Multimodal Transportation Study

Final Report
for
Habersham, Rabun, Stephens and White Counties

Prepared for

Georgia Department of Transportation

Prepared by

Day Wilburn Associates, Inc.

In association with

The Jaeger Company

Multimodal Transportation Study
Habersham, Rabun, Stephens and White Counties

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1 Introduction

Due to growth and a resulting increase in travel demands, a long-range multimodal transportation study was conducted for the following four counties: Habersham, Rabun, Stephens and White Counties. This study identified transportation deficiencies and recommends solutions in the form of transportation projects. The final product, a plan for each county addressing current and future transportation needs in each jurisdiction and for the region as a whole, is presented in this document. The study was developed by Day Wilburn Associates, Inc. (DWA) for the Georgia Department of Transportation (GDOT) in partnership with the four counties.

Study Purpose

There are many reasons for an area to prepare a transportation study, but the primary objective is to ensure that transportation facilities will be developed to adequately serve future mobility needs. Undertaking a long-range transportation study can also provide numerous benefits, including:

- Prioritization of improvement needs and allocation of available funding.
- Provision for the existence of feasible improvement options as needs arise.
- Planning and design of facilities to perform specific functions.
- General understanding of the multimodal transportation network and each component's intended function by local officials and residents.
- Residents' knowledge and understanding of where future improvements are planned and why.

Taking a regional approach and including four counties in the transportation study leads to development of transportation strategies with interconnectivity between adjacent jurisdictions. While the purpose and general methodology of transportation planning does not vary significantly by jurisdiction, studies such as this must be tailored to meet the area's unique circumstances.

The purpose of this study was to evaluate present multimodal transportation deficiencies and identify future transportation needs for all four counties individually and for the region as a whole. Necessary transportation solutions that address current and future transportation deficiencies and recommended multimodal improvements were also identified. Current services and future needs with respect to highways, airport access, bike and pedestrian facilities, public transit and railways were evaluated as part of the study assessment.

Study Area Description

The four northeast Georgia mountain counties of Habersham, Rabun, Stephens and White cover an area of approximately 1,070 square miles, with a total population of 96,331 people. As illustrated in Figure 1, the counties are linked geographically, topographically, demographically and literally through their borders and the existing network of highways and arterials. The region is crisscrossed with a number of excellent federal and state routes. The four counties share a wealth of natural, historical, recreational and environmental locales that attract people with special interests year round. The beautiful mountain scenery has attracted seasonal guests for well over a century, with Atlantans and others retreating from the summer heat to the cool sanctuary of the highlands. However, in recent years, it has become more than a seasonal home for many. From young married couples to retirees, people have found the quality of life in the smaller mountain towns and cities to be very appealing.

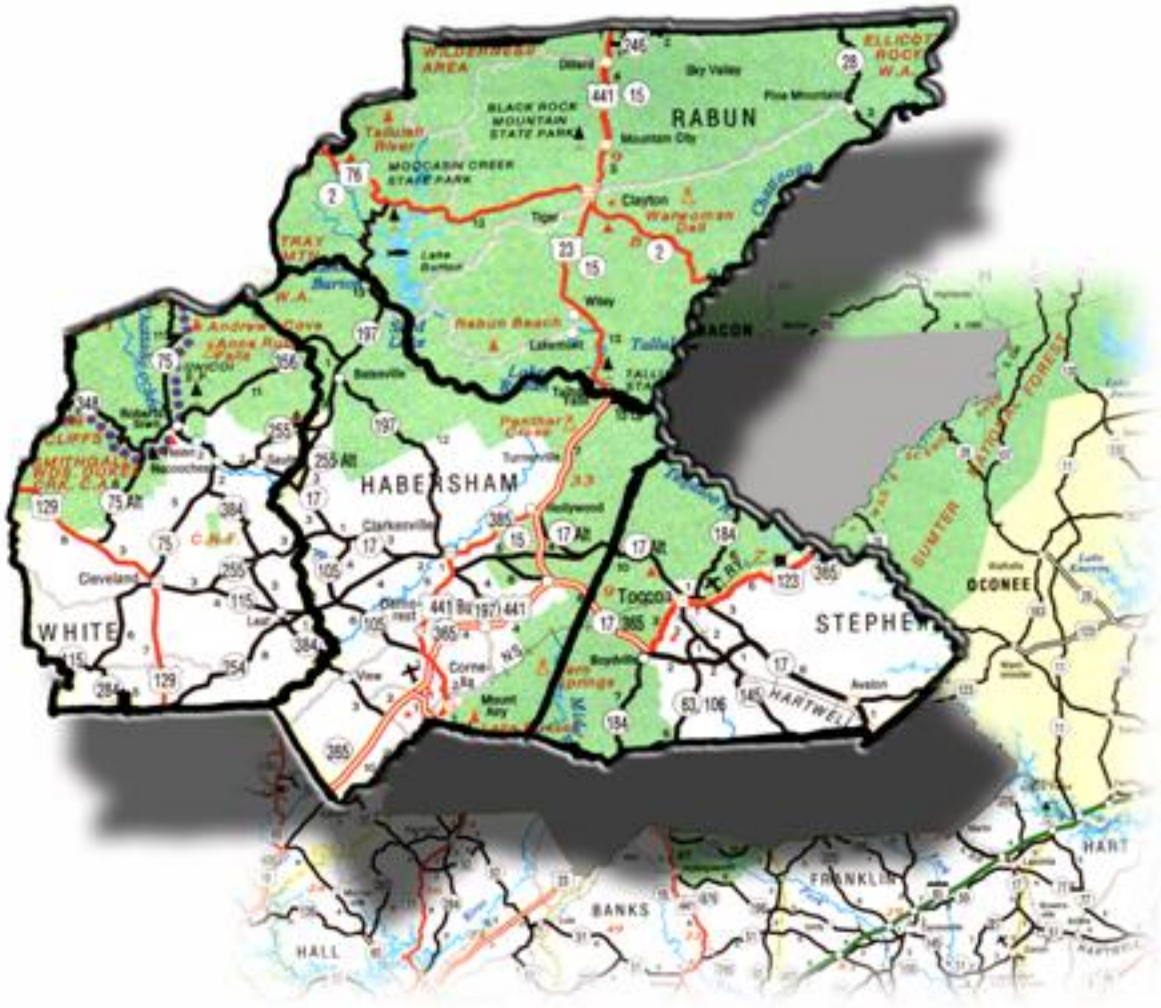
The study area encompasses four counties that are unique in economics, demographics and natural character, yet share several important transportation system characteristics. Natural and historic features often limit opportunities for system improvements without careful application of design, construction and maintenance techniques sensitive to that context. Those same features, in combination with the area's proximity to Atlanta and other urbanized areas, are attracting substantial residential and commercial development, with resultant significant increases in both permanent and seasonal travel demand.

The roadway network for these four counties is examined where needs are identified. State routes, county roads and city streets are included within the transportation evaluation for traffic capacity and safety.

The following characteristics of the study area influence its transportation network:

- Significant variation in travel demand by time of year, facility type and origin-destination pattern.
- Trip lengths and vehicle type mix significantly different from those experienced in urbanized areas or even other resort areas.
- Large geographic area encompassing rural, small town and seasonal communities within a land use context reflecting extensive ownership by local, state and federal agencies with statutory obligation to often restrict the amount and character of development.
- Socioeconomic fabric that, while similar across the entire study area in some respects, reflects the unique goals, development objectives and transportation system needs of each county and community.

Study Area



Study Area

Legend

Study Area

Figure 1

Source: Georgia DOT, and Day Wilburn Associates, Inc.

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Study Process

The study has been segmented into two phases, both consisting of six tasks designed to address the needs of transportation plan development. Phase I tasks include:

- Data Collection
- Existing Conditions Evaluation
- Future Conditions (FY 2025) Evaluation
- Develop Findings for Current and Future Transportation Needs
- Technical Reports
- Meetings

All readily available data and documentation related to travel within and through the study area were obtained and reviewed in Task 1. Primary information sources included previously prepared plans, transportation studies, discussions with local government staff and elected officials in the four counties, field inventories and supplemental data collection activities. The data collection effort was supported by an extensive public outreach and stakeholder involvement process which involved county representatives, an Advisory Panel of stakeholders and the general public to gather input on areas of concern. Special emphasis was placed on reaching low-income and minority groups dispersed throughout the study area.

Task 2 included an analysis of the existing conditions in the study area utilizing information collected in Task 1. The analysis consisted of travel patterns, accident histories, traffic growth rates and other data to enable the study team to identify locations and corridors where primary attention should be dedicated.

Task 3 consisted of reviewing growth estimates and trends, mobility and access issues and forecasting travel patterns and traffic volumes. An assessment of future roadway network capacity and operations, as well as identification of potential deficiencies, was also included.

Analysis findings on existing and proposed transportation conditions within the four counties were identified in Task 4. Task 5, the Phase I report, presented the findings in Sections 3 and 4 and summarized the data collection and analysis activities of the first three tasks. This information is included again in this final report. Coordination with the Project Steering Committee and Advisory Panel of stakeholders occurred through a series of regularly scheduled meetings (Task 6) at key milestones throughout the study to review and comment on work products.

Phase II activities included identifying and analyzing transportation system improvements in the four counties, as well as developing timetables and costs for implementation. Improvements were evaluated according to county specific and regional factors (capacity, safety, cost, economic development and community benefits) that were used to prioritize future transportation improvements. These activities were also supported by public outreach and stakeholder involvement.

Public and Stakeholder Involvement

A Public Involvement Plan was prepared, reviewed and approved by GDOT during Phase I. The plan outlines activities and procedures for the inclusion of identified stakeholders, local government representatives, members of the general public and environmental justice (EJ) groups in the study area. Title VI, Executive Order 12898 and Section 450 of TEA-21 requires that the transportation program involve defined EJ communities. It also requires that transportation projects not disproportionally burden minority and low-income communities. According to the Executive Order 12898, the groups that must be addressed as part of environmental justice are African-American, Hispanics, Asian-American, American Indians and persons whose household income is at or below the U. S. Department of Health and Human Services poverty guidelines.

The Public Involvement Plan also identified goals for public participation, defined the roles and responsibilities of study participants, outlined specific activities and techniques to be used and provided a process for evaluation of the public involvement program. The goal of the public involvement process was to create early and ongoing opportunities for broad-based input into the Multimodal Transportation Study for Habersham, Rabun, Stephens and White Counties.

Approach to Involvement

The Public Involvement Plan included the following techniques and activities to maximize diverse and continuous public participation:

- *Project Steering Committee Meetings* – Intergovernmental coordination occurred through regular meetings of the project Steering Committee. The goal was to keep local, regional and state agency representatives apprised of the overall progress of the study and obtain guidance and technical collaboration on the study approach. The meetings assisted in coordinating information sharing, decision-making and oversight of the study. Members of the Project Steering Committee were:

  County Representatives
  - Habersham County
  - Rabun County
  - Stephens County
  - White County

  Georgia Department of Transportation
  - Marta Rosen, GDOT Planning Administrator
  - Todd Long, GDOT District 1 Preconstruction Engineer
  - Cindy VanDyke, GDOT Office of Planning
  - Ulysses Mitchell, GDOT Office of Planning
  - Michelle Caldwell, GDOT Office of Planning, Project Manager
  - Brent Cook, GDOT District 1 Planning and Programming Engineer
  - Teri Pope, GDOT District 1 Communications Specialist

- *Advisory Panel Meetings* – With input from the Project Steering Committee, appropriate groups and individuals were identified for participation on the study's Advisory Panel. The Advisory Panel was a broader forum for disseminating information and receiving comments from local, county and city experts. Representatives of various local agencies and organizations, such as staff from the local planning/engineering departments and Georgia Mountains Regional Development Center (GMRDC), political leaders from the counties and cities in the study area and representatives from local chambers of commerce and economic development organizations were included. A list of Advisory Panel members is provided in Appendix A. Several meetings were planned with the Advisory Panel at key milestones throughout the study.

- *Public Information Meetings* – Two sets of public information meetings were held to solicit input into the planning process during the course of the study. The first series of meetings was held in each of the four counties at the beginning of the planning process to present the study process and obtain input on local issues and needs. The second series of meetings was held during Phase II of the study, toward the end of the process, to review the transportation alternatives being considered.

- *Media Outreach* – A media outreach effort was implemented to increase both attendance and participant diversity at public information meetings. Media outreach efforts were supported by developing information materials for distribution to encourage attendance at meetings. Publicity for public involvement activities was generated through the use of press materials, such as press releases, fact sheets, question and answer sheets, letters to the editors of local newspapers, interviews on local radio and television shows and websites of local chambers and civic organizations. The information materials developed to support public outreach, as well as a list of media contacts, can be found in Appendix A.

- *EJ Outreach* – Emphasis was placed on identifying and notifying environmental justice stakeholders to ensure that the concerns and needs of low-income and minority populations in the study area were considered. EJ outreach efforts focused on phone and written contacts to encourage participation and input. Communities in the study area contacted on an ongoing basis included community groups, community service organizations, educational institutions, religious organizations and churches.

<u>Summary of Activities</u>

Public involvement activities and EJ outreach efforts undertaken during Phase I of the study included:

- *Steering Committee Meetings* – A kickoff meeting was held with the Project Steering Committee and County Commissioners on September 10, 2002, at the Habersham County Courthouse in Clarkesville. Eighteen people attended the meeting: seven representing the four counties; seven representing GDOT; and four representing the

consultant team. A list of attendees and a summary of the meeting is included in Appendix A. During the meeting the following topics were discussed:

- Importance of future transportation planning as it relates to growth and the ability of the counties to keep up with needed transportation changes in order to successfully handle new types of business.
- Importance of the study to county and state government, as well as the importance of engaging county participation and input early in the study.
- Goals of the study and the roles of the consultant team and GDOT.
- Overview presentation on the Multimodal Transportation Study for Habersham, Rabun, Stephens and White Counties.
- Discussion of transportation issues within each county and between counties by county representatives.

Specific examples of many of the issues discussed were subsequently listed as detailed later in this report. In addition, the county representatives committed to sending GDOT a map identifying transportation needs for study consideration. An internal project management meeting was held between the consultant team and GDOT staff prior to the kickoff meeting to discuss public involvement activities for the project.

- *Advisory Panel Meetings* – The first meeting of the Advisory Panel was held on October 3, 2002, at the Toccoa Municipal Building in Stephens County. Twenty people attended the meeting: five representing GDOT, twelve representing local governments, one from the Georgia Mountains Regional Development Center and three representing the consultant team. Attendees were given an overview of the project and a review of the work program. County and agency representatives were asked to share any transportation concerns they have for the area. A summary of the meeting, including a list of meeting participants, can be found in Appendix A.

  The second meeting of the Advisory Panel was held prior to the general public meeting on November 12, 2002, from 3:30 to 4:00 p.m. at the White County City Hall Annex in Cleveland. Fourteen people attended the meeting: three representing GDOT; seven representing local governments; one from the Georgia Mountains Regional Development Center; and three representing the consultant team. At this meeting, Advisory Panel members were allowed to review the displays to be presented at the public information meeting and provide feedback.

- *Public Information Meetings* – The first set of public information meetings was held in mid-November to solicit input into the planning process. Meetings were held in each county from 4:00 to 7:00 p.m. Notification letters were sent to Advisory Panel members and local elected officials in the study area. Advisories were also sent to the local media. The goal of the meetings was to present the study process and obtain input on local issues and needs. Several displays were developed to present initial findings on existing transportation conditions in each of the four counties. Fact sheets and comment

forms were distributed at all meetings. The dates and locations of these public involvement meetings were as follows:

- White County: Tuesday, November 12, 2002, at the City Hall Annex on South Main Street in Cleveland.
- Rabun County: Thursday, November 14, 2002, at the County Courthouse in Clayton.
- Stephens County: Tuesday, November 19, 2002, at the Toccoa Center of North Georgia Technical College on Big A Road in Toccoa.
- Habersham County: Thursday, November 21, 2002, at the Ruby Fulbright Aquatic Center on Paul Franklin Road in Clarkesville.

The Phase I report was distributed to libraries in all four counties for public review. Phase II activities included the following public involvement meetings.

- *Advisory Panel Meetings* – The third meeting of the Advisory Panel was held prior to the general public meeting on Tuesday, March 11, 2003 to assist in further defining county and regional transportation needs and identifying potential improvements.

  The fourth meeting of the Advisory Panel was held on Monday, May 12, 2003 to review and discuss proposed improvement projects. Fourteen people attended the meeting: four representing GDOT; seven representing local governments; and two representing the consultant team. At this meeting, Advisory Panel members reviewed displays and handouts outlining proposed improvements and determined which projects would be recommended for future implementation.

- *Public Information Meetings* – The second set of public information meetings was held in mid-March to share the Phase I study results and discuss potential improvements. Meetings were held in each county from 5:00 to 7:00 p.m. Notification letters were sent to Advisory Panel members and local elected officials in the study area. Advisories were also sent to the local media. Several displays were developed to present potential transportation improvements for each of the four counties. Fact sheets and comment forms were distributed at all meetings. The dates and locations of these public involvement meetings were as follows:
  - Habersham County: Tuesday, March 11, 2003 at the Ruby Fulbright Aquatic Center on Paul Franklin Road in Clarkesville.
  - Stephens County: Thursday, March 13, 2003 at the Toccoa Center of North GA Technical College on Big A Road in Toccoa.
  - White County: Tuesday, March 18, 2003 at the City Hall Annex on South Main Street in Cleveland.
  - Rabun County: Thursday, March 20, 2003 at the County Courthouse in Clayton.

Media outreach was conducted throughout the study effort to increase both attendance and participant diversity at public information meetings. Press releases were sent to the local radio and television stations indicated on the media contact list in Appendix A. Fact sheets, question and answer sheets and a letter to the editor were developed for distribution to local media.

Speaking bullets were also prepared for use by District staff. Local chambers of commerce were contacted about the use of their websites for the publication of project information. The chambers in Rabun, Habersham and Stephens Counties agreed to post project information on their websites. White County was in the process of reorganizing its website and could not accommodate the request at the time.

A list of groups and organizations was developed to support outreach to low-income and minority populations in the study area. Because the EJ communities in these counties are very small, dispersed and not well organized, it was difficult to reach them through media outlets or organized entities. EJ outreach efforts, therefore, focused on contacting representative groups and individuals by phone and e-mail to encourage participation and input during both series of public information meetings. As such, a network through which project information could continuously be disseminated and interest stimulated was built. A complete list of EJ outreach contacts is included in Appendix B.

A total of 40 EJ contacts were made during the course of the study. Each contact was provided a fact sheet, question and answer sheet and comment form for personal use or distribution to the public. Several of the individuals contacted attended the public information meetings. Some contacts provided input during the telephone conversations or via e-mail. The following summarizes the issues and concerns raised:

- There is an increasing need for rural public transportation. Many low-income and minority residents have no means of getting to jobs, training and educational opportunities, or health and medical services. This is believed to be particularly difficult when trying to access basic services across county lines.
- Suggested that a solution to rural public transportation is a public-private partnership to ensure a regional approach.
- Observed that there are many state and county vehicles not fully utilized during the business day. It was recommended that many of these vehicles could be used to provide a shuttle service to low-income and minority residents who do not have transportation to access job or training opportunities.

Program Evaluation

The documentation and evaluation of public involvement efforts are key aspects of determining the effectiveness of the public involvement tools used and the level of public involvement achieved. Stakeholders and residents in the study area were given numerous opportunities to receive information on the study and provide input. Table 1 shows the total number of participants attending both sets of public meetings by county. Meeting summaries, sign-in sheets and news articles about the public meetings are included in Appendix A.

Table 1
Public Meeting Participation

County	No. of Participants - 1st series	No. of Participants - 2nd series	Total No. of Participants
White	24	13	37
Rabun	17	17	34
Stephens	12	12	24
Habersham	32	10	42
Total	***85***	***52***	***137***

Fact sheets, press releases and articles were updated regularly and distributed to the media and the public throughout the study. Comments, written and verbal, received during meetings with the Project Steering Committee, Advisory Panel and the public were documented and considered in each phase of the study. Attendees at public information meetings received a written "thank you" that acknowledged their comments and assured them that their concerns and potential solutions were being considered in the study process.

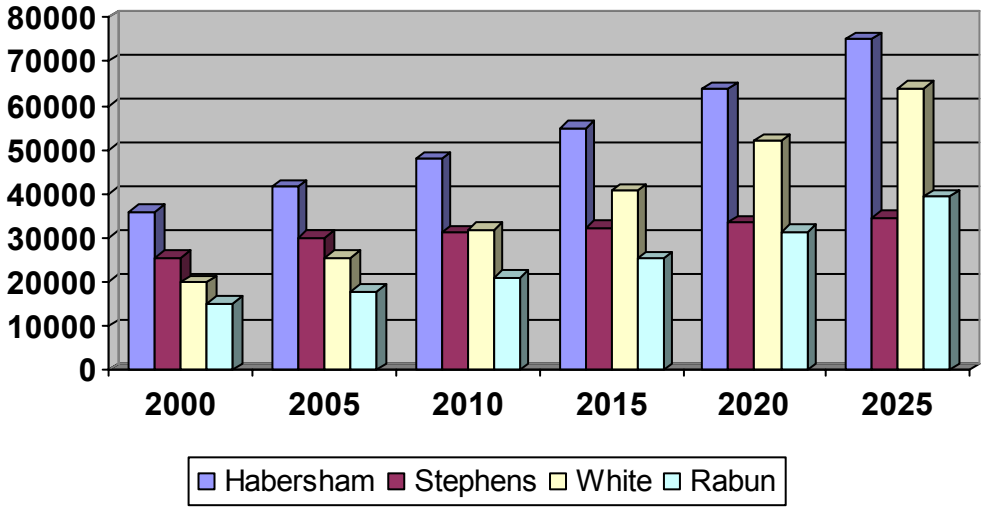
2 Regional Demographics

The northeast Georgia study area encompasses four counties in the northern reaches of Georgia adjacent to the South Carolina and North Carolina border. The area has seen increasing growth over the past two decades and that growth is expected to continue in the foreseeable future. The area's natural and historic features, as well as its proximity to Atlanta and other urbanized areas are attracting substantial residential and commercial development. This has resulted in significant increases in both permanent and seasonal travel demand on the roadway network.

Historic Growth and Development by County

Population has increased steadily in the four northeast Georgia counties between 1970 and the present and is expected to continue growing over the next 25 years. There are many reasons for this continued growth including the natural scenic beauty of the highlands, improved accessibility and increases in commercial development. Population projections are illustrated in Figure 2 below. Further detail about these population projections is provided in Table 2.

Figure 2
Projected Population Growth 2000 - 2025



Source: Georgia Mountains Regional Development Center

Table 2
Projected Population Growth 2000 - 2025

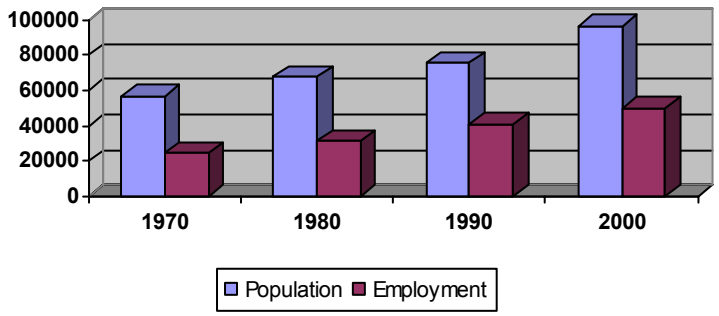
County	2000	2005	2010	2015	2020	2025	Percent Increase 2000-2025
Habersham	35,902	41,565	47,800	54,970	63,820	75,001	**109%**
Rabun	15,050	17,759	20,955	25,146	31,432	39,290	**161%**
Stephens	25,435	30,079	31,164	32,286	33,414	34,542	**36%**
White	19,944	25,570	31,865	40,670	51,910	64,014	**221%**
Total	**96,331**	**114,973**	**131,784**	**153,072**	**180,576**	**212,847**	**121%**

Source: Georgia Mountains Regional Development Center

The four-county area is projected to increase its population by 121 percent between 2000 and 2025, or an average annual growth rate of 3.22 percent. In raw numbers the study area will add more than 115,000 people by 2025. Habersham is the most populous of the four counties and is expected to increase by 109 percent from 2000 and 2025, with an average annual growth rate of 2.99 percent. White County's population is projected to experience the largest increase at 221 percent with an average annual growth rate of 4.78 percent. The projected increase of 221 percent would add over 44,000 residents by the year 2025. Stephens County is expected to continue to grow at a moderate annual rate of 1.23 percent through the year 2025. Rabun County is projected to have the second highest growth rate (3.91 percent per year) which would add more than 24,000 people over the next 25 years.

A large percentage of the four-county area is designated as national forest. This is an important factor which will influence potential future growth. Historically, employment growth has increased with population growth, but at a slower rate. The northeast Georgia region has been fortunate to attract many manufacturing plants while increasing the service and tourism sectors of its economic base. Figure 3 demonstrates historic population and employment growth for the entire four-county study area.

Figure 3
Historic Population and Employment Growth



Source: Bureau of Economic Analysis Regional Accounts Data and US Census

Overall employment within the study area increased from 24,461 in 1970 to 50,080 in 2000. White County experienced the highest average annual growth rate at 4.14 percent. However, Stephens County grew at 1.17 percent between 1970 and 2000, with an average annual growth rate of only 0.39 percent between 1990 and 2000. Habersham and Rabun Counties experienced lower rates of growth between 1990 and 2000 than during either of the previous decades.

The following provides a general overview of the demographics, economics and land use for each of the northeast Georgia counties:

Habersham County

Habersham County has a population of 35,902 and comprises 278 square miles. Although not the largest of the four counties, Habersham County is the most populous, with a 30 percent increase in population between 1990 and 2000. Approximately 11 percent of the population is classified as minority and roughly 12 percent is below the poverty line. The area is also a popular tourist destination, especially in the fall, when visitors flock to Tallulah Falls and Tallulah Gorge, located on the northern border of the county. Over 20 percent of the county's area is designated as national forest.

Historically, population increased steadily in Habersham County between 1920 and 2000. People migrated to the county because of the natural scenic beauty and temperate climate. Transportation infrastructure improvements had much influence on encouraging growth in Habersham County. Specifically, the completion of Highway 365 to US 441 near Cornelia in 1980 increased accessibility to the area. More than half of the population is concentrated in the growth corridor paralleling US Highway 441 from Alto to Tallulah Falls. The county's seven municipalities are located within this corridor.

Since its early settling, Habersham County remained mostly agrarian and rural. Until the 1960's the growth rate was low. Between 1960 and 1980, as access from more populated areas has improved, the county has experienced steady increases in commercial and residential development and its industrial base has grown. Manufacturing and service industries now comprise more than 55 percent of the employment sector.

Rabun County

Rabun County has a population of 15,050 and comprises 371 square miles. The largest of the four counties in land area, it has the smallest population. Like Habersham County to the south, the population of Rabun County increased approximately 29 percent between 1990 and 2000. Approximately 5 percent of the population is classified as minority and 11 percent as below the poverty line. The entire county lies within the Chattahoochee National Forest and one of Georgia's Wild and Scenic Rivers, the Chattooga, runs through the county. Two state parks are located in Rabun County, along with a string of beautiful mountain lakes, making this county a favorite summer destination. Approximately 85 percent of the county's area is designated as national forest.

Natural features have been the largest determinant of land use in the county. Historically, settlement occurred in valleys naturally created by streams and rivers. The recent increase in population can be mostly attributed to the migration of persons, including both retirees and nature lovers, into Rabun County to live and enjoy the extraordinary natural beauty of the area.

Inadequate water supply is expected to constrain overall growth in Rabun County, but nodal growth is expected to occur around Clayton, Tiger and Mountain City where water lines extend out from Clayton.

Stephens County

Stephens County has a population of 25,435 and comprises 179 square miles. It is the second most populous of the four counties, though its population showed a slower growth (8.5 percent) from 1990 to 2000. Approximately 14 percent of the Stephens County population is classified as minority and 15 percent of its population is reported as below the poverty line. Approximately 35 percent of the county's area is designated as national forest. The western half of the county lies within the Chattahoochee National Forest, which includes the Tugaloo River. This river runs into Lake Hartwell before leaving the county and forms the eastern border of Stephens County.

Stephens County has experienced steady growth over the last two decades. As in neighboring counties in the study area, older adult age brackets continue to become a larger portion of the population.

White County

White County has a population of 19,994 and comprises 242 square miles. It is the second least populous of the four counties, but the county experienced the greatest increase between 1990 and 2000 at a substantial 53 percent. Approximately 5 percent of the population is classified as minority and 10.5 percent are below the poverty line. The northern third of the county lies within the Chattahoochee National Forest, with a portion of the headwaters of the Chattahoochee River located in White County and its neighbor to the north, Towns County. Aside from the mountain scenery, other attractions include Anna Ruby Falls, Unicoi State Park, the Russell Brasstown Scenic Byway, the historic Sautee-Nacoochee Valley, the "Bavarian" town of Helen and canoeing, tubing and kayaking on the Chattahoochee River. Almost 50 percent of the county's area is designated as national forest.

The natural environment and resources pose both severe limitations on future land development and tremendous opportunities in the way of resource development and the attraction of future growth and development. The county attracts both seasonal residents who purchase second homes in the area, known for its scenic beauty and tourists who visit year round. Tourist season does have peaks in the fall when the foliage changes color.

Major Traffic Generators

The natural features and scenic beauty in the study area attract visitors every year. The tourism industry adds substantially to the economic base of the counties in north Georgia. A

number of tourist destinations exist in the region and each county attracts tourists and seasonal residents who add to traffic as described in the above section.

In addition to the tourism industry there are large manufacturing and service employment centers that generate traffic. A county level listing of major traffic generators is detailed below.

Habersham County

- Georgia Industrial Institute
- Major industrial plants are located along or near the SR 365/US Highway 441 corridor between Baldwin and Clarkesville
- Retail in downtown Clarkesville and downtown Cornelia
- Lake Russell

Rabun County

- Don'L, Inc.
- Fruit of the Loom, Inc.
- Tallulah River Gorge – Tallulah Falls Depot
- Chattooga River
- State Parks
- Sky Valley—Golf and Ski
- Dillard House Restaurant

Stephens County

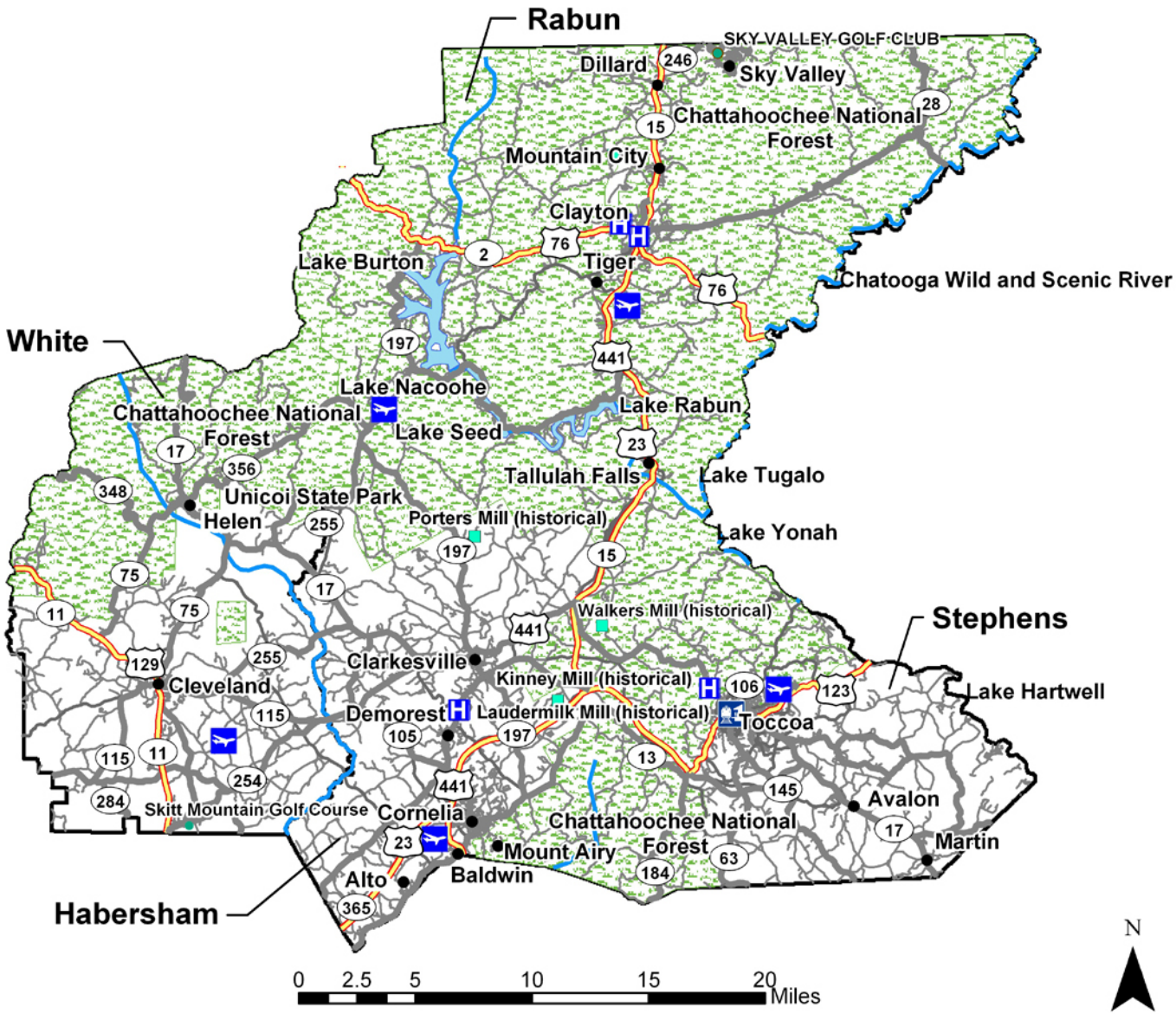
- Toccoa Falls
- Panther Creek
- Lake Hartwell
- Chattahoochee National Forest
- Lake Russell Wildlife Management Area
- Reltec Corp.
- Milliken & Company
- Coats America Inc.

White County

- Sautee-Nacoochee Historic District
- FNGP Manufacturing
- Mt. Vernon Mills, Inc.
- Truett McConnel College

Figure 4 illustrates an overview of major traffic generator locations in each county.

Travel Generators



Study Area

Legend

- Cities
- Golf Course
- Historic Sites
- Recreational Areas
- Airports
- Shopping Centers
- Amtrak
- Hospitals
- Schools
- Local Roads
- Wild and Scenic Rivers
- Lakes
- Federal Lands

Figure 4

Source: Georgia DOT, ESRI, and Day Wilburn Associates, Inc.

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Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

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Table 3 illustrates commuting characteristics for each county. The majority of workers drive alone, but significant numbers of people also carpool and work at home. A comparison of the northeast Georgia study area with the state demonstrates a lower mean travel time to work for people living in the study area and a higher percentage of people driving alone, walking and bicycling. At 82.3 percent Stephens County exceeds the statewide average of workers driving alone. Stephens also has the fastest mean travel time to work at 20.7 minutes; which is 3.8 minutes faster than the study area average and seven minutes faster than the statewide average. Rabun County leads the area in carpooling at 19.1 percent and Habersham leads for walking and bicycling with 2.7 percent. Transportation infrastructure improvements can affect the area's commute characteristics; this was a consideration in Phase II of the project.

Table 3
Census Commuting Characteristics by County

	Habersham	Rabun	Stephens	White	NE GA	GA
Drove Alone	79.2%	74.7%	82.3%	79.8%	79.5%	77.5%
Carpooled	15%	19.1%	12.8%	13.5%	14.7%	14.5%
Public Transportation (includes taxi)	0.2%	0.6%	0.2%	0.2%	0.26%	2.3%
Bicycle or Walked	2.7%	1.8%	2.5%	2.0%	2.3%	1.9%
Motorcycle or Other	0.6%	0.3%	0.5%	0.8%	0.6%	1.0%
Worked At Home	2.3%	3.6%	1.7%	3.7%	2.64%	2.8%
Mean Travel Time to Work*	23.8	24.1	20.7	29.6	24.55	27.7

* Minutes
Source: US Census: Census Transportation Planning Package (CTPP 2000)

Environmental Justice Areas

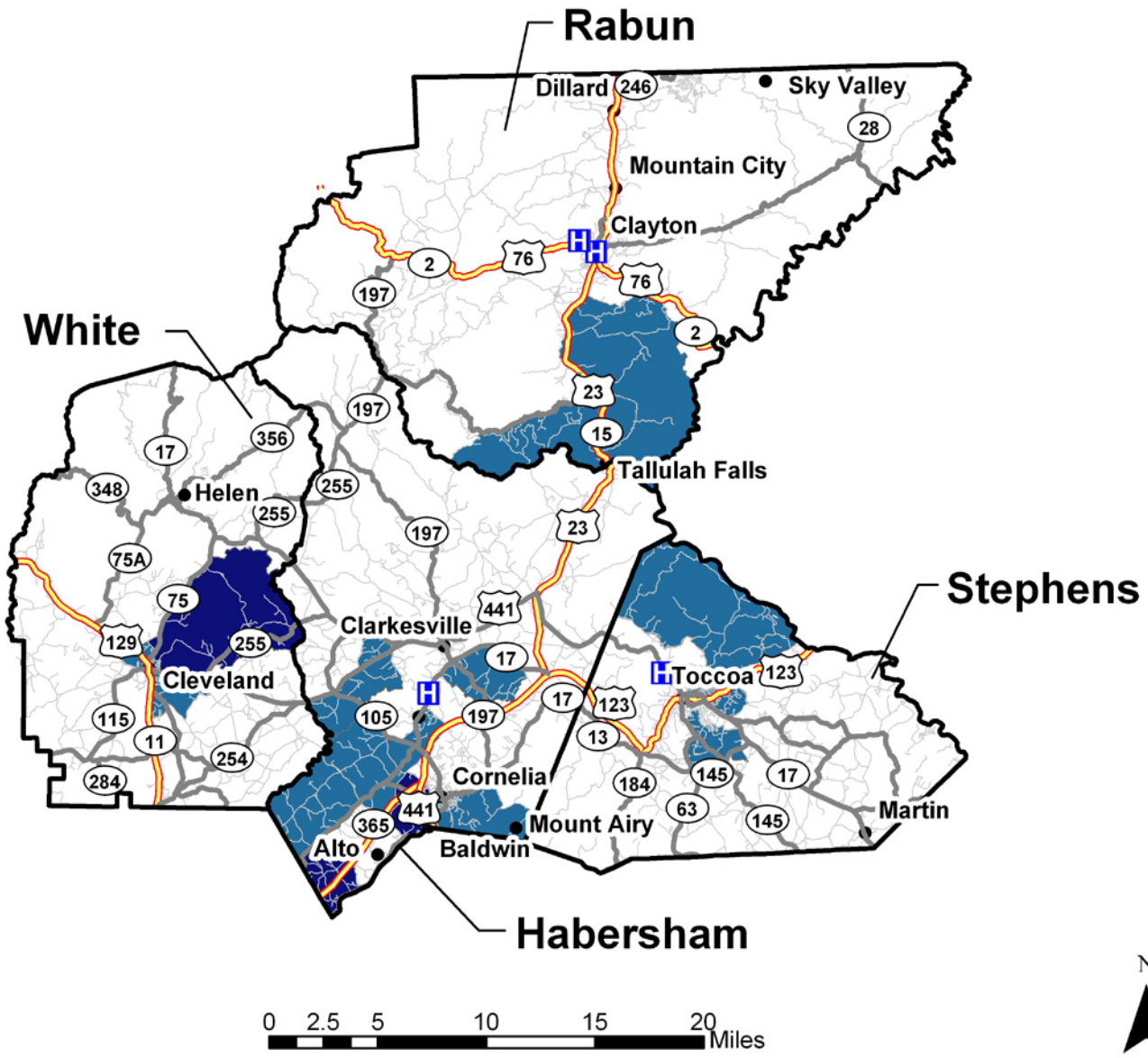
As previously stated, environmental justice (EJ) addresses identification and outreach to minority populations and low-income populations. EJ is also intended to ensure that these groups receive benefits from and are not disproportionately adversely impacted by transportation projects. Minority and low-income areas are geographically located in small pockets in the study area. Minority populations range between 5 percent in Rabun and White to 14 percent in Stephens. The percentage of the population living below the poverty line ranges from close to 11 percent in White County to 15 percent in Stephens County. Georgia's rate of population living below the poverty level is over 13 percent and the national rate is over 12 percent. At 15 percent, Stephens County has a rate higher than the state and national averages.

The maps in Figures 5 and 6 illustrate where the highest concentrations of minority and low-income communities are found in the four-county area. Using 2000 Census population data and 1990 Census income data, the maps show the location (by Census block group) of those communities which exceed the regional average for minority population (14 percent) and those communities which fall below the 1990 regional average per capita income ($11,188).

As shown in Figure 5, 40 to 65 percent of the population in the Census block groups north of Cleveland, near Cornelia and south of Alto are made up of minority groups. The block groups near Cleveland and Cornelia are made up primarily of African-Americans. The block group south of Alto is made up primarily of Hispanic communities, with some African-American communities. Figure 6 shows the area with the highest concentration of households with a per capita income lower than the regional average as the Census block group south of Cleveland.

Smaller low-income and minority communities are dispersed throughout the rest of the study area. Most of the pockets of low-income and minority groups are located in the downtown areas of the major cities in the study area (Clarkesville, Cornelia, Demorest, Baldwin, Toccoa, Clayton and Cleveland), where there are low-income housing communities and better access to health services. Other pockets are located near large employers in the area, such as Fieldale Farms, a poultry producing facility off SR 365 in Cornelia and other manufacturing facilities (referenced in the previous section) for easy access to jobs. There is also a small Asian community (Laotian) in the Cornelia area.

Areas of Minority Population Concentrations



Study Area

Legend

Minority Population Year 2000

- 40% - 65%
- 15% - 40%

Minority Population at County Level

	1990	2000
Habersham	8.3%	11.1%
Rabun	1.1%	5.1%
Stephens	12.7%	14.3%
White	3.7%	4.8%

Statewide Minority Population in 1990 of 28.9%
Statewide Minority Population in 2000 of 34.9%

- Cities
- Local Roads
- Hospitals

Figure 5

Source: Georgia DOT, US Census 2000 Population Data, and Day Wilburn Associates, Inc.

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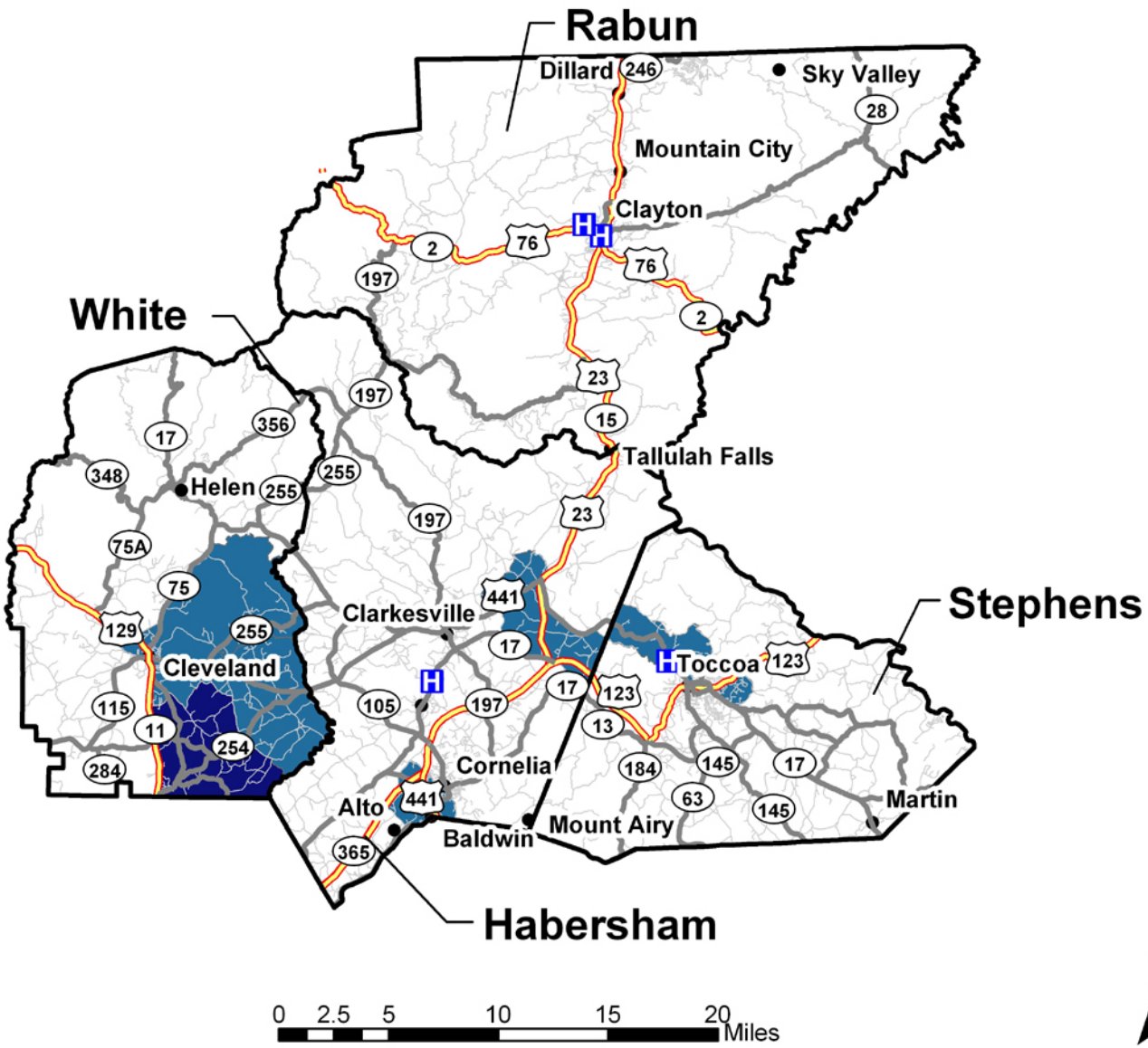
Areas of Low-Income Population Concentrations



Study Area

Legend

Per Capita Income Year 1990

- $0 - $5,999
- $5,999 - $8,999

Per Capita Income at County Level

	1990	2000
Habersham	$10,950	$23,525
Rabun	$11,161	$22,185
Stephens	$10,531	$21,461
White	$11,277	$22,598

Statewide Per Capita Income in 1990 of $13,631

Statewide Per Capita Income in 2000 of $27,324

Note: Census 2000 Income Data not available at Block Group level

- Cities
- Local Roads
- Hospitals

Figure 6

Source: Georgia DOT, US Census 1990 Population Data, and Day Wilburn Associates, Inc.

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Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

Day Wilburn Associates, Inc.

3 Existing Transportation Conditions

An inventory of the existing transportation infrastructure for Habersham, Rabun, Stephens and White Counties was conducted early in the study. The inventory is based on the collection and review of existing transportation-related information for roadways, bicycle and pedestrian facilities, transit, passenger rail, intercity bus and airport service.

Several data and information sources were used to support the inventory. Traffic volumes for the roadway analysis were obtained from historical traffic counts taken at GDOT stations throughout the four-county region. Additional traffic counts were also taken at key GDOT count station locations during the 2002 leaf season period. Historical data for tourism peaking characteristics were also obtained from chamber of commerce visitor records and county tax records. Further information was obtained from a GDOT-maintained road characteristics file (RCFILE) containing roadway and traffic information for all monitored Georgia roadways. Additionally, supplemental data were acquired from the Highway Performance Monitoring System (HPMS), a data collection system administered by the Federal Highway Administration (FHWA) and from GDOT crash history sources.

In documenting the existing conditions of bike and pedestrian facilities in the four-county study area, research was conducted by reviewing county and city comprehensive plans, current land use plans and the Georgia Mountains Regional Comprehensive Plan. Interviews were held with local government officials, and the short-term work programs for each of the counties were also consulted. Finally, the Georgia Bike and Pedestrian Plan and GDOT's Pedestrian Facilities Design Guide assisted in this project task.

Transit service data and information on other transportation services were obtained from discussions with local program operators and the GDOT Intermodal Transportation Office. Socioeconomic information was obtained from 1990 and 2000 Census results. Consultations with local stakeholders and the series of public meetings held throughout the four-county study area were helpful in understanding the needs of the communities.

Existing Highway System

A network of federal, state, county and local roadways serves Habersham, Rabun, Stephens and White Counties. The federal and state routes primarily serve as arterials for the region, allowing connectivity between major population centers. Descriptions of the major federal and state routes are listed in the following section. Because some state routes have more than one designated route number along a single stretch of roadway as the routes converge and diverge with other routes throughout the region, not all major route numbers may be listed.

An inventory of all the major roadways by county is provided as follows:

Habersham County

- U.S. 441 — Extends through Habersham County from the south through Baldwin, joins with U.S. 23 and then extends through northeastern county line. Also referenced as S.R. 105 in places.
- U.S. 23 — Extends through Habersham County from the south near Alto and connects with U.S. 441, passes north through Tallulah Falls. Also referenced as S.R. 365 in places.
- S.R. 15 — Extends through Habersham County from the south through Baldwin and joins with U.S. 23.
- S.R. 17 — Extends through Habersham County from east county line and passes west county line, extending through Clarkesville.
- S.R. 105 — Extends through Habersham County from the south through Baldwin and Cornelia and runs south of Demorest, where it turns northwest and terminates at S.R. 17.
- S.R. 197 — Extends from east of Mount Airy through Clarkesville and turns northwest to northern county line.
- S.R. 255 — Located in northwestern Habersham County.
- S.R. 384 — Extends northwest/southeast through southern Habersham County.

Rabun County

- U.S. 23 — Extends north/south through Rabun County and passes through Clayton, Mountain City and Dillard. Also known as S.R 15 and U.S. 441.
- U.S. 76 — Extends east/west through Rabun County and passes through Clayton. Also known as S.R. 2.
- S.R. 197 — Extends north/south through Rabun County and passes on the west side of Lake Burton.
- S.R. 246 — Extends northeast from U.S. 23 north of Dillard into North Carolina.

Stephens County

- S.R. 17 — Extends through Stephens County from the south and runs southeast/northwest through Martin and Avalon.
- S.R. 63 — Extends through Stephens County from the south and ends in Toccoa.
- S.R. 184 — North/south facility that passes through Toccoa.
- S.R. 328 — Extends east through Stephens County from Avalon.
- S.R. 365 — Extends northeast from Toccoa through Stephens County. Also known as U.S. 123.

White County

- U.S. 129 — Extends through White County from the south and travels north/south to Cleveland before changing to a northwest alignment.
- S.R. 17 — Extends through White County from Habersham County on east and changes to a north/south orientation past Helen.
- S.R. 75 — Extends north/south through White County and connects Cleveland and Helen.
- S.R. 115 — Extends through White County from Habersham County and passes through Cleveland, west of Cleveland alignment shifts to north/south briefly, then continues west.
- S.R. 255 — Serves Chattahoochee Forest area in northern White County.
- S.R. 348 — Serves Chattahoochee Forest area in northern White County.
- S.R. 356 — Serves Chattahoochee Forest area in northern White County.

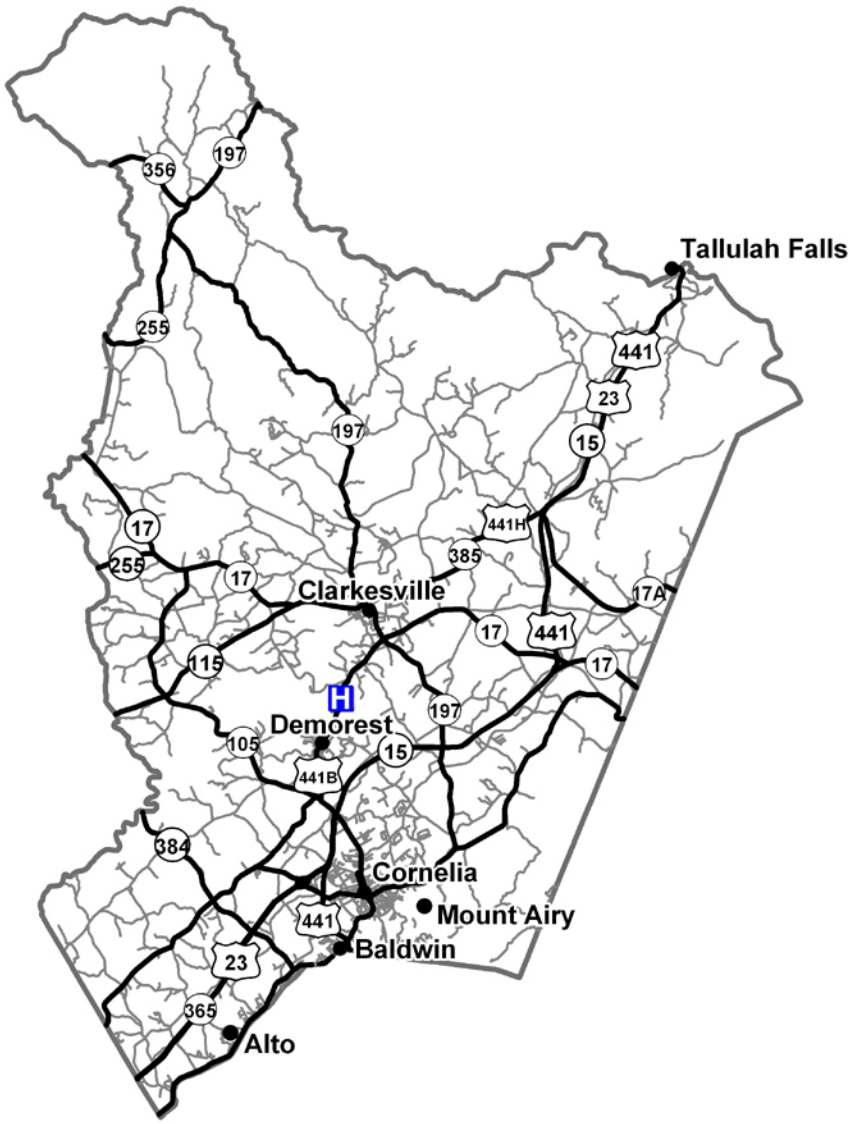
Figures 7 through 10 show the roadway network as described in the previous bulleted lists.

Roadway Network Hierarchy

Roadways serve two primary functions for vehicular users: the ability to reach a local destination (access) and the ability to travel distances efficiently (mobility). As more local destinations are able to be accessed along a given stretch of roadway, more turning movements are made by traveling vehicles, resulting in average vehicular speed for the roadway lowering correspondingly. Thus, as access increases, mobility decreases. The various functional classes for roadways are designated based on the balance between the access and mobility functions. A summary of total mileage and vehicle miles traveled (VMT) by functional classification for each county is provided in Table 4. The data was recorded by the GDOT Office of Transportation Services in 2001.

Arterials are designed to efficiently accommodate vehicles through the roadway system as they travel between communities. These roadways, therefore, have higher posted speed limits and more restricted local access. For the four-county region, arterials make up approximately 11 percent of the total roadway mileage, varying slightly by county from nine percent in Habersham and Rabun Counties to 15 percent in White County. Because arterials tend to serve longer-distance trips and have higher vehicular capacity, the proportion of vehicle miles traveled (VMT) assigned to the arterial class roadways is significantly greater than its total mileage. Arterial VMT comprises an average of 48 percent of all vehicle miles traveled in the four-county region, ranging from 42 percent in Habersham County to 60 percent in White County. GDOT maintains over 90 percent of the arterial roadways within the study area, although Stephens County does have some arterial class roadways maintained at the county and city levels.

Study Area Roadways - Habersham County



Study Area

Legend

Study Area Roadways

- Habersham County US and State Routes
- Cities
- Local Roads - no data available
- Hospitals

Figure 7

Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

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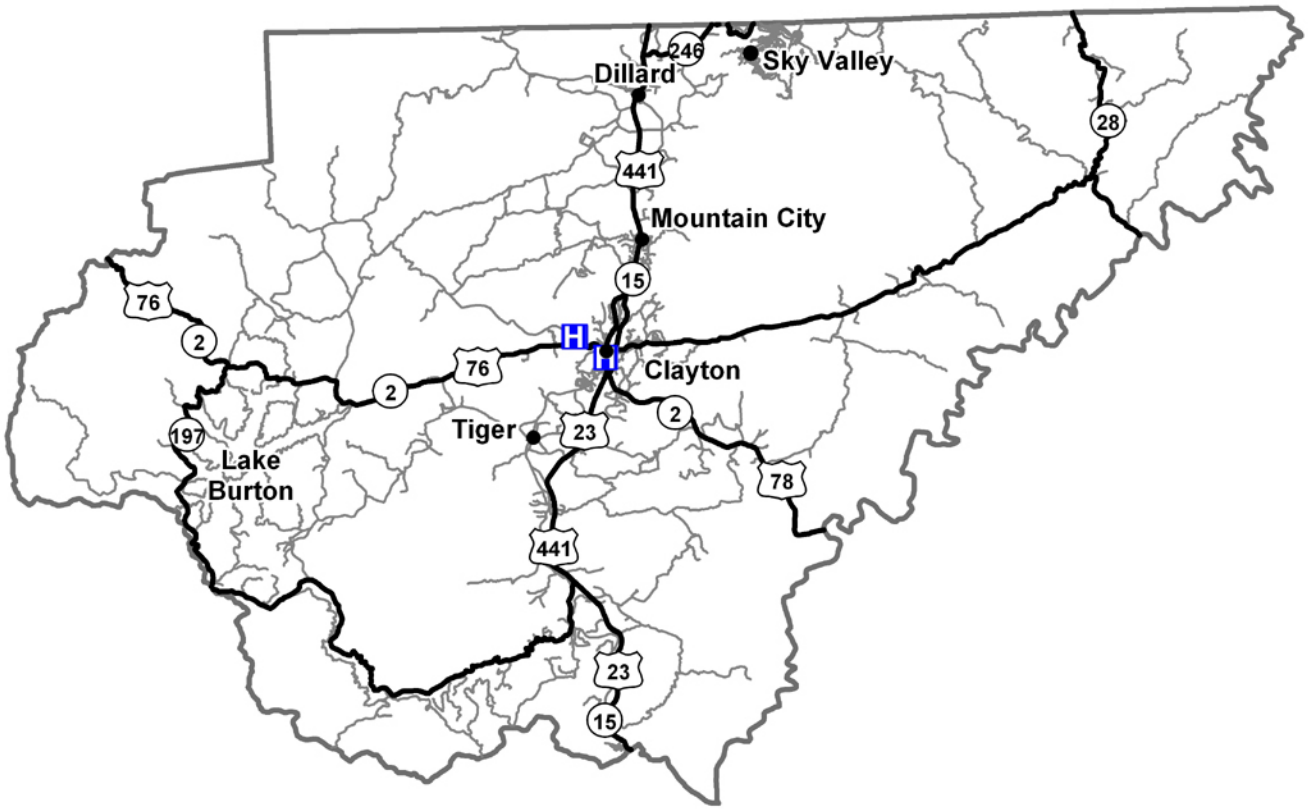
Study Area Roadways - Rabun County



0 1 2 4 6 8 Miles

N

Study Area

Legend

Study Area Roadways

- Rabun County US and State Routes
- Cities
- Local Roads - no data available
- Hospitals

Figure 8

Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

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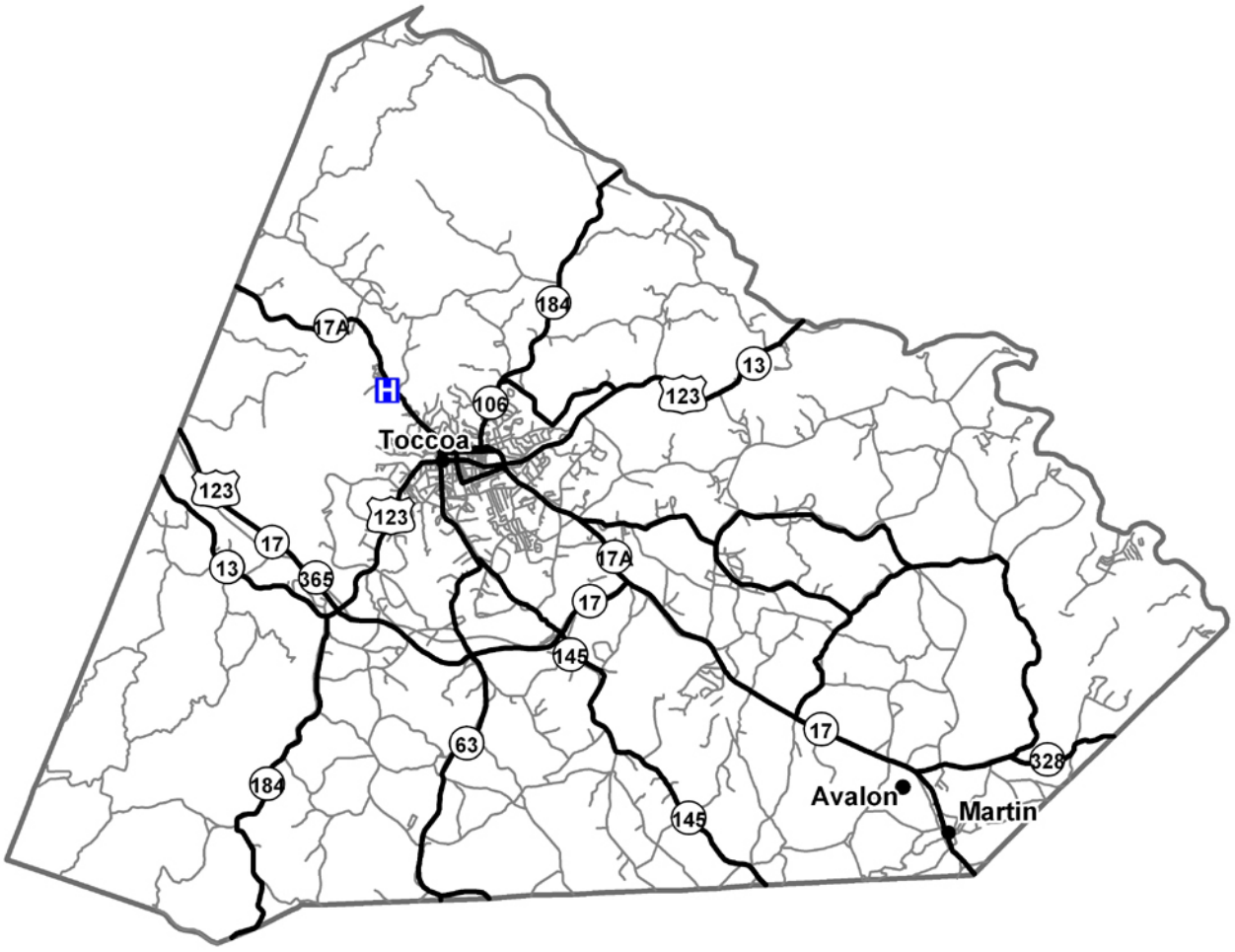
Study Area Roadways - Stephens County



0 1 2 4 6 8 Miles

N

Study Area

Legend

Study Area Roadways

- Stephens County US and State Routes
- Cities
- Local Roads - no data available
- Hospitals

Figure 9

Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

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Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

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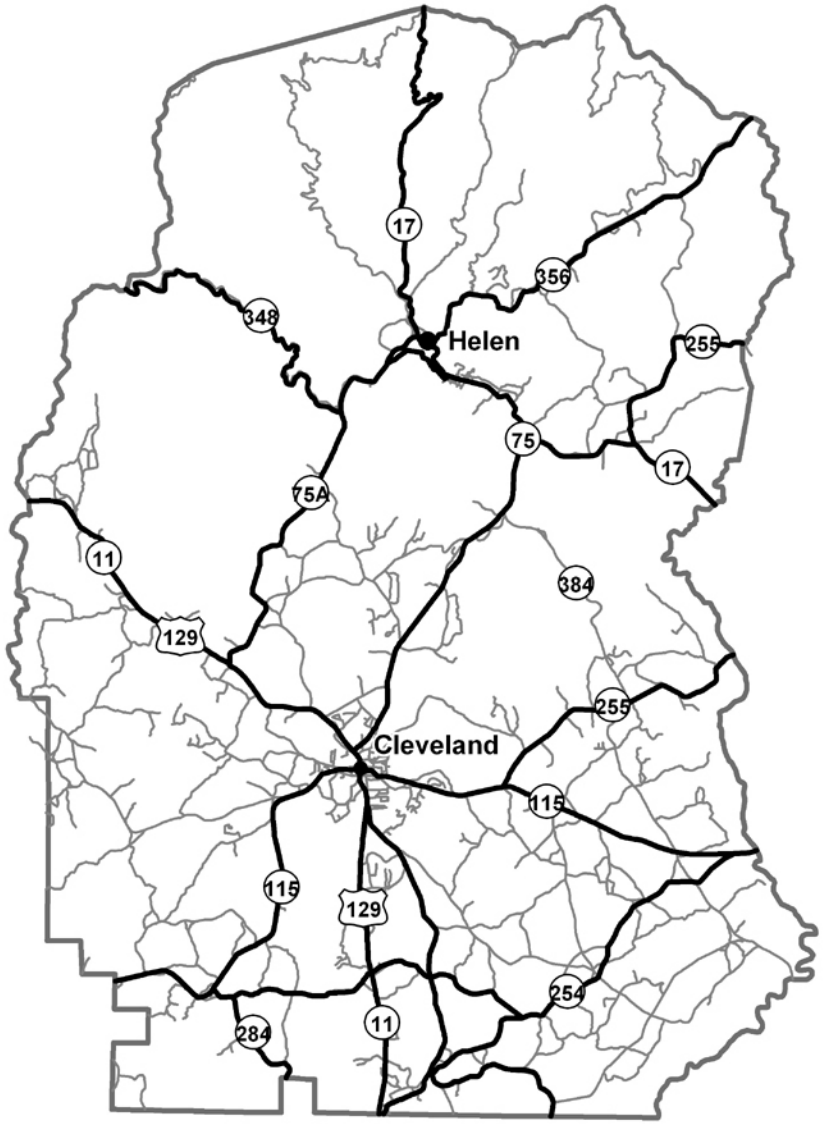
Study Area Roadways - White County



0 1 2 4 6 8 Miles

N

Study Area

Legend

Study Area Roadways

- White County US and State Routes
- Cities
- Local Roads - no data available
- Hospitals

Figure 10

Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

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Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

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Table 4
Total Mileage and Vehicle Miles Traveled by Roadway Functional Class

Functional Class	State Route		County Road		City Street		Total	
	Mileage	VMT	Mileage	VMT	Mileage	VMT	Mileage	VMT
Habersham County								
Arterial	59	559,937	0	0	0	0	59	559,937
Collector	62	231,330	97	282,820	3	17,006	162	531,156
Local	0	0	396	181,824	67	47,907	463	229,731
Totals	121	791,267	493	464,644	70	64,913	684	1,320,824
Rabun County								
Arterial	44	298,449	0	0	0	0	44	298,449
Collector	19	18,725	102	112,121	0	0	122	130,846
Local	0	0	283	117,523	56	38,859	339	156,382
Totals	63	317,174	385	229,644	56	38,859	505	585,677
Stephens County								
Arterial	45	343,725	10	22,325	7	15,135	62	381,185
Collector	25	70,587	62	130,396	9	6,833	96	207,816
Local	0	520	277	162,850	52	42,433	329	205,803
Totals	70	414,832	349	315,571	68	64,401	487	794,804
White County								
Arterial	61	353,268	0	0	0	0	61	353,268
Collector	46	72,092	34	52,660	0	0	80	124,752
Local	0	0	248	99,487	19	14,065	268	113,552
Totals	107	425,360	282	152,147	19	14,065	409	591,572

Source: GDOT, Office of Information Services 12/31/2001

Collector streets balance the access and speed functions; they distribute traffic between arterial routes and neighborhoods or local activity centers at either end of the longer-distance trip. Approximately 22 percent of the roadway network mileage in the four-county region is designated as the collector functional class. The mileage percentage fluctuates slightly between counties, ranging from 20 percent for Stephens and White Counties to 24 percent for Habersham and Rabun Counties. The percentage of total VMT attributed to collector facilities is reported to be approximately 30 percent for the region. County by county variation shows a wider range of values, from 21 percent in White County up to 40 percent in Habersham County. Region-wide, the majority (64 percent) of collector facilities are maintained at the county level, with GDOT maintaining 33 percent of the total collector roadway facilities.

Local roadways are used primarily for access to specific destinations, such as residences and are typically both low-volume and low-speed facilities. Local roadways comprise approximately 67 percent of the total roadway mileage in the region, with only minor variations county by county. The total regional VMT attributed to local roadway networks averages approximately 21 percent, fluctuating between 17 percent for Habersham County to 27 percent for Rabun County.

The majority of roads in the four-county region are two-lane state and county routes, supplemented by privately-owned facilities. As reported by the GDOT Office of Transportation Services, over 75 percent of region's roads have paved surfaces. State routes, which are maintained by GDOT, are paved throughout the region. Approximately 973 miles (34 percent) of county roads are currently unpaved. Table 5 summarizes the information by county.

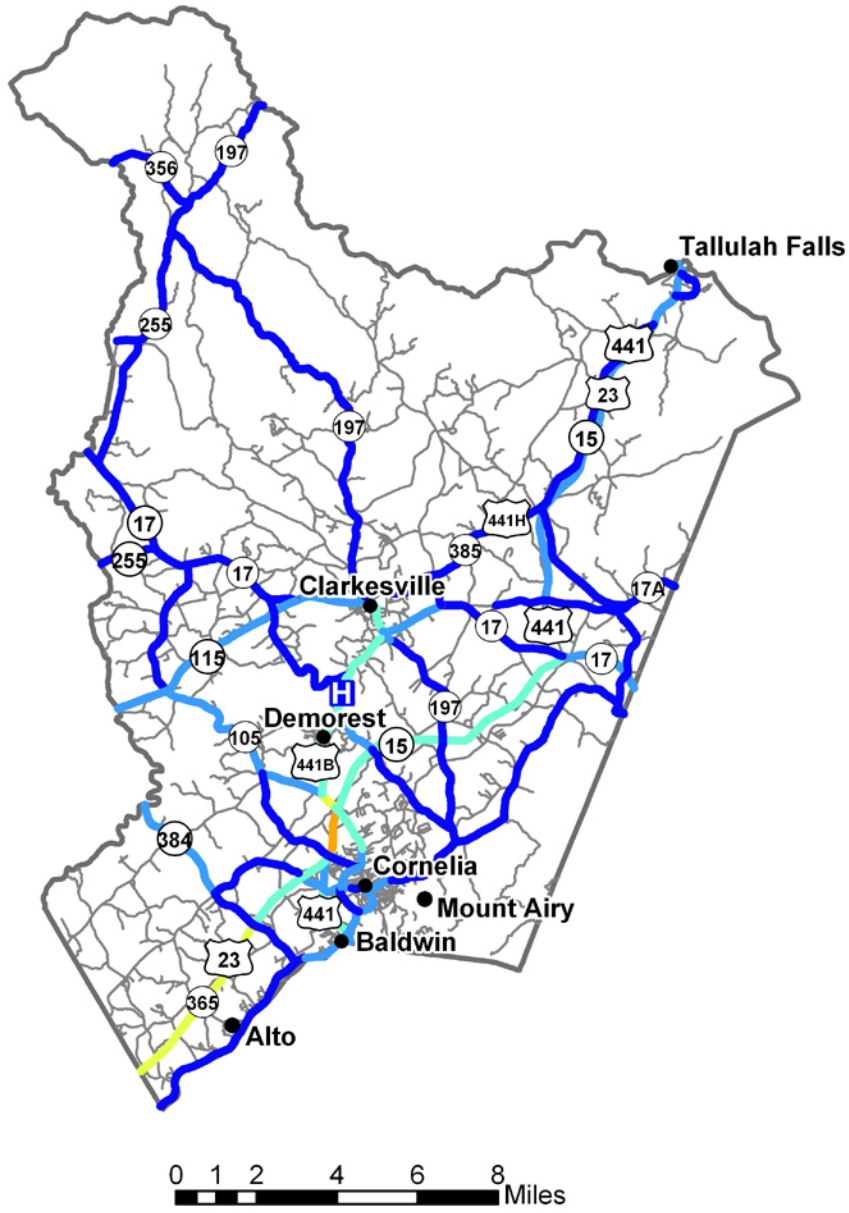
Table 5
Lane Mileage of Public Roads by Surface Type

	Habersham		Rabun		Stephens		White		NE GA Total	
	Unpaved	Paved	Unpaved	Paved	Unpaved	Paved	Unpaved	Paved	Unpaved	Paved
State Routes	0	304	0	141	0	156	0	216	0	817
County Roads	336	627	269	426	128	547	239	273	973	1,873
City Streets	3	114	7	100	1	127	0	37	12	379
Total Roads	339	1,045	276	667	129	830	239	526	985	3,069

Traffic Volumes

Existing traffic conditions provided a basis on which to determine existing transportation needs and establish the baseline for future traffic operations. In order to evaluate the traffic operations of the major roadways for each county, the 2001 average annual daily traffic (AADT) volumes were obtained from GDOT sources. The existing traffic volumes for Habersham, Rabun, Stephens and White Counties can be seen graphically in Figures 11, 12, 13 and 14, respectively.

Habersham County Average Annual Daily Traffic (AADT) Year 2001



Study Area

Legend

Average Annual Daily Traffic (AADT) Year 2001

- 40,001 and Above
- 30,001 - 40,000
- 20,001 - 30,000
- 10,001 - 20,000
- 5,001 - 10,000
- 5,000 and Below
- Cities
- Local Roads - no data available
- Hospitals

Figure 11

Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

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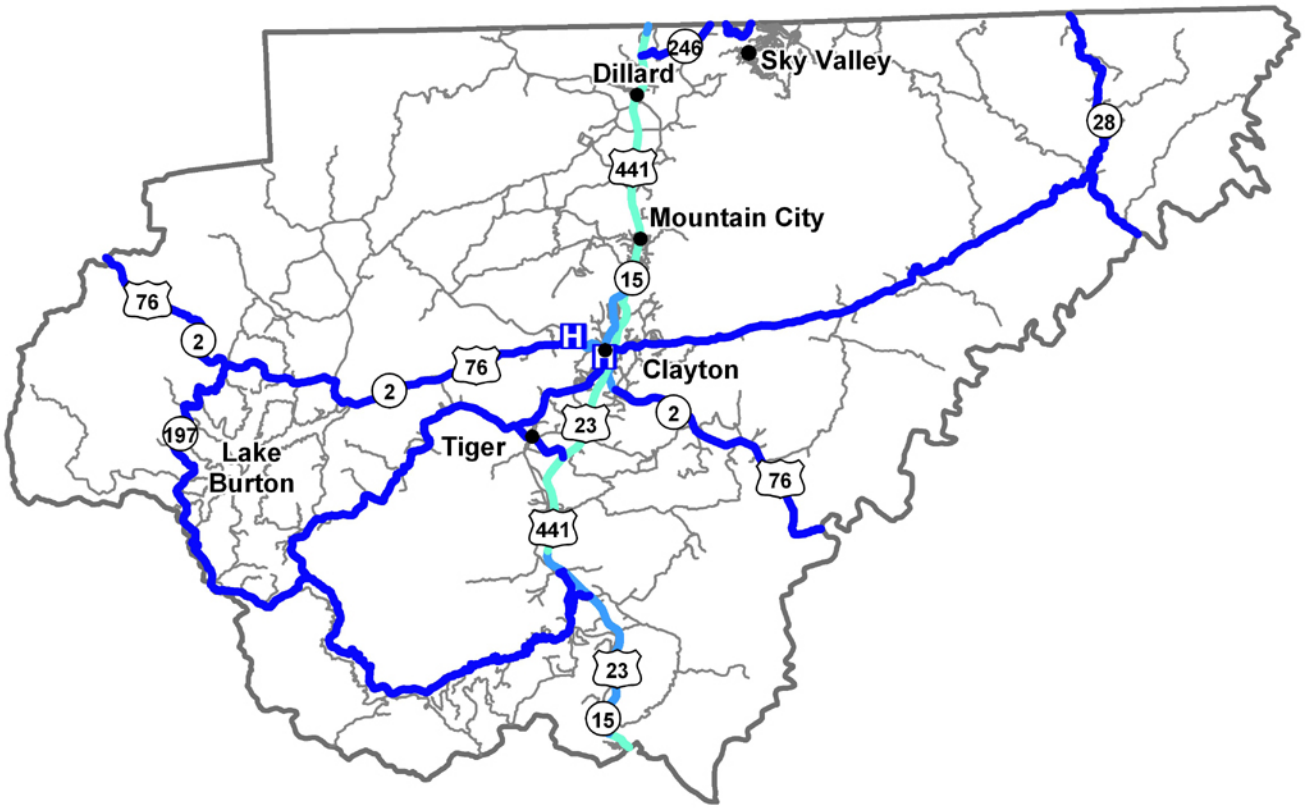
Rabun County Average Annual Daily Traffic (AADT) Year 2001



0 1 2 4 6 8 Miles

N

Study Area

Legend

Average Annual Daily Traffic (AADT) Year 2001

- 40,001 and Above
- 30,001 - 40,000
- 20,001 - 30,000
- 10,001 - 20,000
- 5,001 - 10,000
- 5,000 and Below
- Cities
- Local Roads - no data available
- Hospitals

Figure 12

Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

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Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
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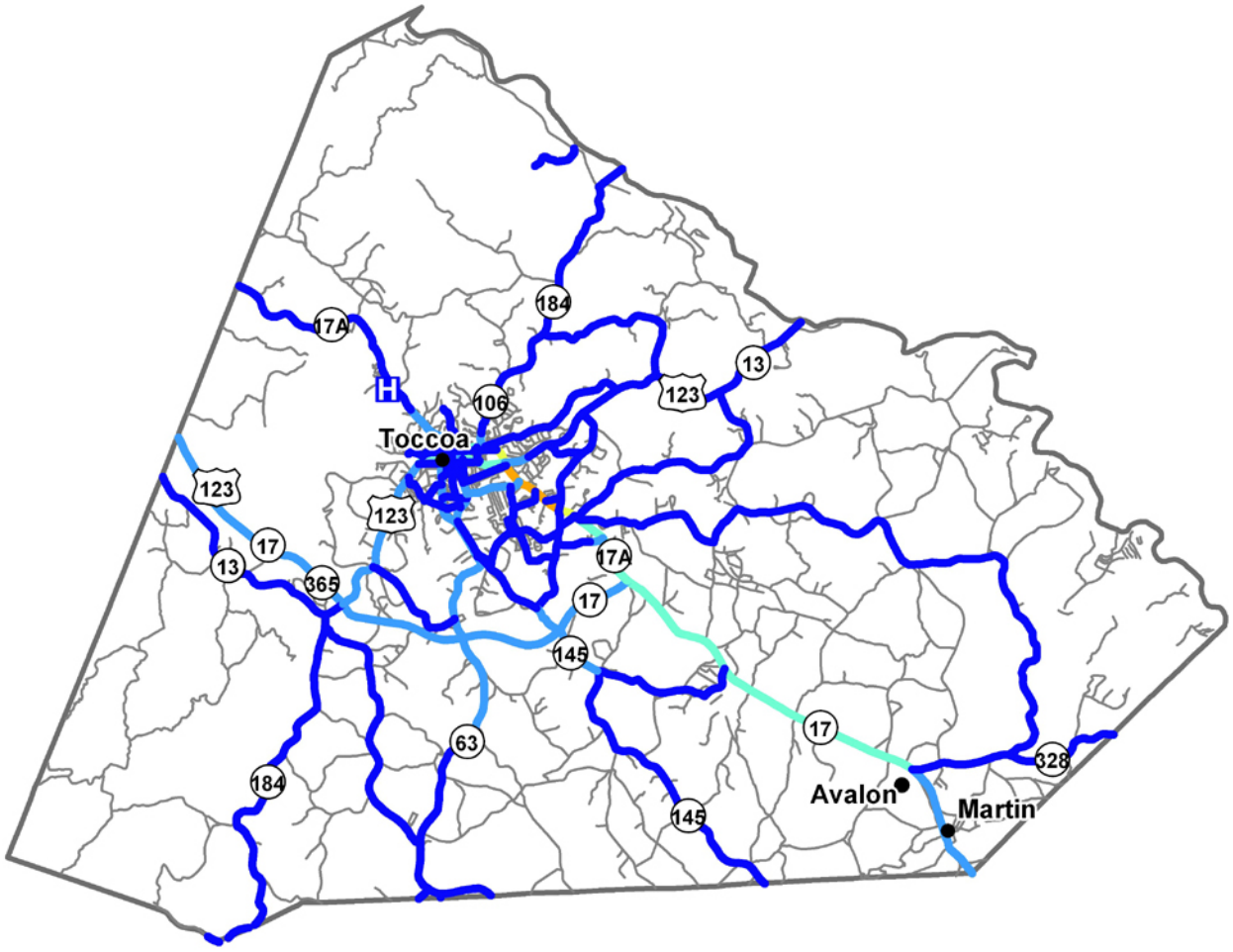
Stephens Average Annual Daily Traffic (AADT) Year 2001



0 1 2 4 6 8 Miles

N

Study Area

Legend

Average Annual Daily Traffic (AADT) Year 2001

- 40,001 and Above
- 30,001 - 40,000
- 20,001 - 30,000
- 10,001 - 20,000
- 5,001 - 10,000
- 5,000 and Below
- Cities
- Local Roads - no data available
- Hospitals

Figure 13

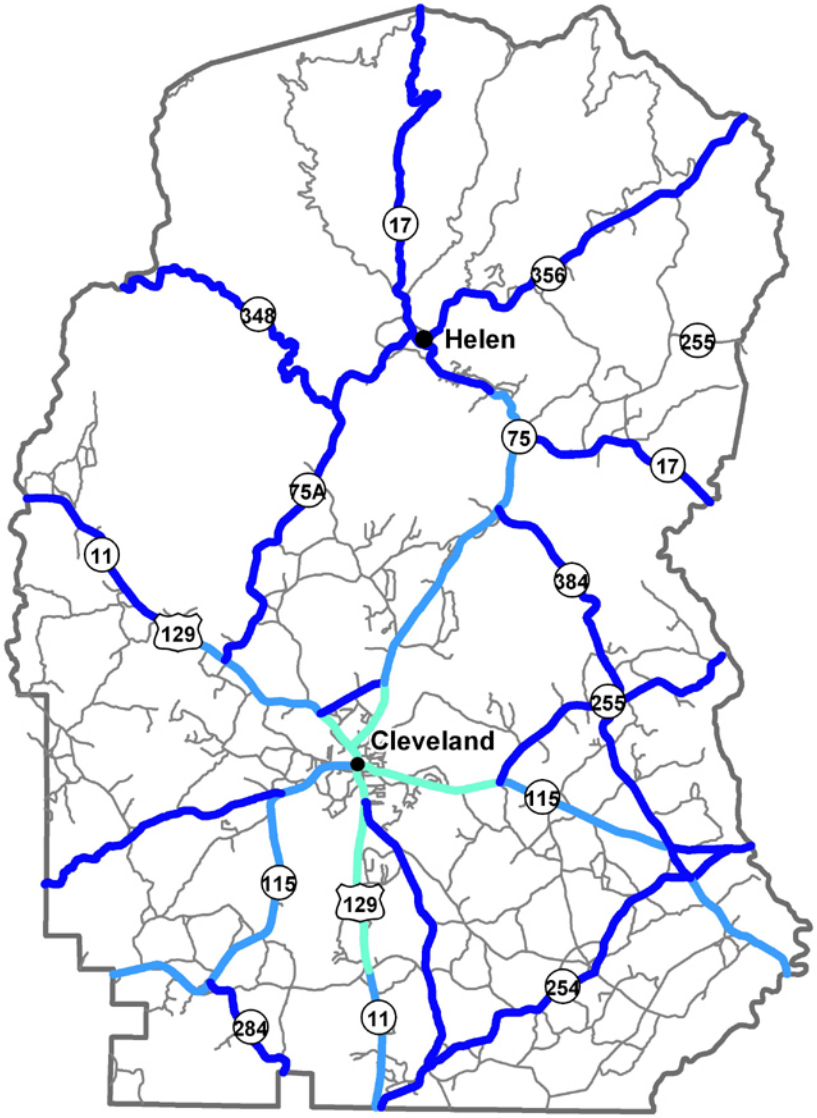
Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

White County Average Annual Daily Traffic (AADT) Year 2001



0 1 2 4 6 8 Miles

N

Study Area

Legend

Average Annual Daily Traffic (AADT) Year 2001

- 40,001 and Above
- 30,001 - 40,000
- 20,001 - 30,000
- 10,001 - 20,000
- 5,001 - 10,000
- 5,000 and Below
- Cities
- Local Roads - no data available
- Hospitals

Figure 14

Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Historical traffic counts at point locations were also presented during the November 2002 public involvement meetings. These presentations are included in Appendix A.

GDOT maintains traffic count locations throughout the state, including locations within Habersham, Rabun, Stephens and White Counties. Historical traffic count data is recorded each year at these locations. This historical traffic count data was used to determine the average annual traffic growth rate for arterials within each county. In general, arterial roadways typically provide the clearest measurement of background growth. The total daily volume of lower-volume roadways (such as collectors or local streets) tend to be more greatly impacted by small, day-to-day variations in traffic counts than the higher-volume arterials. Table 6 shows locations examined for each county between 1991 and 2001. Only those roadways with a positive growth rate were used to determine the average annual traffic growth rate for each county.

Table 6
Traffic Growth Trends for Selected Routes

County	Location	Description	1991 Volume	2001 Volume	Annual Average Change	Positive Annual Average Change
Habersham	Station 134	SR 365/US 441 N of Cornelia	16,048	21,484	3.0%	3.0%
	Station 169	SR 17 W of Clarkesville	6,849	7,764	1.3%	1.3%
	Station 176	US 441 E of Clarkesville	5,124	3,314	-4.3%	--
	Station 198	US 441 N of Cornelia	9,578	12,871	3.0%	3.0%
	Station 365	SR 365 W of Cornelia	8,083	17,812	8.2%	8.2%
	County Average				***2.2%***	***3.9%***
Rabun	Station 009	US 76 W of Clayton	2,700	5,014	6.4%	6.4%
	Station 041	US 441 in S Clayton	7,696	12,189	4.7%	4.7%
	Station 047	US 441 N of Clayton	11,496	15,248	2.9%	2.9%
	Station 049	US 441 N of Mountain City	7,790	13,089	5.3%	5.3%
	Station 052	US 441 at GA border	5,655	8,461	4.1%	4.1%
	County Average				***4.7%***	***4.7%***
Stephens	Station 005	US 123 SW of Toccoa	6,782	7,761	1.4%	1.4%
	Station 035	SR 17 S of Avalon	6,503	10,125	4.5%	4.5%
	Station 039	SR 17 W of Avalon	6,752	11,488	5.5%	5.5%
	Station 051	SR 17 SE of Toccoa	26,912	30,086	1.1%	1.1%
	Station 129	SR 106 S of Toccoa	6,026	6,636	1.0%	1.0%
	County Average				***2.7%***	***2.7%***
White	Station 105	US 129 S of Cleveland	7,412	12,214	5.1%	5.1%
	Station 141	SR 115 W of Cleveland	4,655	8,264	5.9%	5.9%
	Station 145	SR 115 E of Cleveland	7,152	11,676	5.0%	5.0%
	Station 241	SR 75 N of Cleveland	8,302	9,850	1.7%	1.7%
	Station 245	SR 75 S of Helen	7,328	6,914	-0.6%	--
	County Average				***3.4%***	***4.4%***
Total Region Average					**3.3%**	**3.9%**

Truck travel patterns and traffic volumes were considered when evaluating the existing traffic conditions. The heavy vehicle percentage average was calculated from 2002 classification tube counts at the selected sites in Table 6. The summary data by county is shown in Table 7.

Table 7
Heavy Vehicle Percentage for Selected Sites

County	Weekday Average Ratio	Weekend Average Ratio
Habersham	12%	12%
Rabun	12%	9%
Stephens	7%	4%
White	15%	11%
Total Region Average	11%	9%

These truck percentages are generally consistent with the typical heavy vehicle percentages estimated in the GDOT RCFILE database for these facilities.

HPMS, the FHWA data collection system, contains heavy vehicle information for sample roadways in Habersham, Rabun, Stephens and White Counties. In Table 8, the calculated heavy vehicle percentage is compared with the weekday classification count data presented in Table 7.

Table 8
Comparison of Heavy Vehicle Percentage for Selected Sites and HPMS Sample Data

County	Classification Counts Weekday Average Ratio	HPMS Average Ratio
Habersham	12%	8%
Rabun	12%	6%
Stephens	7%	10%
White	15%	8%
Total Region Average	11%	8%

In general, the HPMS sample data results show a lower percentage of heavy vehicles than the classification traffic counts, with the exception of Stephens County. The RCFILE estimated heavy vehicle percentages, which ranged up to 15.1 percent, were the most conservative case and, therefore, were used in the study analysis.

Tourism plays a major role in the four-county region and, as a result, traffic volumes can be expected to be correspondingly higher during tourism peak periods. As previously stated, historical information for tourism peaking characteristics was obtained from chamber of commerce visitor records and county tax records. Additionally, traffic counts were taken at key GDOT count station locations in November 2002 during the 2002 leaf season period. These counts include both weekend and weekday data, covering a 96-hour period at each location. The raw count data for these seasonal traffic counts can be found in Appendix C. The peak daily roadway traffic volume during that 96-hour count was then compared to the AADT traffic volume at each location to determine the tourism peaking characteristics for roadway traffic. The results for both historical commerce information and historical traffic information are shown below in Table 9.

Table 9
Seasonal Effect Comparison

County	2001 Peak Tourist Month	2001 Peak Tourist Month Variation	2001Peak Fall Month	2001 Peak Fall Month Variation	2001 Season Traffic Count Variation
Habersham	November	195%	November	195%	**116%**
Rabun	July	170%	October	142%	**132%**
Stephens	July	144%	October	128%	**120%**
White	October	167%	October	167%	**139%**
Total Region Average				148%	**130%**

County data for 2001 showed that the tourism peaking characteristics were greater than the increase noted for the 2002 leaf season traffic counts. However, discussion with county staff and local residents indicated that 2002 had fewer tourists than had been present historically, so this result was not unexpected.

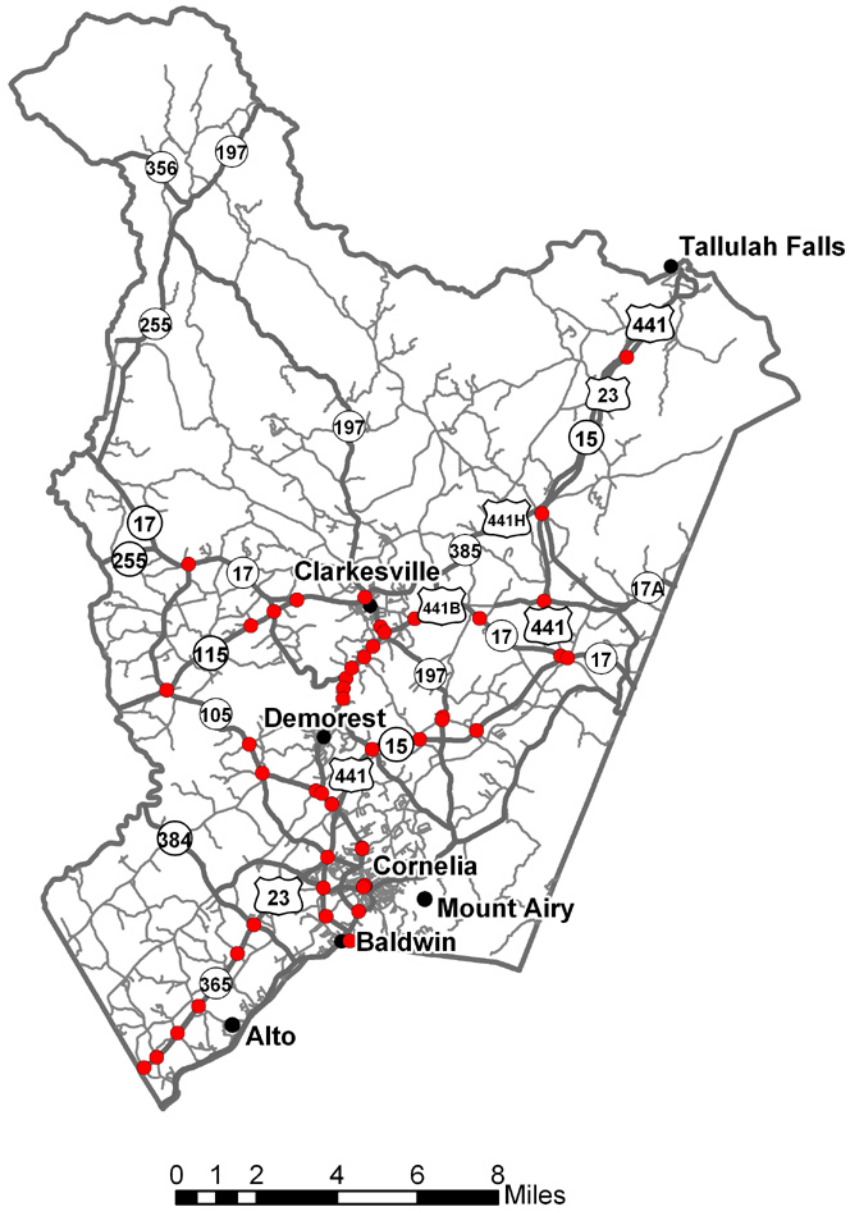
Crash Data

Frequent vehicle crashes at a location can indicate the need for roadway improvements to increase safety. Crash data for the year 2001 was evaluated to help identify potential safety needs. This data was obtained from the GDOT vehicular crash database, which records historical accident data for state routes. This information includes intersections with county and city roadways but does not cover intersections off the state route network.

The Multimodal Transportation Planning Tool (MTPT) program, developed for GDOT to allow access to and analysis from existing GDOT databases, was used to place roadway accident locations and determine locations that have historically had high accident occurrence. The MTPT analyzes the last complete year (1997) of accident information for the state of Georgia. Crash location graphics were presented in the November 2002 public information meetings and are included in Appendix A. This information was compared to year 2001 vehicle crash data. Primarily, the most recent year (2001) of accident information was used to determine intersections and other areas of potential safety concern.

During 2001, the following numbers of vehicular crashes were recorded in the four-county region: 1,234 crashes in Habersham County, 398 crashes in Rabun County, 985 crashes in Stephens County and 892 crashes in White County. These crash incidents resulted in 809 injuries and 16 fatalities in Habersham County, 291 injuries and 13 fatalities in Rabun County, 514 injuries and 3 fatalities in Stephens County and 413 injuries and 6 fatalities in White County. Mile point locations that had five or more vehicular crashes in 2001 are shown on Figures 15, 16, 17 and 18 for Habersham, Rabun, Stephens and White Counties, respectively. The Manual on Uniform Traffic Control Devices (MUTCD 2000) recommends that the need for traffic signal control be considered if an intersection has reported five or more crashes. Therefore, the occurrence of five crashes was used as the criteria for isolating locations with potential safety concerns. The following number of locations was then determined for each county: 49 crash sites in Habersham County, 16 crash sites in Rabun County, 42 crash sites in Stephens County and 32 crash sites in White County. A list of the locations can be seen in Tables 10-13, respectively.

Habersham County Vehicle Crash Locations Year 2001



Study Area

Legend

Vehicle Crash Locations Year 2001

- Roadway Mile Point with Five or More Vehicular Crashes
- Cities
- Local Roads

Figure 15

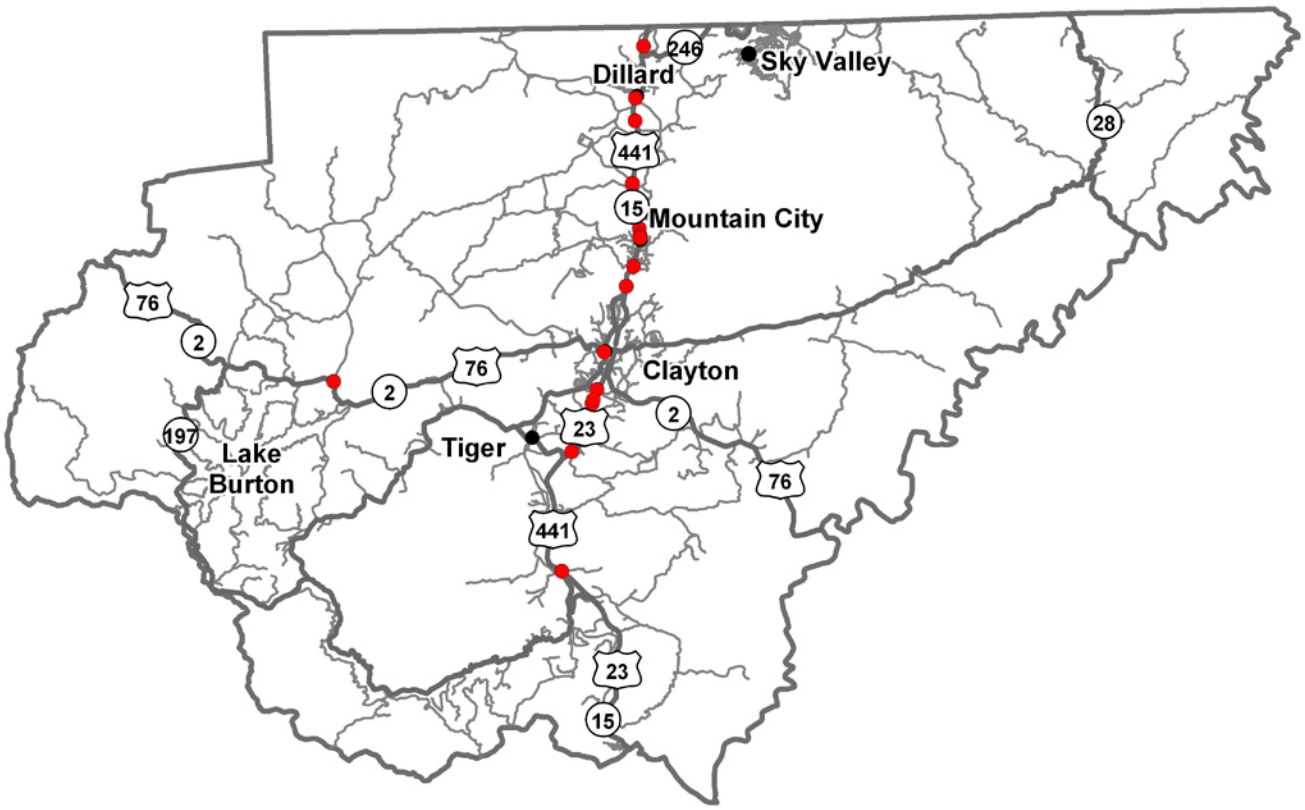
Source: Georgia DOT RC and Crash Databases, and Day Wilburn Associates, Inc.

This map is intended for planning purposes only. July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

Day Wilburn Associates, Inc.

Rabun County Vehicle Crash Locations Year 2001



0 1 2 4 6 8 Miles

N

Study Area

Legend

Vehicle Crash Locations Year 2001

- Roadway Mile Point with Five or More Vehicular Crashes
- Cities
- Local Roads

Figure 16

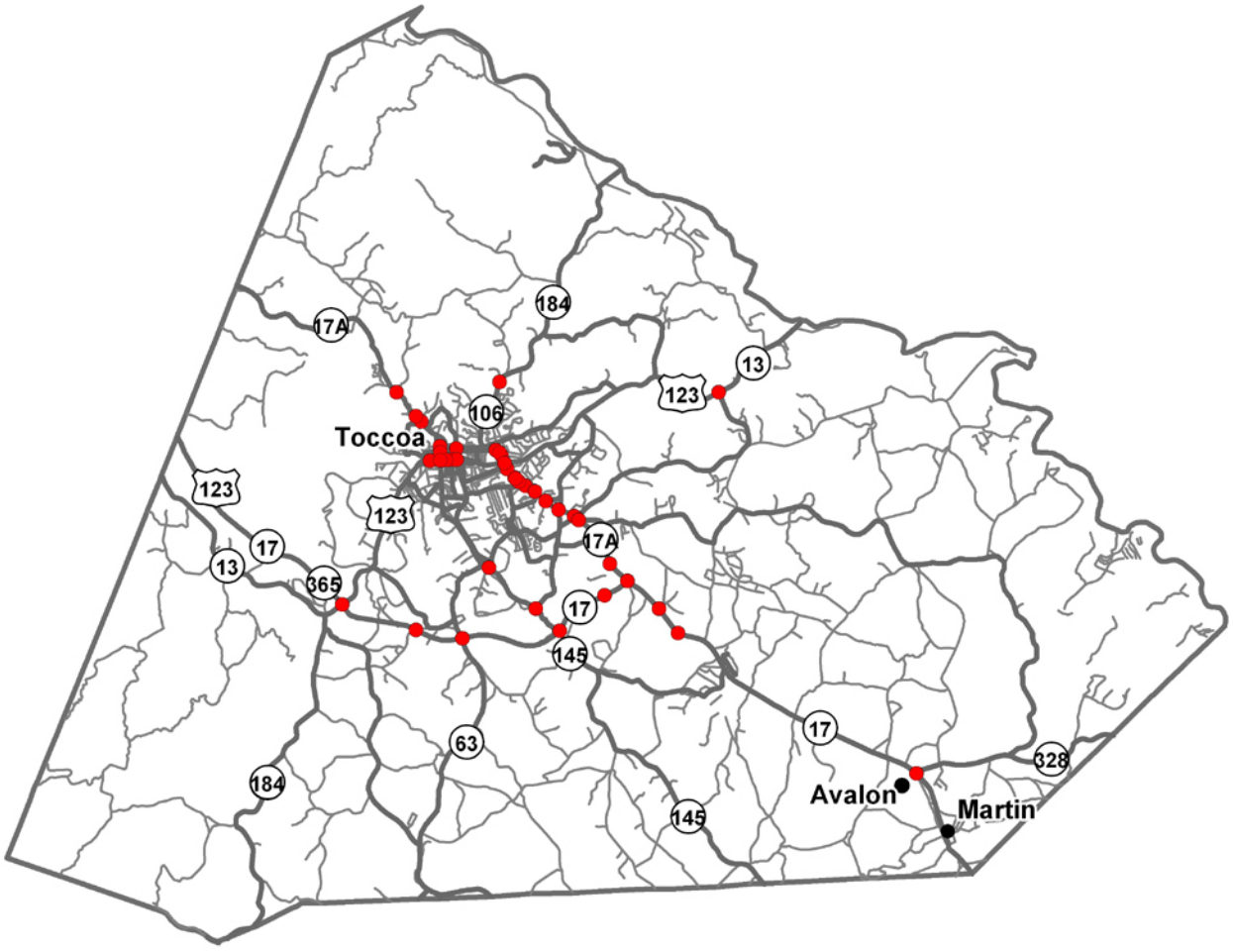
Source: Georgia DOT RC and Crash Databases, and Day Wilburn Associates, Inc.

This map is intended for planning purposes only. July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Stephens County Vehicle Crash Locations Year 2001



0 1 2 4 6 8 Miles

N

Study Area

Legend

Vehicle Crash Locations Year 2001

- Roadway Mile Point with Five or More Vehicular Crashes
- Cities
- Local Roads

Figure 17

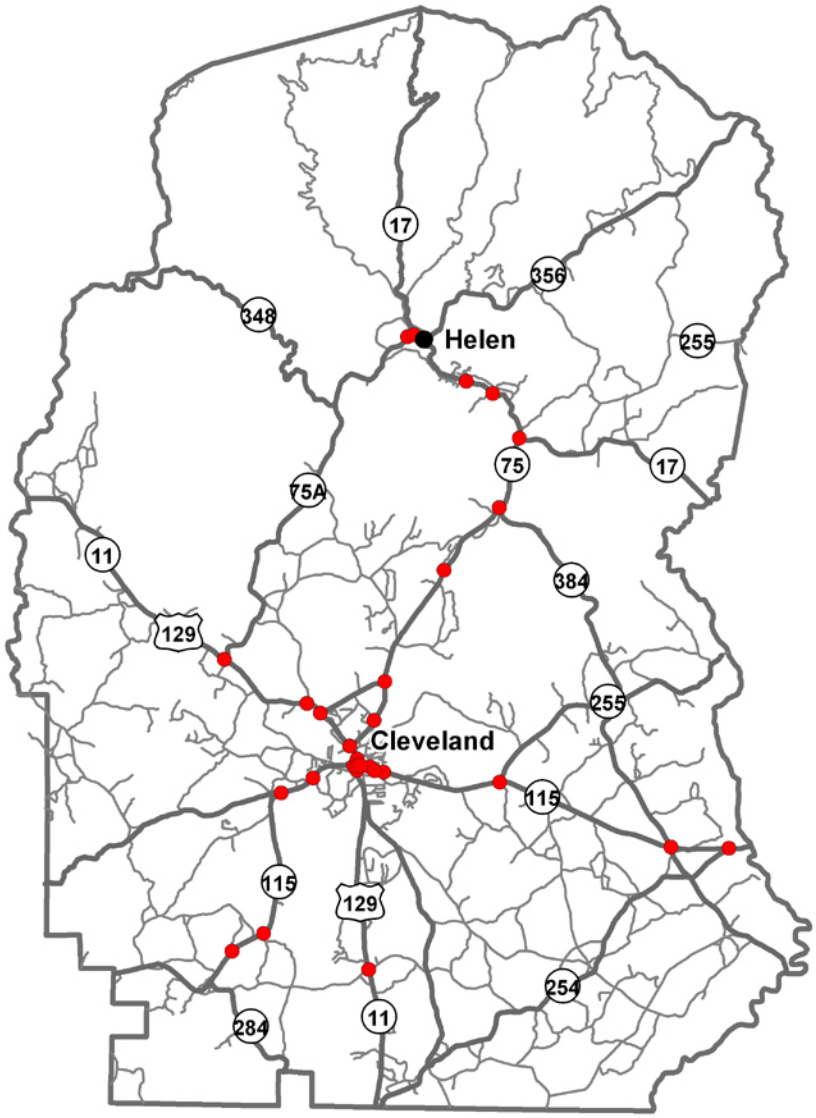
Source: Georgia DOT RC and Crash Databases, and Day Wilburn Associates, Inc.

This map is intended for planning purposes only. July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA Day Wilburn Associates, Inc.

White County Vehicle Crash Locations Year 2001



0 1 2 4 6 8 Miles

N

Study Area

Legend

Vehicle Crash Locations Year 2001

- Roadway Mile Point with Five or More Vehicular Crashes
- Cities
- Local Roads

Figure 18

Source: Georgia DOT RC and Crash Databases, and Day Wilburn Associates, Inc.

This map is intended for planning purposes only. July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Table 10
Locations with Five or More Vehicular Crashes in Habersham County

Number	Route Number	Route Type	Mile Point	Intersecting Route Number (if any)	Intersecting Route Type (if any)
1	15	State Route	0.25	105	State Route
2	15	State Route	0.93	428	County Road
3	15	State Route	1.65	15	State Route
4	15	State Route	2.41	365	State Route
5	15	State Route	5.42	387	County Road
6	15	State Route	6.6	71	County Road
7	15	State Route	8.13	112	County Road
8	15	State Route	11.02	17	State Route
9	15	State Route	12.52	819	State Route
10	15	State Route	14.75	17	State Route
11	15	State Route	19.35		
12	17	State Route	2.01	391	County Road
13	17	State Route	4.5	117	County Road
14	17	State Route	6.32	106	County Road
15	17	State Route	7.15	197	State Route
16	17	State Route	7.32	542	City Street
17	17	State Route	8.23		
18	17	State Route	10.02	115	State Route
19	17	State Route	10.15	197	State Route
20	17	State Route	13.11	105	State Route
21	105	State Route	0.85	913	City Street
22	105	State Route	1.76	904	City Street
23	105	State Route	1.8	908	City Street
24	105	State Route	2.72	391	County Road
25	105	State Route	4.08	542	County Road
26	105	State Route	4.43	385	State Route
27	105	State Route	4.59	44	County Road
28	105	State Route	6	393	County Road
29	105	State Route	6.79	51	County Road
30	105	State Route	9.58	115	State Route
31	115	State Route	3.99	157	County Road
32	115	State Route	4.65	383	County Road
33	197	State Route	0	385	State Route
34	197	State Route	0.56	70	County Road
35	197	State Route	0.64	112	County Road
36	365	State Route	0.14	9	County Road
37	365	State Route	0.5	395	County Road
38	365	State Route	1.33	12	County Road
39	365	State Route	2.17	28	County Road
40	365	State Route	3.82	3	County Road
41	365	State Route	4.65	384	State Route
42	365	State Route	6.35		
43	385	State Route	3.09	81	County Road
44	385	State Route	3.33	80	County Road
45	385	State Route	3.61	679	County Road
46	385	State Route	3.92	75	County Road
47	385	State Route	4.34	71	County Road
48	385	State Route	4.67	83	County Road
49	385	State Route	4.74	75	County Road

Table 11
Locations with Five or More Vehicular Crashes in Rabun County

Number	Route Number	Route Type	Mile Point	Intersecting Route Number (if any)	Intersecting Route Type (if any)
1	2	State Route	8.07	216	County Road
2	2	State Route	15.93	149	County Road
3	15	State Route	5.33	21	County Road
4	15	State Route	8.79	158	County Road
5	15	State Route	13.1	149	County Road
6	15	State Route	13.69	568	City Street
7	15	State Route	14.46	45	County Road
8	15	State Route	14.62	557	City Street
9	15	State Route	15.76	1	County Road
10	15	State Route	17.31	7	County Road
11	15	State Route	17.9	216	County Road
12	15	State Route	19.23	246	State Route
13	15	State Route	10.02		
14	15	State Route	10.11		
15	15	State Route	10.37		
16	15	State Route	14.4		

Table 12
Locations with Five or More Vehicular Crashes in Stephens County

Number	Route Number	Route Type	Mile Point	Intersecting Route Number (if any)	Intersecting Route Type (if any)
1	17	State Route	0.37	190	County Road
2	17	State Route	1.33	538	County Road
3	17	State Route	1.36	421	County Road
4	17	State Route	1.42	422	County Road
5	17	State Route	1.7	734	City Street
6	17	State Route	1.86	652	City Street
7	17	State Route	1.97	77	County Road
8	17	State Route	2.21	83	County Road
9	17	State Route	2.39	634	City Street
10	17	State Route	2.52	104	County Road
11	17	State Route	2.6		
12	17	State Route	2.63	643	City Street
13	17	State Route	2.81	545	City Street
14	17	State Route	2.92	365	State Route
15	17	State Route	3.06	112	County Road
16	17	State Route	3.12	523	City Street
17	17	State Route	3.19	527	City Street
18	17	State Route	3.87	508	City Street
19	17	State Route	4.14	184	State Route
20	17	State Route	4.19	511	City Street
21	17	State Route	4.75	500	City Street
22	17	State Route	4.87	610	City Street
23	17	State Route	5.39	160	County Road
24	17	State Route	6.48	194	County Road
25	17	State Route	6.99	40	County Road
26	17	State Route	7.78	17	State Route
27	17	State Route	8.24	190	County Road
28	17	State Route	9.25	145	State Route
29	17	State Route	10.96	63	State Route
30	17	State Route	11.81	292	County Road
31	17	State Route	13.13	184	State Route
32	63	State Route	8.44	184	State Route
33	145	State Route	6.5	84	County Road
34	145	State Route	7.57	245	County Road
35	184	State Route	9.8	589	City Street
36	184	State Route	10.1	184	County Road
37	184	State Route	12.01	722	City Street
38	365	State Route	7.36	550	City Street
39	365	State Route	7.39		
40	365	State Route	7.45	528	City Street
41	365	State Route	7.54	185	County Road
42	365	State Route	12.62	421	County Road

Table 13
Locations with Five or More Vehicular Crashes in White County

Number	Route Number	Route Type	Mile Point	Intersecting Route Number (if any)	Intersecting Route Type (if any)
1	11	State Route	0.04	115	State Route
2	11	State Route	2.64	204	County Road
3	11	State Route	6.37	507	City Street
4	11	State Route	6.44	510	City Street
5	11	State Route	6.48	115	State Route
6	11	State Route	6.57	513	City Street
7	11	State Route	6.87	75	State Route
8	11	State Route	7.7	68	County Road
9	11	State Route	8	84	County Road
10	11	State Route	9.86	75	State Route
11	17	State Route	4.21	75	State Route
12	17	State Route	5.38	613	City Street
13	17	State Route	5.93	614	City Street
14	75	State Route	0.65	542	City Street
15	75	State Route	1.38	68	County Road
16	75	State Route	3.82	281	County Road
17	75	State Route	5.38	384	State Route
18	75	State Route	11.01		
19	75	State Route	11.11	17	State Route
20	115	State Route	2.77	162	County Road
21	115	State Route	3.43	161	County Road
22	115	State Route	6.26	200	County Road
23	115	State Route	6.93	533	City Street
24	115	State Route	7.76	509	City Street
25	115	State Route	7.88	511	City Street
26	115	State Route	8.05	501	City Street
27	115	State Route	8.18	54	County Road
28	115	State Route	8.34	523	City Street
29	115	State Route	10.55	255	State Route
30	115	State Route	11.56	4	County Road
31	115	State Route	14	384	State Route
32	115	State Route	15.07	254	State Route

Bridges and Major Culverts

GDOT maintains a management system on every bridge and major culvert in the state. These Inventory Data Listings include the following relevant information:

- Location
- Sufficiency rating
- Facility carried
- Features intersected
- Year constructed
- Year reconstructed (if applicable)

- Date of last inspection
- Design load
- Structure and foundation type
- Appurtenances information
- Work programming data
- Hydraulic data
- Number of lanes
- Length, width and clearance
- Posting data

The structures are graded by a sufficiency rating, which is used to determine scheduling for rehabilitation or reconstruction of the facility. With adequate maintenance, any structure with a rating above 75 should still be in acceptable condition 20 years from its rating date. Those structures with a rating between 65 and 75 are more marginal, and those with a sufficiency rating below 65 are likely to require major rehabilitation or reconstruction within the next 20 years.

DWA obtained GDOT inventory records for all bridges and major culverts in the four-county region: 101 structures in Habersham County, 104 structures in Rabun County, 72 structures in Stephens County and 69 structures in White County. Appendix D has the complete Inventory Data Listings for those structures with a sufficiency rating below 65. The total number of structures meeting this criterion is summarized below in Table 14.

Table 14
Bridge and Major Culvert Locations with Sufficiency Ratings below 65

County	Roadway Type Carried by Structure			Total
	State Route	County Road	City Street	
Habersham	1	18	0	19
Rabun	2	41	4	47
Stephens	2	13	3	18
White	4	8	0	12

Pavement Condition

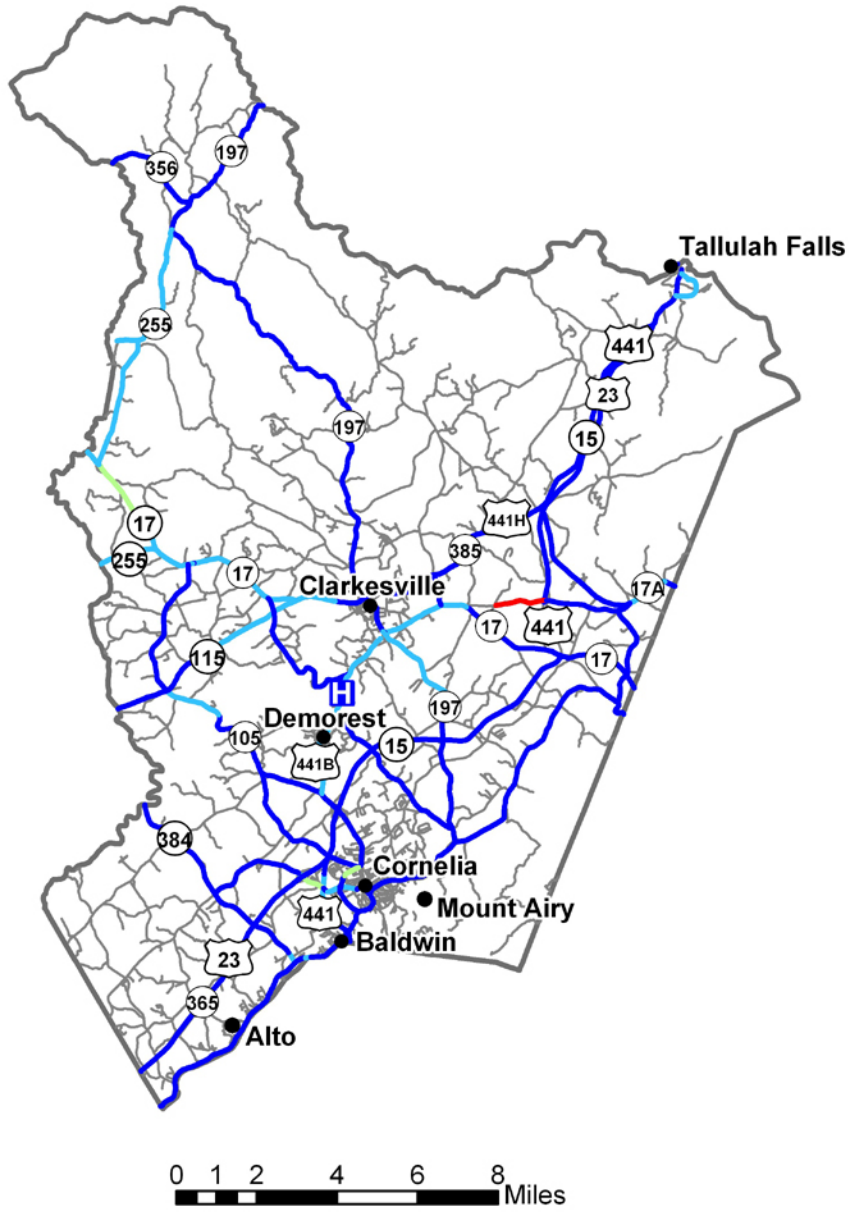
GDOT also inventories pavement conditions for maintained roadways to determine scheduling for road repaving and reconstruction. Poor pavement condition can affect vehicle operation, increase delay, cause safety concerns and add to vehicle wear and damage. In order to identify potential pavement improvement locations, the most recent pavement present serviceability ratings (PSR) for roadways in the four-county area were obtained from HPMS data. This subjective rating system uses the grading criteria listed in Table 15, with results ranging from very good (PSR of 4.0 or better) to poor (PSR of 2.0 or less). The PSR ratings for Habersham, Rabun, Stephens and White Counties can be seen in Figures 19, 20, 21 and 22, respectively.

Table 15
Present Serviceability Rating

PSR	Description
4.0 – 5.0	Only new (or nearly new) superior pavements are likely to be smooth enough and distress free (sufficiently free of cracks and patches) to qualify for this category. Most pavements constructed or resurfaced during the data year would normally be rated in this category.
3.0 – 4.0	Pavements in this category are not quite as smooth as those described above, but give a first-class ride. They exhibit few, if any, visible signs of surface deterioration. Flexible pavements may begin to show evidence of rutting and fine random cracks. Rigid pavements may begin to show evidence of slight deterioration, such as minor cracks and spalling.
2.0 – 3.0	The riding qualities of pavements in this category are noticeably inferior to those of new pavements and may be barely tolerable for high-speed traffic. Surface defects of flexible pavements may include rutting, map cracking and extensive patching. Rigid pavements in this group may have a few joint fractures, faulting and/or cracking and some pumping.
1.0 – 2.0	Pavements have deteriorated to such an extent that they affect the speed of free-flow traffic. Flexible pavement may have large potholes and deep cracks. Distress includes raveling, cracking and rutting and occurs over 50 percent or more of the surface. Rigid pavement distress includes joint spalling, faulting, patching, cracking and scaling and may include pumping.
0.0 – 1.0	Pavements are in extremely deteriorated conditions. The facility is passable only at reduced speeds and considerable ride discomfort. Large potholes and deep cracks exist. Distress occurs over 75 percent or more of the surface.

Source: Conditions and Performance Report 1999, Federal Highway Administration (FHWA)

Habersham County Pavement Conditions based on Present Serviceability Rating (PSR)



Study Area

Legend

Pavement Conditions based on PSR

- Poor: 2.0 and Below
- Mediocre: 2.1 - 2.5
- Fair: 2.6 - 3.4
- Good: 3.5 - 3.9
- Very Good: 4.0 and Above
- Cities
- Local Roads - no data available
- Hospitals

Average Pavement Conditions by County

Habersham	3.96 - Good
Rabun	3.91 - Good
Stephens	3.79 - Good
White	4.06 - Very Good

Figure 19

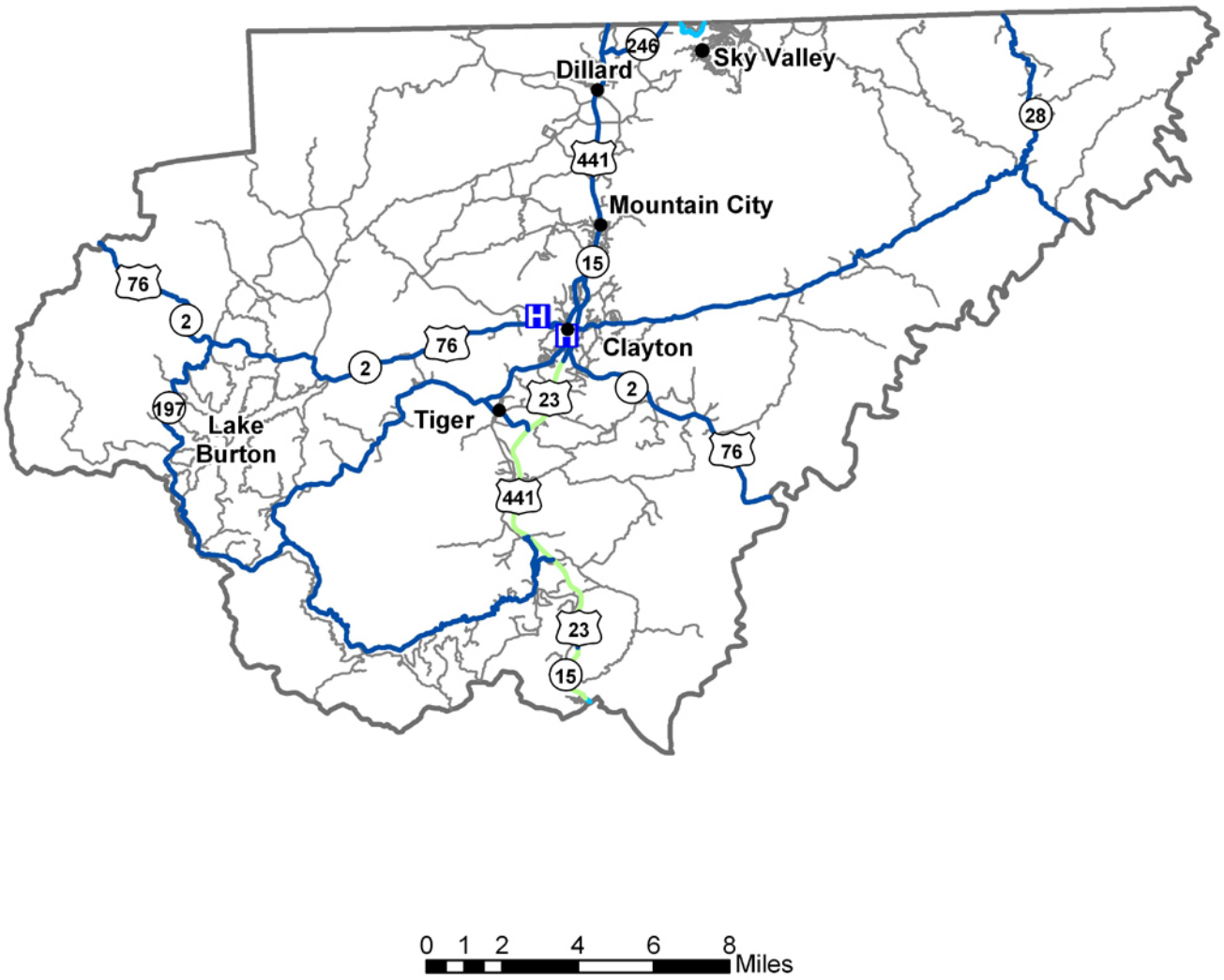
Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Rabun County Pavement Conditions based on Present Serviceability Rating (PSR)



Study Area

Legend

Pavement Conditions based on PSR

- Poor: 2.0 and Below
- Mediocre: 2.1 - 2.5
- Fair: 2.6 - 3.4
- Good: 3.5 - 3.9
- Very Good: 4.0 and Above
- Cities
- Local Roads - no data available
- Hospitals

Average Pavement Conditions by County

Habersham	3.96 - Good
Rabun	3.91 - Good
Stephens	3.79 - Good
White	4.06 - Very Good

Figure 20

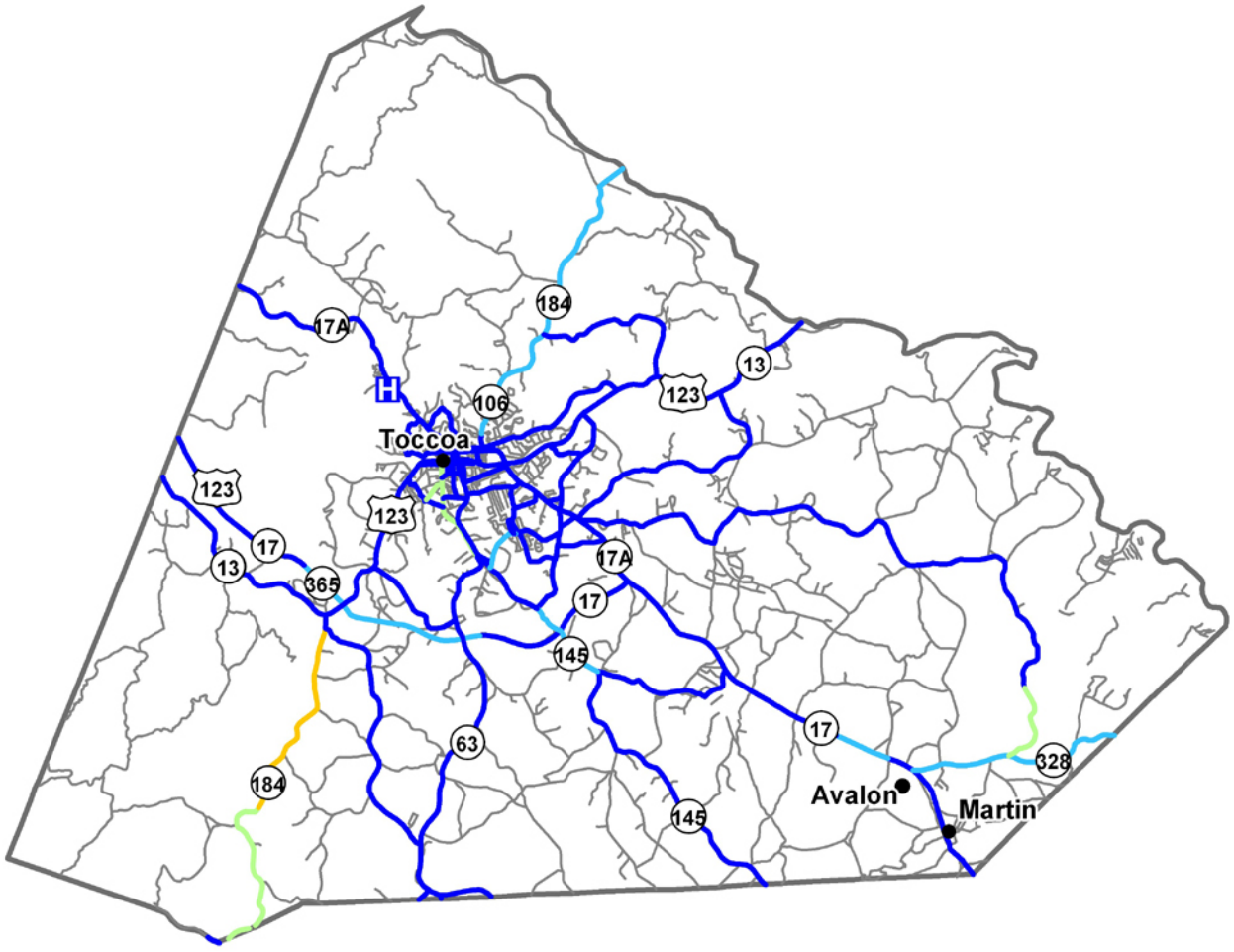
Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Stephens County Pavement Conditions based on Present Serviceability Rating (PSR)



0 1 2 4 6 8 Miles

N

Study Area

Legend

Pavement Conditions based on PSR

- Poor: 2.0 and Below
- Mediocre: 2.1 - 2.5
- Fair: 2.6 - 3.4
- Good: 3.5 - 3.9
- Very Good: 4.0 and Above
- Cities
- Local Roads - no data available
- Hospitals

Average Pavement Conditions by County

Habersham	3.96 - Good
Rabun	3.91 - Good
Stephens	3.79 - Good
White	4.06 - Very Good

Figure 21

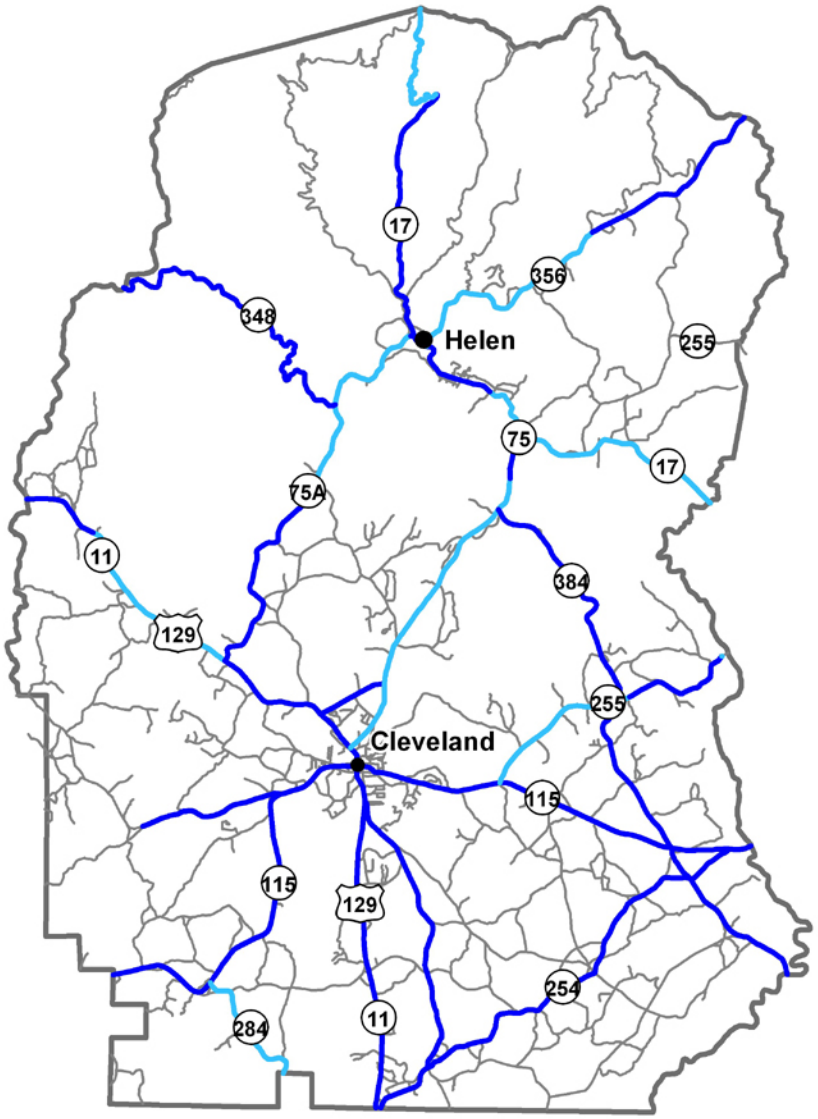
Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

White County Pavement Conditions based on Present Serviceability Rating (PSR)



0 1 2 4 6 8 Miles

N

Study Area

Legend

Pavement Conditions based on PSR

- Poor: 2.0 and Below
- Mediocre: 2.1 - 2.5
- Fair: 2.6 - 3.4
- Good: 3.5 - 3.9
- Very Good: 4.0 and Above
- Cities
- Local Roads - no data available
- Hospitals

Average Pavement Conditions by County

Habersham	3.96 - Good
Rabun	3.91 - Good
Stephens	3.79 - Good
White	4.06 - Very Good

Figure 22

Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Alternative Modes

An inventory of facilities and services provided by alternative modes, including pedestrian and bicycle facilities, transit, passenger rail, intercity bus service and airport facilities and service, was undertaken. The evaluation focused on the collection and review of existing facility and service data, including an assessment of capacities and deficiencies for these modes.

Pedestrian and Bicycle Facilities

In documenting the existing conditions of the bicycle and pedestrian facilities in the four-county study area, current land use plans were reviewed, local government officials interviewed and facilities inventoried within each of the four counties and their respective cities. The Georgia Bike and Pedestrian Plan and GDOT's Pedestrian Facilities Design Guide also guided this phase of the project.

Each of the county and city comprehensive plans, as well as the GMRDC's Regional Comprehensive Plan, was studied for existing or proposed projects that would include pedestrian and/or bicycle facilities. Short-term work programs for each local government, required by the State of Georgia, were also consulted. A draft version of the *Russell Brasstown Corridor Management Plan* (currently in progress) was also reviewed for pedestrian and bike improvements. In addition to looking for projects specifically associated with pedestrian and bicycle facilities, projects that may have an effect on the location of new pedestrian and bicycle routes (such as new schools, parks, or road improvements) were noted.

The series of public meetings held throughout the four-county study area was helpful in understanding the needs of the local communities. Interviews with the GMRDC's land use planner and transportation planner also contributed to pinpointing significant projects and needs in the region.

As various projects were identified, calls were made to local government officials and staff to clarify their current status. Projects given a low priority by the local government were not included on the existing conditions map unless they specifically dealt with pedestrian or bicycle facilities.

Once the initial research was completed, the counties and cities were inventoried for sidewalks, community nodes, recreation sites and bike routes. The features were noted on field maps and then transferred onto color-coded maps for the project. The maps of existing bicycle and pedestrian facilities are included in Appendix E. In addition, rail corridors, power line easements and designated scenic/tourist routes were added to the final maps.

Existing Facilities

Sidewalks

Sidewalks were the first features to be inventoried in each of the 16 cities in the study area. Sidewalks are defined by two distinct types: those with greenspace, which have a strip of

grass or other plantings between the sidewalk and the roadway and those without greenspace, which are flush with the roadway. Alto, Avalon, Mount Airy, Sky Valley and Tallulah Falls have no municipal sidewalks located within the city limits. In general, only a small percentage of city streets have sidewalks and most are concentrated, as expected, in the commercial center of town along major thoroughfares. The condition of the sidewalks varied greatly as did their accessibility. Although many of the existing sidewalks can be classified as sidewalks with greenspace, the actual greenspace varied between being wide enough to include plantings such as trees to being just 18 to 24 inches.

Pedestrian Trails

A pedestrian trail is defined as an improved path that connects several activity nodes and does not follow a road. Two pedestrian trails currently exist in the study area. The City of Helen has a pedestrian trail that begins at City Hall, goes to the library and then connects with hiking trails in Unicoi State Park. The second pedestrian trail, in the City of Cornelia, follows the old Tallulah Falls Railroad from the city center out to the Wal-Mart Shopping Center at the edge of town.

Bike Routes

There are no locally designated bike routes within the four-county study area. However, three State Bike Routes are located within the study area. Bike Route 55 – Appalachian Gateway is 62.8 miles long and travels from north to south, reaching from Hall County to White County. Bike Route 85 – Savannah River Run stretches 314.9 miles from the North Carolina state line in Rabun County to Savannah, Georgia. It travels through Rabun, Habersham and Stephens Counties. The only east/west bike route in the study area is Route 90 – Mountain Crossing, which is 210.3 miles long and stretches between Whitfield County in the west and Rabun County in the east, traveling through White, Habersham and Rabun Counties.

Community Activity Nodes

Community activity nodes are defined as locations with an attraction, such as commercial centers, government offices, schools, libraries, large residential subdivisions, or other centers of active use. Noting the location of community activity nodes, in conjunction with their accessibility by pedestrians and bicyclists, will be important in the final recommendation phase of this project. In general, sidewalks seem to surround individual activity nodes but often do not connect the various activity nodes together. The State Bike Routes often skirt the centers of cities and community activity nodes as their intention is more related to tourism and traveling long distances than service to local commuters.

Recreation Sites

The Georgia Mountain region relies heavily on tourism, specifically recreation-based tourism, for the local economy. Recreation sites have been inventoried as a part of this study to evaluate their ease of pedestrian and bicycle accessibility. Additionally,

Habersham, Rabun, Stephens and White Counties contain National Forest lands, and five State Parks and many smaller city and county parks are located within the study area. Although trails within the National and State Parks were not inventoried as a part of this project, high use entrances to these trails from city and county roads are mapped. Significant historic sites and museums are also noted on the existing conditions maps.

Scenic Routes

Several scenic routes are located within the study area. Although these scenic corridors have not been designated as pedestrian or bicycle routes, they have been inventoried on the existing conditions map as an opportunity for pedestrian and bicycle enhancements. The scenic routes are well publicized and heavily traveled by visitors to the region. The Southern Highroads Trail, which travels through Tennessee, North Carolina, Georgia and South Carolina, is partially located in Rabun County. The U.S. Highway 441 Heritage Trail travels the length of Georgia, beginning at the North Carolina state line in Rabun County and continuing through Habersham County before entering Banks County. The Russell Brasstown National Scenic Highway is both a state and nationally designated Scenic Byway. A corridor management plan is currently being developed for this Scenic Highway and the White County improvements will be addressed in this plan. This loop route is approximately 40 miles and crosses White, Towns and Union Counties. The Appalachian Foothills Parkway, which follows existing roads in Stephens and Habersham Counties, is envisioned as an east/west corridor extending from the South Carolina border on the east to the Alabama and Tennessee borders on the west. A bikeway element was recommended to extend the entire distance of this corridor.

Rail Corridors

Abandoned rail corridors are located on the existing conditions maps in Appendix E. The old Tallulah Falls Railroad once serviced an area between Cornelia and Franklin, North Carolina. In the past, local governments in Habersham and Rabun Counties have discussed the potential for a Rails-to-Trails project using the old railbed. The pedestrian trail in Cornelia follows the abandoned railbed and serves as a demonstration project for the Rails-to-Trails project.

Proposed City and County Projects

Projects intended for pedestrian and bicycle facilities that are included in the local comprehensive plan or Short-term Work Program have been noted on the maps showing existing bicycle and pedestrian facilities. Other proposed projects, such as the new Boys and Girls Club in Toccoa, the Historic Hardman Estate in White County, or city park improvements in Alto have been noted on the maps for their potential as future community activity nodes. Several cities within the study area, including Toccoa, Clarkesville and Cornelia, are planning or currently undertaking downtown streetscape improvements. The Georgia Scenic Byway Program has received an application for a Scenic Byway along State Highway 197. The route would start in Clarkesville, travel through Habersham County to Batesville and end at US

Highway 76 in Rabun County. This proposal has great potential as a designated bike route for Habersham and Rabun Counties.

Existing Transit Programs and Services

GDOT administers statewide Rural Public Transportation Programs under the Federal Transit Administration (FTA) Section 5311 Program. GDOT shares a partnership role with local governments committed to operating a program. The programs provide transportation for community residents to access area destinations such as business, medical, commercial and activity centers. The programs support local economic development and are funded through federal, state, local (city or county) and user sources. There are 81 rural public transportation programs currently in operation utilizing 318 vehicles throughout the state, one of which is within the study area (Rabun County). The programs in Habersham and Stephens Counties were recently discontinued, but are included for comparative purposes. The characteristics and an overview of these programs are outlined in Table 16.

Table 16
Overview of Transit Service Characteristics

County	Service	R/T Fare*	Vans	Service Type***
Habersham**	Monday to Friday, 5:00 a.m.–3:00 p.m.	$3.00	1	Demand Response
Rabun	Monday to Friday, 8:00 a.m.–5:00 p.m.	$5.00	1	Demand Response
Stephens**	Monday to Friday, 8:30 a.m.–4:30 p.m.	$1.00	1	Demand Response
White	None			

* Round/Trip "base" fares shown; higher fares are charged for longer distance trips.
** Transit service discontinued within year previous to report date.
***Demand Response is shared ride transit service provided to the public on a reservation basis.

Rabun County has operated the Rabun County Dial-A-Ride service for many years. A 2001 ten-passenger lift equipped van is utilized, with an additional van requested for delivery in 2003. In 2002, the service operated 2,114 vehicle hours and 31,429 vehicle miles, transporting 5,111 passengers. The program's ridership increased from 2001 to 2002 by 24 percent. Primary trip purposes include medical, social/recreational and shopping trips. Rabun County Dial-A-Ride also provides transportation for Medicaid recipients to healthcare services through a contract with LogistiCare, the regional non-emergency transportation broker for the Georgia Department of Community Health.

Habersham County operated the Habersham County Transit service for a number of years. A 2001 ten-passenger lift equipped van was utilized for the service. In 2002, the service operated 1,787 vehicle hours and 31,368 vehicle miles, transporting 3,770 passengers. The program's ridership increased from 2001 to 2002 by 13.2 percent. The program previously operated two vans, but reduced to one in 1999 until the program was discontinued in May 2003. Shopping, employment, social/recreational, medical and education trips were the primary trip purposes.

Stephens County operated the Stephens County Transit service from 1999 through 2002. A 1999 11-passenger lift equipped van was utilized, with the program coordinated through the County's Senior Center. In 2002, the service operated 152 vehicle hours and 8,313 vehicle miles, transporting 1,543 passengers. The program's ridership decreased from 2001 to 2002 by 19.8 percent. The primary trip purposes included social/recreational, shopping and medical trips. The service was discontinued on December 31, 2002, due to low ridership and funding concerns. It was reported that most of the users of the service could still be served through the Senior Center transportation resources.

White County has not previously operated a rural public transportation program. The county has no plans to establish a program in the near future.

Other Transportation Services

Other transportation services provided in the four-county area include:

- Taxi Service – Taxi services are available in Rabun, Habersham and Stephens Counties. No service is available in White County.
- Human Service Transportation – The Georgia Department of Human Resources (DHR) provides transportation for persons with disabilities, senior citizens and welfare recipients in each of the four counties. DHR is in the process statewide of discontinuing the prior practice of reimbursing the purchase cost of vehicles and is phasing out much of the existing fleet. Transportation services for eligible clients will be reimbursed through purchased service arrangements.
- Medical Transportation – The Georgia Department of Community Health (DCH), through the Division of Medical Assistance (DMA), provides non-emergency transportation (NET) on weekdays throughout the state for Medicaid recipients to access health care services. The four counties are included in the North Region and LogistiCare is the current NET Broker. Persons eligible for this service must contact the NET Broker to schedule medical trips.
- Intercity Bus Service – There are no current intercity bus services available in any of the four counties.
- Passenger Rail Service – There is one active passenger rail station within the four-county study area in the City of Toccoa. AMTRAK provides daily passenger rail service to/from Toccoa on the "Crescent" between New York and New Orleans, with one train in each direction along the Norfolk Southern Railway. The closest major city stop to the south is Gainesville, which is also the most convenient destination for a day trip. The morning train departs Toccoa at 7:00 a.m., arriving in Gainesville at 7:43 a.m. The evening departure leaves Gainesville at 9:01 p.m., arriving in Toccoa at 9:42 p.m. The current round trip fare between Toccoa and Gainesville is $20.00. There are no plans for additional AMTRAK service at this time. Annual Toccoa AMTRAK ridership activity is exhibited for prior years in Table 17.

Table 17
Annual Toccoa AMTRAK Ridership

Year	Ridership
2002	2,934
2001	3,430
2000	3,413
1999	3,361

- Airport Facilities and Services – There are currently two airports located in the study area. The Habersham County Airport, located two miles southwest of the City of Cornelia, provides private general aviation air service primarily to area residents. Access to the airport is provided by Airport Road off U.S. Highway 23. The airport has a single paved runway (4,200 feet long by 75 feet wide) and is well equipped with navigational and directional aids. The landside facilities consist of an 800-square-foot terminal, automobile parking, a conventional storage hangar, 10 T-hangars and 15,000 square yards of apron. Based aircraft and operations have steadily increased to 52 single and multi-engine aircraft and a total of 30,000 annual operations (local and itinerant) in 2001. In 2021, based aircraft and annual operations are projected to increase to 65 and 39,222 respectively. The second airport, R.G. LeTourneau Field, is located two miles northeast of the City of Toccoa, with access provided by U.S. Highway 123/SR 365. The airport has two paved runways. The primary runway is 4,003 feet long by 75 feet wide with a partial parallel taxiway and is capable of handling light general aviation and corporate jet aircraft. The airport is also well equipped with navigational and directional aids. The landside facilities consist of a 10,000-square-foot terminal building, automobile parking, 20 conventional storage hangars, 12 T-hangars and 16,300 yards of apron. In 2001, total basings were 57 planes with the airport accommodating 20,400 operations. In 2021, based aircraft and operations are projected to increase to 70 and 26,671 respectively.

4 Planned State and Local Projects

GDOT maintains a listing of projects for the entire state and individual counties over a six-year period. The Department also has a three-year multimodal program that contains federally funded projects identified through the planning process. The State Transportation Improvement Program (STIP) includes highway, bridge, bicycle, pedestrian, transportation enhancement and public transportation (transit) projects. Both the Construction Work Program (CWP) and STIP were reviewed as part of this study to identify planned improvements in the four-county northeast Georgia area. The review showed a total of 47 projects programmed over the next several years. The projects, listed and summarized by county below, are depicted graphically in Figures 23 through 26.

Habersham County

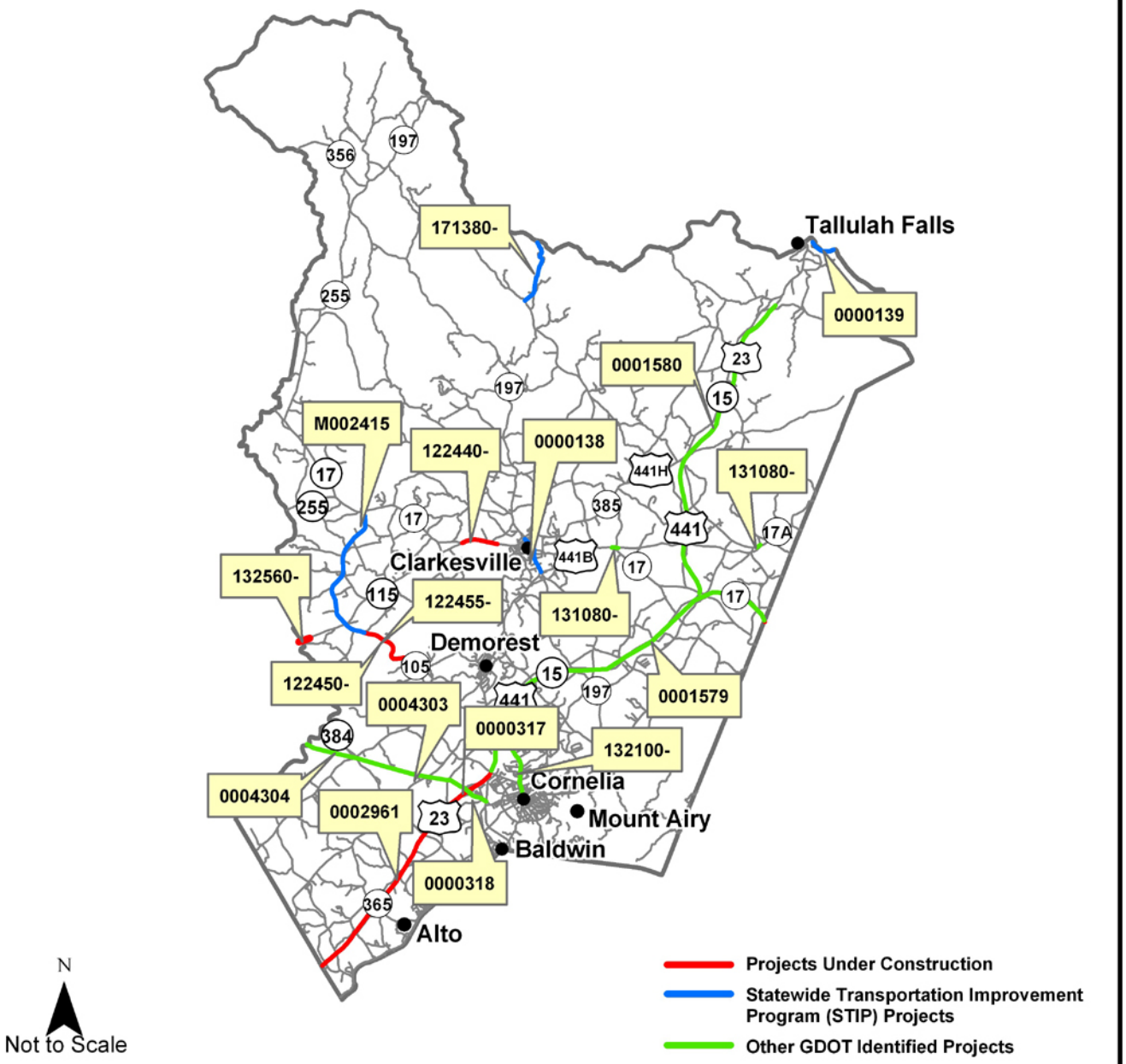
Habersham County currently has 16 projects in the state's six-year CWP. Seven of these, which are also in the STIP, are scheduled for activity in the next three years.

- Project No. 0000138 – Clarkesville Streetscape (CWP/STIP)
- Project No. 0000139 – Tallulah Gorge Multiuse Trail and Bridge (CWP/STIP)
- Project No. 0000317 – SR 365 @ Level Grove Road – Improve ramps/add signals
- Project No. 0000318 – SR 15 CO from SR 365 to US 441 – Upgrade to 4 lanes (CWP/STIP)
- Project No. 0001579 – SR 365/US 23 – Median turn lanes from SR 384 to SR 184/Stephens
- Project No. 0001580 – SR 15/US 441 – Median turn lanes from SR 17 to Tallulah Park
- Project No. 0002961 – SR 365 – Highway sign upgrades (Under Construction)
- Project No. 0004304 – East-West Highway/SR 560 from SR 384 to SR 365 – New construction from 0 to 4 lanes
- Project No. 122440 – SR 17 from 3-lane @ Beaverdam Creek to SR 115 – Widening from 2 to 4 lanes (Under Construction)
- Project 122450 – SR 105 relocation for passing lanes from east of CR 56 to west of CR 53 (Under Construction)
- Project No. 131080 – Antioch Road/CR 117 from SR 17 to SR 17 Alt. – Reconstruction/ rehabilitation
- Project No. 132100 – SR 105/US 441 Bus. from Cannon Bridge Road to Walnut Street/Cornelia – Add median
- Project No. 132560 – SR 115 @ Chattahoochee River 7.5 miles east of Cleveland/Habersham – Bridge replacement (Under Construction)

Habersham County (Continued)

- Project No. 171550 – Depot Rehabilitation in Cornelia (Under Construction)
- Project No. 171380 – CR 240/CR 81/Low Gap Road from CR 245/New Liberty to Rabun County line – Minor widening and resurfacing (CWP/STIP)
- Project No. M002415 – SR 105 from VFW to SR 17 – Resurfacing and maintenance (CWP/STIP)

Habersham County Planned Projects



Planned Projects and Descriptions

PROJECT ID: 0000138
DOWNTOWN CLARKESVILLE BUSINESS DISTRICT STREETSCAPE

PROJECT ID: 0000139
TALLULAH GORGE MULTI-USE TRAIL & BRIDGE PHASE 3

PROJECT ID: 0000317
SR 365 @ LEVEL GROVE RD/IMP RAMPS/ADD SIGNALS

PROJECT ID: 0000318
SR 15CO FROM SR 365 TO US 441 UPGRADE TO 4 LANES

PROJECT ID: 0001579
SR 365/US 23 MED TN LNS FM SR 384 TO SR 184/STEPHENS

PROJECT ID: 0001580
SR 15/US 441 MEDIAN TURN LANES FROM SR 17 TO TALLULAH PARK

PROJECT ID: 0002961
SR 365 HIGHWAY SIGN UPGRADES

PROJECT ID: 0004303
NEW CONSTRUCTION EAST-WEST HIGHWAY/SR 560 FM SR 11 TO SR 384

PROJECT ID: 0004304
NEW CONSTRUCTION EAST-WEST HIGHWAY/SR 560 FM SR 11 TO SR 384

PROJECT ID: 122440-
WIDENING SR 17 FM 3-LANE @ BEAVERDAM CK TO SR 115

PROJECT ID: 122450-
SR 105 RELOC FOR PASSING LANES FRM E OF CR 56 TO W OF CR 53

PROJECT ID: 131080-
REALIGNMENT ANTIOCH RD/CR 117 FM SR 17 TO SR 17 ALT

PROJECT ID: 132100-
WIDENING SR 105/US 441 BUS FM CANNON BRIDGE RD TO WALNUT ST/CORNELIA

PROJECT ID: 171380-
MINOR WIDENING & RESURFACE CR 240/CR 81/LOW GAP RD FM CR 245/NEW LIBERTY TO RABUN CO.

PROJECT ID: M002415
RESURFACE & MAINTENANCE SR 105 FROM VFW RD TO SR 17

PROJECT ID: 122455-
BRIDGE SR 105 OVER SOQUEE CREEK...GOES WITH PI 122450

PROJECT ID: 132560-
BRIDGE SR 115 @ CHATTAHOOCHEE RIV 7.5 MI E. OF CLEVELAND/HABERSHAM

Figure 23

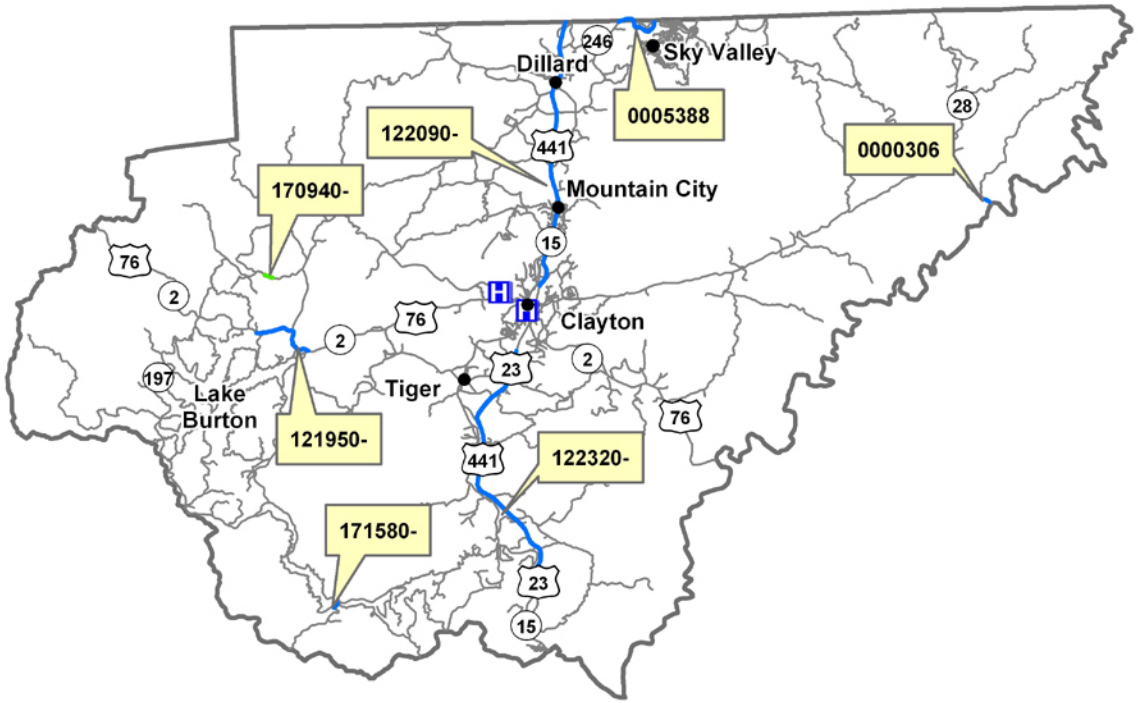
Source: Georgia Department of Tranportation.
This map is intended for planning purposes only. July 2003.

Rabun County

Rabun County currently has six projects in the CWP, all of which are scheduled for activity in the next three years. Six projects are also included in the STIP.

- Project No. 0000306 – SR 28 @ North Fork Chattooga River 13 miles northeast of Clayton – Bridge replacement (CWP/STIP)
- Project No. 0005388 – SR 246 GA/SR 106 North Carolina Advanced Truck Warning System (CWP/STIP)
- Project No. 121950 – SR 2 from Lake Burton Bridge to Charlie Mountain Rd./CR 94 – Passing lanes (CWP/STIP)
- Project No.122090 – SR 15/US 441 from north of the Clayton city limits to North Carolina state line – Widening from 2 to 4 lanes (CWP/STIP)
- Project No.122320 – SR 15/US 441 from north of Tallulah Falls to south of Clayton city limits – Widening from 2 to 4 lanes (CWP/STIP)
- Project No. 171580 – Low Gap Road/CR 80 at Tallulah River 6.6 miles southwest of Tiger – Bridge replacement (CWP/STIP)

Rabun County Planned Projects



N

Not to Scale

Planned Projects and Descriptions

PROJECT ID: 0000306
BRIDGES SR 28 @ NORTH FORK CHATTOOGA RIVER 13 MI NE OF CLAYTON

PROJECT ID: 0005388
SR 246 GA/SR 106 N CAROLINA ADVANCED TRUCK WARNING SYSTEM

PROJECT ID: 121950-
PASSING LANES SR 2 FM LAKE BURTON BRIDGE TO CHARLIE MTN RD/CR 94 & REALIGN

PROJECT ID: 122090-
WIDENING SR 15/US 441 FM NORTH CL/CLAYTON TO NORTH CAROLINA LINE

PROJECT ID: 122320-
WIDENING SR 15/US 441 FM N OF TALLULAH FALLS TO S CL OF CLAYTON

PROJECT ID: 170940-
BRIDGES CR 86/CAT GAP ROAD @ TALLULAH RIVER7.1 MI NW OF TIGER

PROJECT ID: 171580-
BRIDGES LOW GAP ROAD/CR 80 AT TALLULAH RIVER 6.6 MI SW OF TIGER

- Projects Under Construction
- Statewide Transportation Improvement Program (STIP) Projects
- Other GDOT Identified Projects

Figure 24

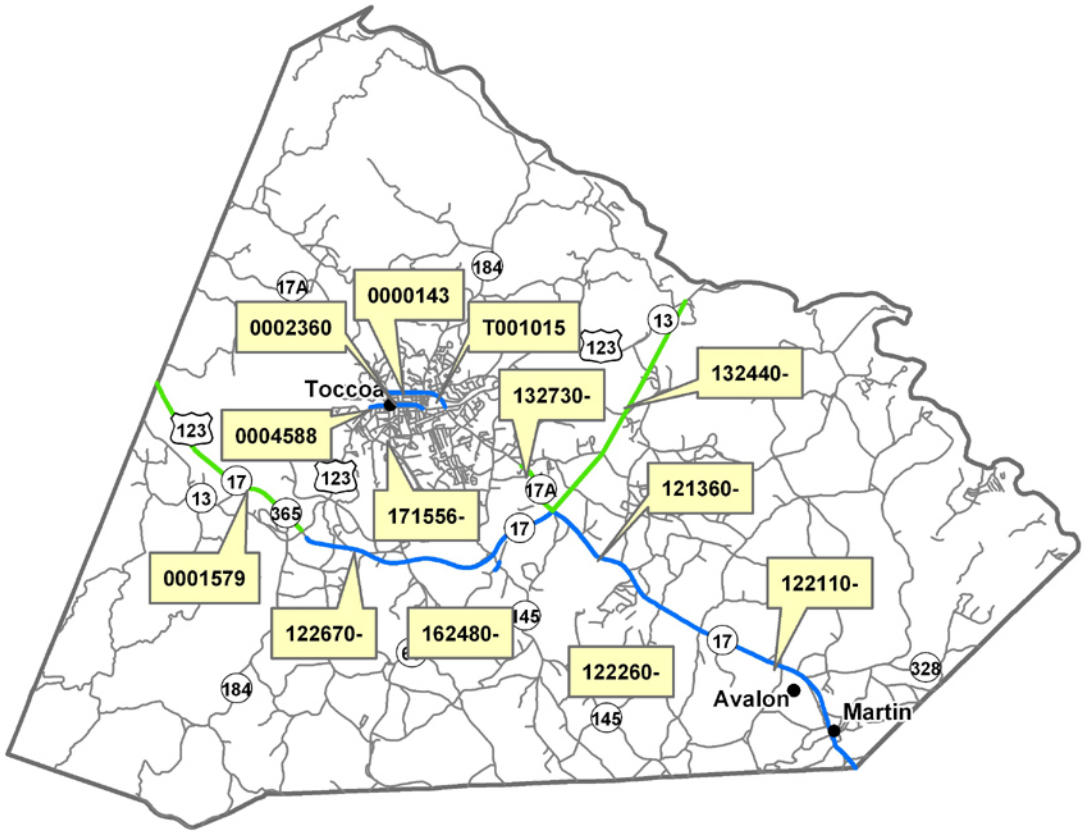
Source: Georgia Department of Tranportation.
This map is intended for planning purposes only. July 2003.

Stephens County

Stephens County currently has 12 projects in the CWP, nine of which are scheduled for activity in the next three years and also included in the STIP.

- Project No. 121360 – SR 17 @ Oggs Branch – Bridge widening (CWP/STIP)
- Project No. 122110 – SR 17 from south of the Martin city limits to northwest of CR 13/Rumsey Rd. – Widening from 2 to 4 lanes (CWP/STIP)
- Project No. 122260 – SR 17 from northwest of CR 13/Rumsey Rd. to Memorial Dr. – Widening from 2 to 4 lanes (CWP/STIP)
- Project No. 122670 – SR 17 from SR 184/365 southeast of Toccoa east to SR 17 Alt. – Widening from 2 to 4 lanes (CWP/STIP)
- Project No. 132440 – SR 365/Toccoa Bypass Ext. @ SR 17 northeast on new location to SR 365@CR 311 – New construction from 0 to 4 lanes
- Project No. 162480 – CR 223/Buena Vista Rd. at Norfolk Southern Railroad – Crossing improvements (CWP/STIP)
- Project No. 132730 – Widening of SR 17 Alt. from Memorial Drive to existing 5-lane near Brookhaven
- Project No. 0000143 – Downtown Toccoa Streetscape Project Phase III (CWP/STIP)
- Project No. 0001579 – SR 365/US 23 median turn lanes from SR 384 to SR 184/Stephens
- Project 0002360 – Enhancement of Toccoa Train Museum (CWP/STIP)
- Project 0004588 – Upgrade traffic signals at several locations on SR 17 Alt. (CWP/STIP)
- Project T001015 – Miscellaneous improvements at Toccoa Airport (CWP/STIP)

Stephens County Planned Projects



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Not to Scale

Planned Projects and Descriptions

PROJECT ID: 0000143
DOWNTOWN TOCCOA STREETSCAPE PROJECT PHASE III

PROJECT ID: 0001579
SR 365/US 23 MED TN LNS FM SR 384 TO SR 184/STEPHENS

PROJECT ID: 0002360
TOCCOA TRAIN MUSEUM (ONLY) ENHANCEMENT

PROJECT ID: 0004588
UPGRADE TRAFFIC SIGNALS @ SEVERAL LOCATIONS ON SR 17 ALT

PROJECT ID: 121360-
BRIDGE RECONSTRUCTION SR 17 @ OGGS BRANCH

PROJECT ID: 122110-
WIDENING SR 17 FM S. CITY LIMITS MARTIN TO NW OF CR 13/RUMSEY ROAD

PROJECT ID: 122260-
WIDENING SR 17 FROM NW OF CR 13/RUMSEY ROAD TO MEMORIAL DRIVE

PROJECT ID: 122670-
WIDENING SR 17 FROM SR 184/365 SE OF TOCCOA EAST TO SR 17 ALT.

PROJECT ID: 132440-
SR 365/TOCCOA BYP EXT @ SR 17 NE ON NEW LOC TO SR 365@CR 311

PROJECT ID: 132730-
WIDENING SR 17ALT FM MEMORIAL DRIVE TO EXISTING 5-LN NEAR BROOKHAVEN

PROJECT ID: 162480-
RR CROSSING COUNTY ROAD 223/BUENA VISTA RD AT NORFOLK SOU RR ID #717571D

PROJECT ID: 171556-
CITY OF TOCCOA STREETSCAPE PHASE II

PROJECT ID: T001015
AP030-9000-14(257), TOCCOA, SITE PREP-PHASE II

Projects Under Construction
Statewide Transportation Improvement Program (STIP) Projects
Other GDOT Identified Projects

Figure 25

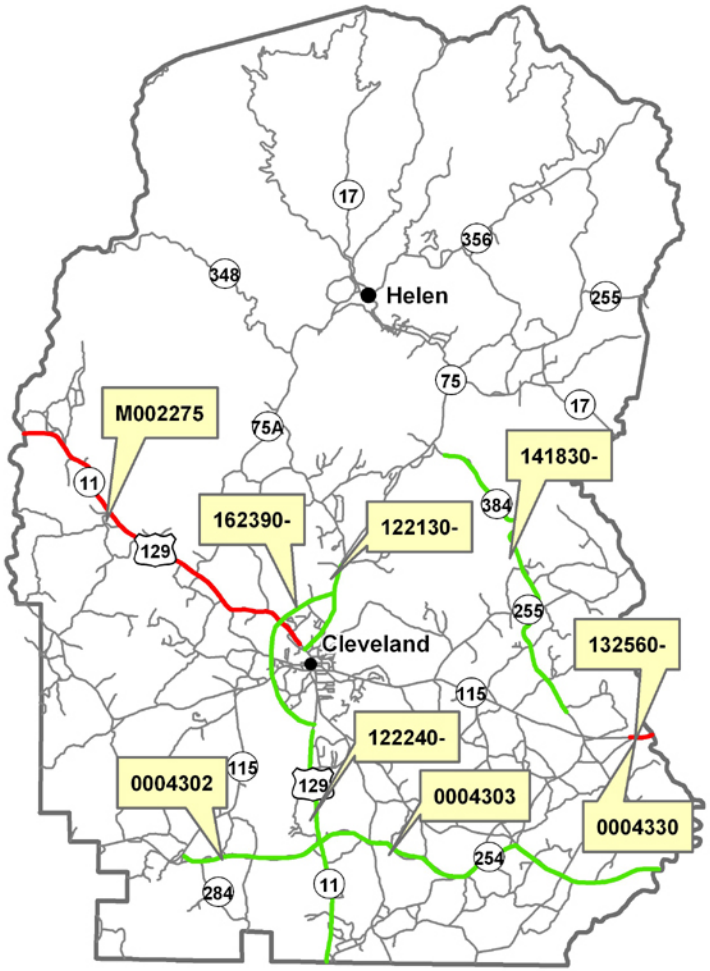
Source: Georgia Department of Tranportation.
This map is intended for planning purposes only. July 2003.

White County

White County currently has nine projects in the CWP. Two of these, scheduled for construction in the next three years, are also included in the STIP.

- Project No. 122130 – SR 75 from SR 75 Alt/Cleveland northeast to Asbestos Rd./CR 88 – Widening from 2 to 3 lanes
- Project No. 132560 – SR 115 @ Chattahoochee River 7.5 miles east of Cleveland/Habersham – Bridge replacement (Under Construction)
- Project No. 141830 – SR 384/Duncan Bridge Rd. from west of SR 115 to SR 75 – Passing lanes/reconstruction/rehabilitation at 8 locations
- Project No. 162390 – Cleveland West Bypass from SR 11 north on new location/Hulsey Rd. to SR 75 – New construction 4 lanes
- Project No. 122240 – Widening SR 11/US 129 from SR 284 Clermont to Cleveland Bypass/White County
- Project No. 0004330 – 371 wetland mitigation credits for Project No. 132560 (CWP/STIP)
- Project No. 0004303 – East-West Highway/SR 560 from SR 11 to SR 384 – New construction
- Project No. 0004302 – East-West Highway/SR 560 from SR 115/Sr 284 along Westmoreland to SR 11 – New construction
- Project No. M002275 – Resurfacing of SR 11 from just south of SR 115 to Lumpkin County line (Under Construction)

White County Planned Projects



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Not to Scale

Planned Projects and Descriptions

PROJECT ID: 0004302
NEW CONSTRUCTION EAST-WEST HIWAY FM
SR 115/SR 284 ALONG WESTMORELAND TO SR 11

PROJECT ID: 0004303
NEW CONSTRUCTION EAST-WEST HIGHWAY/SR 560 FM
SR 11 TO SR 384

PROJECT ID: 122130-
WIDENING SR 75 FM SR 75 ALT/CLEVELAND NE
TO ASBESTOS RD/CR 88

PROJECT ID: 122240-
WIDENING SR 11/US 129 FM SR 284/CLERMONT
TO CLEVELAND BYP/WHITE CO

PROJECT ID: 132560-
BRIDGE SR 115 @ CHATTAHOOCHEE RIV 7.5 MI E.
OF CLEVELAND/HABERSHAM

PROJECT ID: 0004330
371 WETLAND MITIGATION CREDITS FOR PI
132560-/BRS-114-1(93)

PROJECT ID: 141830-
PASSING LANES SR 384/DUNCAN BRIDGE RD
FM W OF SR 115 TO SR 75 (8 LOCATIONS

PROJECT ID: 162390-
CLEVELAND WEST BYP FM SR 11 N ON NEW
LOC/HULSEY RD TO SR 75

PROJECT ID: M002275
RESURFACE & MAINTENANCE SR 11 FROM JUST S OF
SR 115 TO LUMPKIN COUNTY LINE

- Projects Under Construction
- Statewide Transportation Improvement Program (STIP) Projects
- Other GDOT Identified Projects

Figure 26

Source: Georgia Department of Tranportation.
This map is intended for planning purposes only. July 2003.

5 Analysis of Transportation Facilities

Based on the inventory of existing transportation facilities within Habersham, Rabun, Stephens and White Counties, an analysis of the operating conditions and services for inventoried facilities was undertaken. The analysis focused on an assessment of the transportation network's capacities and deficiencies for all modes, including roadways, transit, bicycle and pedestrian facilities, and airports. Other concerns, such as roadway safety, were also evaluated for the roadway network. The analysis is based on technical evaluation of existing facilities and input from stakeholders and the general public.

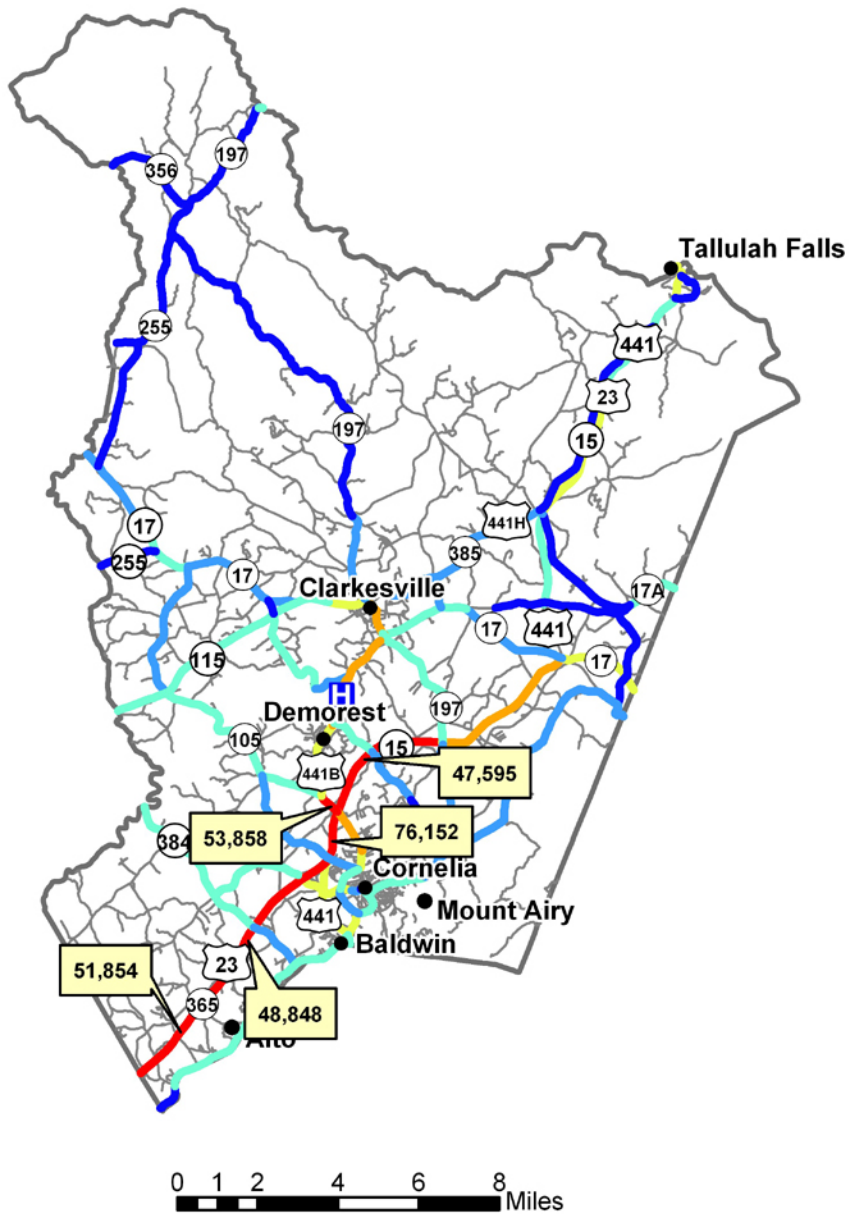
Existing Highway System

Information for the existing roadway network was analyzed using the Multimodal Transportation Planning Tool (MTPT) program previously mentioned in the Existing Transportation Conditions Crash Data section. Expected traffic operations were determined for roadways inventoried by GDOT within the road characteristics file (RCFILE) for Habersham, Rabun, Stephens and White Counties.

Projected 2025 Traffic Volumes

In order to evaluate the future transportation operations of the roadway network, traffic volumes must be increased to account for growth in the area. The historical traffic counts by county, as shown previously in Table 6 of the previous section, were used in determining the annual growth factor for future traffic volumes. Growth factors obtained from historical traffic volumes are more representative of individual traffic growth patterns observed in each county and were, therefore, used in place of the default district growth factors. The resulting projected traffic volumes use the existing roadway network and do not take proposed GDOT projects (such as the Cleveland Bypass) into account. The increased (2025) traffic volumes for Habersham, Rabun, Stephens and White Counties can be seen graphically in Figures 27, 28, 29 and 30, respectively.

Habersham County Average Annual Daily Traffic (AADT) Year 2025



Study Area

Legend

Average Annual Daily Traffic (AADT) Year 2025

- 48,848 — Road sections where AADT values exceed 45,000
- 40,001 and Above
- 30,001 - 40,000
- 20,001 - 30,000
- 10,001 - 20,000
- 5,001 - 10,000
- 5,000 and Below
- Cities
- Local Roads - no data available
- Hospitals

Figure 27

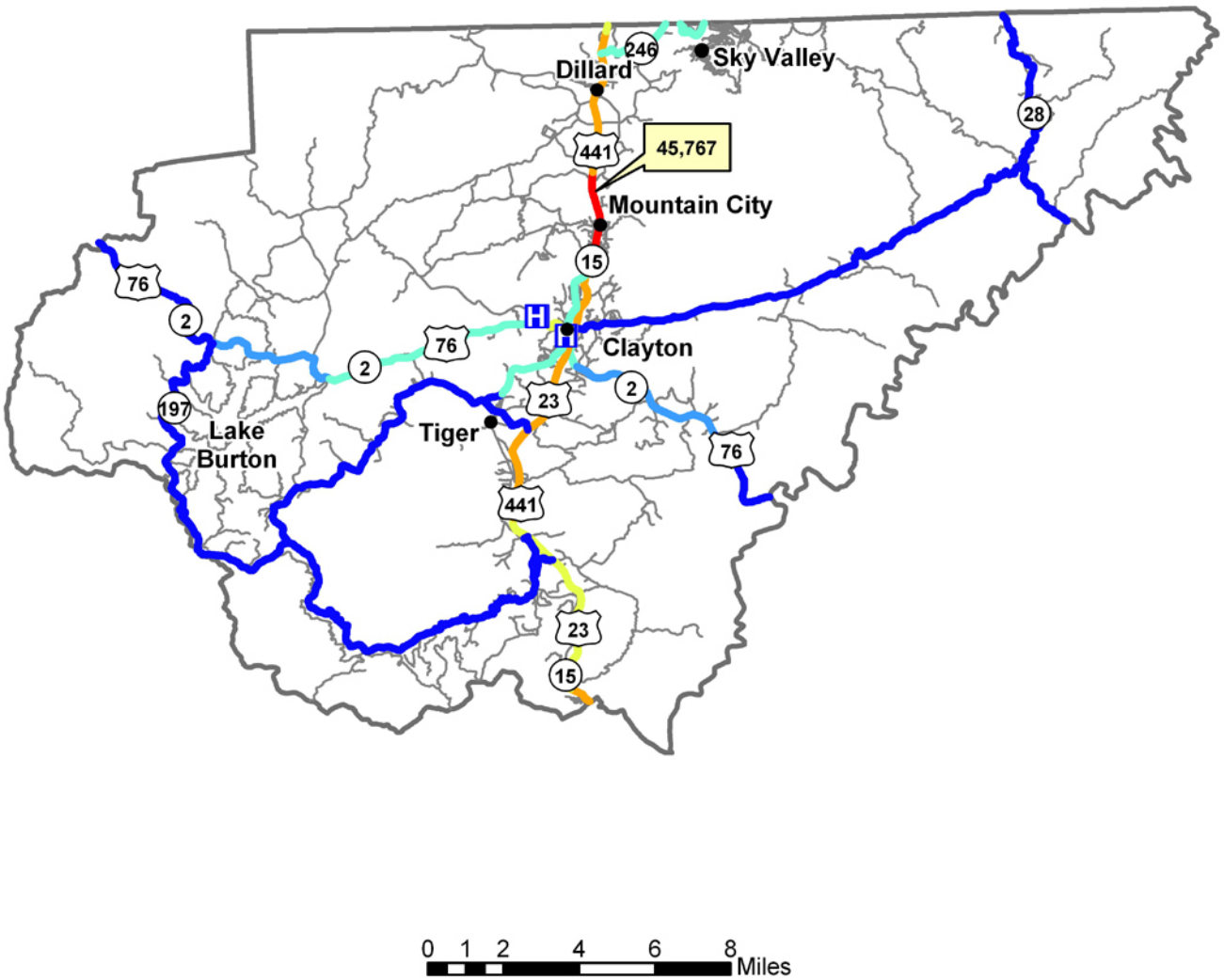
Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

This map is intended for planning purposes only. July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

Day Wilburn Associates, Inc.

Rabun County Average Annual Daily Traffic (AADT) Year 2025



Study Area

Legend

Average Annual Daily Traffic (AADT) Year 2025

- 48,848 — Road sections where AADT values exceed 45,000
- 40,001 and Above
- 30,001 - 40,000
- 20,001 - 30,000
- 10,001 - 20,000
- 5,001 - 10,000
- 5,000 and Below
- Cities
- Local Roads - no data available
- Hospitals

Figure 28

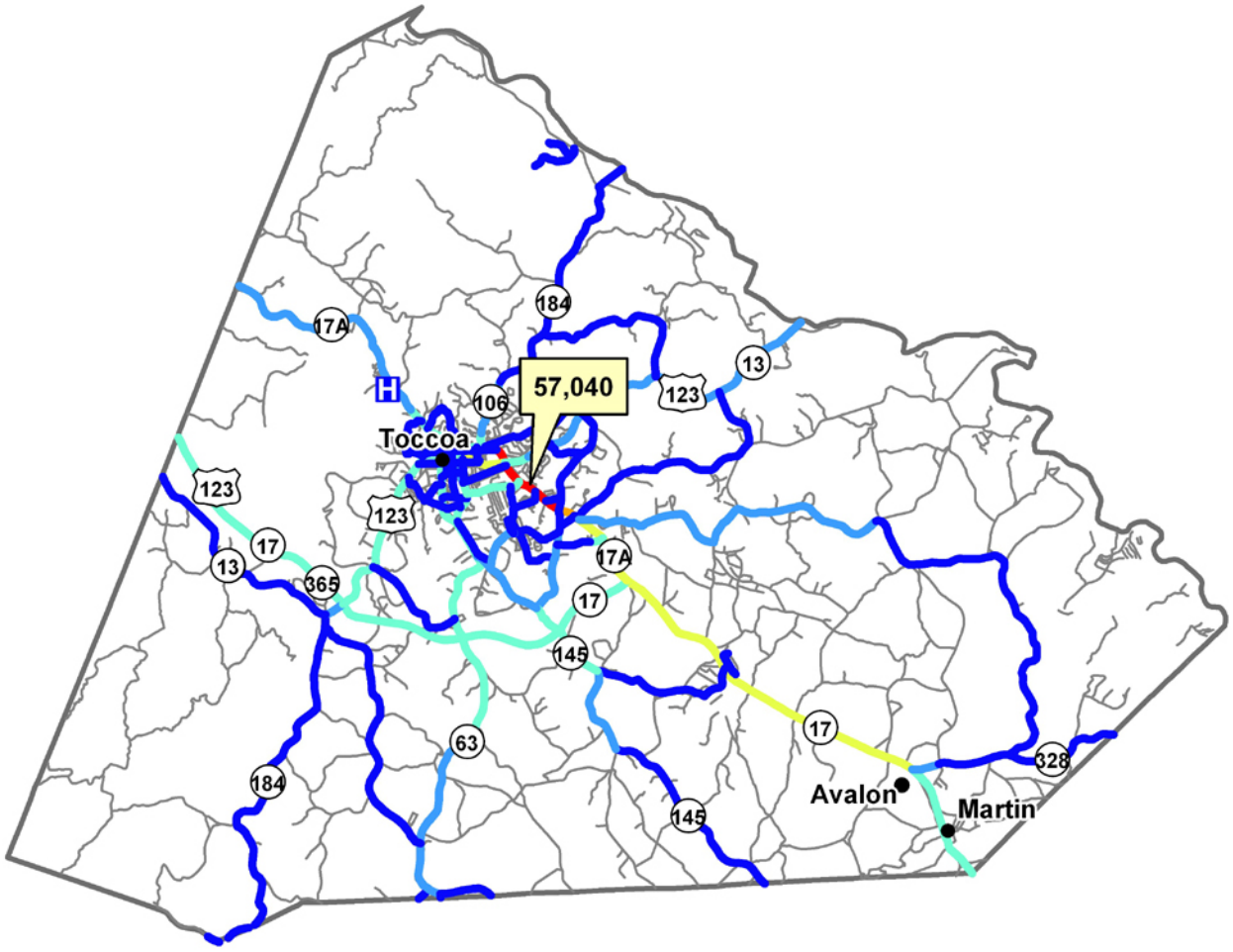
Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Stephens Average Annual Daily Traffic (AADT) Year 2025



Study Area

Legend

Average Annual Daily Traffic (AADT) Year 2025

- 48,848 — Road sections where AADT values exceed 45,000
- 40,001 and Above
- 30,001 - 40,000
- 20,001 - 30,000
- 10,001 - 20,000
- 5,001 - 10,000
- 5,000 and Below
- Cities
- Local Roads - no data available
- Hospitals

Figure 29

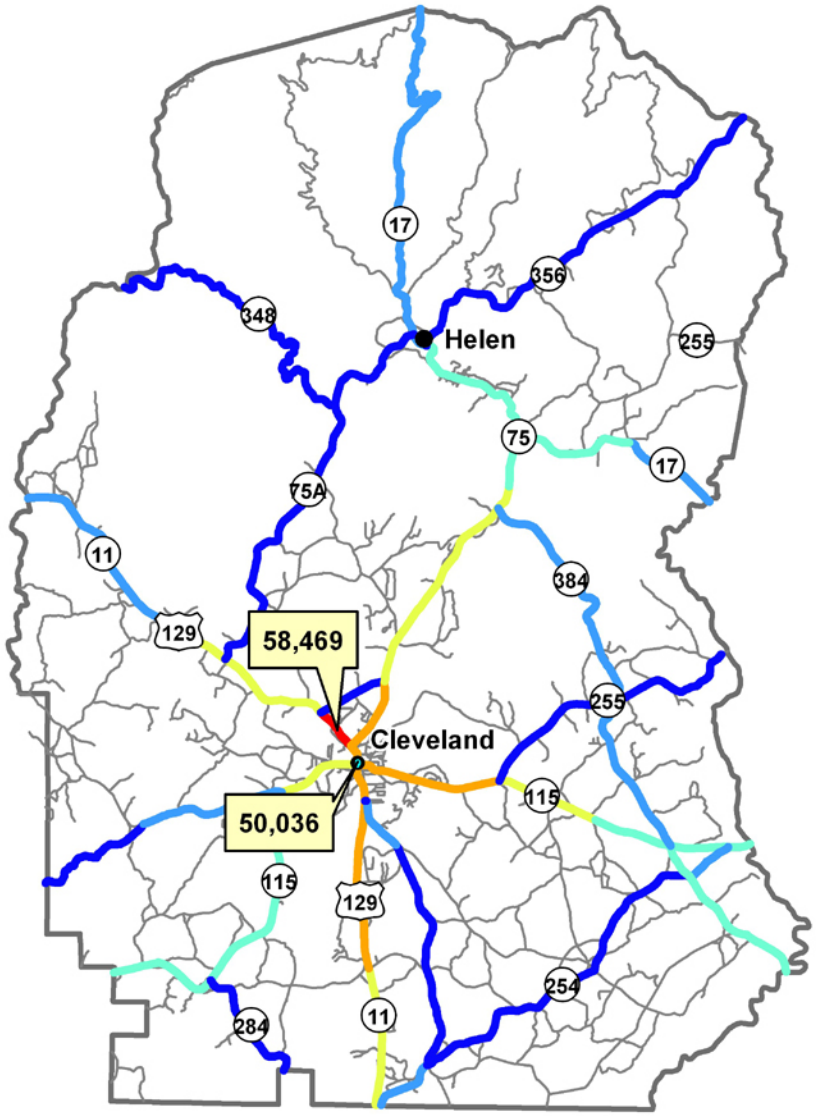
Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

White County Average Annual Daily Traffic (AADT) Year 2025



0 1 2 4 6 8 Miles

N

Study Area

Legend

Average Annual Daily Traffic (AADT) Year 2025

- 48,848 — Road sections where AADT values exceed 45,000
- 40,001 and Above
- 30,001 - 40,000
- 20,001 - 30,000
- 10,001 - 20,000
- 5,001 - 10,000
- 5,000 and Below
- Cities
- Local Roads - no data available
- Hospitals

Figure 30

Source: Georgia DOT, 2001 Highway Performance Monitoring System (HPMS), and Day Wilburn Associates, Inc.

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Roadway Levels of Service

An analysis of existing traffic conditions was performed to determine the level of service (LOS) of main roadways in each county. The Highway Capacity Manual provides ranges of delay for each LOS definition, spanning from very minimal delays (LOS A) to high delays (LOS F). LOS F is considered unacceptable for most drivers. In rural areas, roadways must typically operate at LOS C or better to be acceptable. Under LOS C conditions, a motorist may feel somewhat constrained by other vehicles but travel speeds remain at or near free-flow speed and congestion remains minimal. The MTPT uses methodologies based on the Highway Capacity Manual to determine roadway LOS for freeway, two-lane and multi-lane segments. All GDOT defaults within the program were used. The exception was the annual growth rate for the future LOS analysis, as discussed previously and further detailed below.

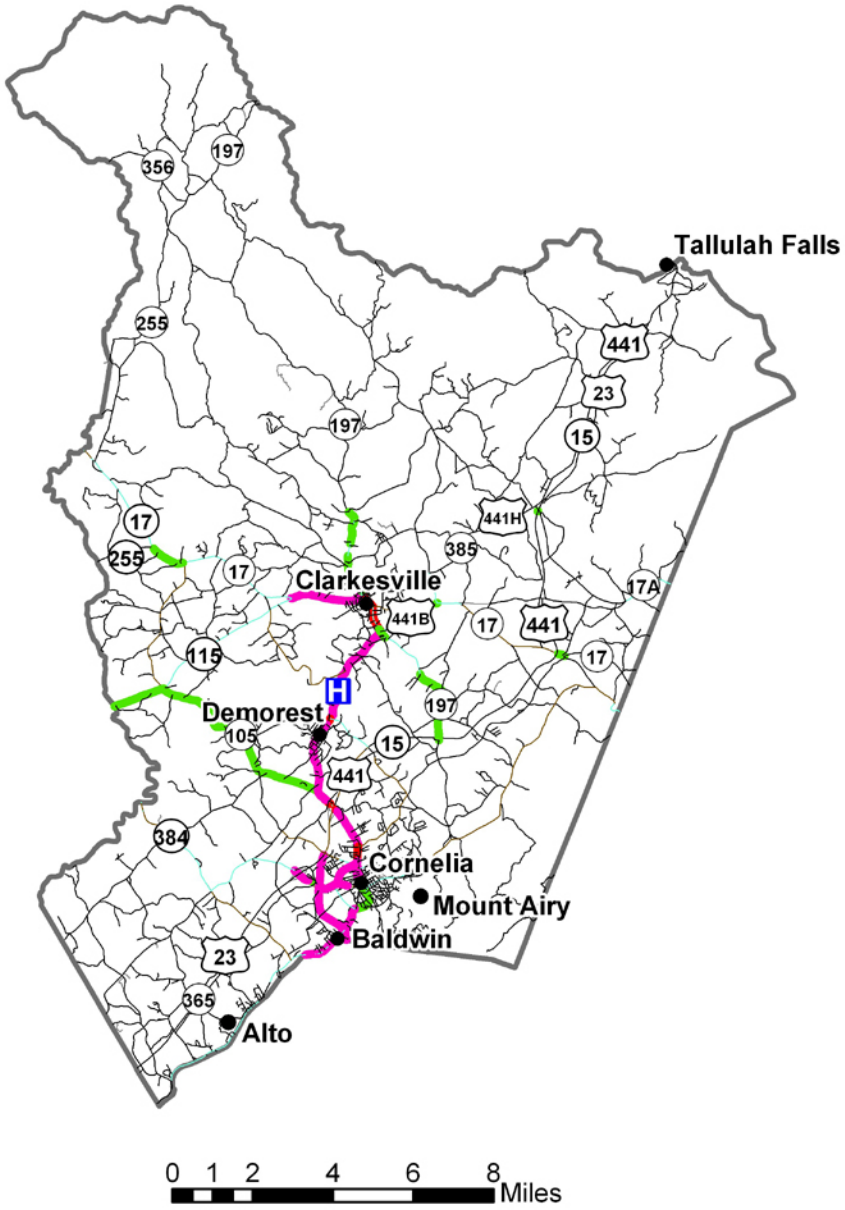
Existing LOS Deficiencies

The resulting LOS analysis for existing conditions can be seen graphically for Habersham, Rabun, Stephens and White Counties in Figures 31, 32, 33 and 34, respectively. The MTPT output results are included in Appendix F. Locations with unacceptable LOS results are further identified in order to indicate areas with potential improvement needs. Roadway segments that have LOS D or lower are listed in Table 18 for Habersham County, Table 19 for Rabun County, Table 20 for Stephens County and Table 21 for White County.

Future 2025 LOS Deficiencies

LOS analyses were then conducted on the increased traffic volumes in order to obtain future 2025 LOS results, which are shown graphically for Habersham, Rabun, Stephens and White Counties in Figures 35, 36, 37 and 38, respectively. The future traffic volumes were obtained from the MTPT program by replacing the District One standard growth rate for arterials and collectors with a modified growth rate based on the results found in Table 6. (Because the MTPT does existing, 10-year, and 20-year results, the actual annual growth rate used was slightly higher than the Table 6 result, to obtain 2025 rather than 2021 LOS results.) The default District One growth rate for local roadways (0.5 percent annually) was used in the analysis. The future MTPT output results are included with the existing analysis in Appendix F. As with the existing conditions analysis, locations with unacceptable LOS results are further identified in order to indicate areas with potential improvement needs that are expected to occur if existing traffic growth trends continue. Tables 22 through 25 list roadway segments that have LOS D or lower in 2025 for Habersham, Rabun, Stephens and White Counties, respectively.

Habersham County Level of Service (LOS) Year 2001



Study Area

Legend

Level of Service (LOS) Year 2001

- A
- B
- C
- D
- E
- F
- Local Roads - LOS Data Not Available
- Cities
- Hospitals

Figure 31

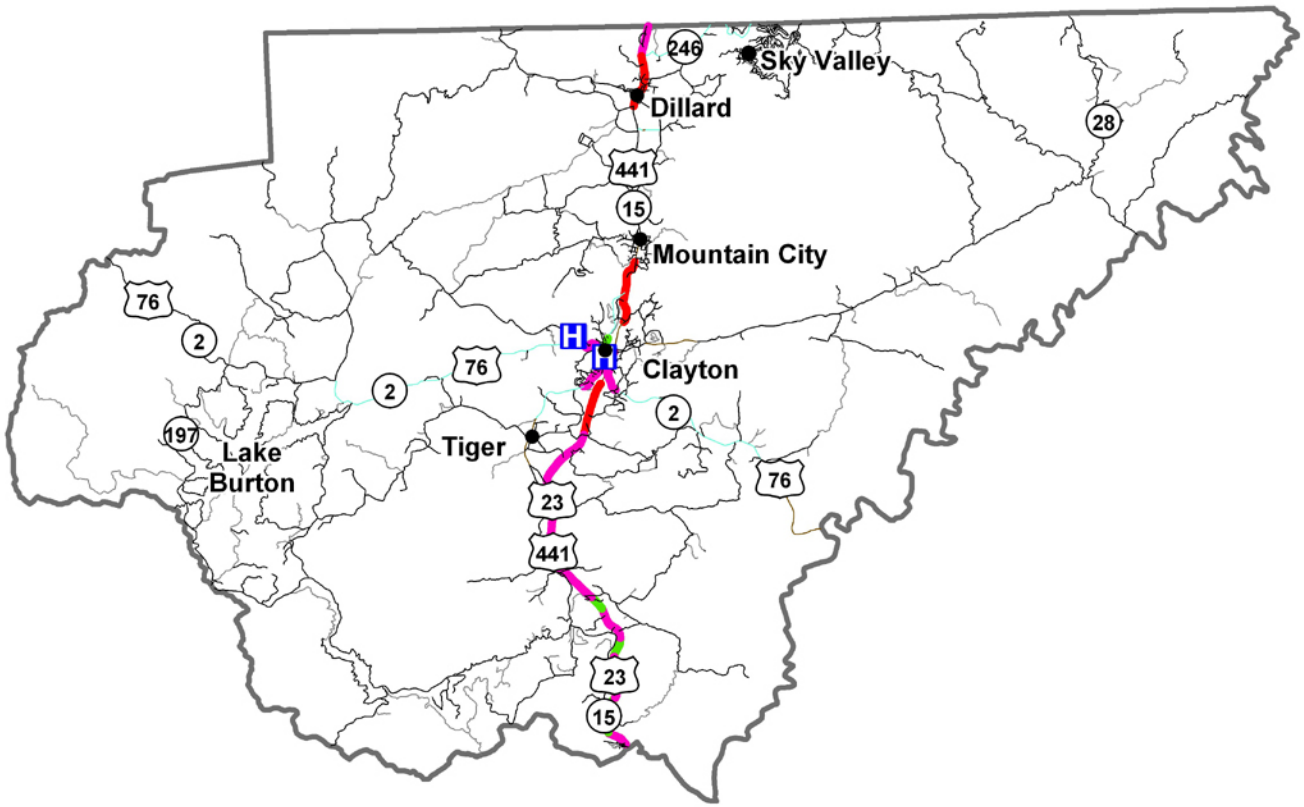
Source: Georgia DOT 2001 RC Database, and Multimodal Transportation Planning Tool (MTPT).

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Rabun County Level of Service (LOS) Year 2001



0 1.5 3 6 9 12 Miles

N

Study Area

Legend

Level of Service (LOS) Year 2001

- A
- B
- C
- D
- E
- F
- Local Roads - LOS Data Not Available
- Cities
- Hospitals

Figure 32

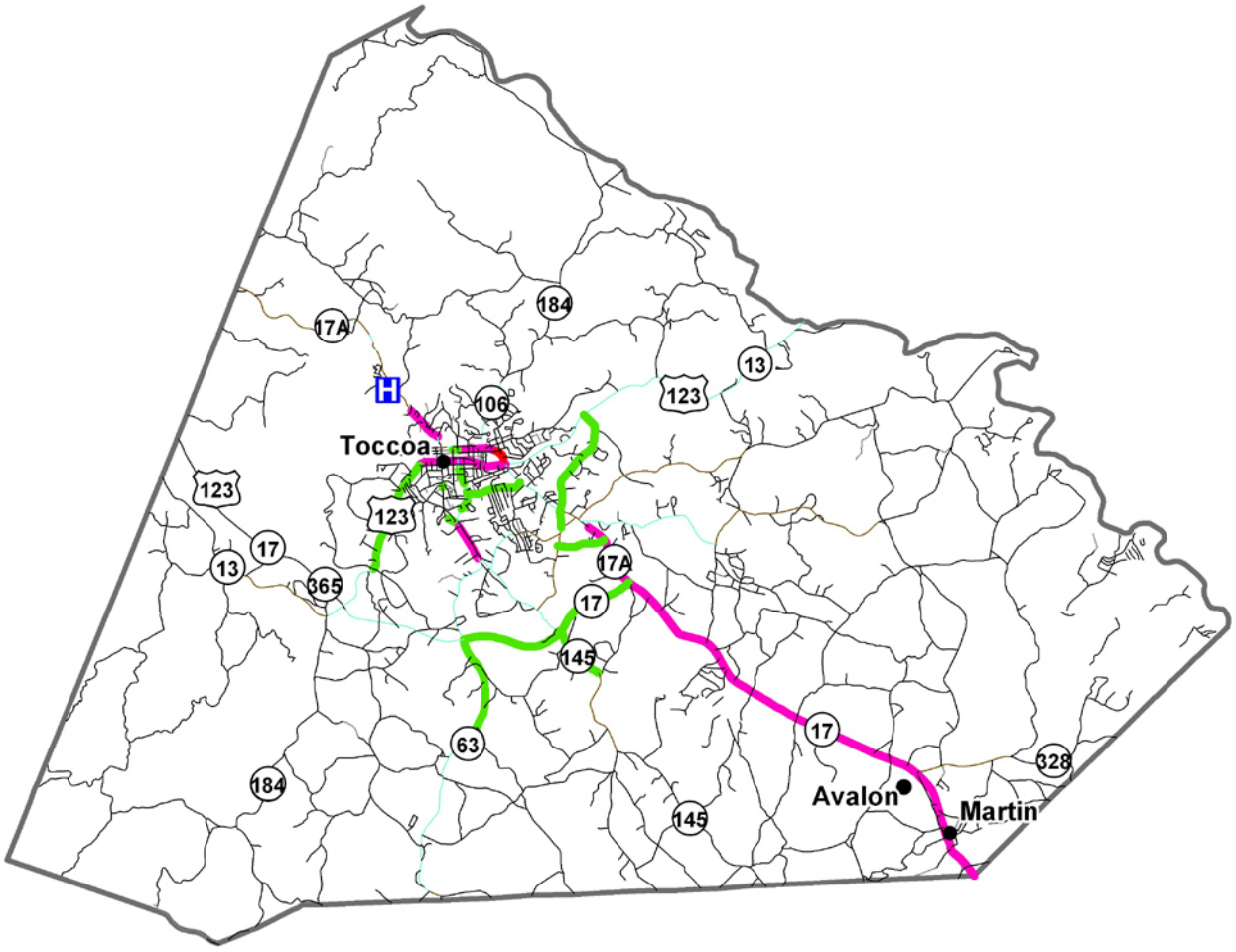
Source: Georgia DOT 2001 RC Database, and Multimodal Transportation Planning Tool (MTPT).

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Stephens County Level of Service (LOS) Year 2001



Study Area

Legend

Level of Service (LOS) Year 2001

- A
- B
- C
- D
- E
- F
- Local Roads - LOS Data Not Available
- Cities
- Hospitals

Figure 33

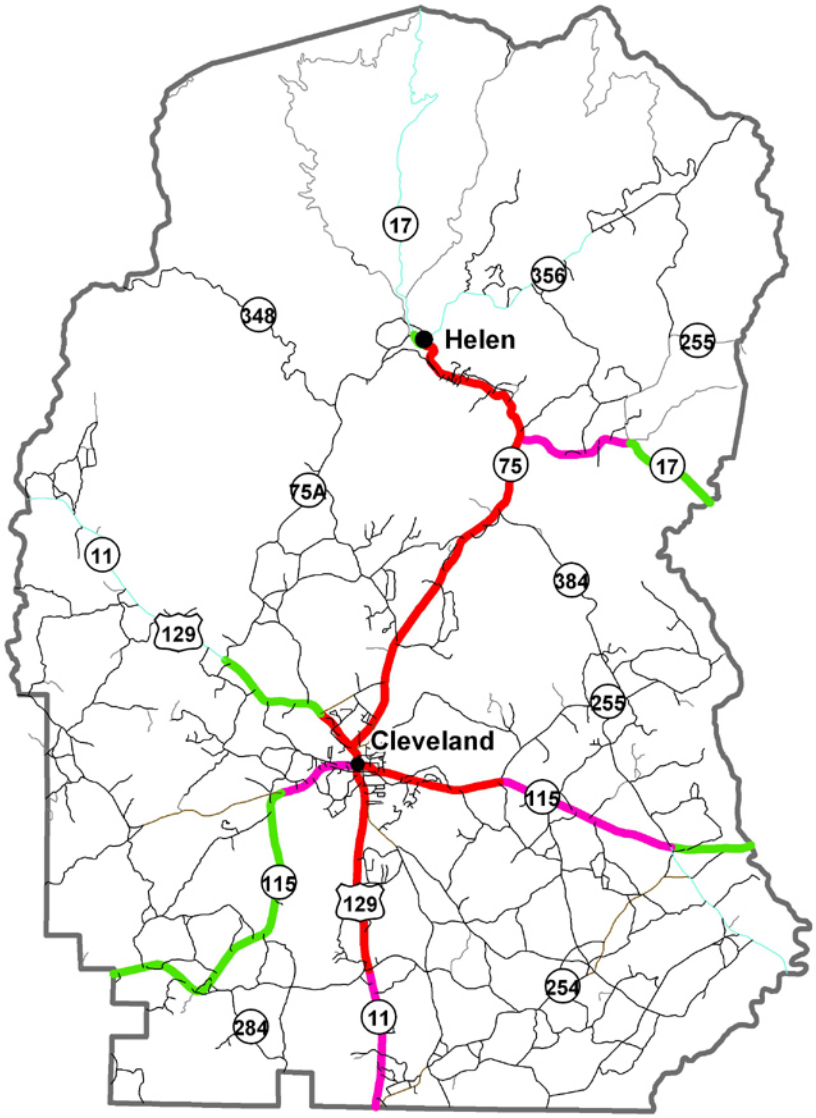
Source: Georgia DOT 2001 RC Database, and Multimodal Transportation Planning Tool (MTPT).

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

White County Level of Service (LOS) Year 2001



0 1 2 4 6 8 Miles

N

Study Area

Legend

Level of Service (LOS) Year 2001

- A
- B
- C
- D
- E
- F
- Local Roads - LOS Data Not Available
- Cities
- Hospitals

Figure 34

Source: Georgia DOT 2001 RC Database, and Multimodal Transportation Planning Tool (MTPT).

This map is intended for planning purposes only. July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Table 18
Habersham County Road Segments with Existing LOS D or Lower

Route Number	Route Type*	Begin Mile Point	End Mile Point	Number of Lanes	AADT along Segment	Lowest LOS along Segment	Highest MTPT Recommended Action
15	SR	0	2.41	2-3	9,300-12,000	E	Immediate
15	SR	14.71	14.72	3	6,600	D	Immediate
15 Connector	SR	0	0.70	2	8,000-8,800	E	Near-Term
17	SR	1.98	2.16	2	5,400-5,700	D	Immediate
17	SR	5.57	5.60	2	4,400	D	Near-Term
17	SR	7.15	7.79	2	16,900-21,800	F	Near-Term
17	SR	7.79	8.2	2	13,900-14,500	F	Near-Term
17	SR	8.2	10.05	2	7,500-9,600	E	Near-Term
17	SR	13.16	14.00	2	3,500	D	Near-Term
105	SR	0.23	1.79	2	6,600-9,000	F	Near-Term
105	SR	1.79	3.82	2-3	12,200-16,400	F	Near-Term
105	SR	4.01	4.19	3	19,200	F	Near-Term
105	SR	4.43	9.58	2	5,100	D	Near-Term
105 South	SR	0	0.58	2	12,200	E	Near-Term
115	SR	0	1.29	2	4,900	D	Near-Term
197	SR	0	0.23	2	5,100	D	Near-Term
197	SR	0.31	1.92	2	5,100	D	Near-Term
197	SR	3.28	3.48	2	5,000	D	Near-Term
197	SR	4.64	4.91	2	4,900-5,200	D	Near-Term
197	SR	5.14	5.32	2	4,100	D	Near-Term
197	SR	5.40	5.66	2	4,100	D	Near-Term
197	SR	5.97	6.35	2	4,100	D	Near-Term
197	SR	6.40	6.50	2	4,100	D	Near-Term
197	SR	6.56	6.84	2	4,100	D	Near-Term
197 Connector	SR	0	0.08	2	12,400	E	Near-Term
385	SR	0.50	5.12	2	11,100-12,800	E	Near-Term
432	CR	5.57	6.76	2	9,700-10,600	E	Near-Term
908	CS	0	0.77	2	10,700	E	Near-Term
913	CS	0.81	1.51	2	7,400	E	Near-Term

* SR = State Route, CR = County Road, CS = City Street

Table 19
Rabun County Road Segments with Existing LOS D or Lower

Route Number	Route Type*	Begin Mile Point	End Mile Point	Number of Lanes	AADT along Segment	Lowest LOS along Segment	Highest MTPT Recommended Action
2	SR	14.81	16.17	2-3	5,200-7,700	F	Immediate
2	SR	16.43	17.20	2	4,400	E	Near-Term
15	SR	0.09	9.21	2-3	5,000-6,900	E	Immediate
15	SR	9.21	10.52	2	9,700-10,100	F	Immediate
15	SR	12.27	13.79	3	10,600-12,700	F	Immediate
15	SR	17.67	19.73	2-3	5,900-8,900	F	Immediate
149	CR	2.12	3.25	2	3,500-4,800	E	Near-Range
149	CR	3.29	3.3	2	3,500	D	Near-Range
149	CR	3.32	3.54	2	3,500	D	Near-Range
539	CS	0	0.26	2	5,200	D	Medium-Range

* SR = State Route, CR = County Road, CS = City Street

Table 20
Stephens County Road Segments with Existing LOS D or Lower

Route Number	Route Type*	Begin Mile Point	End Mile Point	Number of Lanes	AADT along Segment	Lowest LOS along Segment	Highest MTPT Recommended Action
17	SR	0	7.78	2	7,800-10,800	E	Immediate
17	SR	7.78	10.96	2	5,000-5,500	D	Near-Term
17 Alternate	SR	0	1.12	2-3	11,200	E	Immediate
17 Alternate	SR	3.03	3.19	2-3	19,400	F	Near-Term
17 Alternate	SR	3.19	3.96	2	8,000-12,100	E	Near-Term
17 Alternate	SR	4.39	5.01	2-3	10,000	E	Immediate
63	SR	3.37	4.87	2	4,900	D	Near-Term
63	SR	6.62	7.21	2	9,600	E	Immediate
63	SR	7.33	7.46	2-3	5,600	D	Immediate
63	SR	8.0	8.03	2	5,600	D	Immediate
63	SR	8.41	8.44	3	7,600	D	Immediate
104	CR	1.2	1.73	2-3	6,600	D	Near-Term
145	SR	5.01	5.91	2	5,000	D	Near-Term
145	SR	5.95	5.99	2	6,100	D	Near-Term
184	SR	7.63	10.0	2-3	6,800-10,200	E	Immediate
185	CR	0.13	0.4	2	6,200	D	Near-Term
185	CR	0.54	0.57	2	5,500	D	Near-Term
185	CR	0.67	0.85	2	5,500	D	Near-Term
365	SR	7.27	8.35	2	10,600-11,300	E	Immediate
644	CS	0	0.39	2	7,000	D	Near-Term
734	CS	0	2.16	2	7,070	D	Near-Term
736	CS	0	0.82	2-3	7,070	D	Near-Term

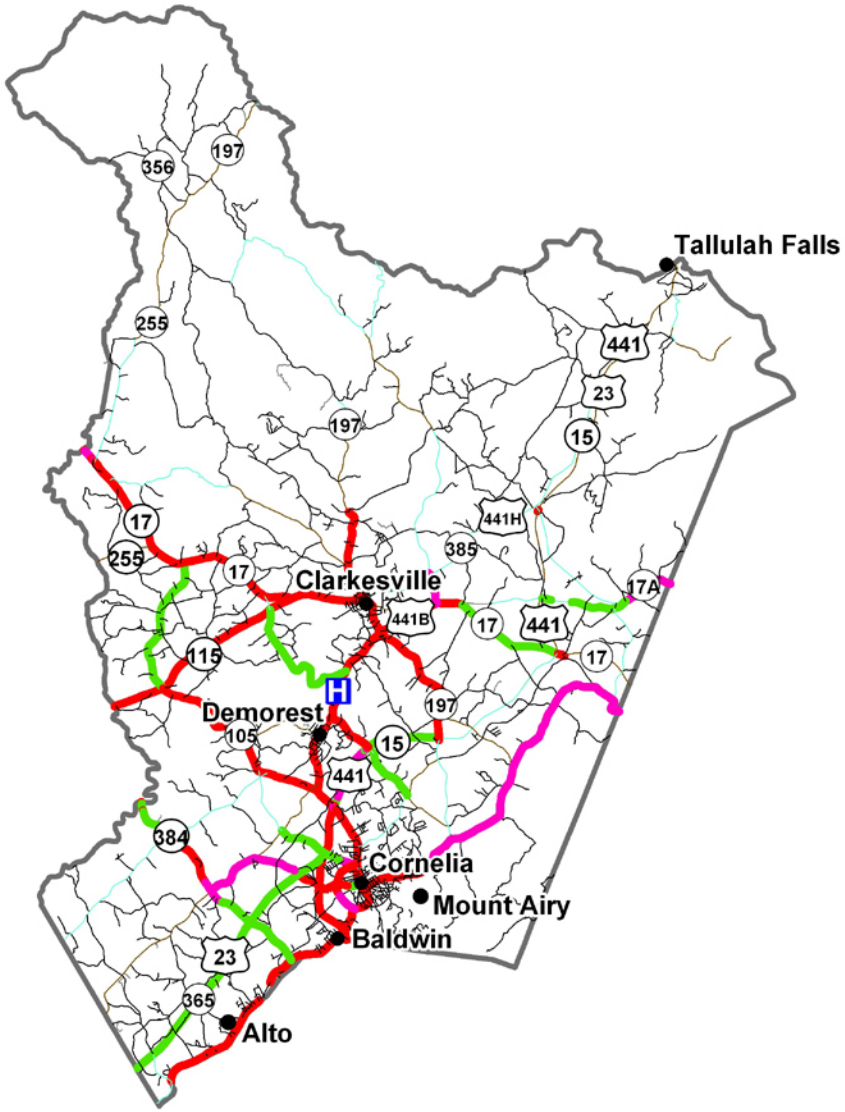
* SR = State Route, CR = County Road, CS = City Street

Table 21
White County Road Segments with Existing LOS D or Lower

Route Number	Route Type*	Begin Mile Point	End Mile Point	Number of Lanes	AADT along Segment	Lowest LOS along Segment	Highest MTPT Recommended Action
11	SR	0	5.76	2	7,400-9,300	F	Immediate
11	SR	5.76	6.45	2	14,300	F	Immediate
11	SR	6.52	6.85	2	17,700	F	Immediate
11	SR	6.85	9.84	2	4,200-7,800	F	Immediate
17	SR	0	4.21	2	2,500-3,400	E	Near-Term
17	SR	4.21	7.1	2	6,700-7,400	F	Near-Term
17	SR	7.1	7.45	2	3,700	D	Near-Term
75	SR	0	6.76	2	6,700-8,600	F	Near-Term
115	SR	0	6.26	2	3,500-3,700	D	Near-Term
115	SR	6.26	12.49	2	5,900-8,200	F	Near-Term
115	SR	12.49	15.5	2	3,400-4,900	E	Near-Term

* SR = State Route

Habersham County Level of Service (LOS) Year 2025



Study Area

Legend

Level of Service (LOS) Year 2025

- A
- B
- C
- D
- E
- F
- Local Roads - LOS Data Not Available
- Cities
- Hospitals

Figure 35

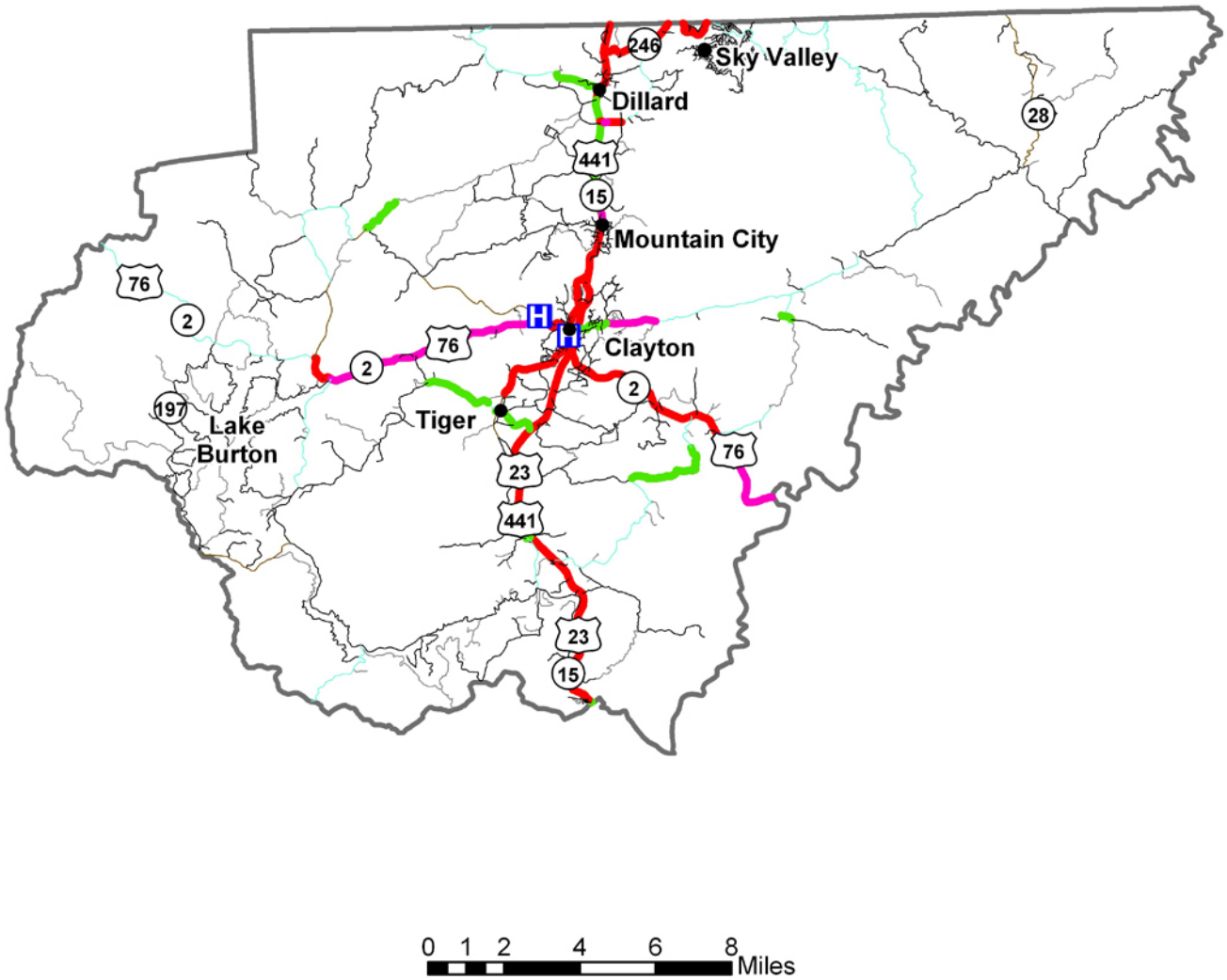
Source: Georgia DOT 2001 RC Database, and Multimodal Transportation Planning Tool (MTPT).

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Rabun County Level of Service (LOS) Year 2025



Study Area

Legend

Level of Service (LOS) Year 2025

- A
- B
- C
- D
- E
- F
- Local Roads - LOS Data Not Available
- Cities
- Hospitals

Figure 36

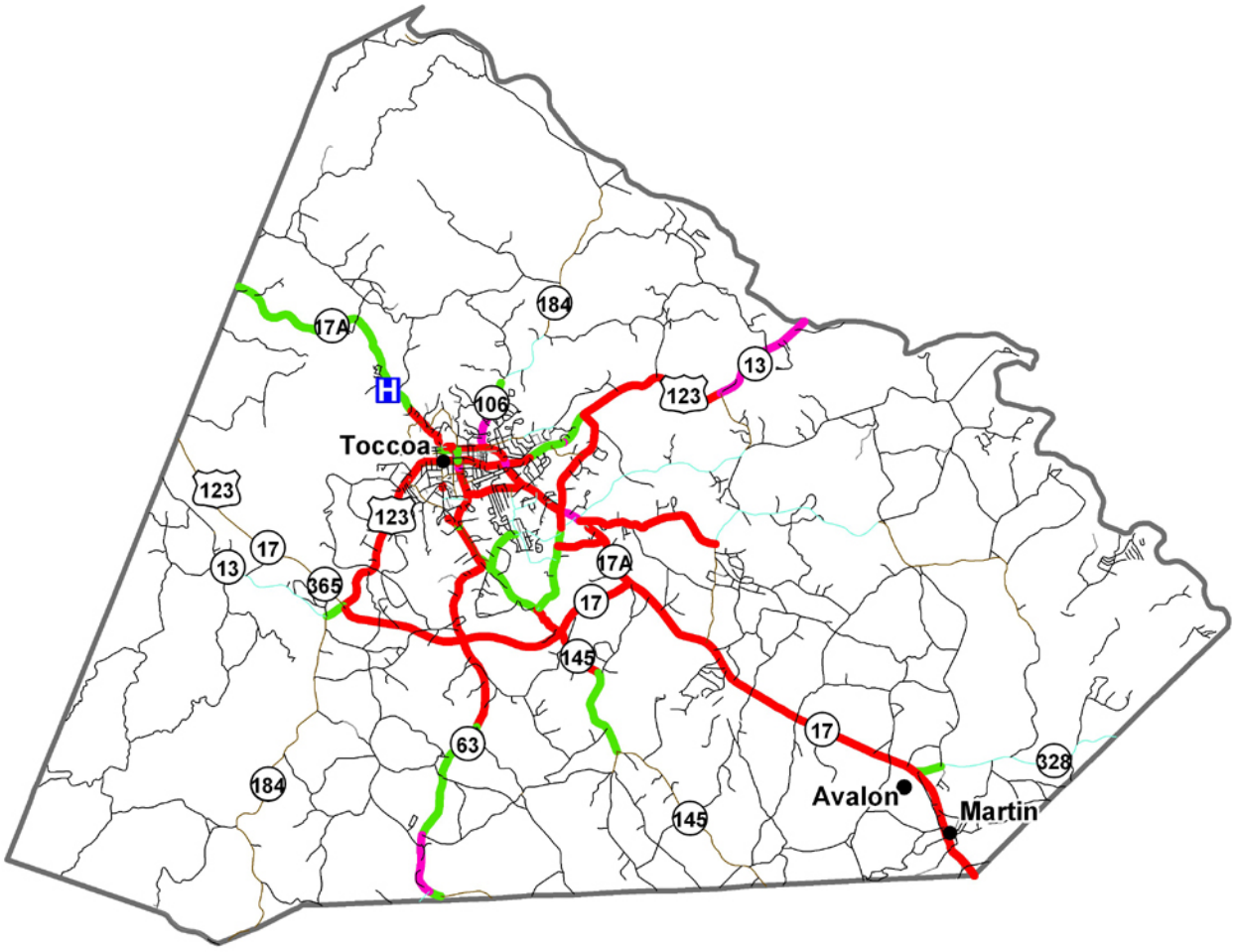
Source: Georgia DOT 2001 RC Database, and Multimodal Transportation Planning Tool (MTPT).

This map is intended for planning purposes only.
July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Stephens County Level of Service (LOS) Year 2025



Study Area

Legend

Level of Service (LOS) Year 2025

- A
- B
- C
- D
- E
- F
- Local Roads - LOS Data Not Available
- Cities
- Hospitals

Figure 37

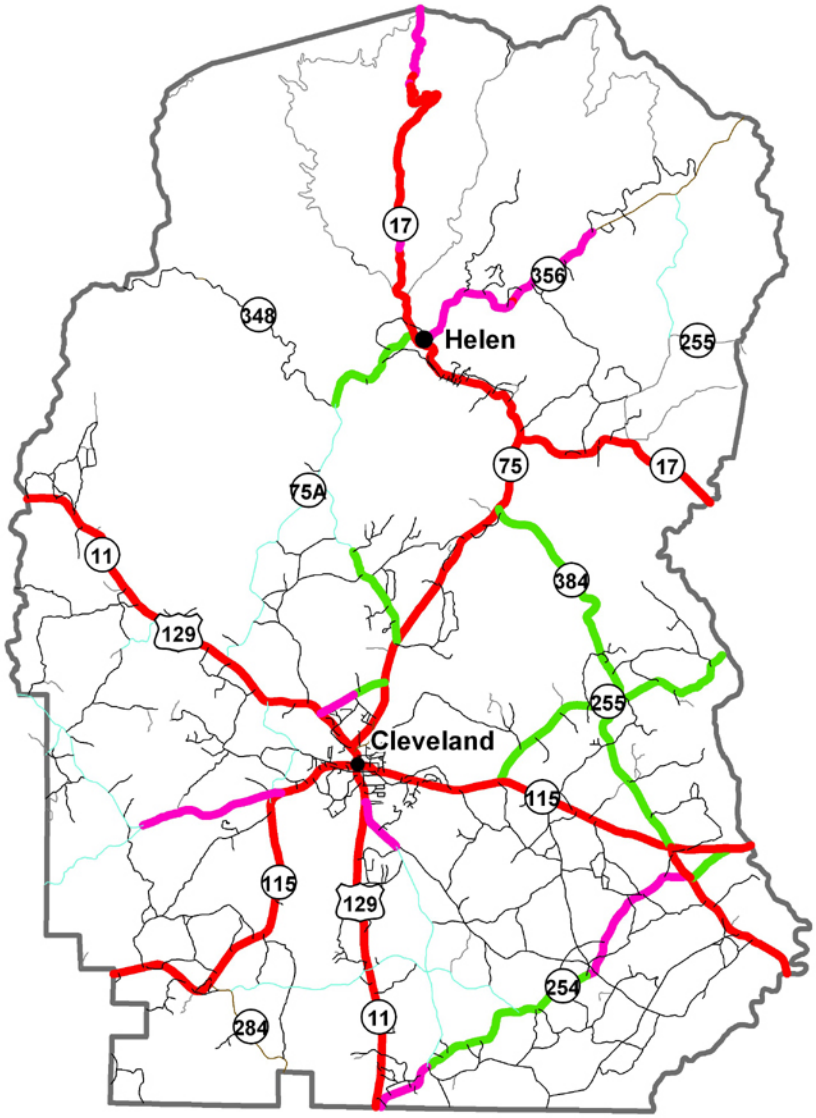
Source: Georgia DOT 2001 RC Database, and Multimodal Transportation Planning Tool (MTPT).

This map is intended for planning purposes only. July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

Day Wilburn Associates, Inc.

White County Level of Service (LOS) Year 2025



0 1 2 4 6 8 Miles

N

Study Area

Legend

Level of Service (LOS) Year 2025

- A
- B
- C
- D
- E
- F
- Local Roads - LOS Data Not Available
- Cities
- Hospitals

Figure 38

Source: Georgia DOT 2001 RC Database, and Multimodal Transportation Planning Tool (MTPT).

This map is intended for planning purposes only. July 2003.

Multimodal Transportation Study for Habersham, Rabun, Stephens, and White Counties

DWA
Day Wilburn Associates, Inc.

Table 22
Habersham County Road Segments with Year 2025 LOS D or Lower

Route Number	Route Type*	Begin Mile Point	End Mile Point	Number of Lanes	Projected AADT along Segment	Lowest LOS along Segment	Highest MTPT Recommended Action
15	SR	0	2.41	2-3	23,300-30,100	F	Immediate
15	SR	2.41	3.70	4	48,600-51,100	F	Medium-Range
15	SR	3.70	7.18	4	30,800-37,800	E	Medium-Range
15	SR	14.71	14.75	3	12,300-16,500	F	Immediate
15 Connector	SR	0	0.70	2	20,000-22,100	F	Near-Term
17	SR	1.98	7.15	2	6,000-14,300	F	Immediate
17	SR	7.15	8.20	2	34,800-36,300	F	Near-Term
17	SR	8.20	10.05	2	18,800-24,100	F	Near-Term
17	SR	10.05	17.03	2	5,000-8,800	F	Near-Term
17 Alternate	SR	0	1.28	2	7,800	E	Long-Term
17 Alternate	SR	4.61	4.63	2	3,500	D	Long-Term
105	SR	0.23	1.79	2	16,500-22,600	F	Near-Term
105	SR	1.79	3.82	2-3	30,600-41,100	F	Near-Term
105	SR	3.82	3.89	4	31,100	E	Long-Term
105	SR	3.89	4.43	3-4	48,100	F	Near-Term
105	SR	4.43	13.14	2	5,800-12,800	F	Near-Term
105 South	SR	0	0.58	2	30,600	F	Near-Term
115	SR	0	5.26	2	10,300-12,300	F	Near-Term
197	SR	0	6.84	2	9,000-13,000	F	Near-Term
197 Connector	SR	0	0.08	2	31,100	F	Near-Term
365	SR	0	6.35	4	34,600-36,100	D	Medium-Term
382	CR	3.85	6.66	2	4,500	D	Long-Term
383	CR	0	2.54	2	4,500	D	Long-Term
384	SR	0	4.25	2	4,800-10,300	F	Medium-Term
385	SR	0.50	5.12	2	27,800-32,100	F	Near-Term

* SR = State Route, CR = County Road

Table 22
Habersham County Road Segments with Year 2025 LOS D or Lower (Continued)

Route Number	Route Type*	Begin Mile Point	End Mile Point	Number of Lanes	Projected AADT along Segment	Lowest LOS along Segment	Highest MTPT Recommended Action
386	CR	0	2.43	2	8,800	E	Long-Term
387	CR	0	1.25	2	10,000	F	Medium-Term
387	CR	1.39	2.83	2	4,300	D	Long-Term
389	CR	0	1.38	2	5,800-6,300	D	Long-Term
393	CR	1.64	3.71	2	5,500-8,300	E	Long-Term
432	CR	0.73	2.74	2	11,800	F	Medium-Term
432	CR	2.83	5.57	2-3	11,800-12,300	F	Medium-Term
432	CR	5.57	6.76	2	24,300-26,600	F	Near-Term
545	CR	0	2.67	2	8,000-12,500	F	Medium-Term
548	CR	0	0.77	2	7,300	E	Long-Term
Antioch Church Road	CR	1.97	2.19	2	4,000	D	Long-Term
Antioch Church Road	CR	2.71	4.14	2	4,000	D	Long-Term
901	CS	0	0.40	2	8,500	F	Medium-Term
908	CS	0	1.09	2	5,500-6,500	D	Long-Term
913	CS	0	1.51	2	18,500	F	Near-Term

CR = County Road, CS = City Street

Table 23
Rabun County Road Segments with Year 2025 LOS D or Lower

Route Number	Route Type*	Begin Mile Point	End Mile Point	Number of Lanes	Projected AADT along Segment	Lowest LOS along Segment	Highest MTPT Recommended Action
2	SR	8.09	14.81	2	6,400-7,000	F	Near-Range
2	SR	14.81	16.17	2-3	15,800-23,300	F	Immediate
2	SR	16.17	16.43	4	39,100	F	Medium-Range
2	SR	16.43	24.56	2	5,200-13,300	F	Near-Range
7	CR	2.75	3.32	2	7,600	F	Medium-Range
15	SR	0	0.09	4	20,900	D	Medium-Range
15	SR	0.09	9.21	2-3	15,200-20,900	F	Immediate
15	SR	9.21	10.52	2	29,400-30,600	F	Immediate
15	SR	10.52	11.17	4	30,600	F	Medium-Range
15	SR	11.44	12.27	4-5	32,100	F	Medium-Range
15	SR	12.27	13.79	3	32,100-38,500	F	Immediate
15	SR	13.79	14.35	4	38,500	F	Medium-Range
15	SR	14.35	17.67	4	25,800	E	Medium-Range
15	SR	17.67	19.73	2-3	17,900-25,800	F	Immediate
21	CR	0	0.09	2	3,000	D	Long-Range
60	CR	3.05	3.30	2	3,000	D	Long-Range
149	CR	0.49	4.84	2	7,300-14,500	F	Near-Range
216	CR	4.08	5.28	2	3,000	D	Long-Range
217	CR	10.26	12.04	2	3,600	D	Long-Range
217	CR	12.31	12.56	2	3,300-3,600	D	Long-Range
217	CR	12.67	13.51	2	3,300	D	Long-Range
218	CR	0.93	3.61	2	3,000	D	Long-Range
219	CR	0.18	2.34	2	3,600-4,500	E	Long-Range
220	CR	0	1.22	2	3,600	D	Long-Range
246	SR	0	3.79	2	8,200	F	Medium-Range
539	CS	0	0.26	2	15,800	F	Medium-Range

* SR = State Route, CR = County Road, CS = City Street

Table 24
Stephens County Road Segments with Year 2025 LOS D or Lower

Route Number	Route Type*	Begin Mile Point	End Mile Point	Number of Lanes	Projected AADT along Segment	Lowest LOS along Segment	Highest MTPT Recommended Action
17	SR	0	7.78	2	14,600-20,300	F	Immediate
17	SR	7.78	13.07	2-3	7,300-10,300	F	Near-Term
17 Alternate	SR	0	1.12	2-3	21,000	F	Immediate
17 Alternate	SR	1.33	3.03	4	36,400-45,600	F	Near-Term
17 Alternate	SR	3.03	3.19	2-3	36,400	F	Near-Term
17 Alternate	SR	3.19	3.96	2	15,000-22,700	F	Near-Term
17 Alternate	SR	3.96	4.14	2	5,800	D	Long-Term
17 Alternate	SR	4.29	5.01	2-3	10,100-18,800	F	Immediate
17 Alternate	SR	5.01	9.2	2-3	6,000	D	Medium-Term
63	SR	0.24	7.46	2-3	10,500-18,000	F	Immediate
63	SR	8.0	8.03	2	10,500	F	Immediate
63	SR	8.41	8.44	3	14,300	F	Immediate
84	CR	0.05	1.42	2	5,600	D	Long-Term
104	CR	1.2	1.73	2-3	12,400	F	Near-Term
106	SR	0.78	1.00	2	4,300	D	Long-Term
145	SR	3.46	7.85	2	5,300-11,500	F	Near-Term
184	SR	6.44	10.0	2-3	12,800-19,200	F	Immediate
184	SR	10.85	12.01	2	8,300-8,400	E	Long-Term
185	CR	0	1.2	2	8,800-11,600	F	Near-Term
328	SR	0	0.41	2	4,900	D	Long-Term
365	SR	7.27	8.35	2	19,900-21,200	F	Immediate
365	SR	8.35	14.52	2	6,900-7,900	F	Near-Term
422	CR	1.27	2.03	2	7,900	D	Long-Term
508	CS	0.82	1.01	2	6,600-8,400	E	Long-Term
510	CS	0	0.31	2	8,600-11,300	F	Medium-Term
511	CS	0.4	0.48	2	7,900	F	Long-Term
538	CR	0	2.57	2	7,700	F	Medium-Term
644	CS	0	0.39	2	13,100	F	Near-Term
734	CS	0	2.16	2	13,300	F	Near-Term
736	CS	0	0.82	2-3	13,300	F	Near-Term

* SR = State Route, CR = County Road, CS = City Street

Table 25
White County Road Segments with Year 2025 LOS D or Lower

Route Number	Route Type*	Begin Mile Point	End Mile Point	Number of Lanes	Projected AADT along Segment	Lowest LOS along Segment	Highest MTPT Recommended Action
11	SR	0	5.76	2	20,800-26,100	F	Immediate
11	SR	5.76	6.45	2	40,200	F	Immediate
11	SR	6.52	6.85	2	49,700	F	Immediate
11	SR	6.85	7.69	2	21,900	F	Immediate
11	SR	7.69	14.97	2	7,300-11,800	F	Immediate
17	SR	0	4.21	2	7,000-9,600	F	Near-Term
17	SR	4.21	7.10	2	18,800-20,800	F	Near-Term
17	SR	7.10	7.45	2	10,400	F	Near-Term
17	SR	7.45	15.28	2	5,300	F	Medium-Term
68	SR	0	1.3	2	3,100-4,500	E	Long-Term
75	SR	0	6.76	2	18,800-24,200	F	Near-Term
75 Alternate	SR	8.83	11.11	2	3,700	D	Long-Term
88	CR	0	1.91	2	2,700	D	Long-Term
115	SR	0	6.26	2	9,800-10,400	F	Near-Term
115	SR	6.26	10.55	2	16,600-23,000	F	Near-Term
115	SR	10.55	14.00	2	13,800-17,700	F	Near-Term
115	SR	14.00	15.5	2	9,600	F	Near-Term
200	CR	3.28	6.03	2	4,800	E	Long-Term
251	CR	4.45	5.56	2	4,800	E	Long-Term
254	SR	0	8.83	2	2,800-4,200	E	Long-Term
255	SR	0	5.5	2	2,800	D	Long-Term
255	SR	11.84	15.62	2	3,700-5,100	E	Long-Term
356	SR	0	4.5	2	5,300	F	Medium-Term
384	SR	0	3.35	2	7,600-8,400	F	Medium-Term
384	SR	3.35	11.35	2	3,700-3,900	D	Long-Term

* SR = State Route, CR = County Road

Safety Concerns

A frequent request during the November 2002 public involvement meetings was for a breakdown of the types of vehicular crashes in high crash zones.

In order to get a very general indication of what types of vehicle crashes are occurring in high-accident locations, the crash incidents were broken out by type per county. At the Habersham County locations listed in Table 10, rear-end crashes made up the largest percentage, at approximately 44 percent. However, angle collisions (a type of accident susceptible to correction with traffic control) made up the second largest percentage, at 42 percent. In Rabun County, rear-end crashes made up 43 percent of the year 2001 crashes recorded for the locations in Table 11. The other vehicle crash types were approximately evenly split between angle, side-swipe and other types of collisions. At the locations listed in Table 12 for Stephens County, 45 percent of the 2001 crash incidents were rear-end collisions. Angle crashes made up the second largest percentage, at 35 percent. White County had the largest proportion of 2001 rear-end crashes for the locations listed in Table 13, at 54 percent.

The locations listed in Tables 10 – 13 were examined individually for potential safety needs as part of the final report.

Bridge and Major Culvert Deficiencies

The percentage of bridge and major culvert structures with a 65 or lower sufficiency rating is approximately 28 percent in the four-county region: 19 percent in Habersham County, 45 percent in Rabun County, 25 percent in Stephens County and 17 percent in White County. Although the sufficiency rating does not identify all potential structural deficiencies and/or facility failures to meet current design standards, this information does highlight potential locations for improvements.

Pavement Deficiencies

In general, reported roadways for Habersham, Rabun, Stephens and White Counties have a PSR rating of 2.6 or higher, as previously shown in Figures 15, 16, 17 and 18, respectively. The PSR threshold of 2.6 is a standard used by FHWA in assessing pavement condition. Some spot locations do have mediocre or poor serviceability ratings, where the riding quality of the pavement is reportedly noticeably inferior to new pavement or degraded to the point where it affects vehicular travel. Pavement improvements may be recommended at these locations.

Pedestrian and Bicycle Facilities

Two issues discussed in GMRDC's Regional Comprehensive Plan are significant for this study and will be considered in all future recommendations. The first is the impact that road widening, new roads and development have on scenic open space. This study will look at the potential for pedestrian and bicycle trails, which provide transportation alternatives and scenic open spaces, improving the visual quality and enjoyment of the trails. The second issue under consideration is that bicycle trails and walking tours need to be promoted and developed in historic areas.

After reviewing the existing pedestrian and bicycle facilities in Habersham, Rabun, Stephens, and White Counties, several opportunities for improvement have been identified. Connections between community activity nodes and recreation sites need to be improved for both pedestrians and bicyclists. Pedestrian facilities are situated around individual nodes but often do not offer interconnection. Bicycle routes often miss community activity nodes completely since they are intended to serve larger distance trips rather than local use. Both tourists and local residents can benefit from improved routes and facilities. Improvements not only include specially designated pedestrian and bicycle routes, but also improved handicap accessibility, signage, lighting, and street furniture, such as bike racks and benches. A multi-county plan will ensure an interconnected network of routes from county to county.

The scenic qualities of the Georgia mountain region are a significant attraction for outdoor enthusiasts. The addition of new bicycle and pedestrian trails will only enhance the local economy by attracting more people to the area. Current scenic driving trails may be an effective way to add bicycle routes to the area. There is also great potential in adding paths and trails to abandoned railbeds.

Several local comprehensive plans mentioned the need to preserve the historic and scenic qualities of the region. Short-term work programs included the creation of walking tours through the historic districts of several cities within the study area. Improved sidewalks and bicycle routes play a significant role in the success of such ventures.

Comments received during public meetings in each of the four counties stressed the need for additional designated bike routes that are safe. Several people mentioned that heavy truck traffic on the roads is an impediment to pedestrians and bicyclists. There was also a call for more sidewalks along well-traveled routes throughout the study area.

Overall, there appears to be the need and desire for improved pedestrian and bicycle facilities in the four-county study area. The county-specific plans include specific recommendations for improvements to the pedestrian and bicycle system.

Potential Public Transit Needs

A number of indicators were examined to evaluate the potential and perceived need for additional public transit services in the four-county study area. Categories reviewed included area socioeconomic data, work travel characteristics, use of existing transit services, public transit services in other northeast Georgia counties, and input obtained from the service providers and public meetings.

The transportation disadvantaged, such as low-income, elderly and minority persons, tend to rely less on automobile travel and more on public transit and other alternative modes. Higher evidence of carpooling and households with no automobile are additional indicators of potential need for transit services. A review of Census 2000 statistical area and state data is summarized in Table 26.

Table 26
Census 2000 Indicators of Potential Transit Needs

County	Over 65	Minority	Below Poverty	Carpool	Household without Auto
Habersham	13.8%	11.1%	12%	15%	6.5%
Rabun	18.1%	5.1%	11%	19.1%	6.1%
Stephens	15.6%	14.3%	25%	12.8%	7.5%
White	14.6%	4.8%	10.5%	13.5%	4.2%
Georgia	9.6%	34.9%	13%	14.5%	8.2%

Source: U.S. Census 2000

When compared to the statewide statistics, the four counties generally exhibit similar characteristics: the percent of persons over age 65 is higher, the minority populations are predominantly lower, and poverty is close to the state average (though somewhat higher in Stephens County). Carpooling for work trips is close to the state average in Stephens and White Counties while being somewhat higher in Habersham and Rabun Counties. The percent of households with no automobile is reported as lower than the statewide average.

Rural public transit programs in four other northeast Georgia counties (Banks, Dawson, Jackson and Lumpkin Counties) exhibiting socioeconomic characteristics similar to the study counties were reviewed for comparative purposes. While public transit ridership activity in 2001 showed similarities between the two groups, the rural public transit programs in the other counties, as with the Rabun County program, fell below the GDOT minimum criteria of 500 monthly person trips per vehicle.

Input from representatives of the GDOT District One Office, the Georgia Department of Human Resources (DHR), the counties, other stakeholders and the public indicates that some needs do exist for additional public transit services. Comments were received about the lack of and need for service in White County, especially for elderly residents. The White County Senior Center in Cleveland provides service on weekdays, but is limited to persons who are over 65 years of age or disabled. Stephens County's transit program was recently discontinued due to low demand for the service and the County's ability to serve most needs through the Senior Center. Comments indicated that Rabun County is very interested in public transit and they have requested an additional van for 2003. With no intercity bus service currently available in the four counties, the need for service to Gainesville from origins throughout the region was also cited.

The GDOT Multimodal Transportation Planning Tool (MTPT) has a transit analysis module that can indicate potential service need in counties with no rural transit program. Only White County could be evaluated for potential public transit program demand using the MTPT because Stephens County operated services through 2001 (the most recent year of data). The MTPT program output for White County was based on 1990 statistics and was compared with the average of all Georgia rural counties in the categories of persons over age 60, persons below the poverty level, total persons with mobility limitations and persons using carpool to work. The

resulting MTPT information indicates that White County is classified as a county with moderate potential for transit service. Selected 2000 data was compared with the 1990 data categories to review current trends. While the selected White County categories are declining from 1990 to 2000, there is still an apparent need for some type of public transit service in the county.

The GDOT Office of Planning is currently conducting a statewide Rural Transportation Study, which includes a public transit element. A survey of stakeholders is being undertaken to assess rural public transit needs. Information obtained through the survey will more closely identify public transit needs throughout the state, including those of Habersham, Rabun, Stephens and White Counties.

Stakeholder and Public Input

Stakeholders and the general public were given several opportunities to provide input and comments on Phase I activities and findings. A Steering Committee and Advisory Panel consisting of local leaders, federal and state agency representatives, and GDOT officials have been formed. Areas of concern noted by the groups are depicted in Tables 27 through 30 for each of the four counties in the study area. A detailed summary of public comments is included in Appendix A.

Table 27
Habersham County Stakeholder Input

No.	Location	Area of Concern
1	CR 200 -Stonepile and Piedmont Road	Congestion
2	CR 392 - The Orchard Road	Congestion
3	Walls Bridge Road	Congestion
4	SR 17 Alt/US 441	Congestion
5	SR 197	Connectivity from Clarkesville to the Hardman Rd N of N GA Tech including pedestrian issues
6	North Bypass	Needed for connectivity and mobility
7	Liberty Rd. and US 441	Unsafe intersection
9	Antioch Church Road	Congestion
10	Antioch Church Road at US 23	Interchange needed
11	Habersham Mills Road	Congestion
12	Habersham Mills Road	Poor roadway geometry - safety
13	SR 365 and Habersham Mills Road	Unsafe intersection
14	SR 385 and SR 17 and SR 197	Unsafe intersection
15	SR 385/US 441Bus	Urban section with sidewalks needs to be considered
16	SR 197	Congestion
17	Double Bridge Rd. and US 441	Consider median removal for safety
18	US 441 and SR 197	Addition of southbound on-ramp needed
19	Camp Creek Rd. and Old SR 197	Unsafe intersection
20	US 441 and Hazel Creek Road	Improvements needed
21	Hazel Creek Rd and Camp Creek Road	Unsafe intersection
22	Demorest-Mt. Airy Road	Needs widening
23	US 441 and US 441 Bus	Interchange revamp needed
24	SR 105 at Old Cleveland Road and Pea Ridge Road	Unsafe intersection
25	Old Clarkesville/Athens Road	Congestion
27	Level Grove Road	Congestion
28	Grove Road at Old Clarkesville Athens Road	School safety
29	CR 1 (BC Grant Road)	Congestion
30	US 441 at SR 384	Needs grade separation
31	Habersham Airport	Improve accessibility
32	Chattahoochee River Greenspace Corridor	Better coordination with State over common issues
33	Dixon Cross Road	Congestion
34	US 441 at Demorest-Mt. Airy Road	Improvements needed
35	Old Clarkesville/Athens Road and Old Cleveland Road	Unsafe intersection
36	Old Cleveland Road at J. Warren Road	Unsafe intersection
37	Demorest-Mt. Airy Rd. from US 441 B to Golf Course Road	Pedestrian walkway near schools

Table 28
Rabun County Stakeholder Input

No.	Location	Area of Concern
1	Warwoman Road and SR 28	Improve roadway between Clayton and NC line
2	US 76/SR 2	Widen, improve, resurface roadway
3	US 441/US 23/SR 15	After widening what else may be needed
4	Seed Lake Road	Consider improvements
5	Old US 441	Consider improvements
6	Boggs Mt. Road	New jail and elementary school - review access needs
7	Southwest Bypass	Regional Advisory Council has considered for connectivity
8	Germany Road	Evaluate needs
9	Bike Routes	Local bike plan underway; US 441 needs bike lanes when widened
10	Pedestrian facilities	Dillard's pedestrian facilities need to be studied
	Access to schools	Consider needs
	Transit	FTA Section 5311 Program - evaluate for additional vans

Table 29
Stephens County Stakeholder Input

No.	Location	Area of Concern
1	Tugalo Corridor	Possible scenic corridor
2	Currahee Street	New development may affect traffic
3	US 123	Needs improvement toward SC line
4	Red Rock Road	Needs improvement
5	Toccoa Bypass	East extension needed
6	SR 17	Needs improvement
7	Oak Valley Road	Improve between SR 17 and Holly Springs needed
8	Brookhaven	Needs evaluation between SR 17 and Whispering Pines Road
9	Population growth	Area of strong population growth over the past several years
10	SR 17/SR 106	Widening/improvement needed
11	SR 106	Improvements needed between Franklin County and SR 145
12	School access	Examine need for capacity and safety improvements
13	Industrial site	Examine access needs
14	Industrial site	Examine access needs
15	Industrial site	Examine access needs
16	School access	Examine need for capacity and safety improvements
17	Industrial site	Examine access needs
18	N GA Tech School	Examine access needs
19	SR 106/SR 17	Need to connect the two routes in the south of the county
	Bike route	Only county bike route is a state route
	RR crossings	Limited visibility - needs review
	Transit	Evaluate needs beyond current one van Section 5311 Program

Table 30
White County Stakeholder Input

No.	Location	Area of Concern
1	Russell-Brasstown Road	Maintenance needed now and in the future
2	Pedestrian Access	Planned for SR 75 N to Hulsey Road but will not reach new recreation area to the north
3	SR 115	Part of planned Foothills Parkway; improvement needed for this inter-county connector
4	Chattahoochee River Greenway	Better coordination is needed by the state regarding proposed parks and related access needs - Buckhorn State Park
5	US 129/SR 11 South	Needs widening or at least turn lanes
6	SR 75 North	Center turn lane is proposed but needs to be extended to the new recreational area
7	Asbestos Road	Needs widening - currently has 18' of pavement
8	US 129/SR 11 North	Needs widening or possible center turn lane
9	Cleveland Bypass	Partial east bypass is under consideration; need bypass around Cleveland
10	Westmoreland Road (CR 204)	Improvement needed; potential major east-west thoroughfare
	Bicycle routes	Need east-west connectivity between state routes
	Schools	Study access
	Four lane roads	More four-lane roads are needed, especially where traffic originates to Atlanta or Gwinnett County
NA	Transit	No needs
[1] North, South, East and West directions are respective to Cleveland		

6 Goals and Strategies

The Multimodal Transportation Study for Habersham, Rabun, Stephens and White Counties represents an effort to define a set of transportation programs and projects that address existing and future transportation needs in these four counties. The study's recommendations will guide future transportation investments and provide mobility solutions to accommodate population and employment growth in this four-county area.

Thoughtful goals and effective performance measures ensure a long-range, needs-based perspective that assists in effectively identifying and implementing appropriate transportation initiatives in Habersham, Rabun, Stephens and White Counties. The goals and performance measures must be compatible in order to develop a transportation network that also addresses regional needs.

Performance measures are necessary tools in needs-based plan development because they can track performance over time and assist in identifying improvements. They provide accountability and link strategic planning to resource allocation. By defining specific performance measures, Habersham, Rabun, Stephens and White Counties will be able to measure the effectiveness of selected projects and programs in meeting goals. Performance measures as a package indicate the extent to which the current and recommended programs help achieve established goals.

The federal Transportation Equity Act for the 21st Century (TEA-21) emphasizes that transportation infrastructure investment should be driven by the need for improvement. The goals and performance measures established for Habersham, Rabun, Stephens and White Counties were designed to meet these counties' specific transportation needs, while simultaneously incorporating sensitivity to the transportation efforts of the region's multiple planning partners. The goals and performance measures for Habersham, Rabun, Stephens and White Counties, provided in Table 31 consider the objectives outlined in county and city comprehensive plans and the GMRDC's Regional Comprehensive Plan.

Goals and Performance Measures

Four transportation planning goals have been established for the study area. The first goal is to improve accessibility and mobility of people and goods. The accomplishment of this goal will be measured by establishing a threshold for 2025 roadway LOS C or better and monitoring performance roadway levels of congestion. The number of alternative roadway connections with capacity for high volume flows will also serve as a measure of transportation access and mobility.

Table 31
Goals and Performance Measures

Goals	Performance Measures
• Improve accessibility and mobility of people and goods.	• MTPT 2025 roadway LOS C or better. • Provides alternative roadway connections with capacity for high volume flows.
• Enhance safety.	• Will reduce accident occurrences. • Locations with significant numbers of correctable vehicle crashes. • Provides additional improvements to pedestrian facilities for activity centers. • Provides additional bike lanes or separated bike paths along corridors with high vehicle/bike friction.
• Preserve and improve the existing system, environment, and quality of life.	• Present serviceability ratings (PSR) of 3.0 or above. • Bridge sufficiency ratings above 75. • Number of actively protected wetlands and historic areas protected from encroachment from transportation projects. • Burdens or benefits to environmental justice communities. • Number of pedestrian facilities for activity centers. • Connectivity of bike facilities to regional network. • Percent of area served by transit. • Number of design features that encourage transit patronage.
• Ensure multi-jurisdictional coordination to facilitate interregional connectivity and foster regional economic development.	• Ongoing communication between regional jurisdictions. • Number of alternative roadway connections between jurisdictions with capacity for high volume flows.

The second goal is to enhance safety. The achievement of this goal will be measured by monitoring and reducing accident rates as well as the number of locations with correctable vehicle crashes. Other performance measures for this goal include increasing the number of pedestrian facilities for activity centers, and the number of miles of bike lanes, or separated bike paths along corridors with high vehicle/bike friction.

Thirdly, Habersham, Rabun, Stephens and White Counties will preserve and improve the existing system, environment and quality of life by monitoring performance measures such as present serviceability ratings for pavement, bridge sufficiency ratings, the number of wetlands and historic areas protected from encroachment from transportation projects, and burdens on and benefits to environmental justice communities. This goal will also be measured by the

number of pedestrian facilities for activity centers, connectivity of bike facilities to the regional network, the percent of area served by transit, and the number of design features that encourage transit patronage.

Finally, the fourth goal is to ensure multi-jurisdictional coordination to facilitate interregional connectivity and foster regional economic development. Achievement of this goal will be measured by the level of ongoing communication between regional jurisdictions and the number of alternative roadway connections with capacity for high volume flows.

Ensuring that the goals for Habersham, Rabun, Stephens and White Counties are achieved requires an accurate inventory of the existing transportation infrastructure and a detailed analysis of the operating conditions and services for inventoried facilities. Both of these were conducted early in the study and are outlined in the two previous sections.

Future growth forecasts are essential for developing long-range transportation plans to determine overall needs and the level of transportation strategies required to meet those needs. Transportation planning is an ongoing process where planning factors, such as growth and the assessment of needs, are periodically monitored and reevaluated. The rapid growth in this four-county area requires an effective monitoring and update function of the planning process. Planning assumptions and transportation strategies must be evaluated periodically, as needed.

Decision Context

As the planning process entered the project development phase, a "decision context" within which strategies would be recommended was developed. To ensure that the overall goals for Habersham, Rabun, Stephens and White Counties are achieved, recommended programs and projects should work to achieve established goals. Whether or not the goals are successfully achieved is assessed objectively by comparing existing and future conditions, using the defined set of performance measures and thresholds.

Four primary "decision context" questions were used to examine potential projects before developing the preferred program of projects:

1. ***Do the strategies meet the plan's goals and objectives?***
   The recommended program should demonstrate, through specific performance measures, that the plan's goals and objectives have been met.
2. ***Are the strategies appropriate and proportional to needs?***
   Specific performance measures are useful tools for evaluating plans, but may not tell the whole story. Strategies must not only be effective, but also appropriate and proportional to needs.
3. ***Are strategies cost-effective?***
   Federal law requires transportation plans to be fiscally constrained. Nevertheless, detailed scrutiny is required to ensure the best possible use of financial resources.
4. ***Are other options viable?***

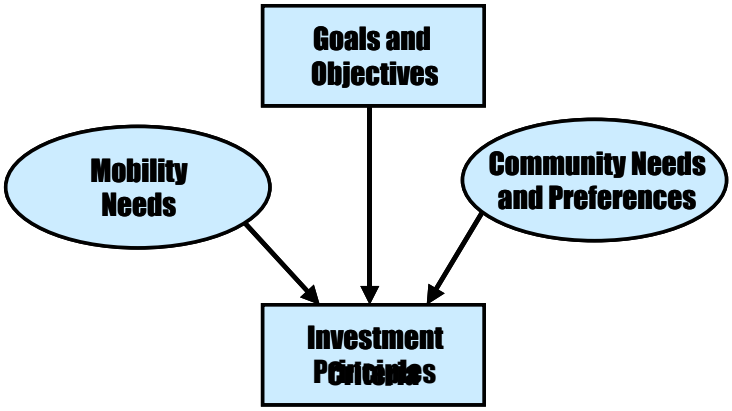
All viable options must be considered. Population and employment densities determine cost-effectiveness. System optimization improvements, such as improving intersection geometrics and signal timing, are low-cost options to alleviate localized congestion.

Investment Criteria

Investment criteria guide the transportation planning process and provide a framework for the development of programs and projects. Within the decision context, financial effectiveness analysis is conducted based on identified established investment criteria. Investment criteria ensure that the counties gain the most cost-effective improvements when developing a program of projects.

Community needs and preferences were defined through a series of discussions with community stakeholders and other public involvement efforts. Mobility needs were identified through technical analysis.

Figure 39
Development of Investment Criteria



Goals and objectives, mobility needs, and community preferences combine to define a series of six primary investment criteria:

Investment Criteria

- ***Efficiency improvements***
- ***Mobility options***
- ***Congestion relief***
- ***Accessibility to interstates and major highways***
- ***East-west connectivity***
- ***North-south connectivity***

Using previously described investment criteria, potential improvement strategies were initially identified and applied to the transportation system. Lower-cost improvements addressing

system efficiency or travel demand were considered prior to more costly strategies. Where less expensive measures do not provide adequate improvement, increased system capacity solutions were considered. Finally, the package of improvements in each program category (such as roadway, transit, and bicycle/pedestrian) is evaluated to ensure that transportation improvements work together to define a fully integrated multimodal transportation system.

Coordination with Regional Planning

The Georgia Planning Act was adopted by the General Assembly in 1989 as a means to encourage better management of growth in the booming areas of the state, while encouraging the less prosperous parts to avail themselves of opportunities for growth. The Planning Act established a coordinated planning program for the State of Georgia, which provides local governments with opportunities to plan for their future and to improve communication with their neighboring governments. The Act established a "bottom-up," comprehensive planning approach initially to be conducted at the local government level, and then at the regional and state levels. The Planning Act also assigns local governments certain minimum responsibilities to maintain "Qualified Local Government" (QLG) status, and thus, be eligible to receive certain state funding.

The cornerstone of the coordinated planning program is the preparation of a long-range comprehensive plan by each local government in the state. This plan is intended to highlight community goals and objectives as well as determine how the government proposes to achieve those goals and objectives. City and county plans are then used as the basis for a regional development plan.

Regional Development Centers (RDC) are charged with the responsibility of promoting the establishment, implementation, and performance of coordinated and comprehensive planning by municipal and county governments. The RDC is expected to plan for conformity with minimum standards and procedures established by the Planning Act. As the designated RDC for the Georgia Mountains area, the Georgia Mountains Regional Development Center addresses regional issues and mobility needs through planning efforts that culminate in the development of the Regional Comprehensive Plan. Habersham, Rabun, Stephens and White Counties should continue to work closely with each other, the RDC, municipalities and local governments in surrounding counties to ensure regional coordination in the development of these plans.

To address regional transportation planning impacts, Habersham, Rabun, Stephens and White Counties must work closely with the GDOT Office of Planning and the GDOT District One Office in Gainesville, Georgia. GDOT's Office of Planning assigns specific planning resources to ensure a regional and statewide perspective in planning for Habersham, Rabun, Stephens and White Counties. The GDOT District One Office also offers personnel and other resources bringing regional and local perspective to the transportation planning process. Transportation solutions are identified for Habersham, Rabun, Stephens and White Counties and other counties through the development of improvement projects included in the six-year GDOT Construction Work Program (CWP) and the three-year Statewide Transportation Improvement Program (STIP).

Transportation Investment Strategies

An inventory of potential strategies was evaluated by the public and study team. These strategies have the potential to reduce congestion, increase capacity, and improve the quality of life in Habersham, Rabun, Stephens and White Counties in the future. Programs and projects to address identified needs in Habersham, Rabun, Stephens and White Counties were drawn from the three classifications presented below.

- Growth Management
- Safety and Operations
  - Traffic System Operations Optimization
  - Intersections and Interchanges
- Infrastructure Enhancements
  - Local Transit
  - Roadway Projects
  - Pedestrian and Bicycle Improvements

Growth Management

Despite high population growth projected in Habersham, Rabun, Stephens and White Counties over the next 30 years, reduced traffic congestion and improved quality of life can be achieved by managing the type and location of growth. Planning the location of community activities and services closer to neighborhoods and one another could substantially reduce vehicle trips. Mixed land use planning on a regional, community, and activity center level will improve accessibility to major destinations. By clustering or mixing uses in a small area, community residents have access to most of their daily needs within a short multi-purpose drive, bicycle ride, or walk from home. Schools, shopping centers, and places of employment are popular destinations and should be developed in locations providing maximum accessibility by the residents of the community or region.

An essential tool in controlling transportation demand, land use regulations such as zoning or subdivision development codes can enable growth, while reducing traffic congestion in Habersham, Rabun, Stephens and White Counties. Traffic congestion will decrease as vehicle trips shorten and transit, bicycling and walking become viable travel options as strong growth management efforts are pursued.

Safety and Operations

Non-capacity adding projects, such as safety and operational projects, can address specific location or community needs. These improvements address the need to maximize the efficiency and safety of the existing roadway network as a foundation for providing an overall transportation system that meets future demands. Safety and operational projects normally

address issues such as sight distance limitations, sharp turning radii, intersection angles, and signage placement. The projects are essential to meeting the transportation needs of the community without adding roadway capacity. The safety and operations category is a key element of the recommended program of projects.

Traffic System Operations Optimization

Small-scale improvements can be incorporated into the existing roadway network to improve the flow of traffic, and they usually have a relatively short completion schedule and lower cost than roadway widening or new construction. Whenever possible, traffic operation improvements should be considered before determining the need for a widening or new construction project. Traffic operations can be optimized in many ways, including providing inter-parcel access, adding medians, closing curb cuts (driveways), adding turn, acceleration or deceleration lanes, or installing or upgrading traffic signals. Coordinated signal timing plans link together the operations of a series of traffic signals located close enough together to impact traffic conditions along an entire corridor. Developed to vary by time of day and day of week, coordinated signal timing plans improve the efficiency of signal operations along congested corridors, increasing the corridor's effective capacity by ten to fifteen percent.

Intersections and Interchanges

Another transportation improvement strategy that addresses safe and efficient travel on the roadway network is the improvement of intersections and interchanges. Many transportation conflicts resulting in congestion and safety issues are found at intersections and interchanges. Their improvement is vital to the safety and efficiency of the transportation network and builds a foundation for a network that meets future demands.

Intersection improvements can correct roadway deficiencies, increase safety, and result in increased capacity without the need to widen or make additional improvements to the roadway. Intersections with high crash rates or severe congestion should be considered for improvements. In addition to intersection improvements, the conversion of critical intersections on high volume roads into interchanges provides effective capacity increases along corridors.

Infrastructure Enhancements

The need to maximize the effectiveness of existing roadway infrastructure is critical in maintaining an efficient transportation network. Potential infrastructure improvements include transit systems, roadway projects, bike and pedestrian facilities, and other strategies requiring capital investment.

Local Transit

The implementation of multimodal alternatives offers potentially sound solutions to meet the region's transportation needs. Demand response local transit can extend the useful life of the expensive roadway infrastructure and offer commuters a safe and convenient ride to work that, when all factors are considered, is cost-effective for most commuters.

Roadway Projects

Roadway improvements identified through the roadway analysis and public involvement process are the central feature of the long-term planning effort. Additional roadway projects that increase levels of service, reduce congestion, and improve safety become the foundation for meeting transportation needs over the study period, but may be subjected to air quality emissions testing conducted region-wide.

Habersham, Rabun, Stephens and White Counties are actively pursuing the development and maintenance of a road network that accommodates continuing growth. Figures 23 through 26 show the short and long-term transportation projects currently being pursued to increase mobility and connectivity for the traveling public. A program of proposed multimodal projects to meet increasing transportation needs is described for each county in Sections 8 through 11.

Pedestrian and Bicycle Improvements

Used for recreation as well as transportation, pedestrian and bicycle facilities serve as an integral element of a multimodal transportation network. Pedestrian and bicycle facilities are vital for providing links to transit, accommodating short trips between neighborhoods and community facilities, and providing circulation between land uses in denser activity centers. The connection of neighborhoods to activity centers, such as employment centers, community facilities, and retail opportunities, by way of pedestrian and bicycle facilities, will improve resident accessibility to these locations. Demand for bicycle and pedestrian facilities has grown substantially since the inception of ISTEA and TEA-21, which have provided more funding for these modes.

Georgia's Statewide Bicycle Plan, created by GDOT, proposes a statewide network of 14 named and numbered routes totaling 2,943 miles that are or will be particularly well-suited for bicycle use. As previously stated, there are three State Bike Routes located within the study area, the Appalachian Gateway, the Savannah River Run, and the Mountain Crossing. Several bicycle/pedestrian projects chosen from the county and GDOT planning efforts are included in the recommended program of projects.

7 Regional Transportation Recommendations

As part of this study, an effort was made to look at regional standards and strategies in order to better address transportation issues throughout the study area. The following sections can be generally applied to any of the four study counties.

Access Management

Access management is a set of techniques that enhances the safety and efficiency of all modes of travel on major streets. As the number of access points increases, the capacity of the roadway will decrease. An increased number of driveways and intersections causes roadway capacity to handle more turning movements, thus leaving less capacity for the movement of through vehicles. Additionally, as the number of access locations increases, the number of conflict points between vehicles increases. This increase in conflict points increases potential vehicle crashes as well as causes drivers to increase their spacing between vehicles. Implementation of access management techniques reduces the number and increases the spacing of access points, thus maximizing the effective use of available roadway capacity.

Access management standards define how frequently access points occur and how they operate. An access management program provides design standards that establish appropriate access and signal spacing appropriate to the intended roadway function. GDOT has roadway guidelines in place for driveway placement and median design that help preserve roadway capacity. These guidelines are based on such things as the classification of roadway, number of lanes, roadway traffic, speed limit and vehicle crash data.

The most effective access management strategies, as reported in the Institute of Transportation Engineers November 1998 informational report “Access Management — A Key to Safety and Mobility”, are as follows:

1. Separate conflict points.
2. Restrict turning movements at unsignalized driveways and intersections on multi-lane roadways.
3. Maintain a hierarchy of streets.
4. Establish design standards.
5. Locate and design traffic signals to enhance traffic movement.
6. Remove turning vehicles from through travel lanes.
7. Encourage shared driveways, unified site plans and cross-access easements.
8. Plan for pedestrians, bicycles and transit vehicles.

Implementation of access management standards, especially in conjunction with roadway widening or other improvements, can result in reduced congestion and preserved roadway capacity, as well as reduced accident potential.

Desirable County Roadway Standards

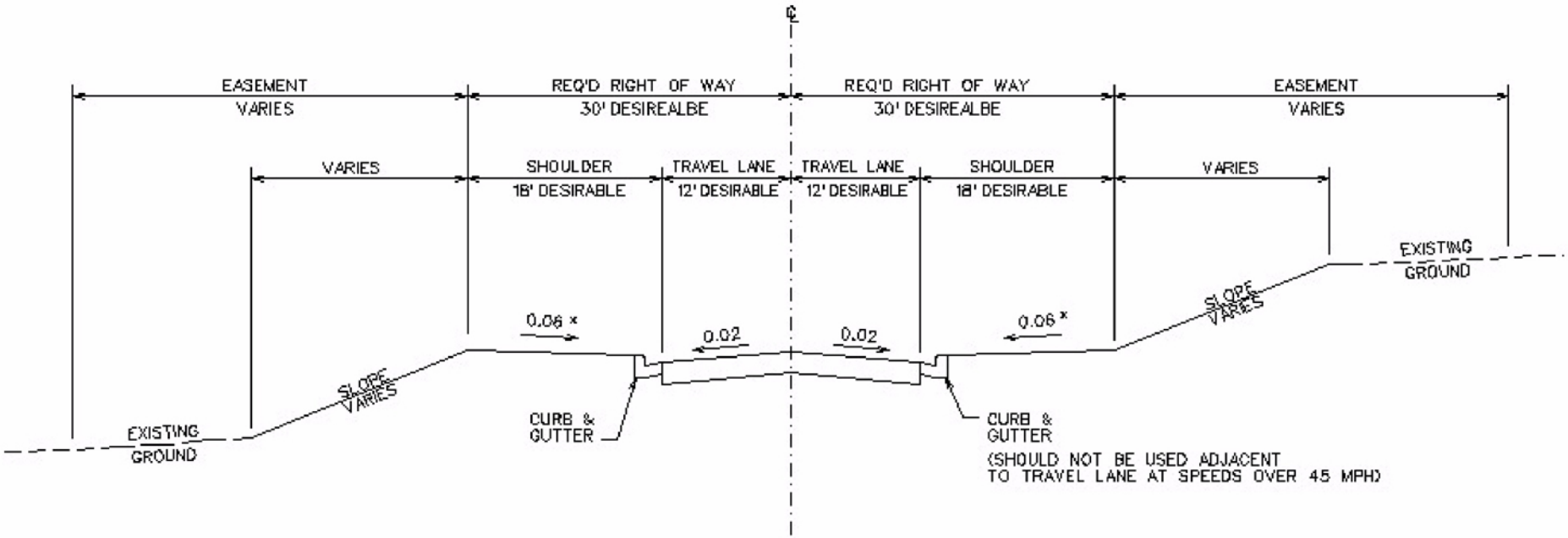
Another method of maintaining good capacity and safety along public roadways is to establish and use a set of desirable roadway standards throughout the region. These roadway standards would also have other desirable side effects, such as allowing for appropriate drainage and meeting driver expectations and comfort levels. Roadway standards should be generally applicable for all four counties and include desirable roadway dimensions for existing and new roadway construction. Typical desirable cross-sections are shown for two-lane urban and rural roadways in Figures 40 and 41, respectively.

Because site-specific topography and other factors can strongly influence roadway design, these cross-sections should be used as desirable, rather than minimum standards. Further design guidance can be found in the references listed in Table 32.

Table 32
Design and Construction Reference Material

Design	
Roadway Geometry	American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets 2001, Fourth Edition AASHTO Geometric Design of Very Low-Volume Roads (ADT ≤ 400) 2001
Roadside Characteristics – Clear Zone	AASHTO Roadside Design Guide 2002
Roadway Signing, Marking and Sidewalks	AASHTO Manual of Uniform Traffic Control Devices 2001 Millennium Edition Georgia Design Pedestrian Manual (DRAFT)
Construction	
Construction Specifications	Georgia Department of Transportation Standard Specifications Construction of Transportation Systems 2001 Edition
Construction Standards	Georgia Department of Transportation
Construction Details	Georgia Department of Transportation

Two Lane Urban Typical Section (Speed Design 45 MPH or Less)



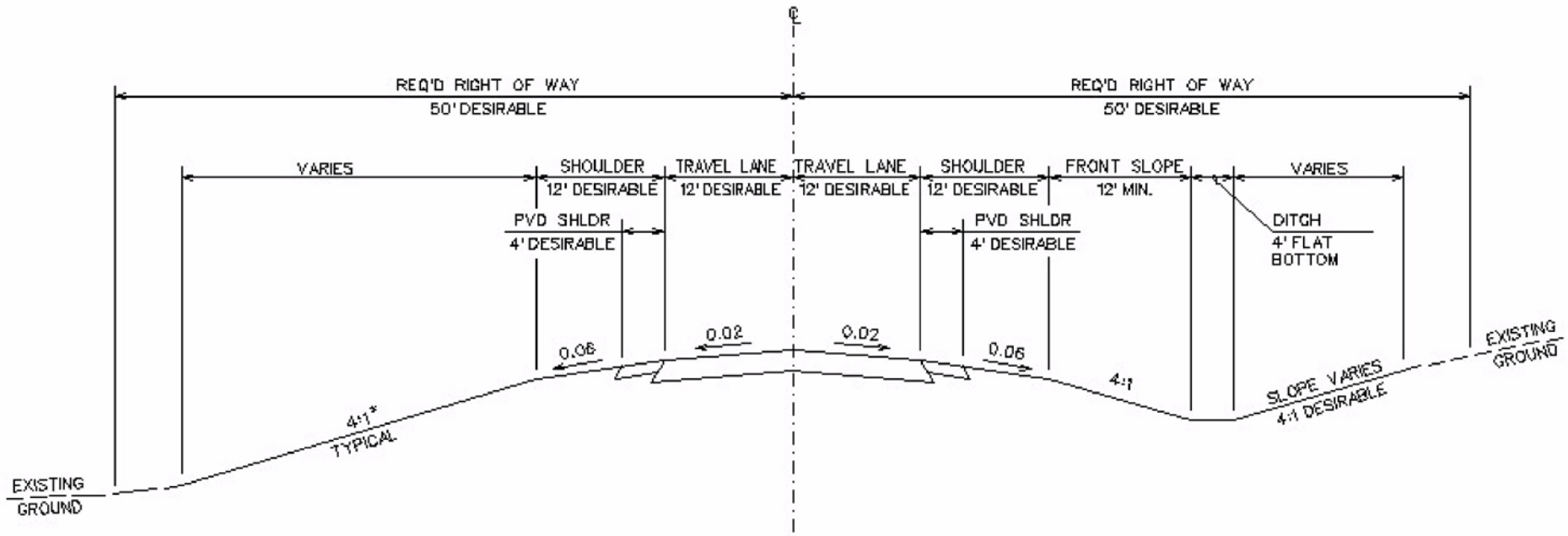
* 0.06 IS MAXIMUM SHOULDER SLOPE WITHOUT SIDEWALK. SEE GDOT DETAILS AND ADA FOR SIDEWALK SLOPES.

N

Not to Scale

Figure 40

Two Lane Rural Typical Section (Speed Design 55 MPH or Less)



* 2:1 SLOPES IN THE CLEAR ZONE WILL REQUIRE GUARDRAIL

N

Not to Scale

Figure 41

Regional Transit Strategies

Even though public transit service is currently very limited within the study area, a broader range of transportation services are evident. Components include two rural public transit programs, local taxi services, DHR and agency client transportation, Medicaid transportation, and Amtrak passenger rail service. The region's services should be reviewed for potential opportunities to improve service availability and coordination. When the GDOT Office of Planning's statewide needs survey on rural transit is completed, the responses from the four counties should be reviewed to establish a new baseline for local interests and needs. Consideration should be given to utilizing the survey results as an approach to "regional" coordination of transportation services. The GDOT Offices of Planning and Intermodal Programs (along with District 1, DHR, and DMA) could use the existing regional transportation working group to review needs and opportunities for establishing, improving, funding, and coordinating public transit service for the four county region. Appropriate representatives from the four counties should be included in this group when the four-county region is addressed.

The four-county area has some degree of need for improved public transit service from both an individual county and a regional perspective as rural transit programs are only provided by two of the four counties, taxi services are limited, and no intercity bus service operates in the region. The first step to forming a regional approach to provision of public transit service would be the establishment of a viable rural transit program in all four counties. In Phase I, which assessed existing transit services and needs, some degree of need in each of the counties is evident. In White County, where no rural transit program has previously been provided, results from the MTPT indicated that need existed for a program.

The need for service from the region to Gainesville was also noted during the earlier study phase. If each county provided a rural transit program, in addition to the normal countywide service, a consistent day or days could be designated for regular service to Gainesville. Morning service trips could be provided from such origins as Toccoa, Cleveland, Clarkesville, and Clayton to Cornelia as a central point for a coordinated transfer for continuing and direct service to Gainesville. A routing could be established in Gainesville to include drop-off at medical facilities, shopping areas, and government facilities with subsequent afternoon pick-up. This would establish a regular service pattern for customer awareness and offer opportunities for cooperation among providers. Coordination with DHR or DMA could also be explored through this concept, and there might also be interest by the Hall County rural transit program to participate in this service concept.

Bicycle Rider and Facility Designations

Bicycle users have various levels of expertise, which makes different types of facilities more desirable. Cyclists are typically separated into three groups: Type A, Type B and Type C. These types are described in the AASHTO Guide for the Development of Bicycle Facilities as follows:

- Type A Cyclists: Advanced or experienced riders who generally use their bicycles as they would a motor vehicle.
- Type B Cyclists: Basic or less confident adult riders who may also be using their bicycles for transportation purposes, e.g. to get to the store or visit friends, but prefer to avoid roads with fast or busy motor vehicle traffic unless there is ample roadway width to allow easy overtaking by the faster traveling motor vehicle.
- Type C Cyclists: Children, riding on their own or with parents, who may not travel as fast as their adult counterparts but still require access to key destinations in their community, such as schools, convenience stores and recreation facilities.

Cyclists desire safe routes to go to work and school, complete errands, and ride for health and recreational reasons. Cyclists are also discouraged from riding on sidewalks, which can create safety hazards for pedestrians. In order to provide safe and attractive routes for cyclists, bike routes are being recommended for local designation. Specific bicycle facility locations are recommended as part of each county's implementation plan. However, there are several acceptable ways to delineate a bikeway. These different types depend greatly on the volume and speed of traffic and are typically chosen during the design phase of the bikeway project.

For the purposes of future guidance for appropriate bikeway selection, the types of bikeways will be discussed. Bicycle facilities have four basic types (three on-road facilities and one off-road facility) that are described in more detail below. In addition, recommendations from a study for the Pedestrian and Bicycle Information Center completed in August 2002 titled "Bicycle Facility Selection: A Comparison of Approaches" will be summarized. For further information on bicycle facilities, the following sources can be consulted:

- Georgia Bicycle and Pedestrian Plan, Georgia Department of Transportation;
- Pedestrian and Bicycle Information Center;
- Federal Highway Administration (FHWA), and
- American Association of State Highway and Transportation Officials (AASHTO).

The simplest type of bikeway is a paved shoulder. Especially in rural areas, AASHTO suggests that paved shoulders of a four-foot width minimum can act as a bicycle facility. GDOT has guidelines available for signing a bike route. It is recommended that all routes, whether they are a paved shoulder or striped bike lane, be signed. Type A cyclists are typically comfortable with this type of bikeway, but Type B and Type C cyclists may not prefer it.

The next level of bikeway is a wide outside lane or shared lane. As the name suggests, bicyclists share the outside lane of traffic with motorists. Generally the minimum width of an outside lane must be 14-feet and should not include the gutter pan. It is acceptable to reduce the width of an interior lane of traffic in order to provide for a wider outside lane according to AASHTO. This allows for safer bicycle travel without having to widen the roadway.

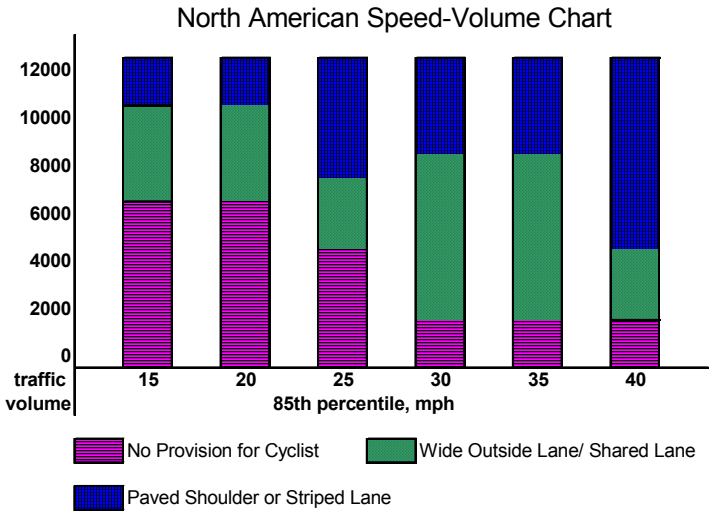
The final on-road bikeway is the bike lane. A bike lane is a striped separate lane designated solely for bicycles. A minimum four-foot wide lane is acceptable for lanes with no curb, gutter or parking. A minimum of five-feet is necessary for lanes that are adjacent to parking. In

situations where bicyclists must share the lane with parallel parking areas, a minimum of 11-feet is necessary for lanes with no curb and 12-feet for lanes with a curb face. Bike lanes require a solid white line stripe to separate it from vehicular traffic.

An additional off-road bikeway is a separated lane. This lane is located adjacent to a road and may have a planting strip or cement wall between the lane and road. The less-experienced Type B and Type C cyclists favor the security of this type of bikeway. These are used most often for recreational use in Georgia and none are recommended in this study.

As previously mentioned, the decision on which type of bikeway to use depends on traffic volume and speeds. A study completed in August 2002 by the Highway Research Center at the University of North Carolina – Chapel Hill for the Pedestrian and Bicycle Information Center reviewed volume and speed standards to give some guidance for North American bikeway designs. Figure 42 shows an aggregate chart of the various North American standards looked at in the study. It also lists the associated assumptions to the side. Further information is available through the Pedestrian and Bicycle Information Center.

Figure 42
Bicycle Facility Selection Guide



Michael King for the UNC-HSRC Pedestrian and Bicycle Information Center, 2002

- Two-way streets
- Urban setting
- On-street parking
- Commercial land use
- 10% trucks
- 10% right turns
- 50% parking utilization
- For speed limit add 10

For cyclists to be able to use their bikes for daily activities, it is necessary to provide bike racks in public areas such as schools, government buildings, parks, and commercial activity centers. Bike racks should support a bicycle in two places and prevent the wheel from tipping. All racks should be anchored so that they cannot be stolen. Racks should be located near the entrances of buildings and under cover, if possible.

Pedestrian Facility Recommendations

Whether performing improvements to existing sidewalks or designing new pedestrian facilities, efforts should be made to create a pleasant and safe walking experience for all users. The following recommendations are made to help in achieving this goal.

Existing Sidewalks

Sidewalks throughout the study area should be in compliance with the Americans with Disabilities Act (ADA). Adequate curb cuts and railings (if necessary) should be installed. Repairs to cracked and deteriorating concrete should be made on a regular basis. Children and older adults are often the largest users of sidewalks. This group of pedestrians may have mobility issues that would be made more difficult by uneven pavement. For safety, sidewalks should be in good condition.

In making repairs to existing sidewalks, care should be taken if historic paving materials are present. Many of the cities in this region have sidewalks built with hexagonal pavers. These pavers may be a character-defining element of a historic district and should be carefully repaired and preserved in place. Historic commercial buildings often have small ceramic tiles at the recessed entrances of stores that abut the sidewalk. When repairing or replacing sidewalks, these historic tile entrances should not be disturbed.

When existing sidewalks are in need of major repair or where a road project requires sidewalk reconstruction, every attempt should be made to improve sidewalks with a planting strip between the road and sidewalk. Planting strips that separate pedestrians from vehicular traffic are widely accepted as a way of helping pedestrians feel safer and more comfortable. The design of planting strips depends largely on the volume and speeds of traffic and whether or not on-street parking exists. GDOT has several recommendations for planting strip designs and should be consulted when the time comes to make improvements to sidewalks.

New Sidewalks

Building new sidewalks is the second, but equally important, priority for pedestrian facility enhancements. When making recommendations for new sidewalks, first priority is to link existing sidewalk sections with new sidewalks. This creates a continuous sidewalk path and reduces the need for pedestrians to cross the street or walk on roadways. In general, this is necessary in city centers where sidewalks may have been built in stages or as part of the construction of a building site.

New sidewalks should extend existing sidewalks to local schools, parks, recreation centers, institutions, and commercial activity nodes. GDOT recommends that, whenever possible, sidewalks should be located on both sides of the street. Where sidewalks have not previously existed, constructing sidewalks on one side of the street is acceptable for the short-term. As with improvements to existing sidewalks, new sidewalks should be ADA accessible and have a planting strip.

It is recommended that subdivision regulations for sidewalks meet the same standards as city and county sidewalks to include planting strips and ADA compatibility. In addition, subdivision sidewalks should link to public sidewalks to provide a continuous path.

When building new sidewalks in listed or eligible historic districts, a preservation professional should be consulted to identify significant landscape elements that should not be altered. New sidewalks are compatible with historic districts when done sensitively. Planners may want to recommend incorporating appropriate historic paving materials into the design of a new sidewalk.

Pedestrian amenities such as street furniture and lighting improve the quality of the pedestrian experience. Street furniture includes benches, trash receptacles, bike racks and newspaper boxes. The installation of these items should be carefully planned to allow for the uninterrupted flow of traffic. Too much street furniture creates clutter and maintenance issues that can be a nuisance for the pedestrian. It is recommended that street furniture be clustered in areas that receive at least a moderate amount of foot traffic and out of the path of pedestrians. National standards have been established for the minimum space requirements for street furnishings. These standards should be consulted when planning new streetscapes. GDOT can also assist local governments in this regard.

Proper lighting for pedestrians is an important safety consideration. Most urban areas have adequate lighting in place. For pedestrian purposes it is recommended that lighting fixtures be shorter than typical street lighting. Generally, lighting fixtures for pedestrians should not exceed 15-feet. Care should also be taken to choose lighting fixture styles that are appropriate to the character of the neighborhood. Overly stylistic lights would not typically be appropriate for historic rural mountain communities such as those in the study area. Simple contemporary fixtures are often more compatible. Lighting fixtures should be directed toward the sidewalk area and not upward. Light that is pointed at the sky creates a glow that can hamper the vision of pedestrians and cyclists. In addition, it becomes necessary to add more lighting, which raises the cost. It is recommended that light fixtures be positioned for maximum effectiveness, thereby increasing the quality of the pedestrian experience and decreasing the cost to the community and the negative impacts of environmental or light pollution.

Other Alternate Mode Recommendations

Some types of facilities, such as multi-use trails and scenic highways, encourage use by more than one mode of travel. Because multimodal use creates the need for some additional considerations, some further recommendations are mentioned below.

Multi-use Trails and Paths

Multi-use trails are off-road paved (either pervious or impervious) trails that are shared by pedestrians and cyclists and used for other activities such as horseback riding. These trails are usually considered to be recreational, but people also use short segments for daily activities when they are located near commercial activity centers. GDOT recommends that multi-use shared paths be 10-feet in width, at a minimum. However, a 12-foot or more width offers

greater comfort for users. These trails are popular with both locals and tourists. As an example, the Silver Comet Trail in Georgia currently has 38 miles of shared trails with plans for a total of 51 miles. Eventually the trail will connect with the Chief Ladiga Trail in Alabama to cover 101 miles from Atlanta to Anniston, Alabama.

Scenic Highways

This study recommends that designated scenic highway routes be considered for bicycle use where possible. Parts of these routes are too steep for cyclists or else the traffic volume is too great. However, these routes are already being promoted to visitors and cyclists are using accessible portions of the routes. To increase safety, it is recommended that as improvements are made, the addition of bicycle facilities be considered.

8 Habersham County

Transportation needs were identified for Habersham County through the correlation of several sources, including the following: existing transportation conditions, projected transportation needs, stakeholder input and comments from the public involvement effort. Transportation projects to respond to those needs were then developed using the goals and strategies presented in this report. Details, such as estimated costs and phasing, are given for each recommended project.

Summary of Findings

Habersham has the largest population of the four counties within the study area and has experienced strong growth within the last decade. Both tourist and local traffic contribute to traffic volumes, with tourist traffic being heaviest during the fall leaf season. A summary of the existing and projected traffic conditions follows:

- **Roadway capacity** – Most traffic congestion within Habersham County is located within the various residential and commercial centers, such as Baldwin, Clarkesville, Cornelia and Demorest. Congestion especially occurs on the major routes, such as US 23/US 441, US 441 Historic, State Route 17, State Route 105 and State Route 197. County and local roads also experience some congestion during peak periods.
- **Intersection safety** - The forty-nine vehicle crash sites identified within Habersham County were primarily on State Route 15, State Route 17, State Route 105, State Route 365 and State Route 385. Site evaluations, as well as further data research, were performed to identify appropriate safety improvements.
- **Bridge and major culverts** - Of the 101 bridge and major culvert structures in Habersham County, 19 structures have a sufficiency rating below 65. The majority of these deficient structures carry county routes, rather than state routes or city streets. A complete inventory is included in Appendix D. Bridge and major culvert structures are inventoried in a federally-mandated project that includes an annual inspection and submittal for deficient structures for replacement or rehabilitation. Because of this existing program, no additional bridge and major culvert structure recommendations were made as part of this report.
- **Pavement condition** – Antioch Church Road was reported as having poor present serviceability rating for a section of pavement by the 2001 Highway Performance Monitoring System. Additional visual inspections were made as part of the roadway evaluations.
- **Pedestrian facilities** - Of the residential centers in Habersham County, Alto, Mount Airy and Tallulah Falls were identified as having no municipal sidewalks located within the city limits. The three designated bicycle routes in the study area are already interconnected and allow travel to all of the study counties. Stakeholder and public involvement comments indicated interest in improved pedestrian and bicycle facilities throughout Habersham County. Existing bicycle and pedestrian facilities are inventoried

in Appendix E. These maps also include projects included in the local comprehensive plan or short-term work program.

- **Transit service** - Habersham County currently has no operating transit service. Stakeholder and public involvement comments have indicated a desire for county transit services.
- **Other transportation services** - Other transportation services in Habersham County include taxi service, human service transportation and medical transportation. The Habersham County Airport is located two miles southwest of the City of Cornelia. There is no current intercity bus service or passenger rail service within Habersham County.

Recommended Improvements

The collected data was used to develop a series of recommended transportation improvements. Existing GDOT transportation projects addressed some of the identified Habersham County deficiencies. Additional projects are proposed to mitigate the additional roadway and alternative mode needs. Table 33 presents both previously-identified and additional projects with brief descriptions of its location, anticipated benefits, suggested phase plan, estimated costs and suggested funding sources. The roadway projects are also shown graphically on Figure 43. Maps of the pedestrian and bikeway improvement projects are included in Appendix G.

Specific locations included for Project 28 are those that were investigated in this study due to LOS analysis results, vehicle crash data, stakeholder input or comments from the public involvement process. Although no recommendations are made for these locations at this time, they are recommended for future monitoring. A list of locations may be found in Appendix H.

Environmental Considerations

With over 20 percent of its area designated as national forest, the resources of natural beauty and historical significance within Habersham County can make improvements challenging to implement. Although these environmental considerations were kept in mind when determining the recommended improvements, further investigation will be required for each project as part of the study and design phases. Cities such as Demorest and Clarkesville have National Register Historic Districts located in prominent areas. Many other cities in the study area, such as Cornelia, have National Register sites or eligible historic districts. When building new sidewalks in listed or eligible historic districts, a preservation professional should be consulted to identify significant landscape elements that should not be altered. New or improved facilities are compatible with historic and environmental preservation with the proper care.

Environmental justice also plays a part in project evaluation to avoid disproportionately high and adverse impacts on low-income and minority populations and to ensure that these groups benefit from transportation improvements. Countywide, the program of recommended improvements will improve safety, access and mobility for all users of the transportation system in Habersham County. However, there are significant concentrations of minority and low-income populations in the southern part of the county along the US 441 corridor, in Baldwin,

Table 33
Habersham County Recommended Improvements

No.	GDOT Prev ID	Location	Project	Need Addressed	Anticipated Benefits	Phasing Time Period			Estimated	Potential Funding Source				
						Short	Mid	Long	Cost*	Federal	State	County	Local	Private
1	X	US 441 / SR 365 at Demorest-Mt. Airy Road intersection (approximately milepoint 5.42 on SR 15)	Intersection improvements.	Stakeholders desired transportation improvements at this intersection. Public involvement comment indicated desire for an interchange at this intersection.	Improves traffic operations. This intersection will ultimately be grade separated.	X			UC	--	--	--	--	--
2		US 441 / SR 15 and SR 365 between Hall County line and SR 17 Alternate (milepoints 0.00 to 5.12 on SR 365 and milepoints 2.41 to 15.13 on SR 15)	Implement access management plan with limited access at some locations.	Future LOS on SR 365 is projected to be LOS D from milepoints 0.00 to 6.35. Future LOS on SR 15 is projected to be LOS F from milepoints 0 to 3.70 and LOS E from milepoints 3.70 to 7.18. Vehicle crash locations for SR 365 were investigated at milepoints 0.14, 0.50, 1.33, 2.17, 3.82, 4.65, and 6.35. Vehicle crash locations for SR 15 were investigated at milepoints 2.41, 5.42, 6.6, 8.13, 11.02, 12.52, and 14.75.. Stakeholders requested improvements at intersections with SR 17 Alternate, Liberty Road, Double Bridge Road, SR 197, Hazel Creek Road, Demorest-Mt. Airy Road, US 441 Business, and SR 384. Stakeholder comments also included concern about US 441 congestion. Public involvement comments suggested an additional lane on SR 365 from US 441 to SR 105 and intersection improvements at Demorest-Mt. Airy Road and SR 384. Public involvement comments also suggested grade separation for SR 365.	Reduces vehicle crashes while maintaining high-speed characteristic of US 441. Stakeholder input requested interchanges at Duncan Bridge Road and Demorest-Mt. Airy Road and public involvement requested additional capacity on southern portion of US 441.			X	$50,000,000	X	X	X	X	X
3		SR 15 at Industrial Boulevard intersection (approximately milepoint 1.46 on CR 428)	Add overhead intersection signage.	Stakeholders desired improved accessibility to the Habersham County airport.	Improves routing to airport. This improvement should be coordinated with anticipated Habersham airport improvements.	X			$2,000		X	X	X	X
4	X	SR 15 Connector from SR 365 to US 441 / SR 15 (milepoints 0.00 to 0.50)	Improve ramps and widen roadway (three to four lanes).	Existing LOS on SR 15 Connector is reported as SR LOS E from milepoints 0.00 to 0.70. Future LOS on 15 Connector is reported as LOS F from milepoints 0.00 to 0.70. Congestion on Level Grove Road (also SR 15 Connector) was concern of stakeholders.	Relieves congestion.		X		GDOT	--	--	--	--	--
5	X	SR 17 at Antioch Church Road intersection (approximately milepoint 4.50 on SR 17)	Intersection improvements.	There were twelve rear-end crashes recorded in 2001. Field observation showed limited sight distance at intersection. Stakeholders requested an interchange at this intersection.	Reduces vehicle crashes.		X		GDOT	--	--	--	--	--
6	X	SR 17 Alternate at Antioch Church Road (approximately milepoint 1.32 on SR 17 Alternate)	Intersection improvements.	Public involvement comments suggested reconstruction of Antioch Road and change right-of-way at Talmidge Drive [SR 17 Alternate].	Improves traffic operations.		X		GDOT	--	--	--	--	--
7		SR 17 Alternate between Stephens County line and SR 15 (milepoints 0.00 to 3.98 on SR 17 Alternate)	Add passing lanes.	Future LOS on SR 17 Alternate is projected to be LOS E from milepoints 0 to 1.28. Stakeholder comments included concern about congestion on SR 17 Alternate.	Improves traffic operations.			X	$5,302,000	X	X	X		
8		SR 17 at SR 105 intersection (approximately milepoint 13.11 on SR 17)	Intersection improvements.	There were seven vehicle crashes recorded at this intersection in 2001. Public involvement comments included a suggestion to lower the hill crest at the intersection.	Reduces vehicle crashes and addresses public involvement point of concern.		X		$638,000	X	X	X		
9		SR 17 at SR 115 intersection (approximately milepoint 10.02 on SR 17)	Intersection improvements.	There were 13 vehicle crashes recorded at this intersection in 2001. A public involvement comment cited that the intersection visibility is poor and suggested to change intersection alignment to 90 degrees and install a traffic signal.	Reduces vehicle crashes.		X		$638,000	X	X	X		
10		SR 17 at SR 197 and SR 385 intersections (approximately milepoint 7.15 on SR 17)	Three intersection improvements.	There were nine vehicle crashes recorded in 2001 at the intersection of SR 17 and SR 197. During fieldwork, the observed delays at these adjacent intersections was significant enough to cause queues. Stakeholders commented that these intersections are perceived as unsafe.	Reduces both vehicle crashes and short stacking distances between major intersections.		X		$1,950,000	X	X	X	X	
11	X	SR 17 between Beaverdam Creek and SR 115 (milepoints 8.82 to 10.19 on SR 17)	Add TWLTL.	Existing LOS on SR 17 is reported as LOS E from milepoints 8.20 to 10.02. Future LOS on SR 17 is projected to be LOS F from milepoints 8.20 to 10.05.	Improves traffic operations.	X			GDOT	--	--	--	--	--
12		SR 105 at Wayside Street intersection (approximately milepoint 0.85 on SR 105)	Intersection improvements.	There were nine vehicle crashes recorded in 2001 at the intersection of SR 105 at Wayside Street.	Reduces vehicle crashes.		X		$480,000		X	X	X	
13	X	SR 105 between Cannon Bridge Road and Walnut Street (milepoints 1.69 to 4.43 on SR 105)	Widen roadway (two to four lanes, four to six lanes).	Existing LOS on SR 105 is reported as LOS F from milepoints 0.23 to 3.82 and milepoints 4.01 to 4.19. Future LOS on SR 105 is projected to be LOS F from milepoints 0.23 to 3.82 and milepoints 3.89 to 4.43. Along the project length are five intersections with more than five vehicle crashes recorded in 2001.	Improves traffic operations, reduces congestion and reduces vehicle crashes at Camp Creek, J Warren, Old Athens Highway and SR 385.		X		GDOT	--	--	--	--	--
14	X	SR 105 from East Garrett Road to West VFW Road (milepoints 6.79 to 8.84 on SR 105)	Add passing lanes and replace bridge over Soquee Creek.	Existing LOS on SR 105 is reported as LOS D from milepoints 4.43 to 9.58. Future LOS on SR 105 is projected to be LOS F from milepoints 4.43 to 13.14.	Improves traffic operations.	X			UC	--	--	--	--	--

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GDOT These projects have been previously identified by GDOT or will be performed as part of normal operations.
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-- Projects that are previously identified are already assigned to a funding source.

Table 33
Habersham County Recommended Improvements
(Continued)

No.	GDOT Prev ID	Location	Project	Need Addressed	Anticipated Benefits	Phasing Time Period			Estimated	Potential Funding Source				
						Short	Mid	Long	Cost*	Federal	State	County	Local	Private
15		SR 115 from SR 17 to White County line (milepoints 0.00 to 5.26 on SR 115)	Widen roadway (two to four lanes).	Existing LOS on SR 115 is reported as LOS D from milepoints 0.00 to 1.29. Future LOS on SR 115 is projected to be LOS F from milepoints 0.00 to 5.26.	Relieves congestion.			X	$11,134,000	X	X	X		
16		SR 197 at SR 365 (approximately milepoint 0.05 on SR 197)	Ramp improvements.	Stakeholder comment suggested the addition of a southbound on-ramp needed. There were 11 vehicle crashes recorded in 2001 at this interchange.	Improves traffic operations and addresses stakeholder point of concern.		X		$1,466,000		X	X		
17		SR 197 between Hazel Creek Road and Ansley Road intersections (milepoints 0.55 to 0.65 on SR 197)	Two intersection improvements.	On SR 197 in 2001, there were eight rear-end vehicle crashes recorded at the intersection with Ansley Road and five rear-end vehicle crashes recorded at the intersection with Hazel Creek Road. Stakeholder comments suggested improvements needed at Hazel Creek Road intersection.	Reduces vehicle crashes and addresses stakeholder point of concern. This may be combined with the long-range improvement to SR 197.		X		$1,117,000	X	X	X		
18		SR 197 between SR 365 and North Georgia Technical College (milepoints 0.00 to 6.39 on SR 197)	Widen roadway (two to four lanes). Consider turn lanes at Roper Drive to serve expanded church needs.	On SR 197, existing LOS is reported as LOS D from milepoints 0.00 to 0.23, milepoints 0.31 to 1.92, milepoints 3.28 to 3.48, milepoints 4.64 to 4.91, milepoints 5.14 to 5.32, milepoints 5.4 to 5.66, milepoints 5.97 to 6.35, and milepoints 6.40 to 6.50. Future LOS on SR 197 is projected to be LOS F from milepoints 0.00 to 6.84 on SR 197. Stakeholder comments included concern about congestion.	Relieves congestion and addresses stakeholder point of concern.			X	$6,363,000	X	X	X	X	
19	X	SR 384 to Helen (milepoints 4.00 to 11.32 on SR 384)	Roadway improvements.	Stakeholders commented on need for improved connections to Helen, Georgia.	Improves traffic operations and addresses stakeholder point of concern.	X			GDOT	--	--	--	--	--
20		SR 385 from SR 105 to Clarkesville (milepoints 0.50 to 5.62 on SR 385)	Widen roadway to add center turn lane.	Existing LOS on SR 385 is reported as LOS E from milepoints 0.50 to 5.13. Future LOS on SR 385 is projected as LOS F from milepoints 0.50 to 5.13. Stakeholder comments included concern about congestion and the need for an urban section with sidewalks. Public involvement comments indicated concern about the congestion on this roadway.	Improves traffic operations.			X	$4,369,000	X	X	X	X	X
21	X	SR 560 from SR 11 to SR 384 (milepoints 0.00 to 7.00 on SR 560)	Roadway improvements.	Future LOS on parallel roadways (such as SR 384) reported as LOS F.	Provides additional capacity to relieve parallel roadways.		X		GDOT	--	--	--	--	--
22		Clarkesville North Bypass	New roadway construction between SR 17 and SR 17, on the northern side of Clarkesville.	Future LOS on Clarkesville roadways (such as SR 17 and SR 197) reported as LOS F. Stakeholder comments included the need for this bypass to improve connectivity and mobility. Public involvement comments included concern about congestion in Clarkesville and the desire for a truck route around the city.	Relieves additional congestion within Clarkesville.			X	$19,368,000	X	X	X	X	
23		CR 1 (BC Grant Road) from SR 365 to Wilbanks Road (milepoints 10.00 to 12.60 on CR 1)	Widen to standard road width.	Existing roadway width is 19-20 feet for two travel lanes. Stakeholder comments included concern about congestion on this roadway.	Improves traffic operations and addresses stakeholder point of concern.		X		$1,226,000			X	X	
24		CR 383 (Habersham Mills Road) from SR 385 to SR 115 (milepoints 0.00 to 2.54 on CR 383)	Roadway improvements.	Stakeholder comments included concern about congestion and poor roadway geometry and safety on CR 383. Future LOS deficiency and stakeholder and public involvement points of concern.	Improves traffic operations and addresses stakeholder and public involvement point of concern.		X		$9,913,000	X		X	X	
25		CR 387 (Demorest-Mt. Airy Road) between SR 385 and Camp Creek Road (milepoints 0.00 to 2.83 on CR 387)	Widen roadway (two to four lanes).	Stakeholder comments included a request to widen CR 387 to at least three lanes. Future LOS on SR 387 is projected to be LOS F from milepoint 0.00 to 1.25 and LOS D from milepoint 1.39 to 2.83.	Relieves congestion and addresses stakeholder point of concern.	X			$6,961,000	X		X	X	

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Table 33
Habersham County Recommended Improvements
(Continued)

No.	GDOT Prev ID	Location	Project	Need Addressed	Anticipated Benefits	Phasing Time Period			Estimated	Potential Funding Source				
						Short	Mid	Long	Cost*	Federal	State	County	Local	Private
26		CR 44 (Old Athens Highway) at Old Cleveland Road intersection (approximately milepoint 0.98 on CR 44)	Intersection improvements.	Stakeholder comments included concern about safety of this intersection.	Improves safety and addresses stakeholder point of concern.	X			$638,000		X	X	X	
27		CR 71 (Double Bridge Road) between US 441 and SR 385 (milepoints 0.00 to 2.50 on CR 71)	Roadway improvements.	Stakeholder comments included a request to improve CR 71 alignment for safety and travel comfort, and that spot improvements could be done on a more short-range basis.	Improves traffic operations and addresses stakeholder point of concern.		X		$6,804,000		X	X	X	
28		Countywide	Monitor additional locations of public concern.	Additional locations were identified through public involvement and stakeholder meetings that did not currently show LOS, congestion or safety deficiencies but that should be monitored in the future.	Improves response efficiency to developing transportation deficiencies and addresses stakeholder and public involvement points of concern.	X	X	X	GDOT		X	X		
29		Countywide	Study transit feasibility.	Stakeholder and public involvement comments included the desire for improved transit services.	Addresses need and desire for transit service without instituting a standard transit system (inefficient in rural setting).	X	X	X	$30,000	X	X	X	X	X
30		Between Alto and Baldwin	Bike facilities northeast to Baldwin on Gainesville Hwy.	Connection between Alto and Baldwin communities.	Increases connections between existing bicycle facilities and desired destinations.			X	$702,000	X	X	X	X	X
31		Between Baldwin and Cornelia	Bike facilities northeast along SR 441 towards Cornelia.	Connection between Baldwin and Cornelia communities.	Increases connections between existing bicycle facilities and desired destinations.			X	$242,000	X	X	X	X	X
32		Between Cornelia and Demorest	Bike facilities north along US 441 / US 23 to Demorest.	Connection between Cornelia and Demorest communities.	Increases connections between existing bicycle facilities and desired destinations.		X		$811,000	X	X	X	X	X
33		Between Demorest and Clarkesville	Bike facilities north along US 441 / US 23 to Clarkesville.	Connection between Demorest and Clarkesville communities.	Increases connections between existing bicycle facilities and desired destinations.		X		$874,000	X	X	X	X	X
34		Between Clarkesville and State Bike Route 85	Bike facilities north along SR 197.	Connection between Clarkesville communities and State Bike Route 85.	Increases connections between existing bicycle facilities and desired destinations.			X	$1,572,000	X	X	X	X	X
35		Alto	Bike facilities northeast through Alto on Gainesville Hwy.	Bike facilities for Alto community that includes access to Baldwin connection.	Increases connections between existing bicycle facilities and desired destinations.			X	$162,000	X	X	X	X	X
36		Baldwin	Bike facilities on Gainesville Hwy. through Baldwin.	Bike facilities for Baldwin community that includes access to Alto and Cornelia connections.	Increases connections between existing bicycle facilities and desired destinations.			X	$322,000	X	X	X	X	X
37		Baldwin Spur	Bike facilities northwest on US 441 ending in the commercial district.	Bike facilities for Baldwin community that includes access to the US 441 commercial district.	Increases connections between existing bicycle facilities and desired destinations.			X	$417,000	X	X	X	X	X
38		Clarkesville	Bike facilities along Business 441 through Clarkesville.	Bike facilities for Clarkesville community that includes access to Demorest and State Bike Route 85 connections.	Increases connections between existing bicycle facilities and desired destinations.	X		X	$375,000	X	X	X	X	X
39		Cornelia	Bike facilities north through Cornelia along Business 441.	Bike facilities for Cornelia community that includes access to Baldwin and Demorest connections.	Increases connections between existing bicycle facilities and desired destinations.		X		$623,000	X	X	X	X	X
40		Cornelia Spur	Bike facilities east along SR 197 to Mount Airy.	Bike facilities for Cornelia community that includes access to Demorest-Mount Airy Road.	Increases connections between existing bicycle facilities and desired destinations.			X	$318,000	X	X	X	X	X
41		Demorest	Bike facilities through Demorest on Business 441.	Bike facilities for Demorest community that includes access to Cornelia and Clarkesville connections.	Increases connections between existing bicycle facilities and desired destinations.			X	$452,000	X	X	X	X	X
42		Mount Airy	Bike facilities east along SR 197 to Lake Russell Rec. Area.	Bike facilities for Mount Airy community that includes access to Lake Russell Recreation Area.	Increases connections between existing bicycle facilities and desired destinations.			X	$516,000	X	X	X	X	X
43		Tallulah Falls	Bike facilities on loop from US 441 around Gorge Overlook to US 441.	Bike facilities for Tallulah Falls community.	Increases connections between existing bicycle facilities and desired destinations.	X			$368,000	X	X	X	X	X
44		Alto	Pedestrian facilities for City Center.	Pedestrian facilities for higher-use Alto community centers.	Increases connections between existing pedestrian facilities and desired destinations.	X			$16,000	X	X	X	X	

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Table 33
Habersham County Recommended Improvements
(Continued)

No.	GDOT Prev ID	Location	Project	Need Addressed	Anticipated Benefits	Phasing Time Period			Estimated	Potential Funding Source				
						Short	Mid	Long	Cost*	Federal	State	County	Local	Private
45		Baldwin	Pedestrian facilities for Gainesville Highway links.	Pedestrian facilities for higher-use Baldwin community centers on Gainesville Highway.	Increases connections between existing pedestrian facilities and desired destinations.		X		$25,000	X	X	X	X	
46		Baldwin	Pedestrian facilities for City Hall to Wilbanks Park.	Pedestrian facilities to improve existing connections for City Hall and connecting to Wilbanks Park.	Increases connections between existing pedestrian facilities and desired destinations.	X			$117,000	X	X	X	X	
47		Clarkesville	Pedestrian facilities for Pitts Park to school.	Pedestrian facilities to improve existing connections for school and connecting to Pitts Park.	Increases connections between existing pedestrian facilities and desired destinations.		X		$50,000	X	X	X	X	
48		Clarkesville	Pedestrian facilities for County Courthouse to elementary school.	Pedestrian facilities to improve existing connections to elementary school and higher-use Clarkesville community centers.	Increases connections between existing pedestrian facilities and desired destinations.		X		$82,000	X	X	X	X	
49		Clarkesville	Pedestrian facilities for Welcome Center to City Park.	Pedestrian facilities to improve existing connections for higher-use Clarkesville community centers and connections to city park.	Increases connections between existing pedestrian facilities and desired destinations.			X	$59,000	X	X	X	X	
50		Clarkesville	Pedestrian facilities for City Center links.	Pedestrian facilities to improve existing connections for City Center.	Increases connections between existing pedestrian facilities and desired destinations.	X			$46,000	X	X	X	X	
51		Clarkesville	Pedestrian facilities for US 441 Business to school.	Pedestrian facilities to connect US 441 Business and school location.	Increases connections between existing pedestrian facilities and desired destinations.		X		$35,000	X	X	X	X	
52		Clarkesville	Pedestrian facilities for US 441 Business to county fairgrounds.	Pedestrian facilities to connect US 441 Business and county fairgrounds.	Increases connections between existing pedestrian facilities and desired destinations.			X	$100,000	X	X	X	X	
53		Cornelia	Pedestrian facilities for elementary school (south) links.	Pedestrian facilities to connect elementary school and US 441 Business in pedestrian network.	Increases connections between existing pedestrian facilities and desired destinations.		X		$234,000	X	X	X	X	
54		Cornelia	Pedestrian facilities for Community Center to City Park.	Pedestrian facilities to extend connection from community center to city park.	Increases connections between existing pedestrian facilities and desired destinations.			X	$47,000	X	X	X	X	
55		Cornelia	Pedestrian facilities for City Center links.	Pedestrian facilities to create pedestrian network connecting existing city center walkways.	Increases connections between existing pedestrian facilities and desired destinations.	X			$101,000	X	X	X	X	
56		Cornelia	Pedestrian facilities for elementary school (north) links.	Pedestrian facilities to improve existing connections for elementary school and US 129.	Increases connections between existing pedestrian facilities and desired destinations.		X		$32,000	X	X	X	X	
57		Demorest	Pedestrian facilities for US 441 Business elementary school to Cornelia.	Pedestrian facilities to improve elementary school connection to US 441 Business.	Increases connections between existing pedestrian facilities and desired destinations.		X		$246,000	X	X	X	X	
58		Demorest	Pedestrian facilities for City Center links.	Pedestrian facilities to improve existing connections for higher-use Demorest community centers.	Increases connections between existing pedestrian facilities and desired destinations.	X			$39,000	X	X	X	X	
59		Demorest	Pedestrian facilities for US 441 Business to middle school.	Pedestrian facilities to connect US 441 Business to the middle school.	Increases connections between existing pedestrian facilities and desired destinations.			X	$168,000	X	X	X	X	
60		Mount Airy	Pedestrian facilities for Town Center links.	Pedestrian facilities for higher-use Mount Airy community centers.	Increases connections between existing pedestrian facilities and desired destinations.	X			$21,000	X	X	X	X	
61		SR 197	Install pedestrian facility for North Georgia Technical College.	Pedestrian facility needed to serve students and faculty crossing SR 197.	Improves pedestrian facilities and addresses stakeholder point of concern.	X			$127,000	X	X	X	X	X

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Habersham County Recommended Projects

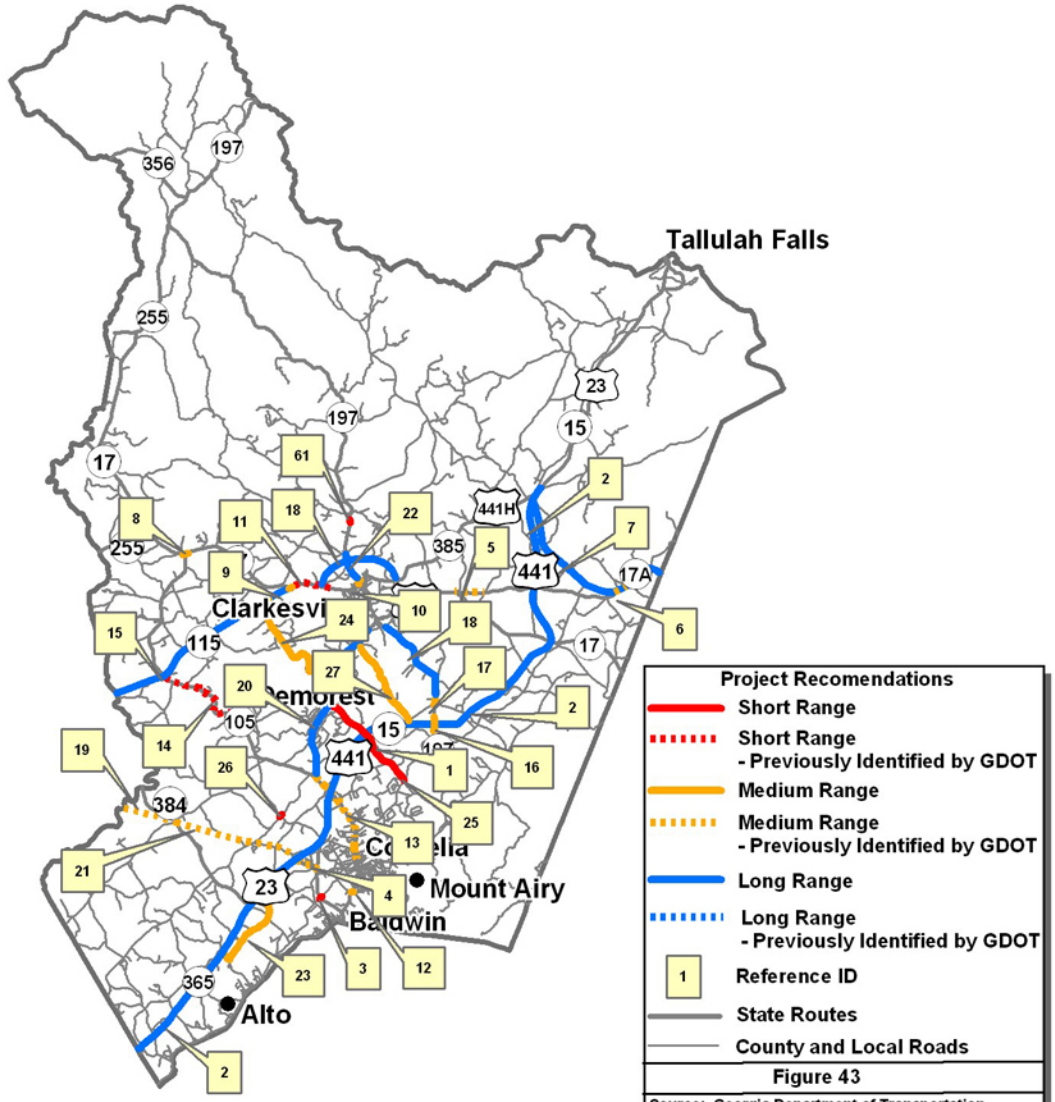


Figure 43

Source: Georgia Department of Transportation
This map is intended for planning purposes only.
July 2003.

Recommended Projects and Descriptions

Reference ID: 01 - S
Intersection improvements at US 441 / SR 365 and Demorest-Airy Rd.

Reference ID: 02 - L
Access Management along US 441 / SR 15 and SR 365 from Hall Co. to SR 17 Alt

Reference ID: 03 - S
Add overhead intersection signage for SR 15 at Industrial Blvd. intersection

Reference ID: 04 - M
Widen SR 15 Connector from SR 365 to SR 105 (3-4 lanes) and Improve Ramps to SR 365

Reference ID: 05 - M
SR 17 Intersection at Antioch Church Rd Intersection Improvements

Reference ID: 06 - M
SR 17 Alt at Antioch Church Road Intersection Improvements

Reference ID: 07 - L
Add Passing Lanes on SR 17 Alt between Stephens Co. Line and SR 15

Reference ID: 08 - M
SR 17 at SR 105 Intersection Improvements

Reference ID: 9 - M
Improve SR 17 at SR 115 Intersection Improvements

Reference ID: 10 - M
SR 17 at SR 197 and SR 385 Intersection Improvements

Reference ID: 11 - S
Add TWLTL on SR 17 between Beaverdam Creek and SR 115

Reference ID: 12 - M
SR 105 at Wayside St Intersection Improvement

Reference ID: 13 - M
Widen SR 105 (2-4 lanes and 4-6 lanes) from Cannon Bridge Rd to Walnut St

Reference ID: 14 - S
Passing Lanes on SR 105 from East Garrett Rd to West VFW Rd
and Replace Soquee Creek Bridge

Reference ID: 15 - L
Widen SR 115 to Four Lanes from SR 17 to White County Line

Reference ID: 16 - M
SR 197 Ramp Improvement to SR 365

Reference ID: 17 - M
SR 197 at Hazel Creek and Ansley Road Intersection Improvements

Reference ID: 18 - L
Widening SR 197 (2-4 lanes) from SR 365 to North Georgia Tech

Reference ID: 19 - S
Roadway Improvements on SR 384 to Helen

Reference ID: 20 - L
Widen SR 385 from SR 105 to Clarkesville to add TWLTL

Reference ID: 21 - M
New Road Construction: SR 560 between SR 11 and SR 384

Reference ID: 22 - L
Consider Clarkesville North Bypass

Reference ID: 23 - M
Widening CR 1 (BC Grant Road) to 12ft. lanes from SR 365 to Willbanks Rd

Reference ID: 24 - M
CR 383 (Habersham Mills Road) Roadway Improvements from SR 385 to SR 115

Reference ID: 25 - S
Widening CR 387 (Demorest Mt-Airy Road) (2-4 lanes) between SR 385 and Camp Creek Rd

Reference ID: 26 - S
CR 44 (Old Athens Highway) at Old Cleveland Rd Intersection Improvement

Reference ID: 27 - M
CR 71 (Double Bridge Road) Roadway Improvements

Reference ID: 61 - S
Add Pedestrian Facility on SR 197 at North Georgia Tech

Mount Airy and Demorest, and along the border with Habersham County. Seventeen of the recommended roadway projects are located in this part of the County and could have potential impacts on these populations. They include:

1. Project No. 2 - US 441 / State Route 15 and State Route 365 between Hall County line and State Route 17 Alternate; implement access management plan with limited access at some locations.
2. Project No. 3 - State Route 15 at Industrial Boulevard intersection; add overhead intersection signage.
3. Project No. 4 - State Route 15 Connector from State Route 365 to US 441 / State Route 15; improve ramps and widen roadway (three to four lanes).
4. Project No. 5 - State Route 17 at Antioch Church Road intersection; intersection improvements.
5. Project No. 6 - State Route 17 Alternate at Antioch Church Road; intersection improvements.
6. Project No. 7 - State Route 17 Alternate between Habersham County line and State Route 15; add passing lanes.
7. Project No. 8 - State Route 17 at State Route 105 intersection; intersection improvements.
8. Project No. 12 - State Route 105 at Wayside Street intersection; intersection improvements.
9. Project No. 15 - State Route 115 from State Route 17 to Habersham County Line; widen roadway (two to four lanes).
10. Project No. 17 - State Route 197 between Hazel Creek Road and Ansley Road intersections; two intersection improvements.
11. Project No. 18 - State Route 197 between State Route 365 and North Georgia Technical College; widen roadway (two to four lanes) and consider turn lanes at Roper Drive to serve expanded church needs.
12. Project No. 19 - State Route 384 to Helen; roadway improvements.
13. Project No. 20 - State Route 385 from State Route 105 to Clarkesville; widen roadway to add center turn lane.
14. Project No. 21 - State Route 560 from State Route 11 to State Route 384; roadway improvements.
15. Project No. 23 - County Road 1 (BC Grant Road) from State Route 365 to Wilbanks Road; widen to standard road width.
16. Project No. 26 - County Road 44 (Old Athens Highway) at Old Cleveland Road intersection; intersection improvements.
17. Project No. 27 - County Road 71 (Double Bridge Road); roadway improvements.

With the exception of the roadway widening projects, these projects will have minimal impacts, if any, in terms of population displacement or land consumption, while providing needed safety and operational benefits. The intersection improvements on SR 17 will be particularly beneficial in light of the high incidence of accidents at these intersections. While the roadway widening projects along SR 385, SR 197, SR 115, SR 105 and SR 15 Connector will provide much needed congestion relief along these corridors, appropriate planning and

avoidance/minimization of impacts will be required during project development to ensure that minority and low-income communities in this area are not adversely impacted. The new construction of SR 560, in particular, will be developed to meet both federal requirements under the National Environmental Policy Act (NEPA) and state requirements under the Georgia Environmental Policy Act (GEPA) to assess the environmental, health, socioeconomic, social and cultural impacts of the proposed alignment. Recommended pedestrian and bicycle improvements will improve safety and access to businesses, public services, schools, and other facilities.

Additional Alternate Mode Observations

Habersham County Transit

The Habersham County transit program was recently discontinued. However, the public involvement process did indicate a desire for transit services. Further study should be given to rural transit feasibility.

Tallulah Falls Railroad Trail

The Tallulah Falls Railroad was 58 miles long and went from Cornelia, in Habersham County, through Habersham County, to Franklin, North Carolina. The railroad was operated from 1898 to 1961 and was a key factor in the growth of Habersham County. Although the railroad has been abandoned, sections of the railroad bed and some trestles still exist. Several of the historic depots remain as important historic resources.

This study recommends reclaiming the railroad bed, or at least sections of it, for a multi-use trail through North Georgia to the North Carolina line. Many of the visible sections are eligible for the National Register of Historic Places and the trail would provide an educational experience as well as a recreational one. Parts of the old railroad are located near city centers and would provide an opportunity for daily use. A sizeable portion of the railroad is located in the Tallulah Gorge State Park. This creates an opportunity to link the park with the surrounding communities and to carry park visitors into town centers.

The City of Cornelia has cleared a section along the railroad bed from the Cornelia Depot to the edge of town that serves as a demonstration project for the entire trail. Currently the section is only accessible to pedestrians, but with proper paving materials, cyclists could share the trail.

The success of this project relies on the cooperation of local jurisdictions, private citizens, and the State of Georgia. The national Rails-to-Trails organization can offer a great deal of technical support in the process of creating a trail. The Georgia Mountains Regional Development Center is available to work with local governments in coordinating the various trail projects within Habersham County.

Because of the popularity in long distance multi-use trails, the Tallulah Falls Trail has the potential to greatly benefit the local economy. The inherent scenic quality of North Georgia, as

well as the variety of recreational opportunities that currently exists, makes the trail even more attractive.

Estimated Costs

Order of magnitude cost estimates were prepared to provide a planning level of resources needed for the implementation of various projects. The estimates may be considerably higher or lower than actual costs, based on a number of factors, including complexity of the design, utility relocation, property values and mitigating environmental impacts.

For the projects previously identified by GDOT or that are already under construction, costs have been previously estimated by GDOT and are not listed in the following tables. Additional projects that would be part of normal GDOT operations are also not given an estimated cost. Because of the highly variable costs and needs for right-of-way, no right-of-way acquisition costs are estimated for the additional projects recommended by this report. For these projects, the costs previously shown in Table 33 are therefore significantly lower than if a full estimate was completed and should be used with caution. The estimated costs were based on GDOT source material for roadway segments in northeast Georgia and on intersection improvement costs developed for other studies performed by DWA for GDOT.

Potential Funding Sources

The most likely funding sources are identified for each project, based largely on the location of the project and responsible agencies. In some situations, it may be possible for the county or local agencies to accelerate the process of upgrading facilities by increasing local funding participation. The most likely funding sources for Habersham County are listed as follows:

- General Funds
- Special Purpose Local Options Sales Tax (SPLOST)
- Local Options Sales Tax (LOST)
- FHWA, Transportation Enhancement Activities funds
- FTA, Rural Public Transportation funds
- State Aid, County / City contracts
- Federal Lands Program, Scenic Byways

Other options, considered less likely for Habersham County specifically, include:

- Appalachian Regional Commission program grants
- Transit farebox revenues
- Public/private partnerships, such as Community Improvement Districts (CIDs)
- Development impact fees

Habersham County currently has one SPLOST program in operation. These initiatives can provide millions of dollars in local funds for a variety of transportation improvements, including both roadway and non-roadway transportation projects. If the citizens of Habersham County

decide to approve future referenda, funding may be generated for future projects. Additionally, business groups and civic organizations may be willing to contribute, especially for pedestrian and bicycle improvements. The most likely funding sources for the recommended projects were also listed in Table 33.

Project Phasing

Although a large number of transportation projects have been recommended, it is not practical or feasible to implement all improvements simultaneously. A phasing plan was therefore developed to provide a starting point to use in prioritizing the recommended projects for further evaluation, funding, and implementation. The prioritization was based on the level of deficiency to be mitigated or eliminated by the project, the estimated cost and the difficulty of implementation from a planning or design perspective. The three time periods used were as follows:

- Short-range period: 2004 through 2007
- Medium-range period: 2008 through 2014
- Long-range period: 2015 through 2025

The specific phase recommended for each improvement was previously outlined in Table 33.

Project Implementation

In order to enhance the potential of success for this proposed plan, the following implementation guidelines are offered:

- Continue public outreach efforts for project-specific details as part of studying the project feasibility.
- Secure funding for each short-range project.
- Identify ways to utilize resources to accelerate the planning, design and construction process for the recommended projects.
- Undertake study to determine more detailed cost and design elements for the recommended projects.

9 Rabun County

Transportation needs were identified for Rabun County through the correlation of several sources, including the following: existing transportation conditions, projected transportation needs, stakeholder input and comments from the public involvement effort. Transportation projects to respond to those needs were then developed using the goals and strategies presented in this report. Details, such as estimated costs and phasing, are given for each recommended project.

Summary of Findings

Known for its scenic resources, Rabun County experiences strong tourist traffic through the summer as well as autumn months. The county has also experienced strong growth in its population within the last decade. Both tourist and local traffic contribute to traffic volumes. A summary of the existing and projected traffic conditions follows:

- **Roadway capacity** – Some congestion is experienced during peak traffic periods on such roadways as US 441/State Route 15 and US 76/State Route 2. Some county roads also experience congestion during peak times, such as Old Highway 441 and Warwoman Road. Traffic volumes are expected to increase over time, which will aggravate existing traffic deficiencies as well as produce new congested locations. However, overall traffic congestion within Rabun County is not typically a widespread problem occurring over extended time periods.
- **Intersection safety** - The sixteen vehicle crash sites identified within Rabun County were primarily on US 441/State Route 15 and US 76/State Route 2. Site evaluations, as well as further data research, were performed to identify appropriate safety improvements.
- **Bridge and major culverts** - Of the 104 bridge and major culvert structures in Rabun County, 47 structures have a sufficiency rating below 65. The majority of these deficient structures carry county routes, rather than state routes or city streets. A complete inventory is included in Appendix D. Bridge and major culvert structures are inventoried in a federally-mandated project that includes an annual inspection and submittal for deficient structures for replacement or rehabilitation. Because of this existing program, no additional bridge and major culvert structure recommendations were made as part of this report.
- **Pavement condition** - No GDOT inventoried roadway was reported as having a poor serviceability rating within Rabun County. Additional visual inspections were made as part of the roadway evaluations.
- **Pedestrian facilities** - Of the residential centers in Rabun County, Sky Valley and Tallulah Falls were identified as having no municipal sidewalks located within the city limits. The three designated bicycle routes in the study area are already interconnected and allow travel to all of the study counties. Stakeholder and public involvement comments indicated interest in improved pedestrian and bicycle facilities throughout Rabun County. Existing bicycle and pedestrian facilities are inventoried in Appendix E.

These maps also include projects included in the local comprehensive plan or short-term work program.

- **Transit service** - Rabun County currently has an operating demand response van service for weekday operations. Stakeholder and public involvement have indicated a desire for expanded transit services.
- **Other transportation services** - Other transportation services in Rabun County include taxi service, human service transportation and medical transportation. There is no current intercity bus service, passenger rail service or airport facility within Rabun County.

Recommended Improvements

The collected data was used to develop a series of recommended transportation improvements. Existing GDOT transportation projects addressed some of the identified Rabun County deficiencies. Additional projects are proposed to mitigate the additional roadway and alternative mode needs. Table 34 presents both previously-identified and additional projects with brief descriptions of its location, anticipated benefits, suggested phase plan, estimated costs and suggested funding sources. The roadway projects are also shown graphically on Figure 44. Maps of the pedestrian and bikeway improvement projects are included in Appendix G.

Specific locations included for Project 13 are those that were investigated in this study due to LOS analysis results, vehicle crash data, stakeholder input or comments from the public involvement process. Although no recommendations are made for these locations at this time, they are recommended for future monitoring. A list of locations may be found in Appendix H.

Environmental Considerations

With almost 85 percent of its area designated as national forest, the resources of natural beauty and historical significance within Rabun County can make improvements challenging to implement. Although these environmental considerations were kept in mind when determining the recommended improvements, further investigation will be required for each project as part of the study and design phases. When building new sidewalks in listed or eligible historic districts, for example, a preservation professional should be consulted to identify significant landscape elements that should not be altered. New or improved facilities are compatible with historic and environmental preservation with the proper care.

Environmental justice also plays a part in project evaluation to avoid disproportionately high and adverse impacts on low-income and minority populations and to ensure that these groups benefit from transportation improvements. Countywide, the program of recommended improvements will improve safety, access and mobility for all users of the transportation system in Rabun County. However, there is a significant minority concentration in the southeastern quadrant of Rabun County. Two of the recommended roadway projects are located in this

Table 34
Rabun County Recommended Improvements

No.	GDOT Prev ID	Location	Project	Need Addressed	Anticipated Benefits	Phasing Time Period			Estimated	Potential Funding Source				
						Short	Mid	Long	Cost*	Federal	State	County	Local	Private
1	X	US 441 / SR 15 from Tallulah Falls to south Clayton (milepoints 1.74 to 10.35 on SR 15)	Widen roadway (two to four lanes).	Existing LOS on SR 15 is reported as LOS E from milepoint 0.09 to 9.21 and LOS F from milepoint 9.21 to 10.52. Future LOS on SR 15 is projected as LOS F from milepoint 0.09 to 11.17. Stakeholder comments included concern on what other improvements might be needed after roadway widening. SR 15 was also a frequent inquiry at the public involvement meetings.	Relieves congestion and addresses stakeholder and public involvement points of concern.	X			GDOT	--	--	--	--	--
2	X	US 441 / SR 15 from north Clayton to the North Carolina line (milepoints 12.45 to 19.73 on SR 15)	Widen roadway (two to four lanes).	Existing LOS on SR 15 is reported as LOS F from milepoint 12.27 to 13.79 and milepoint 17.67 to 19.73. Future LOS on SR 15 is projected as LOS F from milepoint 11.44 to 14.35, LOS E from milepoint 14.35 to 17.67 and LOS F from milepoint 17.67 to 19.73. Stakeholder comments included concern on what other improvements might be needed after roadway widening. SR 15 was also a frequent inquiry at the public involvement meetings.	Relieves congestion and addresses stakeholder and public involvement points of concern.		X		GDOT	--	--	--	--	--
3	X	US 441 / SR 15 at Erwin Street intersection / entrance to Black Rock Mtn. State Park (approximately milepoint 14.4 on SR 15)	Intersection improvements.	There were five vehicle crashes recorded in 2001 for the intersection of SR 15 at Erwin Street. Public involvement comment included suggestion for a traffic signal at the Black Rock Mtn. State Park entrance.	Reduces vehicle crashes and addresses public involvement points of concern. This improvement will be performed as part of SR 15 / US 441 widening.		X		GDOT	--	--	--	--	--
4	X	US 441 / SR 15 at Old Highway 441 intersection (approximately milepoint 13.10 on SR 15)	Intersection improvements.	There were fourteen vehicle crashes recorded in 2001 for the intersection of SR 15 at Old Highway 441. Stakeholder comments included the suggestion to make improvements for Old Highway 441.	Reduces vehicle crashes and addresses stakeholder concern for Old Highway 441. This improvement will be performed as part of SR 15 / US 441 widening.		X		GDOT	--	--	--	--	--
5	X	US 441 / SR 15 at Wiley Connector / McCracken intersection (approximately milepoint 5.33 on SR 15)	Intersection improvements.	There were four angle and seven rear-end vehicle crashes recorded in 2001 for the intersection of SR 15 at Wiley Connector. Public involvement comments included concern for safety at this intersection.	Reduces vehicle crashes and addresses public involvement point of concern. This improvement will be performed as part of SR 15 / US 441 widening.	X			GDOT	--	--	--	--	--
6		US 76 / SR 2 from Clayton to Kingwood resort (milepoints 16.44 to 19.07 on SR 2)	Widen roadway (two to four lanes).	Existing LOS on SR 2 is reported as LOS E from milepoint 16.43 to 17.20. Future LOS on SR 2 is projected as LOS F from milepoint 16.43 to 24.56. Stakeholder comments included the suggestion to widen, improve and resurface the roadway.	Relieves congestion and addresses stakeholder point of concern.		X		$5,854,000	X	X	X	X	X
7	X	US 76 / SR 2 from Lake Burton Bridge to CR 94 (milepoints 6.80 to 9.12 on SR 2)	Realign and add passing lanes.	Future LOS on SR 2 is projected as LOS F from milepoint 8.09 to 14.81. There were seven vehicle crashes recorded in 2001 for the intersection of SR 2 at Persimmon Road. The safety of that intersection was also a concern from participants in the public involvement process.	Improves traffic operations and addresses safety concern at existing intersection with Persimmon Road.	X			UC	--	--	--	--	--
8	X	SR 246	Advanced truck warning system.	Future LOS on SR 246 is projected as LOS F from milepoint 0.00 to 3.79.	Improves safety.	X			GDOT	--	--	--	--	--
9	X	CR 149 (Old Highway 441) from Tiger to Clayton (milepoints 0.00 to 3.19 on CR 149)	Resurface and shoulder improvements.	Stakeholder comments included the suggestion to make improvements on Old Highway 441.	Improves traffic operations prior to the additional work on SR 15, as requested by public involvement.	X			UC	--	--	--	--	--
10	X	CR 153 (Old Highway 441) from Wiley to Tiger (milepoints 1.23 to 5.12)	Resurface and shoulder improvements.	Public involvement suggested improving Old Highway 441 before starting improvements on SR 15.	Improves traffic operations prior to the additional work on SR 15, as requested by public involvement.	X			UC	--	--	--	--	--
11		CR 217 (Bridge Creek Road) from Charlie Mountain Road to Tiger (milepoints 4.82 to 13.53 on CR 217)	Roadway improvements.	Future LOS on CR 217 is projected as LOS D from milepoint 10.26 to 12.04, milepoint 12.31 to 12.56 and milepoint 12.67 to 13.51. Stakeholder comments included the suggestion to make alignment improvements in locations along CR 217.	Increases safety and addresses stakeholder comments.		X		$12,655,000		X	X		
12		CS 531 (Rickman Street) from US 441 / SR 15 to Warwoman Road (milepoints 0.00 to 0.52 on CS 531)	Widen roadway (two to four lanes).	Future LOS on parallel roadways (such as CR 219/Warwoman Road) projected to be LOS E. Stakeholder comments included a desire to improve Warwoman Road between Clayton and the North Carolina state line.	Relieves congestion. (Alternative to widening of Warwoman Road.)			X	$3,054,000		X	X	X	

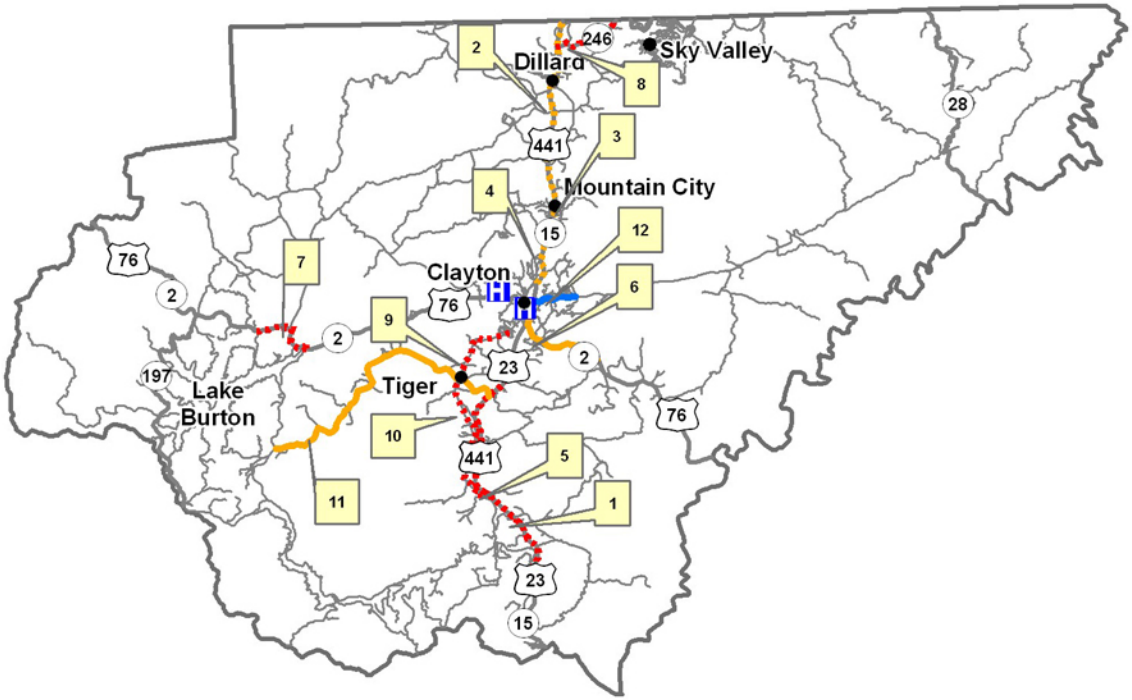
* Estimated costs do not include right-of-way.
GDOT These projects have been previously identified by GDOT or will be performed as part of normal operations.
UC These projects are currently under construction.
-- Projects that are previously identified are already assigned to a funding source.

Table 34
Rabun County Recommended Improvements
(Continued)

No.	GDOT Prev ID	Location	Project	Need Addressed	Anticipated Benefits	Phasing Time Period			Estimated	Potential Funding Source				
						Short	Mid	Long	Cost*	Federal	State	County	Local	Private
13		Countywide	Monitor additional locations of public concern.	Additional locations were identified through public involvement and stakeholder meetings that did not currently show LOS, congestion or safety deficiencies but that should be monitored in the future.	Improves response efficiency to developing transportation deficiencies and addresses stakeholder and public involvement points of concern.	X	X	X	GDOT		X	X		
14		Countywide	Increase public awareness of existing transit service.	Stakeholder and public involvement opinions included the comment that some potential ridership may be unaware of the existing transit service.	Encourages ridership growth.	X	X	X	$10,000	X	X	X	X	X
15		Countywide	Study transit feasibility.	Stakeholder and public involvement comments included the desire for improved transit services.	Addresses need and desire for transit service without instituting a standard transit system (inefficient in rural setting).	X	X	X	$30,000	X	X	X	X	
16		Between Clayton and GA/SC state line	Bicycle facilities east along Hwy. 76 toward GA/SC state line.	Connection between Clayton community and South Carolina.	Increases connections between existing bikeways and desired destinations.		X		$2,585,000	X	X	X	X	X
17		Between Clayton and Towns County	Bicycle facilities west along Hwy. 76 towards Towns County.	Connection between Clayton community and Towns County.	Increases connections between existing bicycle facilities and desired destinations.	X			$5,076,000	X	X	X	X	X
18		Clayton	Bicycle facilities east / southeast along Hwy. 76.	Bike facilities for Clayton community that includes access along US 76.	Increases connections between existing bicycle facilities and desired destinations.		X		$534,000	X	X	X	X	X
19		Dillard	Bicycle facilities west from US 441 to elementary school.	Bike facilities for Dillard that provide connection between US 441 and the elementary school.	Increases connections between existing bicycle facilities and desired destinations.	X			$436,000	X	X	X	X	X
20		Mountain City	Bicycle facilities west from US 441 to Black Rock Mtn. State Park.	Bike facilities for Mountain City that provide connection between US 441 and Black Rock Mtn. State Park.	Increases connections between existing bicycle facilities and desired destinations.		X		$309,000	X	X	X	X	X
21		Clayton	Pedestrian facilities for City Center links.	Pedestrian facilities to improve existing connections for City Center.	Increases connections between existing pedestrian facilities and desired destinations.	X			$21,000	X	X	X	X	
22		Dillard	Pedestrian facilities for US 441 to Dillard House.	Pedestrian facilities to connect US 441 and the community centers around Dillard House.	Increases connections between existing pedestrian facilities and desired destinations.		X		$47,000	X	X	X	X	
23		Dillard	Pedestrian facilities for US 441.	Pedestrian improvements to improve connections along US 441.	Increases connections between existing pedestrian facilities and desired destinations.		X		$107,000	X	X	X	X	
24		Mountain City	Pedestrian facilities for Town Center links.	Pedestrian facilities for higher-use Mountain City community centers.	Increases connections between existing pedestrian facilities and desired destinations.		X		$259,000	X	X	X	X	
25		Sky Valley	Pedestrian facilities for pavilion to proposed City Hall.	Pedestrian facilities to connect recreation sites with post office and City Hall.	Increases connections between existing pedestrian facilities and desired destinations.		X		$97,000	X	X	X	X	
26		Tallulah Falls	Pedestrian facilities for Town Center links.	Pedestrian facilities for higher-use Tallulah Falls community centers.	Increases connections between existing pedestrian facilities and desired destinations.	X			$130,000	X	X	X	X	
27		Tallulah Falls	Pedestrian facilities for US 441 to high school.	Pedestrian facilities to connect US 441 to the middle and high schools.	Increases connections between existing pedestrian facilities and desired destinations.	X			$75,000	X	X	X	X	
28		Tiger	Pedestrian facilities for post office.	Pedestrian facilities to improve connections for Tiger post office.	Increases connections between existing pedestrian facilities and desired destinations.	X			$10,000	X	X	X	X	
29		Tiger	Pedestrian facilities for Senior City link.	Pedestrian facilities to extend connections to Rabun County senior center.	Increases connections between existing pedestrian facilities and desired destinations.		X		$23,000	X	X	X	X	

* Estimated costs do not include right-of-way.
GDOT These projects have been previously identified by GDOT or will be performed as part of normal operations.
UC These projects are currently under construction.
-- Projects that are previously identified are already assigned to a funding source.

Rabun County Recommended Projects



N

Not to Scale

Recommended Projects and Descriptions

Reference ID: 1 - S
Widen US 441 / SR 15 (2-4 lanes) from Tallulah Falls to South Clayton

Reference ID: 2 - M
Widen US 441 / SR 15 (2-4 lanes) from North Clayton to North Carolina Line

Reference ID: 3 - M
Intersection Improvements at US 441 / SR 15 at Erwin St / Entrance to Blackrock Mt Park

Reference ID: 4 - M
Intersection Improvements at US 441 / SR 15 at Old Highway 441

Reference ID: 5 - S
Interection Improvements at US 441 / SR 15 at Wiley Conn / McCraken Rd

Reference ID: 6 - M
Widen US 76 / SR 2 (2-4 lanes) from Clayton to Kingwood Resort

Reference ID: 7 - S
Realign and add passing lanes on US 76 / SR 2 from Lake Burton Bridge to Charlie Mt Road

Reference ID: 8 - S
Advanced truck warning system on SR 246

Reference ID: 9 - S
Resurface and Shoulder Improvements on CR 149 (Old Highway 441) from Clayton to Tiger

Reference ID: 10 - S
Resurface and Shoulder Improvements on CR 153 (Old Highway 441) from Tiger to Wiley

Reference ID: 11 - M
Improve CR 217 (Bridge Creek Road)

Reference ID: 12 - L
Widen CR 531 (Rickman St) (2-4 lanes) between US 441 / SR 15 and Warwoman Rd

- Short Range
- Short Range - Previously Identified by GDOT
- Medium Range
- Medium Range - Previously Identified by GDOT
- Long Range
- Long Range - Previously Identified by GDOT
- 1 Reference ID
- State Routes
- County and Local Roads

Figure 44

Source: Georgia Department of Tranportation.
This map is intended for planning purposes only. July 2003.

part of the county and could have a potential impact on these populations. They include:

1. Project No. 1 - US 441 / State Route 15 from Tallulah Falls to south Clayton; widen roadway (two to four lanes).
2. Project No. 6 - US 76 / State Route 2 from Clayton to Kingwood resort; widen roadway (two to four lanes).

The roadway widening projects along US 441 and SR 2 will provide much needed congestion relief along these corridors. However, appropriate planning and avoidance/minimization of impacts will be required during project development to ensure that minorities in this area are not adversely impacted. Recommended pedestrian and bicycle improvements will improve safety and access to businesses, public services, schools, and other facilities.

Additional Alternate Mode Observations

Rabun County Transit

Rabun County currently operates rural public transit programs. As customer related information on these services is not readily available, consideration should be given to enhancing public awareness of these programs. Promoting the service could be initiated through the preparation and distribution of a service information brochure that should include general transit program information such as days/hours of operation, fares, accessibility, destinations, contact numbers, and other descriptive information about the program. Additional promotion opportunities could include a transit section on the county website, merchant displays, and coordination with local news media. Increasing awareness of the transit programs could result in ridership growth within the existing capacity of the service, which would correspondingly increase productivity and fare revenues.

Tallulah Falls Railroad Trail

The Tallulah Falls Railroad was 58 miles long and went from Cornelia, in Habersham County, through Rabun County, to Franklin, North Carolina. The railroad was operated from 1898 to 1961 and was a key factor in the growth of Habersham and Rabun counties. Although the railroad has been abandoned, sections of the railroad bed and some trestles still exist. Several of the historic depots remain as important historic resources.

This study recommends reclaiming the railroad bed or at least sections of it for a multi-use trail through North Georgia to the North Carolina line. Many of the visible sections are eligible for the National Register of Historic Places and the trail would provide an educational experience as well as a recreational one. Parts of the old railroad are located near city centers and would provide an opportunity for daily use. A sizeable portion of the railroad is located in the Tallulah Gorge State Park. This creates an opportunity to link the park with the surrounding communities and to carry park visitors into town centers.

The success of this project relies on the cooperation of local jurisdictions, private citizens, and the State of Georgia. The national Rails-to-Trails organization can offer a great deal of technical

support in the process of creating a trail. The Georgia Mountains Regional Development Center is available to work with local governments in coordinating the various trail projects within Habersham and Rabun Counties.

Because of the popularity in long distance multi-use trails, the Tallulah Falls Trail has the potential to greatly benefit the local economy. The inherent scenic quality of North Georgia, as well as the variety of recreational opportunities that currently exists, makes the trail even more attractive.

Estimated Costs

Order of magnitude cost estimates were prepared to provide a planning level of resources needed for implementation of various projects. The estimates may be considerably higher or lower than actual costs, based on a number of factors, including complexity of the design, utility relocation, property values and mitigating environmental impacts.

For the projects previously identified by GDOT or that are already under construction, costs have previously been estimated by GDOT and are not listed in the following tables. Additional projects that would be part of normal GDOT operations are also not given an estimated cost. Because of the highly variable costs and needs for right-of-way, no right-of-way acquisition costs are estimated for the additional projects recommended by this report. For these projects, the costs previously shown in Table 34 are therefore significantly lower than if a full estimate was completed and should be used with caution. The estimated costs were based on GDOT source material for roadway segments in northeast Georgia and on intersection improvement costs developed for other studies performed by DWA for GDOT.

Potential Funding Sources

The most likely funding sources are identified for each project, based largely on the location of the project and responsible agencies. In some situations, it may be possible for the county or local agencies to accelerate the process of upgrading facilities by increasing local funding participation. The most likely funding sources for Rabun County are listed as follows:

- General Funds
- Special Purpose Local Options Sales Tax (SPLOST)
- Local Options Sales Tax (LOST)
- FHWA, Transportation Enhancement Activities funds
- FTA, Rural Public Transportation funds
- State Aid, County / City contracts
- Federal Lands Program, Scenic Byways

Other options, considered less likely for Rabun County specifically, include:

- Appalachian Regional Commission program grants
- Transit farebox revenues

- Public/private partnerships, such as Community Improvement Districts (CIDs)
- Development impact fees

Rabun County currently has one LOST and two SPLOST programs in operation. These initiatives can provide millions of dollars in local funds for a variety of transportation improvements, including both roadway and non-roadway transportation projects. If the citizens of Rabun County decide to approve future referenda, funding may be generated for future projects. Additionally, business groups and civic organizations may be willing to contribute, especially for pedestrian and bicycle improvements. The most likely funding sources for the recommended projects were also listed in Table 34.

Project Phasing

Although a large number of transportation projects have been recommended, it is not practical or feasible to implement all improvements simultaneously. A phasing plan was therefore developed to provide a starting point to use in prioritizing the recommended projects for further evaluation, funding, and implementation. The prioritization was based on the level of deficiency to be mitigated or eliminated by the project, the estimated cost and the difficulty of implementation from a planning or design perspective. The three time periods used were as follows:

- Short-range period: 2004 through 2007
- Medium-range period: 2008 through 2014
- Long-range period: 2015 through 2025

The specific phase recommended for each improvement was previously outlined in Table 34.

Project Implementation

In order to enhance the potential of success for this proposed plan, the following implementation guidelines are offered:

- Continue public outreach efforts for project-specific details as part of studying the project feasibility.
- Secure funding for each short-range project.
- Identify ways to utilize resources to accelerate the planning, design and construction process for the recommended projects.
- Undertake study to determine more detailed cost and design elements for the recommended projects.

10 Stephens County

Transportation needs were identified for Stephens County through the correlation of several sources, including the following: existing transportation conditions, projected transportation needs, stakeholder input and comments from the public involvement effort. Transportation projects to respond to those needs were then developed using the goals and strategies presented in this report. Details, such as estimated costs and phasing, are given for each recommended project.

Summary of Findings

Stephens County is the second most populous of the four study counties, though population growth has been moderate over the last decade. Natural resources, such as Lake Hartwell, also attract tourist activity, which adds to traffic congestion on major roadways during certain times of day and year. A summary of the existing and projected traffic conditions follows:

- **Roadway capacity** – Most traffic congestion within Stephens County occurs within Toccoa, along State Route 17 Alternate and State Route 365. Some county roads and city streets also experience congestion during peak periods, such as Rose Lane and Pond Street. Outside the Toccoa city limits, major routes such as State Route 17 and US 123 also experience periods of heavy traffic.
- **Intersection safety** - The 42 vehicle crash sites identified within Stephens County were primarily on State Route 17, State Route 17 Alternate and State Route 365. Site evaluations, as well as further data research, were performed to identify appropriate safety improvements.
- **Bridge and major culverts** - Of the 72 bridge and major culvert structures in Stephens County, 18 structures have a sufficiency rating below 65. The majority of these deficient structures carry county routes, rather than state routes or city streets. A complete inventory is included in Appendix D. Bridge and major culvert structures are inventoried in a federally-mandated project that includes an annual inspection and submittal for deficient structures for replacement or rehabilitation. Because of this existing program, no additional bridge and major culvert structure recommendations were made as part of this report.
- **Pavement condition** - No GDOT inventoried roadway was reported as having a poor serviceability rating within Stephens County. One portion of State Route 184 was reported as having mediocre serviceability rating, in the southwestern part of the county. Additional visual inspections were made as part of the roadway evaluations.
- **Pedestrian facilities** - Of the residential centers in Stephens County, Avalon was identified as having no existing municipal sidewalks located within the city limits. The three designated bicycle routes in the study area are already interconnected and allow travel to all of the study counties. Stakeholder and public involvement comments indicated interest in improved pedestrian and bicycle facilities throughout Stephens County. Existing bicycle and pedestrian facilities are inventoried in Appendix E. These

maps also include projects included in the local comprehensive plan or short-term work program.

- **Transit service** - Stephens County currently has no operating transit service. Stakeholder and public involvement comments have indicated a desire for county transit services.
- **Other transportation services** - Other transportation services in Stephens County include taxi service, human service transportation and medical transportation. There is one active passenger rail station and one local airport within the city of Toccoa. There is no current intercity bus service within Stephens County.

Recommended Improvements

The collected data was used to develop a series of recommended transportation improvements. Existing GDOT transportation projects addressed some of the identified Stephens County deficiencies. Additional projects are proposed to mitigate the additional roadway and alternative mode needs. Table 35 presents both previously-identified and additional projects with brief descriptions of its location, anticipated benefits, suggested phase plan, estimated costs and suggested funding sources. The roadway projects are also shown graphically on Figure 45. Maps of the pedestrian and bikeway improvement projects are included in Appendix G.

Specific locations included for Project 11 are those that were investigated in this study due to LOS analysis results, vehicle crash data, stakeholder input or comments from the public involvement process. Although no recommendations are made for these locations at this time, they are recommended for future monitoring. A list of locations may be found in Appendix H.

Environmental Considerations

With almost 35 percent of its area designated as national forest, the resources of natural beauty and historical significance within Stephens County can make improvements challenging to implement. Although these environmental considerations were kept in mind when determining the recommended improvements, further investigation will be required for each project as part of the study and design phases. Cities such as Avalon and Martin have National Register Historic Districts located in prominent areas. Many other cities in the study area, such as Toccoa, have National Register sites or eligible historic districts. When building new sidewalks in listed or eligible historic districts, a preservation professional should be consulted to identify significant landscape elements that should not be altered. New or improved facilities are compatible with historic and environmental preservation with the proper care.

Environmental justice also plays a part in project evaluation to avoid disproportionately high and adverse impacts on low-income and minority populations and to ensure that these groups benefit from transportation improvements. Countywide, the program of recommended improvements will improve safety, access and mobility for all users of the transportation system in Stephens County. However, there are significant concentrations of minority and low-income populations in and around Toccoa and at the northern tip of the county. There were no transportation needs identified in the northern tip of the county. Four of the recommended

Table 35
Stephens County Recommended Improvements

No.	GDOT Prev ID	Location	Project	Need Addressed	Anticipated Benefits	Phasing Time Period			Estimated	Potential Funding Source				
						Short	Mid	Long	Cost*	Federal	State	County	Local	Private
1	X	US 123 / SR 365 from Habersham County line to SR 184 (milepoints 0.00 to 4.00 on SR 365)	Add median turn lane.	SR 365 was an inquiry at the public involvement meetings.	Improves traffic operations as future traffic volumes increase.		X		GDOT	--	--	--	--	--
2	X	SR 17 from Franklin County line to Memorial Drive (milepoints 0.06 to 9.09 on SR 17)	Widen (from two to four lanes).	Existing LOS on SR 17 is reported as LOS E from milepoint 0.00 to 7.78 and LOS D from milepoint 7.78 to 10.96. Future LOS on SR 17 is projected to be LOS F from milepoint 0.00 to 13.07. Stakeholder comments support roadway widening.	Relieves congestion and addresses public involvement point of concern.	X			GDOT	--	--	--	--	--
3	X	SR 17 from SR 17 Alternate to SR 184 (milepoints 7.78 to 13.13 on SR 17)	Widen (from two to four lanes).	Existing LOS on SR 17 is reported as LOS D from milepoint 7.78 to 10.96. Future LOS on SR 17 is projected to be LOS F from milepoint 0.00 to 13.07. Stakeholder comments support roadway widening.	Relieves congestion and addresses public involvement point of concern.	X			GDOT	--	--	--	--	--
4		SR 17 Alternate from SR 17 to SR 365 Business (milepoints 0.37 to 2.93 on SR 17 Alternate)	Widen (from two to four lanes where needed) and install raised median.	Existing LOS on SR 17 Alternate is reported as LOS E from milepoint 0.00 to 1.13 and LOS F from milepoint 3.03 to 3.19. Future LOS on SR 17 Alternate is reported as LOS F from milepoint 0.00 to 1.13 and from milepoint 1.33 to 4.14. There are 14 intersections with more than 5 vehicles crashes recorded in 2001 along this part of SR 17 Alternate.	Relieves congestion and reduces number of vehicle conflicts through commercial area.			X	$2,981,000	X	X	X	X	
5	X	SR 17 at SR 17 Alternate intersection (approximately milepoint 7.78 on SR 17)	Intersection improvements.	There were 2 angle, 20 rear-end and 2 sideswipe vehicle crashes recorded in 2001 for the intersection of SR 17 and SR 17 Alternate.	Reduces vehicle crashes. This will be combined with the planned improvements to SR 17.	X			GDOT	--	--	--	--	--
6	X	SR 17 at SR 63 intersection (approximately milepoint 10.96 on SR 17)	Intersection improvements.	There were 13 vehicle crashes recorded in 2001 for the intersection of SR 17 and SR 63.	Reduce vehicle crashes. This will be combined with the planned improvements to SR 17.	X			GDOT	--	--	--	--	--
7	X	SR 365 (Toccoa Bypass Extension) from SR 17 to South Carolina line	New roadway construction.	Future LOS on parallel roadways (such as SR 365) reported as LOS F. Stakeholder comments also indicated need for this extension.	Relieves congestion east of Toccoa and provides additional connectivity. Addresses stakeholder concern about relief for US 123 to South Carolina.		X		GDOT	--	--	--	--	--
8		CS 644 (Collins Road) from Pond Street to Kyte Street (milepoints 0.00 to 0.14)	Widen (from two to four lanes).	Existing LOS on CS 644 is reported as LOS D from milepoint 0.00 to 0.39. Future LOS on CS 644 is projected to be LOS F from milepoint 0.00 to 0.39.	Relieves congestion and provides turn lanes at Pond Street intersection.			X	$827,000		X	X	X	
9		CR 185 (Pond Street) from Collins Road to SR 63 (milepoints 0.59 to 1.20 on CR 185)	Realign and widen (from two to four lanes).	Existing LOS on CR 185 is reported as LOS D from milepoint 0.67 to 0.85. Future LOS on CR 185 is projected to be LOS F from milepoint 0.00 to 1.20.	Improves railroad crossing at SR 63 and relieves congestion.			X	$3,488,000		X	X	X	
10		CR 84 (Rose Lane) from SR 145 to SR 17 Alternate (milepoints 0 to 1.42 on CR 84)	Widen (from two to four lanes).	Future LOS on CR 84 is projected to be LOS D from milepoint 0.05 to 1.42. Public involvement comments included concern about congestion and future development along Rose Lane.	Relieves congestion and addresses public involvement point of concern.		X		$3,733,000		X	X	X	
11		Countywide	Monitor additional locations of public concern.	Additional locations were identified through public involvement and stakeholder meetings that did not currently show LOS, congestion or safety deficiencies but that should be monitored in the future.	Improves response efficiency in developing transportation deficiencies and addresses stakeholder and public involvement points of concern.	X	X	X	GDOT		X	X		

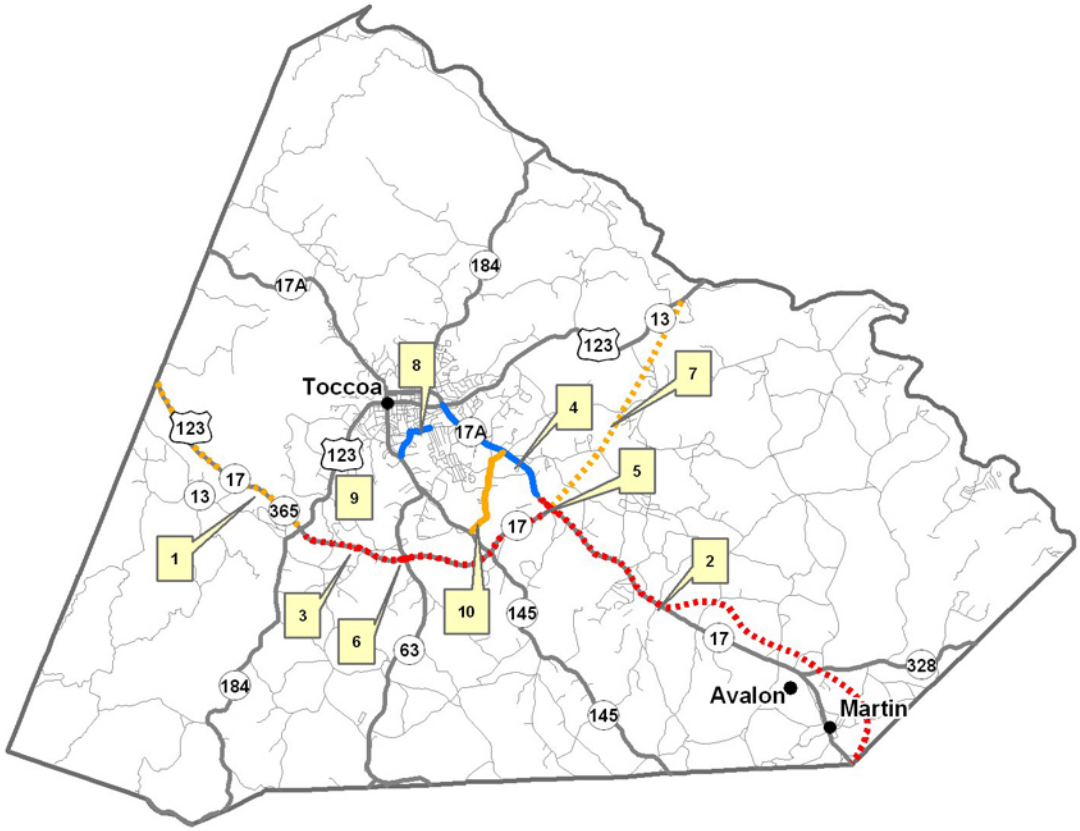
* Estimated costs do not include right-of-way.
GDOT These projects have been previously identified by GDOT or will be performed as part of normal operations.
UC These projects are currently under construction.
-- Projects that are previously identified are already assigned to a funding source.

Table 35
Stephens County Recommended Improvements
(Continued)

No.	GDOT Prev ID	Location	Project	Need Addressed	Anticipated Benefits	Phasing Time Period			Estimated	Potential Funding Source				
						Short	Mid	Long	Cost*	Federal	State	County	Local	Private
12		Countywide	Study transit feasibility.	Stakeholder and public involvement comments included the desire for improved transit services.	Addresses need and desire for transit service without instituting a standard transit system (inefficient in rural setting).	X	X	X	$30,000	X	X	X	X	
13		Travelers Rest	Bicycle facilities northeast from Toccoa to Travelers Rest Historic Site.	Connection between Toccoa community and Travelers Rest Historic Site.	Increases connections between existing bicycle facilities and desired destinations.	X			$1,887,000	X	X	X	X	X
14		Lake Louise Spur	Bicycle facilities north from Travelers Rest Spur to GA Baptist Assembly.	Connection between Travelers Rest Spur to GA Baptist Assembly.	Increases connections between existing bicycle facilities and desired destinations.	X			$724,000	X	X	X	X	X
15		Travelers Rest Spur	Bicycle facilities northwest from Travelers Rest to Tugaloo Heritage Center Trail.	Connection between Travelers Rest to Tugaloo Heritage Center Trail.	Increases connections between existing bicycle facilities and desired destinations.			X	$1,422,000	X	X	X	X	X
16		Tugaloo Heritage Center	Bicycle facilities north from Toccoa to Tugaloo Heritage Center.	Connection between Toccoa community and Tugaloo Heritage Center.	Increases connections between existing bicycle facilities and desired destinations.		X		$2,570,000	X	X	X	X	X
17		Toccoa	Bicycle facilities from City Hall to Community Center.	Bike facilities for Toccoa community that includes access to community centers.	Increases connections between existing bicycle facilities and desired destinations.	X			$133,000	X	X	X	X	X
18		Avalon	Pedestrian facilities for North GA Technical College to City Hall.	Pedestrian facilities to connect college to City Hall.	Increases connections between existing pedestrian facilities and desired destinations.		X		$122,000	X	X	X	X	
19		Martin	Pedestrian facilities for Town Center along SR 17.	Pedestrian facilities to improve existing town center connections along SR 17.	Increases connections between existing pedestrian facilities and desired destinations.	X			$46,000	X	X	X	X	
20		Toccoa	Pedestrian facilities for Alewine Park links.	Pedestrian facilities to connect Alewine Park to downtown Toccoa.	Increases connections between existing pedestrian facilities and desired destinations.			X	$89,000	X	X	X	X	
21		Toccoa	Pedestrian facilities for City Center to Doyle Street Park.	Pedestrian facilities to improve connections from higher-use community centers and Doyle Street Park.	Increases connections between existing pedestrian facilities and desired destinations.	X			$164,000	X	X	X	X	
22		Toccoa	Pedestrian facilities for Welcome Center links.	Pedestrian facilities to improve existing welcome center connections.	Increases connections between existing pedestrian facilities and desired destinations.			X	$56,000	X	X	X	X	
23		Toccoa	Pedestrian facilities for neighborhood links.	Pedestrian facilities to improve existing neighborhood connections.	Increases connections between existing pedestrian facilities and desired destinations.		X		$19,000	X	X	X	X	
24		Toccoa	Pedestrian facilities for Bell Street Park links.	Pedestrian facilities to improve connections to Bell Street Park.	Increases connections between existing pedestrian facilities and desired destinations.		X		$4,000	X	X	X	X	
25		Toccoa	Pedestrian facilities for Emory Johnson Park links.	Pedestrian facilities to improve connections to Emory Johnson Park.	Increases connections between existing pedestrian facilities and desired destinations.		X		$14,000	X	X	X	X	

* Estimated costs do not include right-of-way.
GDOT These projects have been previously identified by GDOT or will be performed as part of normal operations.
UC These projects are currently under construction.
-- Projects that are previously identified are already assigned to a funding source.

Stephens County Recommended Projects



N

Not to Scale

Recommended Projects and Descriptions

Reference ID: 1 - M
Add Median Turn Lane on US 123 / SR 365 from Habersham County Line to SR 184

Reference ID: 2 - S
Widen SR 17 (2-4 Lanes) from Franklin County Line to Memorial Drive

Reference ID: 3 - S
Widen SR 17 (2-4 Lanes) from SR 17 Alt to SR 184

Reference ID: 4 - L
Widen SR 17 Alt (2-4 Lanes where needed) and install raised median from SR 17 to SR 365

Reference ID: 5 - S
SR 17 at SR 17 Alt: Intersection Improvements

Reference ID: 6 - S
SR 17 at SR 63: Intersection Improvements

Reference ID: 7 - M
New Road Construction (To Bypass Extension) on SR 365 from SR 17 to South Carolina Line

Reference ID: 8 - L
Widen CS 644 (Collins Road) (2-4 Lanes) from Pond St to Kyte St

Reference ID: 9 - L
Realign and Widen CR 195 (Pond Street) (2-4 Lanes) from Collins Rd to SR 63

Reference ID: 10 - M
Widen CR 184 (Rose Lane) (2-4 Lanes) from SR 145 to SR 17 Alt

- Short Range
- Short Range - Previously Identified by GDOT
- Medium Range
- Medium Range - Previously Identified by GDOT
- Long Range
- Long Range - Previously Identified by GDOT
- 1 Reference ID
- State Routes
- County and Local Roads

Figure 45

Source: Georgia Department of Tranportation.
This map is intended for planning purposes only. July 2003.

roadway projects are located in and around Toccoa and could have a potential impact on these populations. They include:

1. Project No. 4 - State Route 17 Alternate from State Route 17 to State Route 365 Business; widen (from two to four lanes where needed) and install raised median.
2. Project No. 8 – City Street 644 (Collins Road) from Pond Street to Kyte Street; widen (from two to four lanes).
3. Project No. 9 - County Road 195 (Pond Street) from Collins Road to State Route 63; realign and widen (from two to four lanes).
4. Project No. 10 - County Road 84 (Rose Lane) from State Route 145 to State Route 17 Alternate; widen roadway (two to four lanes).

These roadway widening projects will provide much needed congestion relief along these corridors. However, appropriate planning and avoidance/minimization of impacts will be required during project development to ensure that minority and low-income communities along these corridors are not adversely impacted. Recommended pedestrian and bicycle improvements will improve safety and access to businesses, public services, schools, and other facilities.

Additional Alternate Mode Observations

Stephens County does not currently operate a transit program. The public involvement process did however indicate a desire for transit services. Further study should be given to rural transit feasibility.

Recommendations for enhancing multimodal travel between counties include linking interior city bike routes to the statewide routes. New bike routes have been recommended as shown in Appendix G. For example, several new bike routes are recommended in Toccoa and Stephens County that link with State Bicycle Route 85. These new routes link the center of Toccoa to State Bike Route 85 at GA Hwy 17 and then out to Traveler's Rest, a popular State Historic Site. In addition, as improvements are made to the roads along State Bicycle Routes, designers are encouraged to incorporate designated bike lanes where possible.

Estimated Costs

Order of magnitude cost estimates were prepared to provide a planning level of resources needed for the implementation of various projects. The estimates may be considerably higher or lower than actual costs, based on a number of factors, including complexity of the design, utility relocation, property values and mitigating environmental impacts.

For the projects previously identified by GDOT or that are already under construction, costs have previously been estimated by GDOT and are not listed in the following tables. Additional projects that would be part of normal GDOT operation are also not given an estimated cost. Because of the highly variable costs and needs for right-of-way, no right-of-way acquisition costs are estimated for the additional projects recommended by this report. For these projects, the costs previously shown in Table 35 are therefore significantly lower than if a full estimate

was completed and should be used with caution. The estimated costs were based on GDOT source material for roadway segments in northeast Georgia and on intersection improvement costs developed for other studies performed by DWA for GDOT.

Potential Funding Sources

The most likely funding sources are identified for each project, based largely on the location of the project and responsible agencies. In some situations, it may be possible for the county or local agencies to accelerate the process of upgrading facilities by contributing by increasing local funding participation. The most likely funding sources for Stephens County are listed as follows:

- General Funds
- Special Purpose Local Options Sales Tax (SPLOST)
- Local Options Sales Tax (LOST)
- FHWA, Transportation Enhancement Activities funds
- FTA, Rural Public Transportation funds
- State Aid, County / City contracts
- Federal Lands Program, Scenic Byways

Other options, considered less likely for Stephens County specifically, include:

- Appalachian Regional Commission program grants
- Transit farebox revenues
- Public/private partnerships, such as Community Improvement Districts (CIDs)
- Development impact fees

Stephens County currently has one LOST and two SPLOST programs in operation. These initiatives can provide millions of dollars in local funds for a variety of transportation improvements, including both roadway and non-roadway transportation projects. If the citizens of Stephens County decide to approve future referenda, funding may be generated for future projects. Additionally, business groups and civic organizations may be willing to contribute, especially for pedestrian and bicycle improvements. The most likely funding sources for the recommended projects were also listed in Table 35.

Project Phasing

Although a large number of transportation projects have been recommended, it is not practical or feasible to implement all improvements simultaneously. A phasing plan was therefore developed to provide a starting point to use in prioritizing the recommended projects for further evaluation, funding, and implementation. The prioritization was based on the level of deficiency to be mitigated or eliminated by the project, the estimated cost and the difficulty of implementation from a planning or design perspective. The three time periods used were as follows:

- Short-range period: 2004 through 2007

- Medium-range period: 2008 through 2014
- Long-range period: 2015 through 2025

The specific phase recommended for each improvement was previously outlined in Table 35.

Project Implementation

In order to enhance the potential of success for this proposed plan, the following implementation guidelines are offered:

- Continue public outreach efforts for project-specific details as part of studying the project feasibility.
- Secure funding for each short-range project.
- Identify ways to utilize resources to accelerate the planning, design and construction process for the recommended projects.
- Undertake study to determine more detailed cost and design elements for the recommended projects.

11 White County

Transportation needs were identified for White County through the correlation of several sources, including the following: existing transportation conditions, projected transportation needs, stakeholder input and comments from the public involvement effort. Transportation projects to respond to those needs were then developed using the goals and strategies presented in this report. Details, such as estimated costs and phasing, are given for each recommended project.

Summary of Findings

White County is the second least populous of the four study counties but has experienced the greatest population growth in the last decade. White County is also home to a number of tourist sites, including the Sautee-Nacoochee Valley, the town of Helen, and Unicoi State Park. Both local and tourist traffic contribute to traffic congestion and transportation needs within the county. A summary of the existing and projected traffic conditions follows:

- **Roadway capacity** – Most traffic congestion within White County is located on the major routes: US 129 / State Route 11, State Route 17, State Route 75 and State Route 115. Congestion especially occurs on these routes within Helen and Cleveland during peak tourist months and times of day.
- **Intersection safety** - The 32 vehicle crash sites identified within White County were primarily on State Route 11, State Route 75 and State Route 115. Site evaluations, as well as further data research, were performed to identify appropriate safety improvements.
- **Bridge and major culverts** - Of the 69 bridge and major culvert structures in White County, 12 structures have a sufficiency rating below 65. The majority of these deficient structures carry county routes, rather than state routes or city streets. A complete inventory is included in Appendix D. Bridge and major culvert structures are inventoried in a federally-mandated project that includes an annual inspection and submittal for deficient structures for replacement or rehabilitation. Because of this existing program, no additional bridge and major culvert structure recommendations were made as part of this report.
- **Pavement condition** - No GDOT inventoried roadway was reported as having a poor serviceability rating within White County. Additional visual inspections were made as part of the roadway evaluations.
- **Pedestrian facilities** - Of the residential centers in White County, both Helen and Cleveland have existing municipal sidewalks located within the city limits. The three designated bicycle routes in the study area are already interconnected and allow travel to all of the study counties. Stakeholder and public involvement comments indicated interest in improved pedestrian and bicycle facilities throughout White County. Existing bicycle and pedestrian facilities are inventoried in Appendix E. These maps also include projects included in the local comprehensive plan or short-term work program.

- **Transit service** - White County currently has no operating transit service. Stakeholder and public involvement comments have indicated a desire for county transit services.
- **Other transportation services** - Other transportation services in White County include human service transportation and medical transportation. There is no current taxi service, intercity bus service, passenger rail or local airport within White County.

Recommended Improvements

The collected data was used to develop a series of recommended transportation improvements. Existing GDOT transportation projects addressed some of the identified White County deficiencies. Additional projects are proposed to mitigate the additional roadway and alternative mode needs. Table 36 presents both previously-identified and additional projects with brief descriptions of its location, anticipated benefits, suggested phase plan, estimated costs and suggested funding sources. The roadway projects are also shown graphically on Figure 46. Maps of the pedestrian and bikeway improvement projects are included in Appendix G.

Specific locations included for Project 17 are those that were investigated in this study due to LOS analysis results, vehicle crash data, stakeholder input or comments from the public involvement process. Although no recommendations are made for these locations at this time, they are recommended for future monitoring. A list of locations may be found in Appendix H.

Environmental Considerations

With almost 50 percent of its area designated as national forest, the resources of natural beauty and historical significance within White County can make improvements challenging to implement. Although these environmental considerations were kept in mind when determining the recommended improvements, further investigation will be required for each project as part of the study and design phases. Areas such as the Sautee-Nacoochee Community have National Register Historic Districts located in prominent areas. Many other cities in the study area, such as Cleveland, have National Register sites or eligible historic districts. When building new sidewalks in listed or eligible historic districts, a preservation professional should be consulted to identify significant landscape elements that should not be altered. New or improved facilities are compatible with historic and environmental preservation with the proper care.

Environmental justice also plays a part in project evaluation to avoid disproportionately high and adverse impacts on low-income and minority populations and to ensure that these groups benefit from transportation improvements. Countywide, the program of recommended improvements will improve safety, access and mobility for all users of the transportation system in White County. However, there is a significant minority concentration in the southeastern quadrant of White County. Twelve of the recommended roadway projects are located in this part of the county and could have a potential impact on these populations. They include:

Table 36
White County Recommended Improvements

No.	GDOT Prev ID	Location	Project	Need Addressed	Anticipated Benefits	Phasing Time Period			Estimated	Potential Funding Source				
						Short	Mid	Long	Cost*	Federal	State	County	Local	Private
1		US 129 / SR 11 from proposed Cleveland bypass to Lumpkin County line (milepoint 7.70 to 14.97 on SR 11)	Add passing lanes.	Existing LOS on SR 11 is reported as LOS F from milepoint 6.85 to 9.84. Future LOS on SR 11 is projected to be LOS F from milepoint 6.85 to 14.97. Stakeholder comments included the suggestion that SR 11 needed widening or possible center turn lane.	Improves traffic operations.			X	$7,688,000	X	X	X		
2	X	US 129 / SR 11 from White County line to proposed Cleveland bypass (milepoint 0.00 to 4.98 on SR 11)	Widen roadway (two to four lanes).	Existing LOS on SR 11 is reported as LOS F from milepoint 0.00 to 5.76. Future LOS on SR 11 is projected to be LOS F from milepoint 0.00 to 5.76. Stakeholder comments included the suggestion that SR 11 needed widening or turn lanes to help ease existing congestion during peak periods.	Relieves congestion and addresses public involvement point of concern. Also expected to provide some congestion relief for parallel roadways, such as CR 251 (Highway 75 South). GDOT should monitor this roadway and make improvements as necessary until the ultimate roadway project is implemented.			X	GDOT	--	--	--	--	--
3		SR 115 at SR 254 intersection (approximately milepoint 15.07 on SR 115)	Intersection improvements.	There were five vehicle crashes recorded in 2001 for the intersection of SR 115 at SR 254.	Improves safety.		X		$480,000	X	X	X		
4		SR 115 from White County line to proposed connector (milepoints 9.64 to 15.48 on SR 115)	Widen roadway (two to four lanes).	Existing LOS on SR 115 is reported as LOS F from milepoint 6.26 to 12.49 and LOS E from milepoint 12.49 to 15.5. Future LOS on SR 115 is projected to be LOS F from milepoint 6.26 to 15.5. Stakeholder comments included request for improvements to SR 115.	Relieves congestion and addresses stakeholder point of concern. GDOT should monitor this roadway and make improvements as necessary until the ultimate roadway project is implemented.			X	$12,513,000	X	X	X		
5	X	SR 384 from SR 115 to SR 75 (milepoints 4.00 to 11.32 on SR 384)	Add passing lanes.	Future LOS on SR 384 is projected to be LOS D from milepoint 3.35 to 11.35. Stakeholders commented on need for improved connections to Helen, Georgia.	Improves traffic operations.		X		GDOT	--	--	--	--	--
6		SR 75 Alternate from SR 11 to Helen (milepoints 3.01 to 11.11 on SR 75 Alternate)	Improve and add passing lanes,	Future LOS on SR 75 is projected as LOS F. Future LOS on SR 75 Alternate is projected to be LOS D from milepoint 8.83 to 11.11.	Improve operations and creates better alternative route to Helen to relieve SR 75.			X	$8,462,000	X	X	X		
7	X	SR 75 from SR 75 Alternate to Asbestos Road (milepoints 0.00 to 2.21 on SR 75)	Add center turn lane.	Stakeholder comments included request to make sure that the center turn lane be extended to the new recreational area.	Improve traffic operations.	X			GDOT	--	--	--	--	--
8		SR 75 at SR 17 intersection (approximately milepoint 6.76 on SR 75)	Intersection improvements.	There were five vehicle crashes recorded in 2001 for the intersection of SR 75 at SR 17. Field observation also indicated delays caused by turning movements. Public involvement comments included concern about the safety of this intersection and suggested installing a traffic signal or a right turn lane from SR 17 to SR 75.	Improve operations, potentially reduce rear-end crashes and address public point of concern.	X			$480,000	X	X	X		
9		SR 75 at SR 384 intersection (approximately milepoint 5.37 on SR 75)	Intersection improvements.	There were four angle, six rear-end and two sideswipe vehicle crashes recorded in 2001 for the intersection of SR 75 at SR 384. Field observation indicated delays caused by turning movements, especially right turns from SR 384 to SR 75.	Reduce northbound rear-end crashes and improve operations.	X			$480,000	X	X	X		
10	X	CR 204 (Westmoreland Road) from SR 11 to SR 384 (milepoints 0.00 to 7.00 on SR 560)	Roadway improvements along existing Westmoreland Road with extensions to increase connectivity.	Stakeholder comments supported these planned improvements and cited need for east-west connectivity.	Relieves congestion on existing east-west facilities by providing additional connectivity. Addresses stakeholder concern about east-west thoroughfares.			X	GDOT	--	--	--	--	--

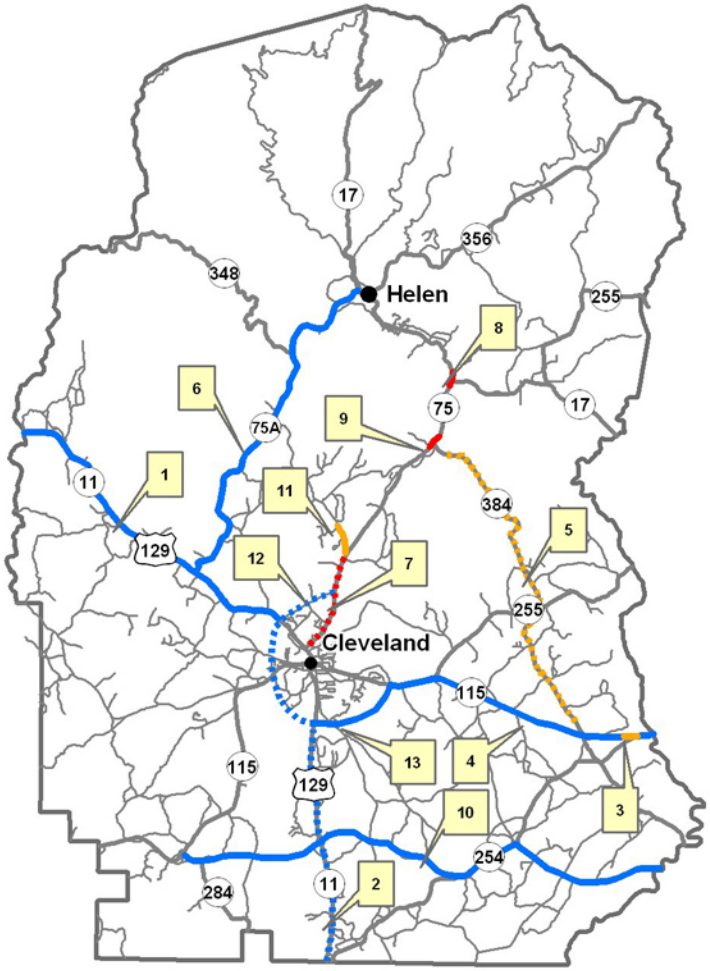
* Estimated costs do not include right-of-way.
GDOT These projects have been previously identified by GDOT or will be performed as part of normal operations.
UC These projects are currently under construction.
-- Projects that are previously identified are already assigned to a funding source.

Table 36
White County Recommended Improvements
(Continued)

No.	GDOT Prev ID	Location	Project	Need Addressed	Anticipated Benefits	Phasing Time Period			Estimated	Potential Funding Source				
						Short	Mid	Long	Cost*	Federal	State	County	Local	Private
11		CR 88 (Asbestos Road) from new recreation center to SR 75 (milepoints 0.00 to 0.66 on CR 88)	Widen roadway to standard design width.	Future LOS is projected to be LOS D from milepoint 0.00 to 1.91. Stakeholder comment and field measurement showed 18 feet of pavement for two travel lanes.	Improves traffic operations on main route to new recreation center.		X		$323,000		X	X	X	
12	X	Cleveland West Bypass	New roadway construction from SR 11 to SR 75.	Existing and future LOS deficiency on state routes through Cleveland. Stakeholder and public involvement comments supported this planned project.	Relieves congestion on state routes within Cleveland. Addresses stakeholder and public points of concern.		X		GDOT	--	--	--	--	--
13		SR 11 to SR 115 Connector	New roadway construction between SR 115 to West Bypass intersection with SR 11.	Existing and future LOS deficiency on state routes through Cleveland. Stakeholder comments requested a partial east bypass around Cleveland. Public involvement comments indicated a desire to allow through traffic to pass around Cleveland to reduce congestion.	Relieves additional congestion on state routes within Cleveland.			X	$13,954,000	X	X	X	X	
14		Countywide	Listing of dirt roads to be paved.	Stakeholder comments included the suggestion that dirty roads be inventoried to facilitate roadway paving projects.	Administration improvement to facilitate roadway paving.	X	X	X	GDOT		X	X		
15		Countywide	Monitor additional locations of public concern.	Additional locations were identified through public involvement and stakeholder meetings that did not currently show LOS, congestion or safety deficiencies but that should be monitored in the future.	Improves response efficiency to developing transportation deficiencies and addresses stakeholder and public involvement points of concern.	X	X	X	GDOT		X	X		
16		Countywide	Study transit feasibility.	Stakeholder and public involvement comments included the desire for improved transit services.	Address need and desire for transit service without instituting a standard transit system (inefficient in rural setting).	X	X	X	$30,000	X	X	X	X	X
17		Sautee	Bicycle facilities east from SR 75 along SR 17 to Sautee Community Assoc.	Connection between SR 75 and Sautee Community Association.	Increases connections between existing bicycle facilities and desired destinations.	X			$756,000	X	X	X	X	X
18		Cleveland	Bicycle facilities from W.O.W. Park to Truitt McConnell College.	Connection between W.O.W. Park and Truitt McConnell College.	Increases connections between existing bicycle facilities and desired destinations.	X			$547,000	X	X	X	X	X
19		Helen	Bicycle facilities southeast from SR 356 along SR 75 to SR 17.	Connection between SR 75 and SR 17.	Increases connections between existing bicycle facilities and desired destinations.	X			$944,000	X	X	X	X	X
20		Helen	Pedestrian facilities for City Center links.	Pedestrian facilities to improve existing City Center connections.	Increases connections between existing pedestrian facilities and desired destinations.	X			$117,000	X	X	X	X	
21		Helen	Pedestrian facilities for proposed Riverwalk Area.	Pedestrian facilities to improve existing connections along the proposed Riverwalk Area.	Increases connections between existing pedestrian facilities and desired destinations.			X	$236,000	X	X	X	X	
22		Helen	Pedestrian facilities for City Center to the Hardeman Estate.	Pedestrian facilities to connect the City Center with the Hardeman Estate.	Increases connections between existing pedestrian facilities and desired destinations.		X		$74,000	X	X	X	X	
23		Cleveland	Pedestrian facilities for primary school to elementary school.	Pedestrian facilities to connect schools and SR 115.	Increases connections between existing pedestrian facilities and desired destinations.		X		$118,000	X	X	X	X	
24		Cleveland	Pedestrian facilities for City Center to W.O.W. Park links.	Pedestrian facilities to connect City Center and W.O.W. Park.	Increases connections between existing pedestrian facilities and desired destinations.	X			$285,000	X	X	X	X	

* Estimated costs do not include right-of-way.
GDOT These projects have been previously identified by GDOT or will be performed as part of normal operations.
UC These projects are currently under construction.
-- Projects that are previously identified are already assigned to a funding source.

White County Recommended Projects



Short Range
Short Range - Previously Identified by GDOT
Medium Range
Medium Range - Previously Identified by GDOT
Long Range
Long Range - Previously Identified by GDOT
1 Reference ID
State Routes
County and Local Roads

N
Not to Scale

Recommended Projects and Descriptions

Reference ID: 1 - L
Add Passing Lanes on US 129 / SR 11 from White Co. Line to Cleveland Bypass

Reference ID: 2 - L
Widen US 129 / SR 11 to 4 Lanes from White Co. Line to Cleveland Bypass

Reference ID: 3 - M
SR 115 at SR 254: Intersection Improvements

Reference ID: 4 - L
Widen SR 155 to 4 Lanes from White Co. Line to proposed connector

Reference ID: 5 - M
Add Passing Lanes on SR 384 from SR 115 to SR 75

Reference ID: 6 - L
Improve and Add Passing Lanes on SR 75 Alt from SR 11 to Helen

Reference ID: 7 - S
SR 75 from SR 75 Alt to Asbestos Rd: Add Center Turn Lane

Reference ID: 8 - S
SR 75 at SR 17: Intersection Improvements

Reference ID: 9 - S
SR 75 at SR 384: Intersection Improvements

Reference ID: 10 - L
CR 204: Road Improvements along existing Westmoreland RD

Reference ID: 11 - M
Widen CR 88 (Asbestos Road) from New Recreation Center to SR 75

Reference ID: 12 - L
Cleveland W Bypass: New Road Construction from SR 11 to SR 75

Reference ID: 13 - L
SR 11 to SR 115 Connector: Consider New Road to Relieve Congestion

Figure 46

Source: Georgia Department of Tranportation.
This map is intended for planning purposes only. July 2003.

1. Project No. 2 - US 129 / State Route 11 from White County line to proposed Cleveland bypass; widen roadway (two to four lanes).
2. Project No. 3 - State Route 115 at State Route 254 intersection; intersection improvements.
3. Project No. 4 - State Route 115 from White County line to proposed connector; widen roadway (two to four lanes).
4. Project No. 5 - State Route 384 from State Route 115 to State Route 75; add passing lanes.
5. Project No. 6 - State Route 75 Alternate from State Route 11 to Helen; improve and add passing lanes.
6. Project No. 7 - State Route 75 from State Route 75 Alternate to Asbestos Road; add center turn lane.
7. Project No. 8 - State Route 75 at State Route 17 intersection; intersection improvements.
8. Project No. 9 - State Route 75 at State Route 384 intersection; intersection improvements.
9. Project No. 10 - County Road 204 (Westmoreland Road) from State Route 11 to State Route 384; roadway improvements along existing Westmoreland Road with extensions to increase connectivity.
10. Project No. 11 - County Road 88 (Asbestos Road) from new recreation center to State Route 75; widen roadway to standard design width.
11. Project No. 12 - Cleveland West Bypass; new roadway construction from State Route 11 to State Route 75.
12. Project No. 13 - State Route 11 to State Route 115 Connector; new roadway construction between State Route 115 to West Bypass intersection with State Route 11.

With the exception of the roadway widening projects, these projects will have minimal impacts in terms of population displacement or land consumption, while providing needed safety and operational benefits, particularly the intersection improvements on SR 75 where they have been a high incidence of accidents. The roadway widening projects along US 129, SR 115, SR 384, SR 75 and CR 88 (Asbestos Road) will provide much needed congestion relief along these corridors. However, appropriate planning and avoidance/minimization of impacts will be required during project development to ensure that minorities in this area are not adversely impacted. The two new roadway construction projects, in particular, must meet extensive federal requirements under the National Environmental Policy Act (NEPA) to assess the environmental, health, socioeconomic, social and cultural impacts of the proposed alignments. Recommended pedestrian and bicycle improvements will improve safety and access to businesses, public services, schools, and other facilities.

Additional Alternate Mode Observations

White County does not currently operate a transit program. In White County, where no rural transit program has previously been provided, results from the MTPT, which were based on characteristics from other Georgia rural counties, indicated that need existed for a program.

The public involvement process also indicated a desire for transit services. Further study should be given to rural transit feasibility.

Recommendations for enhancing multimodal travel between counties include linking interior city bike routes to the statewide routes. New bike routes have been recommended within city limits to the statewide routes, as shown in Appendix G. For example, several new bike routes are recommended in Toccoa and White County that link with State Bicycle Route 85. These new routes link the center of Toccoa to State Bike Route 85 at GA Hwy 17 and then out to Traveler's Rest, a popular State Historic Site. In addition, as improvements are made to the roads along State Bicycle Routes, designers are encouraged to incorporate designated bike lanes where possible.

Estimated Costs

Order of magnitude cost estimates were prepared to provide a planning level estimate of resources needed for the implementation of various projects. The estimates may be considerably higher or lower than actual costs, based on a number of factors, including complexity of the design, utility relocation, property values and mitigating environmental impacts.

For the projects previously identified by GDOT or that are already under construction, costs have previously been estimated by GDOT and are not listed in the following tables. Additional projects that would be part of normal GDOT operations are also not given an estimated cost. Because of the highly variable costs and needs for right-of-way, no right-of-way acquisition costs are estimated for the additional projects recommended by this report. For these projects, the costs previously shown in Table 36 are therefore significantly lower than if a full estimate was completed and should be used with caution. The estimated costs were based on GDOT source material for roadway segments in northeast Georgia and on intersection improvement costs developed for other studies performed by DWA for GDOT.

Potential Funding Sources

The most likely funding sources are identified for each project, based largely on the location of the project and responsible agencies. In some situations, it may be possible for the county or local agencies to accelerate the process of upgrading facilities by increasing local funding participation. The most likely funding sources for White County are listed as follows:

- General Funds
- Special Purpose Local Options Sales Tax (SPLOST)
- Local Options Sales Tax (LOST)
- FHWA, Transportation Enhancement Activities funds
- FTA, Rural Public Transportation funds
- State Aid, County / City contracts
- Federal Lands Program, Scenic Byways

Other options, considered less likely for White County specifically, include:

- Appalachian Regional Commission program grants
- Transit farebox revenues
- Public/private partnerships, such as Community Improvement Districts (CIDs)
- Development impact fees

White County currently has one LOST and one SPLOST programs in operation. These initiatives can provide millions of dollars in local funds for a variety of transportation improvements, including both roadway and non-roadway transportation projects. If the citizens of White County decide to approve future referenda, funding may be generated for future projects. Additionally, business groups and civic organizations may be willing to contribute, especially for pedestrian and bicycle improvements. The most likely funding sources for the recommended projects were also listed in Table 36.

Project Phasing

Although a large number of transportation projects have been recommended, it is not practical or feasible to implement all improvements simultaneously. A phasing plan was therefore developed to provide a starting point to use in prioritizing the recommended projects for further evaluation, funding, and implementation. The prioritization was based on the level of deficiency to be mitigated or eliminated by the project, the estimated cost and the difficulty of implementation from a planning or design perspective. The three time periods used were as follows:

- Short-range period: 2004 through 2007
- Medium-range period: 2008 through 2014
- Long-range period: 2015 through 2025

The specific phase recommended for each improvement was previously outlined in Table 36.

Project Implementation

In order to enhance the potential of success for this proposed plan, the following implementation guidelines are offered:

- Continue public outreach efforts for project-specific details as part of studying the project feasibility.
- Secure funding for each short-range project.
- Identify ways to utilize resources to accelerate the planning, design and construction process for the recommended projects.
- Undertake study to determine more detailed cost and design elements for the recommended projects.

12 Conclusions

Habersham, Rabun, Stephens and White Counties have growing populations as well as burgeoning tourist activity to a multitude of scenic attractions. The associated traffic generates difficult transportation planning challenges. Improvements were selected that can be implemented without changing the fundamental character of the study area. The purpose of this study was to provide information and transportation recommendations for the four counties in order to address their transportation needs in a long-range transportation planning process.

Public involvement, technical data and site observations were features emphasized during the process. The public involvement process used techniques such as media releases, stakeholder meetings, public involvement presentations and extensive interaction with local GDOT staff. Some of the technical data was obtained from existing reporting programs such as the Highway Performance Monitoring Software and the Multimodal Transportation Planning Tool. Other data was provided by GDOT, such as bridge and major culvert inventories and vehicle crash incidents.

Based on the public involvement process, data collection and analysis, and working with GDOT staff, a multimodal program of projects was prepared for each county. The proposed projects were reviewed at a stakeholder committee meeting. Regional transportation recommendations are made in Section 7. The final proposed county-specific programs are included in Sections 8 through 11.

The program of projects requires periodic review of assumptions and solutions to ensure they still address an appropriate need effectively. However, these proposed transportation plans provide a comprehensive look at the existing and expected transportation needs in Habersham, Rabun, Stephens and White Counties.