton, and connects an elementary school to a park, and local residents to both.	Sidewalks on Both Sides	0.29	**37.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
39	104	Gracen Road	SR 119 to Summer Place	This is a key segment of integrated pedestrian network in Guyton, and connects an elementary school to a park, and local residents to both.	Sidewalks on Both Sides	0.45	**37.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
	106	Magnolia Street	SR 119 to Anderson Street	This is a key segment of integrated pedestrian network in Guyton, and safely connects residents to multiple parks as well as area business located along SR 119.	Sidewalks on Both Sides	0.85	**37.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
	111	Ash Street / Ash Street Extension	S Laurel Street to Early Street	One of several streets highlighted in Springfield to provide N-S city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Springfield, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on Both Sides	1.97	**37.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
	112	E Madison Street	Laurel Street to N Ash Street	One of several streets highlighted in Springfield to provide E-W city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Springfield, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on Both Sides	0.28	**37.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
	121	W 1st Street Extension	SR 21 to SR 119	A sidewalk is needed in front of the hospital and Veteran's Park to provide connectivity between them and downtown Springfield's commericial areas, neighborhoods, and community facilities.	Sidewalks on Both Sides	0.39	**37.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
	125	E 9th Street (Rincon)	SR 21 to Lexington Avenue	One of several streets highlighted in Rincon to provide E-W city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Rincon, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on Both Sides	0.18	**37.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**

Table 6.6 Ranked List of Recommended Potential Pedestrian Projects, Continued

Rank	Map ID	Facility Name	Extents	Details / Justification	Pedestrian Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Pedestrian +General
	121	W 1st Street Extension	SR 21 to SR 119	A sidewalk is needed in front of the hospital and Veteran's Park to provide connectivity between them and downtown Springfield's commericial areas, neighborhoods, and community facilities.	Sidewalks on Both Sides	0.39	**37.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
	125	E 9th Street (Rincon)	SR 21 to Lexington Avenue	One of several streets highlighted in Rincon to provide E-W city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Rincon, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on Both Sides	0.18	**37.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
	7	Old Tusculum Road, Segment 2	SR 21 to Standard Lane	Adding sidewalks to this road will enable children to safely walk to local schools, and allow general pedestrian access to destinations along SR 21 and in downtown Springfield. This improvement would be most effective in combination with projects #72, #121, and #118.	Sidewalks on Both Sides	0.33	**33.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
46	50	Long Bridge Road	Ebenezer Road to 4000 ft N of Wylly Rd	Adding a sidewalk here would provide a pedestrian connection to a recreation area, as well as providing a facility on which children could walk to Ebenezer Middle and Elementary Schools.	Sidewalks on One Side	1.60	**33.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
	58	Vale Royal Drive	McCall Road to Westwood Drive	This is a central road within a compact existing neighborhood. In combination with project #59, sidewalks along this street segment will help area residents safely access SR 21 commercial and employment opportunities, recreational areas, and a nearby school.	Sidewalks on Both Sides	0.29	**33.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
	72	Old Tusculum Road, Segment 1	SR 21 to SR 119 realign (GDOT)	Adding sidewalks to this road will enable children to safely walk to local schools, and allow general pedestrian access to destinations along SR 21 and in downtown Springfield. This improvement would be most effective in combination with projects #7, #121, and #118.	Sidewalks on Both Sides	0.18	**33.0**	**0.0**	**0.0**	**23.0**	**10.0**	**33.00**
	101	US 80, Segment 2	SR 17 to Sandhill Road	Continuation of widening from Chatham County, terminate at Sand Hill Road (or Old River Road). State bike route. provide facilities (lanes/sidewalks) on all of US 80 within Effingham. Four state bike routes utilize this stretch of road and should have dedicated facilities for safety. All arterials should have sidewalks.	Sidewalks on Both Sides	4.48	**87.3**	**30.0**	**25.5**	**23.0**	**8.8**	**31.75**
50	117	SR 119, Segment 3	SR 21 to Laurel St	This recommended multi-use path along this roadway segment provides safe, direct multi-modal access to Downtown Springfield, and is a continuation of project #78. It also accommodates a State Bike Route.	Multi-Use Path	0.43	**61.3**	**0.0**	**25.5**	**23.0**	**8.8**	**31.75**
51	127	Fort Howard Road, Segment 3	SR 21 to McCall Road	Ft Howard is an important E-W connector and should be continued west to provide direct access to employment center. Develop road (and RR crossing) as part of DRI. Construct "Complete Street" with bike lanes and sidewalks. Eventually this and parallel roads should connect to future Effingham Parkway.	Sidewalks on Both Sides	1.29	**81.3**	**22.5**	**25.5**	**23.0**	**6.3**	**29.25**
52	100	US 80, Segment 1	SR 17 to Chatham County Line	Four state bike routes utilize this stretch of road and should have dedicated facilities for safety. Additionally, all arterials should have sidewalks as they provide direction connections between many origins and destinations.	Sidewalks on Both Sides	0.78	**64.8**	**10.0**	**25.5**	**23.0**	**6.3**	**29.25**
53	102	US 80, Segment 3	Sandhill Road to Bulloch County Line	Arterials should have sidewalks for multi-modal safety and accessibility. Additionally, facilities for a long distance state bike route are needed as the route continues into Bulloch County to connect with their greenway plan.	Sidewalks on Both Sides	1.09	**59.8**	**10.0**	**20.5**	**23.0**	**6.3**	**29.25**
54	15	SR 17, Segment 4	Old Elam Cemetary Road to 1300 ft S of Egypt Ardmore Road	SR 17 is the main street in the Egypt community, and adding a short sidewalk will help local residents safely access commercial destinations in the area. Eventually add pedestrian crosswalk and/or signal at Egypt-Ardmore Road to aid in local multimodal mobility. Locate the sidewalk on the northeast side of road.	Sidewalks on One Side	0.42	**43.3**	**10.0**	**0.0**	**23.0**	**6.3**	**29.25**
55	97	SR 30, Segment 1	Nease Road to Kolic Helmey Road	Many residents in area need to access middle and high schools. Busy road requires separate pedestrian facilities for safety. This is an important link in a continuous pedestrian network.	Sidewalks on Both Sides	3.06	**39.3**	**10.0**	**0.0**	**23.0**	**6.3**	**29.25**
56	34	SR 119, Segment 5	Marion Avenue to Clyo-Kildare Road	Adding a sidewalk to the east side of SR 119 will increase pedestrian safety and access to future businesses on SR 21 in vicinity of Clyo.	Sidewalks on One Side	0.68	**33.3**	**0.0**	**0.0**	**23.0**	**6.3**	**29.25**
57	35	SR 21, Segment 6	Shawnee Egypt Road to 500 ft N of Shawnee Road	Providing a short sidewalk will enhance pedestrian access to commercial development and potential transit stops for local residents. Sidewalk is recommended on northeast side of SR 21. This project is located in an environmental justice area where people are more likely to visit destinations through some means other than driving themselves.	Sidewalks on One Side	0.32	**33.3**	**0.0**	**0.0**	**23.0**	**6.3**	**29.25**
58	79	SR 17, Segment 3	Midland Road to Pound Road	This sidewalk connects recommended sidewalk facilities along Midland Road to the multi-use path corridor (#89) in Pineora via SR 17. It is part of an integrated pedestrian network.	Sidewalks on One Side	0.66	**33.3**	**0.0**	**0.0**	**23.0**	**6.3**	**29.25**
59	124	Carolina Avenuenue (South)	W 17th Street to N Ridge Drive	This project provides rear access to Lowe's and other development along SR 21 from residential Rincon, reducing the need for local traffic to utilize arterials. It was specifically requested by the Rincon planning department.	Sidewalks on One Side	0.69	**75.0**	**22.5**	**20.5**	**23.0**	**5.0**	**28.00**
60	9	Powell Road Extension	4th Avenue to SR 119 (intersect w/ Little McCall Realignment)	Constructing this road will allow local vehicular and pedestrian access to the residential areas of Guyton without forcing vehicular traffic through the busy SR 119 / SR 17 intersection in downtown Guyton. Would be most effective in combination with project # 78 (realignment of Little McCall Road intersection with SR 119).	Sidewalks on One Side	0.54	**60.5**	**32.5**	**0.0**	**23.0**	**5.0**	**28.00**

Table 6.6 Ranked List of Recommended Potential Pedestrian Projects, Continued

Rank	Map ID	Facility Name	Extents	Details / Justification	Pedestrian Improvement	Length (miles)	Total Score	Roadway Score	Bike Score	Pedestrian Score	General Score	Pedestrian +General
60	9	Powell Road Extension	4th Avenue to SR 119 (intersect w/ Little McCall Realignment)	Constructing this road will allow local vehicular and pedestrian access to the residential areas of Guyton without forcing vehicular traffic through the busy SR 119 / SR 17 intersection in downtown Guyton. Would be most effective in combination with project # 78 (realignment of Little McCall Road intersection with SR 119).	Sidewalks on One Side	0.54	**60.5**	**32.5**	**0.0**	**23.0**	**5.0**	**28.00**
61	64	Courthouse Road	SR 21 to SR 17	Many neighborhoods are located along Courthouse Road and sidewalks would more safely connect residents to Springfield and parks. Currently, vehicles travel along this road in numbers and at speeds that make it unsafe for pedestrians to share the road with them.	Sidewalks on Both Sides	8.35	**52.0**	**10.0**	**14.0**	**23.0**	**5.0**	**28.00**
62	21	Clyo-Kildare Road	SR 119 to Marion Avenue	Local pedestrian connectivity, access to SR 119. Most effective in combination with projects #27, #34, and #17	Sidewalks on One Side	0.09	**42.0**	**10.0**	**0.0**	**23.0**	**5.0**	**28.00**
63	27	Marion Avenue	SR 119 to Clyo-Kildare Road	A sidewalk is recommended for the eastern side of the street to aid in pedestrian safety and connectivity to SR 119. Several fatal vehicular incidents occurred in vicinity, and adding a sidewalk may reduce the chance of pedestrian involvement or give a vehicle an additional correction buffer.	Sidewalks on One Side	0.69	**42.0**	**10.0**	**0.0**	**23.0**	**5.0**	**28.00**
64	86	Midland Road	SR 30 to Rails-to-Trails	Adding a pedestrian facilities along Midland Road will help people to access to future commercial nodes as well as subdivisions, schools, and recreational areas. It is an important piece of a large-scale pedestrian network that will be necessary as the county expands. Minimally, right-of-way should be preserved and sidewalks could be implemented on one side at a time, beginning with the northernmost section accommodating existing neighborhoods between Courthouse Road and SR 17.	Sidewalks on Both Sides	8.38	**42.0**	**10.0**	**0.0**	**23.0**	**5.0**	**28.00**
65	57	Stephens Drive	Goshen Road to McCall Road	A sidewalk is needed to provide a pedestrian connection between Goshen Road and McCall Road without having to utilize SR 21. This road helps areas residents to access a nearby park and elementary school.	Sidewalks on One Side	0.58	**38.0**	**10.0**	**0.0**	**23.0**	**5.0**	**28.00**
66	59	Westwood Drive	Vale Royal Dr to SR 21	This is a central road within a compact existing neighborhood. In combination with project #58, sidewalks along this street segment will help area residents safely access SR 21 commercial and employment opportunities, recreational areas, and a nearby school.	Sidewalks on Both Sides	0.46	**38.0**	**10.0**	**0.0**	**23.0**	**5.0**	**28.00**
67	17	4th Street	Marion Avenue to Stillwell-Clyo Road	4th Street is a primary street in Clyo. Adding a sidewalk to it will provide a continuous connection between future pedestrian facilities on Marion Avenue and Stillwell-Clyo Road. Locate sidewalk on south side of 4th Street, and build in combination with project #36.	Sidewalks on One Side	0.22	**32.0**	**0.0**	**0.0**	**23.0**	**5.0**	**28.00**
68	23	Fair Street	Clyo-Stillwell Road to community center	Adding a sidewalk to this road will provides opportunity for area residents to access Clyo community center safely, and helps to address environmental justice issues in this low-income part of the county.	Sidewalks on One Side	0.32	**32.0**	**0.0**	**0.0**	**23.0**	**5.0**	**28.00**
69	30	Shawnee Road, Segment 1	SR 21 to Old Dixie Highway	Paving this street provides opportunity for area residents to access SR 21 and community facilities in Shawnee. Also provides pedestrian safety if #31 built as the road may experience slight increase in traffic.	Sidewalks on One Side	1.05	**32.0**	**0.0**	**0.0**	**23.0**	**5.0**	**28.00**
70	36	Stillwell-Clyo Road	4th Street to Fair Street	Stillwell-Clyo Rd is a local direct travel route with fast-moving vehicles. Adding a sidewalk on the west side of the street will help Clyo residents safely access the community center on Fair St	Sidewalks on One Side	0.58	**32.0**	**0.0**	**0.0**	**23.0**	**5.0**	**28.00**
71	109	2nd Street	Ash Street to RR Avenue	One of several streets highlighted in Springfield to provide E-W city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Springfield, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on Both Sides	0.34	**32.0**	**0.0**	**0.0**	**23.0**	**5.0**	**28.00**
72	110	3rd Street	SR 21 to S Laurel Street	One of several streets highlighted in Springfield to provide E-W city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Springfield, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on Both Sides	0.63	**32.0**	**0.0**	**0.0**	**23.0**	**5.0**	**28.00**
73	113	Early Street	Laurel Street to "Springfield ES Drive Ext" between Ash Street and Lake Dr	One of several streets highlighted in Springfield to provide E-W city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Springfield, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on Both Sides	0.35	**32.0**	**0.0**	**0.0**	**23.0**	**5.0**	**28.00**
74	114	Railroad Avenue	W 2nd Street to W 3rd Street	One of several streets highlighted in Springfield to provide N-S city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Springfield, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on One Side	0.07	**32.0**	**0.0**	**0.0**	**23.0**	**5.0**	**28.00**
75	120	Stillwell Road	Laurel Street to Ash Street	One of several streets highlighted in Springfield to provide E-W city street connectivity. Ultimately a block-by-block local pedestrian and bicycle plan should be developed by the City of Springfield, but highlighted improvements serve as a preliminary guide to potential multi-modal upgrades.	Sidewalks on Both Sides	0.36	**32.0**	**0.0**	**0.0**	**23.0**	**5.0**	**28.00**

Recommended Policies

In addition to the project list, which supports the goals of the transportation plan, a number of policies will help Effingham to attain its vision of being inclusive, sustainable, and supportive of the environment and continued high quality of life. These policies can be incorporated into the Effingham County Comprehensive Plan, future Transportation Plan, local ordinances, and departmental guidelines as appropriate at the discretion of Effingham County or local jurisdictions and governing bodies. The policies are beneficial to the community as a whole in understanding the relationship between transportation and other comprehensive planning elements.

Multi-Modal Connectivity, Mobility, and Access

To have a balanced transportation system that accommodates and provides choices for all users, it is necessary to have connected and accessible multi-modal networks. The following policies can assist in working towards this goal:

- Follow a policy of "Complete Streets" whereby provisions are made for automobiles, bicyclists, transit users, and pedestrians on every major transportation project. If it is not feasible to construct multi-modal facilities due to lack of current need or financial resources, preserve right-of-way so that they can be constructed in the future.
- Establish guidelines for ensuring bicycle and pedestrian connectivity between neighborhoods and adjacent land uses, which are often within close proximity but do not provide convenient access to pedestrians. This could include roadway design or short paths that link the areas.
- Update the zoning code to require that certain commercial and mixed-use land development projects include bicycle parking facilities and other bicycle-related amenities.
- Develop and promote education, enforcement and awareness programs to encourage bicycling and walking, advance safety and awareness for cyclists, walkers and drivers, and understand the rules of sharing right-of-way.

Travel Demand Management (TDM)

Travel Demand Management refers to a series of strategies that increase transportation system efficiency by lessening the number of vehicles using the transportation network, particularly roadways that are already strained beyond their capacity. TDM tactics include programs to increase usage of travel modes other than single occupant vehicles, employer-based programs such as flex-time or telecommuting, carpools, vanpools, and economic incentives. Rising energy prices and the negative environmental impact of many forms of transportation further underscore the need for effective TDM strategies, including the following:

- Encourage mixed-use development patterns via the future land use plan and zoning code(s) for the purpose of reducing automobile travel trip demand as well as vehicle miles traveled. Within appropriate locations, improve the balance between employment, housing, recreational, commercial, and other activities.
- Ensure that bicycle, pedestrian, and transit networks are at least as effective and convenient as automobiles.
- Implement access management along high-volume corridors.
- Encourage area employers to offer incentives for commuter alternative mode usage.
- Use traffic calming techniques along local roads where speeding is a concern, such as on-street parking, narrower widths, roundabouts, street trees, and speed humps.

Access Management

Access management focuses on the process of balancing access to property with the desire to preserve efficient through-movement. As development increases along a roadway, effective systems should combine and reduce street access points to increase public safety, extend the life of the roadway, reduce congestion, support alternative modes of transportation, and improve roadway character.

- Fund and complete corridor-specific access management plans along SR 21, SR 119, US 80, and other roads of high functional classification. The purpose of these plans is to develop implementable access management solutions as well as provide guidance to future land development access issues.
- Limit number of driveways per property, and locate them on lowest adjacent functionally classified road.
- Require interparcel connectivity by linking adjacent parking areas and walkways.
- Define minimum and maximum spacing of access points (both cross-streets and driveways) to provide a balance between efficient vehicle movement and multi-modal connectivity. For instance, pedestrian access points should be spaced between 200 and 500 feet apart, whereas intersections along arterials should be at least 1000 feet apart. Collector and local streets with lower design speeds can have more closely spaced intersections and driveways than arterials. Along high-volume roads, provide protected pedestrian crossing facilities at each signalized intersection.

Parking

While discussion of the storage of roadway vehicles is appropriate in a transportation plan, parking is most effectively addressed by ordinances governing urban design, land use, zoning, and development. Parking is the proverbial tail that wags the dog: provision of parking facilities and access to them often dictate the site layout and potential building footprints for any new construction.

To encourage multi-modal access to destinations and positively address other planning areas such as aesthetics of public space, economic development, housing affordability, and stormwater management, there are a number of guidelines concerning parking facilities that can be implemented, and which are important even in rural areas:

- Locate off-street parking in new developments behind or to the side of buildings. The majority of surface parking spaces should not be visible from roads. Directional signage can be used to assist patrons in locating vehicle parking areas as necessary.
- All local streets in commercial, mixed-use, or more dense residential areas (>8 dwelling units per acre) should have on-street parking on at least one side.
- Encourage businesses and organizations with different peak demand times to share parking areas whenever possible. Commuter park-and-ride lots can also utilize shared parking arrangements, particularly with churches or retail centers with excess weekday parking capacity.
- Implement maximum parking space requirements for all new developments and reduce or remove minimum requirements.
- Require the installation of bicycle parking racks in multi-family housing and all other non-residential developments according to a minimum ratio (to be determined) with motor vehicle spaces. For medium/large employers, encourage the creation/labeling of carpool spaces that are easily accessible to building entry/exit points to provide incentive for employee ridesharing.
- Promote the use of permeable or semi-permeable parking surfaces throughout the county to help control stormwater run-off and reduce negative impact to water quality.
- To minimize driveway access points, reduce impervious surface, assist with housing affordability, and enhance the small-town character of residences: encourage shared driveways; reduce construction of attached, front-facing garages; and/or provide rear (alley) entry or set-back vehicle storage areas.

Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems utilize technology to improve transportation system operations. ITS includes infrastructure applications to manage arterials, incidents, tolling, information, safety, general roadway operations, and emergency vehicle movement. Though Effingham is a primarily rural county, current commuting patterns and future growth rates will necessitate the use of some ITS strategies to make more efficient use of transportation infrastructure, preferably prior to investing in expensive upgrades and new projects. The following strategies could be utilized in Effingham for this purpose:

- Interconnect and coordinate all traffic signals in proximity to each other. For instance, implementing a coordinated and adaptive system along SR 21 may increase the effective capacity of this corridor.
- Provide traffic signal preemption for emergency vehicles.
- Provide information to travelers about congestion, route closings, and transit options. Implement a ridesharing/matching program in concert with new transit service. Information can be provided via the internet, 511, radio, kiosks, etc.
- Install warning signs for railroad crossings and in areas where roadway geometry is an identified safety issue.

Urban Design, Planning, and Zoning Tools

Urban design and streetscape guidelines are powerful tools to inform would-be developers of the desired character of a place. Defining roadway cross sections, building height ranges, architectural materials, and placement of streetscape features such as trees and lighting will help places to maintain their current charm as they grow. If detailed guidelines are employed in cities, it will be necessary to implement some level of design guidance and/or development restriction in unincorporated parts of the county to prevent builders from locating just outside city limits and contributing to sprawl, if current suburban style infrastructure patterns are continued. In Effingham, "character areas" have already been defined as part of the Comprehensive Plan effort. The physical attributes of these character areas must be described and enforced through zoning and development codes to be meaningful. Additional tools such as the use of "Transfer of Development Rights" (TDR) can be used to maintain rural areas and farms, guiding future new construction towards already-developed areas while still compensating rural landowners who wish to sell [development rights associated with] their property to builders.

7. Financial Resources

Identifying and effectively utilizing available transportation funds is a critical element in planning for and successfully implementing a transportation plan; even a financially unconstrained list of projects needs to be aware of potential funding sources. This can help when it comes to considering the balance of the overall program and when prioritizing projects for implementation.

Generally, funding is provided at the federal, state and local levels. From these, the primary source for relatively more costly roadway, transit, bicycle and pedestrian projects is federal funding authorization provided by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). State funds are also an important component of transportation funding, primarily for capital projects (those requiring construction or equipment costs). The use of federal or state funds is coordinated through GDOT and may require a local match, which is typically 20% or more of the total cost. A project is moved into the GDOT Construction Work Program after potential funding sources are identified. Rural roads having a functional classification of a major collector or above, or urban roads designated as a collector or above, are potentially eligible for these funding sources. Projects along local roads and (rural) minor collectors are typically funded through local sources. Use of local funding provides local agencies with additional control and direction over the project, but requires expenditure of local resources. A summary of potential federal, state and local funding sources is provided in the remainder of this chapter.

Federal Funding Sources

Federal funding categories require that the project sponsor contribute a portion of the project's cost. Called a local "match," the required percent contribution varies by federal funding category, as noted in the descriptions that follow. The following funds are programmed by GDOT:

- *National Highway System (NHS)* – Provides funding for roads on the congressionally approved National Highway System. NHS funds can also be used, within NHS corridors, for activities such as transit, park-and-ride lots, and bicycle and pedestrian facilities. Up to 10 percent of a state's NHS apportionment may be dedicated to safety and traffic operations projects financed 100 percent federally. The remaining NHS funds require a minimum 20 percent match.
- *Interstate Maintenance (IM)* – Provides funding for maintenance activities, as well as High Occupancy Vehicle lanes and other non-Single Occupant vehicle improvements along federally designated interstate highways. Up to 10 percent of a state's IM apportionment may be dedicated to safety and traffic operations projects financed 100 percent federally. The remaining IM funds require a minimum 10 percent match.
- *Surface Transportation Program (STP)* – Provides funding for a wide variety of projects including highways, transit and other modes such as bicycle and pedestrian facilities. STP

funds can be used on any roadway classified above a local road or a rural minor collector. The STP funds require a minimum 20 percent match.

- *STP Enhancement* – A set-aside for transportation enhancement activities, such as providing facilities for bicyclists and pedestrians, landscaping and historic preservation. A minimum of 10percent of each state's overall STP allocation must be used for such projects. GDOT programs these funds on a statewide basis using a competitive submittal and evaluation process
- *Highway Safety Improvement Program (HSIP)* – A newly established core program (pulled from the STP core program) with flexibility provided to allow states and regions to target funds to their most critical safety needs. About 10 percent of the total amount available will be distributed to the railway-highway crossing program, with another set-aside annually for construction and operational improvements on high-risk rural roads.
- *Highway Bridge Replacement and Rehabilitation Program* – Provides funding for any public bridge replacement or rehabilitation. Included in this category are funds for both on and off Federal-aid system bridges.
- *High Priority Projects Program* – Provides designated funding for specific projects identified by Congress (commonly referred to as earmarks). The designated funding can only be used for the project as described in the law.
- *Congestion Mitigation and Air Quality (CMAQ) Improvement Program* – Provides funding for projects contributing to attainment of national ambient air quality standards in areas that do not meet the national standards (non-attainment areas) as well as former non-attainment areas that are now in compliance (maintenance areas). Types of projects eligible for CMAQ funds include transit improvements, shared-ride services, traffic flow improvements, TDM strategies, pedestrian and bicycle facilities and programs, and alternative fuel programs. Up to 10 percent of a state's CMAQ apportionment may be dedicated to safety and traffic operations projects and financed 100 percent federally. The remaining CMAQ funds require a minimum 20 percent match.
- *Safe Routes to School* – Federal funds are available for pedestrian and bicycle projects within two miles of a school. These funds are distributed through GDOT and are available for grades kindergarten through eight. Schools must develop and implement a plan which includes a program for promoting bicycling and walking and any proposed infrastructure projects. Funding is available to a maximum of $10,000 per school for development, $500,000 for infrastructure such as sidewalks or crosswalks, and $10,000 for non-infrastructure such as publicity. The funding is limited to $16 million through 2009.
- *New Starts Program: FTA Section 5309* – Provides funding for new fixed guideway transit facilities which utilize and occupy a separate right-of-way, or rail line, for the exclusive use of mass transportation and other high occupancy vehicles, or uses a fixed centenary system and

a right-of-way usable by other forms of transportation. This includes, but is not limited to, rapid rail, light rail, commuter rail, automated guideway transit, people movers, and exclusive facilities for buses (such as bus rapid transit) and other high occupancy vehicles. Funds are awarded by FTA through a competitive process to eligible transit agencies. Funds are programmed by the recipient transit agency. According to a new federal regulation, the match required for transit New Starts funds will be 50 percent of the project cost.

- *Grants for Transportation for Elderly Persons and Persons with Disabilities: FTA Section 5310* – Discretionary funds to provide transit services for these population groups. Funds are awarded by FTA and programmed by the Georgia DHR. A 10 percent match is required for expenditures related to Clean Air Act Amendments (CAAA) and Americans with Disabilities Act (ADA) compliance, with a 20 percent match is required for all other expenditures in this funding category.

- *Rural and Small Urban Areas: FTA Section 5311* – Provides formula funding to states for the purpose of supporting public transportation in areas of less than 50,000 population. Funds may be used for capital, operating, and administrative assistance. The maximum Federal share for capital and project administration is 80 percent (except for projects to meet the requirement of the ADA, the CAAA, or bicycle access projects, which may be funded at 90 percent.) The maximum Federal share for operating assistance is 50 percent of the net operating costs. The local share is 50 percent.

- *The Rural Transit Assistance Program: FTA Section5311(b)* – Provides a source of funding to assist in the design and implementation of training and technical assistance projects and other support services tailored to meet the needs of transit operators in non-urbanized areas. Funds may be used for capital, operating, and administrative purposes. There is no Federal requirement for a local match.

- *Clean Fuels Formula Grant Program: FTA Section 5308* – Provides funding for the purchase of alternative fuel transit vehicles, the conversion of existing vehicles to alternative fuels, and the development of facilities to service clean fuel vehicles. Funds are allocated by FTA on a formula basis and programmed by the recipient transit agency. A minimum of 20 percent match is required.

- *Job Access and Reverse Commute: FTA,* Section 5316 – Purpose is to develop transportation services designed to transport welfare recipients and low-income individuals to and from jobs, and to develop transportation services for residents of urban centers and rural and suburban areas to suburban employment opportunities. Emphasis is placed on projects that use mass transportation services. Grants may finance capital projects and operating costs of equipment, facilities, and associated capital maintenance items related to providing access to jobs; promote use of transit by workers with nontraditional work schedules; promote use by appropriate agencies of transit vouchers for welfare recipients and eligible low-income

individuals; and promote use of employer-provided transportation including the transit pass benefit program. Typically, a 50 percent local match is required.

- *New Freedom Program: FTA Section 5317* – SAFETEA-LU established a new program of formula-based transit grants, the Section 5317 New Freedom Program. This is part of a larger, government-wide "New Freedom Initiative" formally established in 2001. The New Freedom Initiative is a means to integrate persons with disabilities into the workforce, and into daily community life, through a variety of strategies carried out by the federal departments of Labor, Health and Human Services, Housing and Urban Development, Education, Justice, Veterans Affairs, and now Transportation. Typically, a 50 percent local match is required.
- *Growing States and High Density States: FTA Section 5340* – SAFETEA-LU established a new program of formula based transit grants called Growing States and High Density States. These funds are distributed into a single apportionment with the 5307 funds. Separate formulas are used to apportion Section 5307 and Section 5340 funds to urbanized areas. Under the 5340 formula, half of the funds are made available under the Growing States factors and are apportioned based on state population forecasts for 15 years beyond the most recent Census. Amounts apportioned for each state are then allocated to urbanized and rural areas based on the state's urban/rural population ratio. The High Density States factors distribute the other half of the funds to urbanized areas with population densities greater than 370 people per square mile. The distribution or sub-allocation of Sections 5307 and 5340 funds within an urbanized area is typically a local responsibility.
- *Recreational Trails Program* – Provides funds to develop and maintain recreational trails for motorized and non-motorized recreational trail users. Funds are programmed by the Georgia Department of Natural Resources (DNR).

State Funding Sources

The State of Georgia collects two types of taxes on motor fuels to help fund transportation infrastructure projects. Currently, it also has in place a bond program.

- *Fuel Excise Tax* – A fee or tax based on the volume (gallons) of fuel purchased. The amount of the excise tax on gasoline is 7.5 cents per gallon. Since this tax is based solely on the volume of gasoline sold, it is not indexed to inflation. Revenues increase only with an increase in roadway usage, and revenue increases from travel are offset due to improved engine technology and higher fuel efficiency of vehicles.
- *Prepaid State Tax* – A 4 percent sales tax on the average retail price of fuel, whereby 3 percent is dedicated to transportation and the remaining 1 percent goes to the State General Fund for other uses. Revenues from the motor fuel sales tax rise and fall with the price of gasoline.

- *Fast Forward Bond Program* – The Fast Forward program is a $15.5 billion state transportation program announced by Governor Sonny Perdue in 2004. The core of the program is designed to relieve traffic congestion and consists of about $4.5 billion of projects which will have construction dates accelerated through the sale of bonds. The remainder of the Fast Forward program is assigned to other GDOT projects. It is important to note that these bonds are not a new source of funding. The bonds act as new cash flow mechanisms allowing the state to borrow money to fund projects in the short-term. These funds will be paid back over the long term from the same funding sources traditionally used to pay for transportation infrastructure. Short-term congestion relief projects include ITS, Highway Emergency Response Operators (HERO) Expansion, ramp metering, signal timing and synchronization upgrades; long-term congestion relief includes HOV lanes and new transit corridors; and economic development improvements include interstate capacity improvements.

- *State Transportation Infrastructure Bank (STIB)* – Created by the Georgia legislature in 2008, the STIB is a revolving loan fund that cities, counties, transit operators, and Community Improvement Districts (CIDs) can use for transportation projects. Operated by the Georgia State Road and Tollway Authority (SRTA) and with initial funding of $50 million, STIB money will be distributed to projects based on criteria that promote economic development and provide "gap financing" for project completion, as drafted by an oversight taskforce. Eligible projects will include roads, bridges, transit vehicles and facilities, bicycle and pedestrian facilities, rail, and airports.

- *Additional Transportation Revenue* – SAFETEA-LU also offers additional opportunities to establish public-private partnerships and tolling for expediting the implementation of transportation facilities.

Local Funding Sources

- *Special Local Option Sales Tax (SPLOST)* – A Special Local Option Sales Tax can be levied by any Georgia county for the purpose of raising money to build and maintain transportation and other public facility improvements. SPLOSTs must undergo and pass a voter referendum, and can add up to two percent to the existing county sales tax. SPLOSTs typically have five-year horizons, at which point they must be reauthorized by voters.

- *Tax Allocation District (TAD)* – A Tax Allocation District is a strategy for funding infrastructure projects in a limited area targeted for accelerated growth. A TAD finances infrastructure projects from the growth of property taxes based on new development and increased property values. Establishing a TAD and creating a plan for the district can spark redevelopment in the TAD area, which in turn serves to finance TAD bond funds. Funds can be spent on transportation and non-transportation projects in the TAD area. TADs are an appropriate tool for financing some types of transportation projects, especially in connection with the denser redevelopment of a particular area such as an activity center.

- *Community Improvement District (CID)* – A Community Improvement District is a strategy for funding infrastructure projects in a limited area at the discretion of existing commercial property owners. CIDs are essentially self-taxing areas, where property owners organize to raise funds to improve property values in the area. CIDs may organize to market an area, increase safety, and collect and use funds for all types of transportation projects. CIDs are an innovative source of funding for transportation projects with the scope of their activities limited by property owner interests and a defined geographic area.
- *Impact Fees* – Impact fees are one-time fees charged in association with a new development and are designed to cover part of the cost of providing public facilities to support the development. The impact fee amount charged to a particular development must be directly tied to the amount of new infrastructure the development will require. Impact fees are tied to a specific capital improvement program so that it is clear which projects the impact fees will finance. In short, impact fees are effective in tying financing for new transportation infrastructure to new development.

Future Potential Funding Sources

The potential for areas of the county to fall into the Savannah urbanized area at the next census may, at that time, open up additional funding sources that are eligible to urban areas. These include:

- *Surface Transportation Program (STP Urban)* – This federal program applies to projects in urban areas with a population greater than 50,000.
- *Urbanized Area Formula Program: FTA Section 5307* – Provides funding for capital investment, operating and planning assistance within the urbanized area. These funds may be sub-allocated to other transit service providers. Funds are programmed by the individual transit agencies. A match of 10 percent is required for expenditures related to CAAA and ADA compliance and a 20 percent match is required for all other expenditures in this funding category.