

# ***Gainesville – Hall Transportation Study 2030 Long Range Transportation Plan***

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Prepared by the  
Gainesville-Hall Metropolitan Planning Organization  
with assistance from  
Day Wilburn Associates, Inc.

In cooperation with the  
Georgia Department of Transportation  
Federal Highway Administration  
Federal Transit Administration



***GHMPO***

***Gainesville - Hall  
Metropolitan Planning Organization***

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Flowery Branch - Gainesville - Hall County - Oakwood





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## **GHMPO Committees**

### **Policy Committee**

#### **Voting**

Gary Gibbs, Chairman, Hall County Board of Commissioners, Policy Committee Chair  
George Wangemann, Mayor, City of Gainesville, Policy Committee Vice-Chair  
Bryan Puckette, Mayor, City of Flowery Branch  
Lamar Scroggs, Mayor, City of Oakwood  
Cindy Van Dyke, GDOT, representing GDOT Commissioner Harold Linnenkohl

#### **Non-voting**

Tony Dittmeier, Federal Transit Administration  
Andrew Edwards, Federal Highway Administration  
Steve Kish, GDOT Planning and Intermodal Development  
Todd Long, GDOT District 1, District Engineer  
Phillipa Lewis Moss, Hall Area Transit  
Kip Padgett, City of Gainesville, Technical Coordinating Committee Chair  
Hugh Tyner, Citizens Advisory Committee Chair  
Bill Meyer, GHMPO Director

### **Citizens Advisory Committee**

Hugh Tyner, Oakwood, Chair  
Ken Cochran, Hall County, Vice Chair  
Augie DeAugustinis, Hall County  
Cooper Embry, Gainesville  
Doris Evans, Hall County  
Harold Goss, Hall County  
Amos Goudelock, Gainesville  
Mack Jones, Flowery Branch  
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Charles Mensinger, Oakwood  
Maurice Robbins, Hall County  
Frank Simpson, Gainesville  
Lee Steigele, Hall County  
Jim Syfan, Hall County  
J.R. Wright, Gainesville





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### **Technical Coordinating Committee**

#### **Voting**

Kip Padgett, Planning Director, City of Gainesville, Chair  
Stan Brown, City Manager, City of Oakwood, Vice Chair  
Perry Eisenach, Public Works Director, City of Gainesville  
Chris Rainwater, City Manager, City of Flowery Branch  
Verdell Hawkins, Transportation Planner, GDOT  
Phillipa Lewis Moss, Hall Area Transit  
John McHenry, Transportation Planner, GHMPO  
Russell McMurry, District Pre-Construction Engineer, GDOT  
Bill Meyer, Director, GHMPO  
James Miller, County Engineer, Hall County  
Jerry Presley, Transportation Planner, Georgia Mountains RDC  
Scott Puckett, Traffic Engineer, Hall County

#### **Non-Voting**

Steven Ballowe, Superintendent, Gainesville City Schools  
Freida Black, Intermodal Planner, GDOT  
Joe Burnett, Main Street Gainesville  
Ken Cochran, Vice Chair, Citizens Advisory Committee  
Steve Cronic, Sheriff, Hall County  
Tony Dittmeier, Transportation Program Specialist, Federal Transit Authority  
Kit Dunlap, President, Greater Hall Chamber of Commerce  
Dennis Fordham, Superintendent, Hall County Schools  
Frank Hooper, Police Chief, City of Gainesville  
Randall Moon, Police Chief, City of Oakwood  
Christy Moore, Northeast Georgia Medical Center  
Andrew Edwards, Metropolitan Planning Specialist, Federal Highway Administration  
Gerald Lanich, Police Chief, City of Flowery Branch

These committee members contributed to the development of this plan and/or were seated at the time of its adoption.



## **Introduction**

This is the first Long Range Transportation Plan for the newly formed Gainesville-Hall Metropolitan Planning Organization (GHMPO). The document began as a portion of a Multi-County Study initiated by the Georgia Department of Transportation (GDOT) in 2001 to update planning in Counties that would likely become part of the Atlanta Metropolitan Area or Atlanta air quality non-attainment area in the near future. However, in 2002 it was announced that the Gainesville and vicinity, with a population of 88,680, qualified as its own urbanized area based on the 2000 Census. This designation triggered federal requirements, including the establishment of a Metropolitan Planning Organization (MPO) and compliance with the federally regulated metropolitan planning process. An MPO was established to ensure that existing and future expenditures for transportation projects and programs are based on a continuing, cooperative and comprehensive (3-C) planning process.

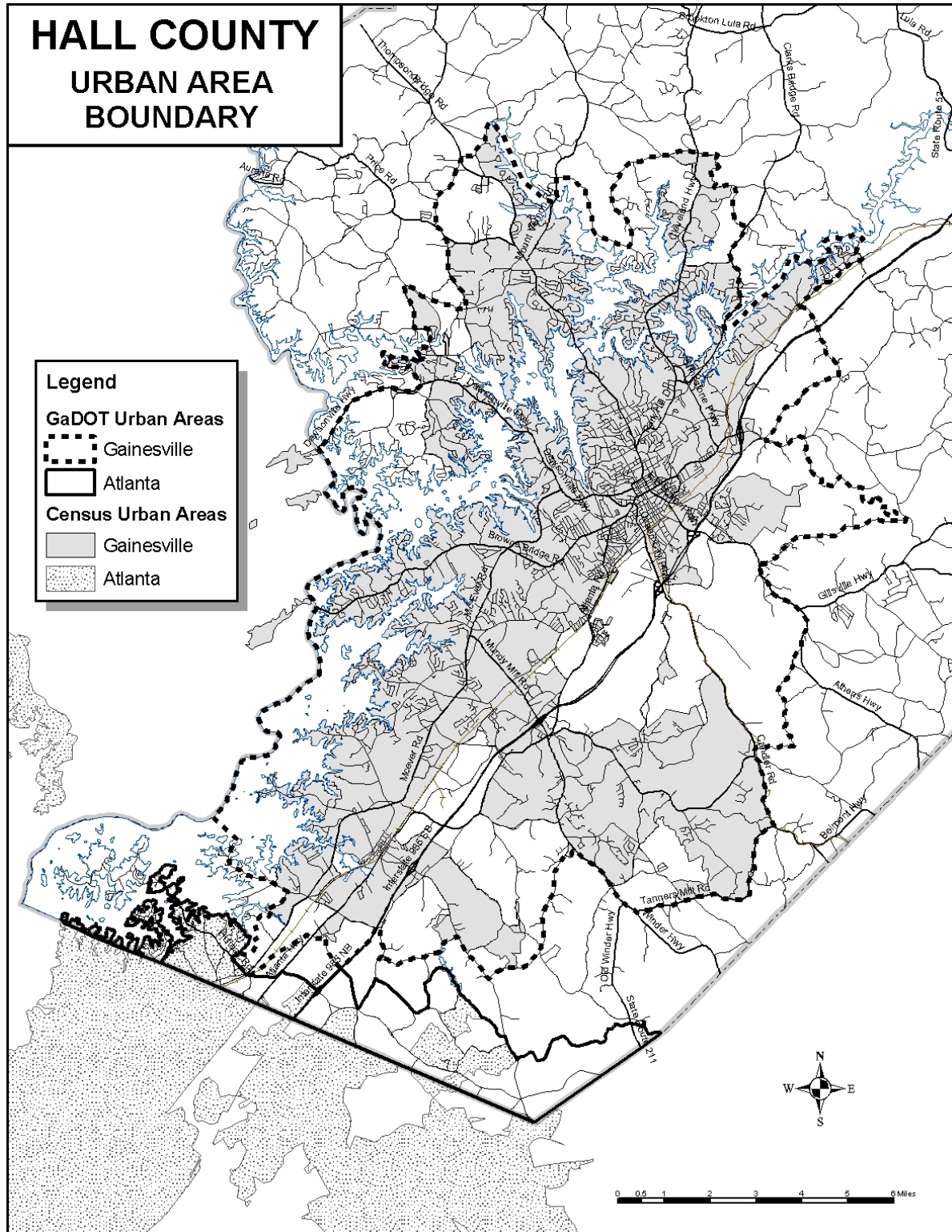
In early 2003, the Hall County Planning Department was designated as the host of the Metropolitan Planning Organization (MPO) for the area. The GHMPO is responsible for conducting and maintaining the Gainesville-Hall Transportation Study (GHTS). The GHMPO has established three committees: the Policy Committee made up of elected officials and the GDOT Commissioner's representative; the Technical Advisory Committee, made up of local government and GDOT staff; and the Citizens Advisory Committee, made up of citizens appointed by the four member local governments. Membership lists of these committees are included at the beginning of this document.

Gainesville and Hall County have had a transportation planning process for over 20 years that paralleled many of the activities of an MPO. The latest version of the area's transportation plan was adopted in 1997. This Long Range Transportation Plan will be required to be updated at least every three years.

The new GHMPO planning process is a complex one for a newly-designated, smaller MPO. The entirety of Hall County has been designated as the study area for the GHMPO. The County includes the Gainesville urbanized area as well as a small portion of the metropolitan Atlanta urbanized area along its southern edge (approximately 2.7 percent of the County land area). At the same time, a small portion of the Gainesville urbanized area reaches west into adjoining Forsyth County, which is part of the Atlanta MPO administered by the Atlanta Regional Commission (ARC). By agreement, there is a coordinated process where the ARC assumes the planning for the Forsyth portion of the Gainesville urban area, while the GHMPO will plan for the portion of the Atlanta urban area in Hall.

Hall County has also recently been designated as part of a 20 County, 8 hour ozone air quality non-attainment area, requiring conformance with the State Implementation Plan (SIP) for air quality to secure federal transportation funding. Therefore, the area's transportation challenges must be met not only in the context of local constraints, such as funding and the growth of congestion, but also within the constraints of regional air quality planning.

**Figure 1 –  
Gainesville and Atlanta Urban Area Boundaries within Hall County**





### Area Description

Hall County encompasses approximately 394 square miles in northeast Georgia. As previously stated, the 2000 Census found that growth in the area qualified the County as urbanized, leading to the creation of the Gainesville-Hall Metropolitan Planning Organization (GHMPO). Approximately five percent of the County, lying within the Cities of Buford and Braselton and the unincorporated area, is also part of the GDOT Atlanta urban area. The County is home to six cities - Clermont, Flowery Branch, Gillsville, Lula, Oakwood, and the county seat, Gainesville, and the Cities of Buford and Braselton have annexed into Hall County.

Hall County has been characterized by steady growth over the last decade. It experienced a 45.9 percent growth rate from the years 1990 to 2000, increasing in population from 96,053 to 139,277. This rate is comparable to that of other suburban counties in the exurbs of Atlanta. Future year forecasts project that by 2030 Hall County's population will increase an additional 186,800 (134 percent). This dramatic growth has created new and more complex challenges to adequately address citizen and business mobility needs.

### *Historical and Geographic Context*

Mule Camp Springs, a trading post at the convergence of two Indian trails, was chartered as the City of Gainesville by the Georgia General Assembly in December 1823. During the 1800's, Gainesville slowly grew as a result of its mining, trading, services, and farming industries. In 1871, the area's first railroad – a route connecting Atlanta and Charlotte, North Carolina – initiated a significant expansion of Gainesville's economic affluence, as manufacturing activities were established. The community also became a resort center drawing patrons seeking its cool summer climate and nearby healing springs. Agriculture and agribusiness are mainstays of economic stability in the vicinity. Informally known as the Poultry Capital of the World, Gainesville and Hall County now generate over \$720 million in poultry related products and services annually.

The creation of Lake Sidney Lanier in 1957, provided 540 miles of shoreline along the western County boundary and offered visitor and residential amenities that contributed significantly to the County's economy and quality of life. Accelerated population growth since that time can also be attributed to both the continued growth of Gainesville as a regional economic center, as well as the continued rapid expansion of the Atlanta metropolitan area. Today Hall County has become one of the fastest growing counties in Georgia.

The history and geography of Hall County have resulted in a transportation system with unique strengths and weaknesses. Gainesville's role as a regional center of commerce has resulted in multiple state and federal highways converging on the City, while the physical constraint of Lake Lanier has precluded a good network of connectors between those routes. The major ridge – the sub-continental divide between the Chattahoochee and Oconee river basins – has attracted strong northeast to southwest routes through the center of the County, with few parallel routes away from that corridor. The relatively rugged topography of much of the County adds to the constraints on developing the transportation system.



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### *Development Patterns*

Historically, most development in the County had centered around Gainesville, with a secondary emphasis along the I-985 corridor. Over the past 10 years, the impact of growth from Gwinnett County has been felt along the southern County boundary, as evidenced by the incursion of the Atlanta urban area approximately 1 mile into the County along much of that area. More recently, there appears to be increasing residential growth pressure from the southeast in Barrow and Jackson Counties, and in the northwest corner of the County, which lies only a mile from the northernmost reaches of the fast growing State Road 400 corridor.

The County's Comprehensive Plan shows primary commercial and industrial growth to be centered in Gainesville and along the I-985/SR 365 corridor, with a secondary element between SR 211 and SR 53 in the southern part of the County. While most major retail development has historically been centered in Gainesville, it appears that major retailers are now ready to establish additional locations in both the southern and northern portions of the County.

### Transportation Planning Challenges

As Gainesville and Hall County grow internally and regionally, congestion in downtown Gainesville will be a continuing challenge. With little available right-of-way, the traditional response to congestion – road widening – becomes less and less practical. One of Gainesville-Hall County's public policy principles is that increasing capacity in downtown Gainesville would only be implemented after careful consideration and study.

Another guiding principle for the plan is that alternative transportation modes, such as transit, sidewalks, bike paths, and travel demand management techniques, will continue to be emphasized to accommodate increasing growth and demand on the system.

One way the City and County are working to help resolve this issue is by including signal upgrades in its program of projects. Another initiative, the Midtown Greenway, will use CSX Railroad right-of-way as a multiuse trail, thus offering pedestrian and bicycle transportation modes as viable alternatives to vehicles.

Hall County is facing a challenge similar to that experienced by the City of Gainesville as portions of the County, particularly in the south, become urbanized: providing mobility in a more congested, high value property environment. As a result, strategies similar to those considered within the City of Gainesville must be employed in the County's urbanized area. However, the greater percentage of vacant property in rural Hall County will enable growth challenges to be met by the full range of transportation improvements. For instance, regional facilities can be widened in the County at less cost than within the City and urbanized areas.

Gainesville and Hall County will be faced with many challenges, including implementing long and short-term transportation planning. The City and County are experiencing significant population and employment growth, which is expected to continue into the future. It also must now deal with the constraints of being designated in non-attainment for air quality under the Environmental Protection Agency's (EPA) 8-hour standards. The federal transportation planning process takes into account and balances transportation needs and environmental impacts. The 1998 Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) and the Clean Air Act Amendments (CAAA) of 1990 challenge policy makers to maximize mobility, connectivity,





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and accessibility while protecting the environment. In areas that exceed federal air quality standards, the transportation planning process must ensure that transportation programs perform within the limits of federal emissions restrictions.

All of these factors describe the special transportation context of Gainesville-Hall County. The financial, geographic and growth challenges are considerable, and the need for coordinated regional solutions adds an additional level of complexity to the planning process. Table 1 reinforces this bureaucratic element of the challenge by identifying each agency's roles and responsibilities in the transportation planning process.

**Table 1 -  
Agency Roles and Responsibilities**

<b>GHMPO</b>	<b>ARC</b>	<b>GDOT</b>
<ul style="list-style-type: none"> <li>• Administer transportation planning process</li> <li>• Update and maintain land use and socio-economic data for travel forecasting</li> <li>• Coordinate with ARC and GDOT on TIP, LRTP, and CMS.</li> <li>• Conduct public involvement process</li> <li>• Develop Unified Planning Work Program (UPWP)</li> <li>• Maintain the Transportation Public Involvement Plan (TPIP)</li> <li>• Prepare cost estimates for GDOT proposed CWP projects</li> <li>• Provide maps and transportation system data</li> </ul>	<ul style="list-style-type: none"> <li>• Work with GHMPO in implementing planning process</li> <li>• Work with GHMPO to coordinate long range Regional Transportation Plan (LRTP) in the Atlanta urbanized area.</li> <li>• Work with GHMPO to develop short range Transportation Improvement Program (TIP) in the Atlanta urbanized area.</li> <li>• Perform air quality conformity analysis</li> <li>• Coordinate with GHMPO on the Congestion Management System (CMS) in the Atlanta urbanized area.</li> </ul>	<ul style="list-style-type: none"> <li>• Assist in implementing planning process</li> <li>• Prepare Statewide Transportation Improvement Program (STIP)</li> <li>• Prepare Construction Work Program (CWP)</li> <li>• Meet with County annually for STIP development and additionally as requested</li> <li>• Program County projects using federal funds</li> <li>• Provide maps and transportation system data</li> <li>• Maintain the travel demand model</li> <li>• Maintain HPMS Data</li> </ul>



## **Goals and Objectives**

The Long Range Transportation Plan addresses the challenges brought on by substantial population, employment, and travel growth, as well as air quality concerns. The purpose of the plan is to propose a program of projects and strategies that meet the County's transportation needs and provides guidance in making decisions regarding future infrastructure needs and investments. Three goals are identified to help guide the development of a plan that meets this purpose.

In developing goals and objectives for the LRTP, direction was sought from many sources. Overall goals developed as part of the comprehensive planning process are the foundation for gauging the community's desires. The Gainesville-Hall County Comprehensive Plan included the following two transportation goals:

*Goal 1: Adequate Transportation System*

Gainesville and Hall County will provide a transportation system to move people and goods with a level of service that supports economic development goals and maintains a high quality of life.

*Goal 2: Transportation Alternatives*

Gainesville and Hall County will continue to explore and promote mechanisms to alleviate traffic congestion through the use of alternative modes of transportation and better management of the existing road network.

Federal highway and transit planning standards include seven factors that must be considered as part of the metropolitan planning process:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety and security of the transportation system for motorized and non-motorized users;
3. Increase the accessibility and mobility options available to people and for freight;
4. Protect and enhance the environment, promote energy conservation, and improve quality of life;
5. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
6. Promote efficient system management and operation;
7. Emphasize the preservation of the existing transportation system.



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These planning factors, along with the goals of the Comprehensive Plan, have led to the following goals for the LRTP. The three goals take these considerations and address them in the terms of the type of system, its characteristics, and how it integrates with and supports broader community goals.

The federal Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) emphasizes that transportation infrastructure investment should be driven by the need for improvement. The goals and performance measures established for the GHTS were designed to meet the County's transportation needs while simultaneously incorporating sensitivity to the transportation efforts of the region's multiple planning partners. The goals and performance measures for Hall County, provided in Table 2, consider the objectives outlined in the County's Comprehensive Plan, and support the previously cited planning factors as noted.

**Table 2 -  
GHTS Long Range Transportation Plan Goals and Performance Measures**

<b>Goal</b>		<b>Performance Measure</b>	<b>Planning Factors Supported</b>
<b>1</b>	Provide an integrated multi-modal and intermodal transportation system that includes more options to provide the desired level of accessibility and mobility of people and goods.	<ul style="list-style-type: none"><li>• Peak period volume to capacity (v/c) ratio</li><li>• Modal split</li><li>• Average trip time</li></ul>	1, 3, 5
<b>2</b>	Develop a transportation system that is safe, efficient, conserves energy, and promotes the attainment of air quality standards, and take steps to ensure the maintenance of that system.	<ul style="list-style-type: none"><li>• Accident rates</li><li>• Number of wetlands and historic areas protected from encroachment from transportation projects</li></ul>	1, 2, 4, 6, 7
<b>3</b>	Integrate transportation planning with land use decisions and other comprehensive planning tools to support economic development goals and enhance the area's quality of life.	<ul style="list-style-type: none"><li>• Ongoing monitoring of development approval process to measure plan compliance and support of GHTS goals</li><li>• Burdens on and benefits to environmental justice communities</li></ul>	1, 4

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, the GHMPO will be able to measure the effectiveness of selected programs in meeting its goals.





## **Planning Process**

The GHMPO Long Range Transportation Plan builds on a two-year effort to define a set of transportation programs and projects that address Hall County's existing and future transportation needs. The Plan will be used to guide future transportation investments and provides mobility solutions to accommodate the County's future population and employment growth.

Discussions with elected officials, community-based stakeholders, and County staff produced broad policy direction and appropriate goals. Information on travel behavior, community needs, and transportation preferences was obtained through interaction with community stakeholders and the general public, as well as review of previous transportation studies. Trends impacting transportation planning in Hall County were examined and forecasts of future growth were developed to determine overall needs and appropriate transportation strategies. From the goals and community needs and preferences, investment principles were developed to guide future transportation projects, programs and strategies.

An inventory of the existing transportation system was prepared and its performance assessed. The existing transportation network, combined with committed future projects, was examined to evaluate potential conditions in 2030. After examining future conditions and identifying deficiencies, potential transportation investment strategies to improve the 2030 network were identified and assessed.

Developing specific program and project recommendations required a detailed assessment of travel conditions for all roadways in the County. To fully address transportation needs, all modes were evaluated, including automobile, transit, carpool/vanpool, pedestrian and bicycle. Methods for reducing and managing system demands were also considered.

### Needs Assessment Process

Ensuring that the goals of the Hall County Long Range Transportation Plan are achieved requires an assessment of future mobility needs and community input regarding transportation needs and preferences. Mobility needs are defined through a travel demand modeling process based on the existing transportation network and planned population and employment growth. The effort requires developing future travel forecasts and identifying where future deficiencies might occur.

The modeling process utilized for development of the Hall County Long Range Transportation Plan relied on information compiled through examination of demographic trends, traffic flow patterns, and transportation demands.

The model was first used to examine base year 2000 travel conditions and establish a baseline for the assessment of future scenarios and performance measures. After establishing the base year 2000 and 2030 existing plus committed networks\*, the travel demand model tested

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\* The existing plus committed network includes all projects in the GDOT 2004-2006 STIP with right-of-way acquisition or construction in or before 2006.



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potential improvement strategies to determine their viability system-wide. Once potential improvements, were identified, specific travel corridors were examined in detail to determine an appropriate mix of options to provide a cohesive multimodal transportation system. Recommended projects were assessed against identified performance measures at the corridor and system-wide levels.

While the GHTS travel demand model has been used to help determine project needs, it was determined through the Atlanta Interagency Consultation process that the model is not suitable for use in the initial conformity determination for the Atlanta Nonattainment Area for ozone under the 8-hour standard. See Appendix F for details of the mechanism agreed to by the Interagency Consultation Group. For future conformity determinations, the modeling methodology for the Atlanta Nonattainment Area will be readdressed, and functional classifications and regional significance designations for the GHMPO will be coordinated with those of the Atlanta Regional Commission.

### Strategy Screening

To ensure that the overall goals of the Long Range Transportation Plan are achieved, recommended programs and projects should meet 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. To aid in screening program strategies, four questions were considered in defining and screening program strategies.

*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.

*Are the strategies appropriate and proportional to needs?* Strategies must not only be effective, but also appropriate and proportional to needs. For example, effective fixed route transit service is possible only for areas where the employment and/or population densities exceed certain levels.

*Are strategies cost effective?* Federal law requires transportation plans to be fiscally constrained. Consequently, detailed scrutiny is required to ensure the best possible use of financial resources.

*Are other options viable?* All viable options must be considered. For example, busways may be an alternative to light rail. 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. A variety of Transportation Demand Management (TDM) options could be implemented over a large area to reduce congestion and emissions rather than focusing on a specific road or corridor.



## **Socio-Economic Context**

The growth that led to the area's metropolitan area designation after the 2000 census has continued into the new century. Growth pressures based on the expansion of the Atlanta Metropolitan area will continue to increase, while the Gainesville area itself continues to attract jobs and residents on its own.

### Base Year and Area Wide Projections – Population and Employment

Table 3 below demonstrates the growth in population and employment under the base and 2030 land use scenarios. The base scenario reflects the land use as of 2000 as well as the Census 2000 population and employment. The 2030 land use reflects the land use plan adopted by Gainesville and Hall County and the anticipated 2030 population and employment projected by the Plan.

Based on the adopted land use plan, the population is projected at under 350,000. This fits an S-shaped population growth curve, indicating the pattern of an area approaching build-out at the end of the planning horizon.

**Table 3 -  
Population and Employment**

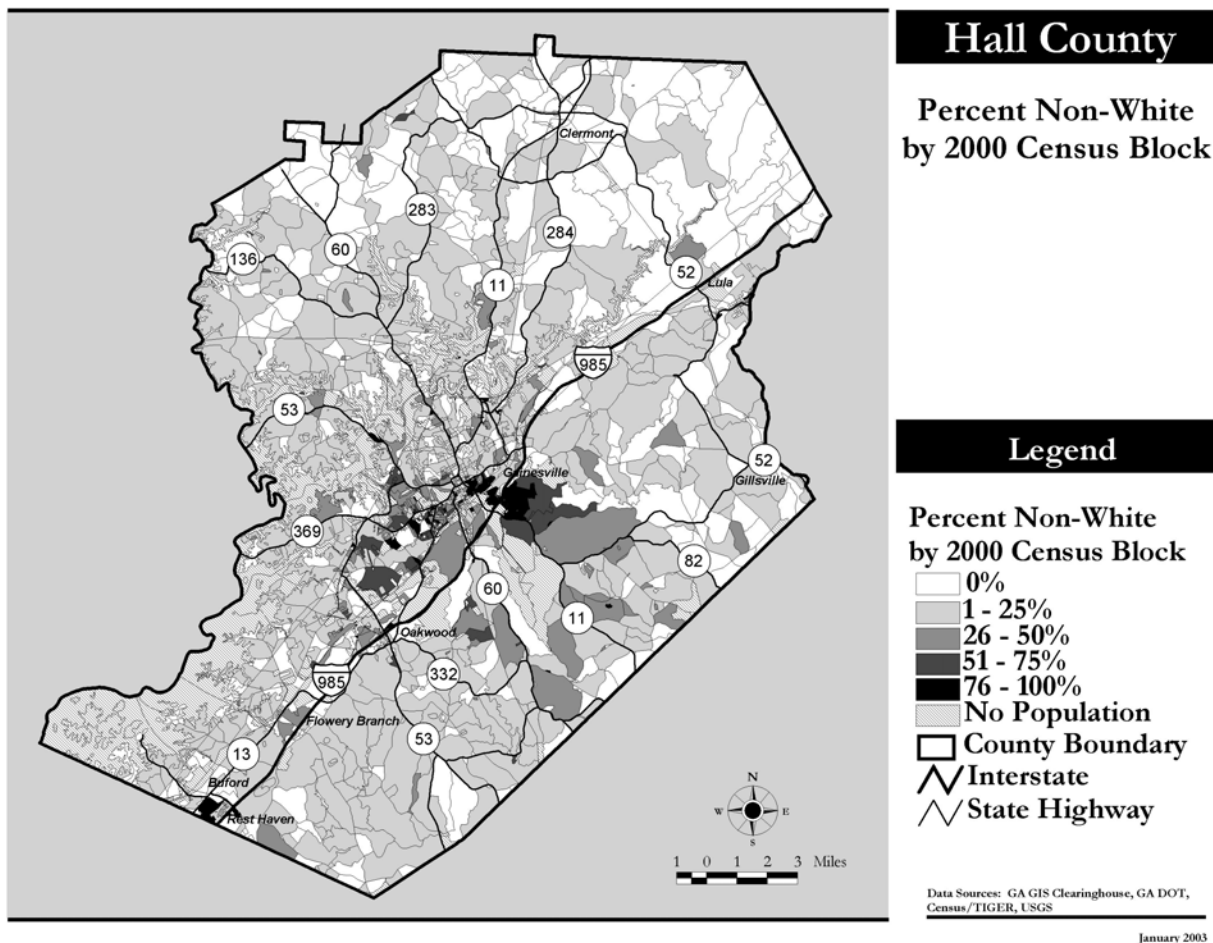
<b>Adopted Land Use Plan</b>	<b>Population</b>	<b>Employment</b>
<b>Base (2000)</b>	139,277	64,973
<b>2030 Estimates (% increase over base)</b>	340,555 (145%)	280,000 (331%)

Source: Hall County Comprehensive Plan

### Current Demographics

In 2000, 71 percent of Hall County residents considered themselves white. The remaining 29 percent of the population was comprised of 7.3 percent black, 19.6 percent Hispanic and 2.1 percent other. The minority population that is non-white is primarily located in the Gainesville area, southeast of Gainesville along Candler Road and Athens Highway, and along the Interstate 985 corridor. The largest concentration is in the southeast and southwest sides of the city of Gainesville. In addition, 2000 Census data indicates that Hall County's poverty rate (12.4 percent or 17,270 persons) is lower than the state average of 13 percent. Persons aged 65 and over (9.4 percent, or 13,092 persons), is very close to the statewide average of 9.6 percent. With a projected 145 percent increase in population over the 30-year period, these segments of the population can also be expected to increase. Figure 2 depicts the distribution of Hall County's non-white population.

**Figure 2 -  
Hall County Percent Non-White by 2000 Census Block**



Source: DWA, U.S. Census, and EDAW (January 2003)

In 2000, approximately 20 percent of the County population was identified as being of Hispanic origin (any race). By 2030, the percentage of Hispanic population is projected to comprise approximately 30 percent. The Hispanic population is concentrated in Gainesville and the surrounding environs.

In 2000, approximately 17 percent of the population was age 55 or older. While the continuing growth of a young Hispanic population will have some effect, the overall trend of aging baby boomers will result in the 55 or older population growing to approximately 25 percent by 2030.

### Current and Projected Employment

As shown in Table 1, Hall County's total employment is projected to increase from 64,973 in 2000 to 280,000 in 2030, based on the adopted Comprehensive Plan. A review of data reveals that year 2000 employment is concentrated in manufacturing, retail trade, services, and



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government. These four sectors employ almost 80 percent of the year 2000 workforce in Hall County.

### Current and Projected Jobs-to-Housing Ratios

The jobs-to-housing ratio compares the number of jobs to the number of people living in an area. The ratio is a useful analysis tool because housing location decisions in relation to workplace marginally affect commute times, costs, and congestion. In 2025, the projected balanced ratio in the Atlanta metro area ranges between 0.81 and 1.2.<sup>1</sup> This ratio applied on a sub-regional basis would indicate a balance in the number of jobs available for the working population in the area, thus reducing trip lengths and congestion.

The 2000 jobs-to-housing ratio for Hall County is 1.37 jobs per household. The adopted Comprehensive Plan provides for significantly higher job creation, and the jobs-to housing ratio is projected to increase to 2.2 jobs per housing unit, in 2030.

### Land Use

#### *Existing Land Use*

Existing land use in Hall County is dominated by undeveloped, agriculture/forestry, and residential land uses. Of the County's total acreage, 86 percent (234,795 acres) of the land is currently in these three categories. Residential land use accounts for 62,962 acres or 23 percent of the total acreage. Agriculture/forestry land use accounts for 71,043 acres or 26 percent of the total acreage.

The existing land use pattern of the County is characterized by the urban core in and around Gainesville, with a pattern of scattered subdivision and rural residential development throughout much of the rest of the County except the areas furthest to the north and east. Subdivision development is most pronounced in the southern part of the County, but there are significant numbers of developments north and northwest of Gainesville, particularly along Lake Lanier. Most commercial and industrial development is located in Gainesville and along the I-985 corridor to the southwest.

#### *Land Use Plan*

The state of Georgia requires local governments to consider policies for managing growth by requiring the development and maintenance of Comprehensive Plans. Managing the type and location of growth reduces traffic congestion and provides a better quality of life.

By clustering or concentrating mixed uses, community residents have access to most of their daily needs within a short distance, maintaining the option of using alternative modes of transportation. Schools, shopping centers, and places of employment are popular destinations and should be developed in locations providing maximum accessibility by the residents of the

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<sup>1</sup> Atlanta Regional Commission, Regional Transportation Plan Needs Assessment Report, May 1999, page 5-22



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community or region. Land use can be an important tool for enabling growth and controlling congestion.

The Hall County land use plan promotes the directing of new growth towards areas that can be efficiently provided with infrastructure and services. Infrastructure will be used as a tool to help manage growth, with infrastructure provided in support of desired types and patterns of growth, with a particular emphasis on high quality commercial, industrial, and business development.

Projected future land use shows 188,080 acres, 71 percent of Hall's total acreage, projected for residential uses in the future. The majority of residential land uses will be low and medium density. Industrial land uses are expected to more than double from 5,508 acres in 2000 to a projected 11,338 acres in 2030. Conservation/parks/recreation is expected to comprise 15 percent of the total acreage in the future and mixed uses are projected to account for 4 percent of total land use.

The County is currently implementing a plan to construct sewer service along the SR 365 corridor north of Gainesville. This effort will extend the pattern of employment up this major road corridor from Gainesville. The Future Land Use Plan for the balance of Hall County reflects an urban development pattern along the I-985/S.R. 365 corridor through and including the Cities of Buford, Flowery Branch, Oakwood, Gainesville, and Lula. Lower density suburban development is reflected around the balance of Lake Lanier and Gainesville, along the major highway corridors to the north, east and west, and in most of the southern portion of the County ranging from 1 unit per one acre to 1 unit per 1.5 acres. A semi-rural residential pattern is retained in large sections of the northern and eastern portions of the County with densities ranging from 1 unit per 2.5 acres to 1 unit per 3.3 acres.





## **Developing the Needs Assessment**

As part of this study, Hall County's existing transportation system was evaluated using performance measures that correlate to the County's overall transportation goals. Performance measures were developed to determine system-wide needs and gauge the performance of proposed strategies and programs. In addition to reviewing data related to the transportation system, input from the public ensured that the concerns of County residents and other transportation network users were considered in evaluating existing conditions.

The identification of existing and projected future needs is a significant element of the transportation planning process. The selection of specific transportation investment strategies is guided by the County's needs, identified through a variety of factors, including travel characteristics, conditions and deficiencies; safety, and citizen input.

### Travel Characteristics, Conditions and Deficiencies

Understanding the travel characteristics of a community is crucial to developing a transportation plan that meets travel needs. Development of an assessment of needs is based partially on the inventory of the condition of the existing transportation system. To identify deficiencies related to current and future congestion, travel demand modeling is a useful tool.

A travel demand model assisted with identification of existing and future congestion on transportation network facilities. Data requirements for the model included household and employment information as well as existing and future land use data and policies from the County's comprehensive plan and other planning documents.

The model provides travel statistics for the 2000 base year and 2030 existing plus committed (E+C) scenario. The E+C scenario offers a tool to identify needs and prioritize transportation improvements. The 2030 E+C network was evaluated to assess transportation network conditions and the impact of no additional capacity projects (beyond those programmed for right-of-way acquisition or construction by 2007) even as population and employment grow. Again, the travel demand model was only used for needs assessment, and not as part of air quality conformity determination.

Performance measures were used to compare year 2000 model conditions against year 2030 existing plus committed conditions. Fundamental system-wide performance measures include projected traffic volumes, volume to capacity ratio, and percent of vehicle miles of travel over capacity.

### *Travel Characteristics*

Examining the commuting patterns of Hall County residents helps to guide transportation improvement investments. As demonstrated in Table 4 below, Hall County's mode split follows state trends. Higher percentages of workers are driving alone and working at home, while fewer persons are carpooling and walking. The majority of Hall County residents age 16 and over commutes elsewhere to work. The majority of these commute trips are to Gwinnett, Fulton, and



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DeKalb counties. There are additional users of the roadways competing for space and fewer of these people are using alternate modes, which contributes to congestion.

**Table 4 -  
Hall County Mode Split Commute to Work Trips**

	<b>Georgia 1990</b>	<b>Georgia 2000</b>	<b>Percent Change</b>	<b>Hall 1990</b>	<b>Hall 2000</b>	<b>Percent Change</b>
Workers 16 years and over	3,106,393	3,832,803	23.4%	48,153	65,402	35.8%
Drove alone	76.5%	77.5%	1.0%	76.8%	76.4%	-0.4%
Carpooled	15.1%	14.5%	-0.6%	17.6%	17.9%	0.3%
Public transportation	2.8%	2.3%	-0.5%	0.3%	1.1%	0.8%
Bicycled or Walked	2.3%	1.7%	-0.6%	1.8%	1.4%	-0.4%
Motorcycle or Other	1.0%	1.0%	0%	1.3%	1.1%	-0.2%
Worked at home	2.1%	2.8%	0.7%	2.2%	2.2%	0%
Mean travel time to work (min.)	22.7	27.7	22%	22.1	26.1	18.1%

Source: Census Transportation Planning Package (CTPP 2000)

### *Traffic Volumes*

The 2030 existing plus committed scenario includes projects in the GDOT 2004-2006 STIP that are programmed for construction or right-of-way acquisition by 2006. Table 5 shows the change in traffic conditions under this scenario.

**Table 5 -  
Hall County 2030 Traffic Volumes**

<b>Highway (Station No.)</b>	<b>Count Location</b>	<b>2000</b>	<b>2030</b>	<b>Percent Increase</b>
Athens Hwy. (US 129) (114)	W of Jackson county line	9,440	31,080	229%
Cleveland Hwy. (US 129) (145)	N of Gainesville	12,930	24,270	88%
Athens Hwy. (US 129) (116)	SE of Gainesville	20,300	61,160	201%
Atlanta Hwy. (SR 13) (165)	S of Gainesville	9,280	45,140	386%
SR 365 (212)	NE of Gainesville	29,380	59,830	104%
Dawsonville Hwy. (SR 53) (267)	W of Gainesville	24,380	56,920	133%
Mundy Mill Road (SR 53) (283)	Oakwood	26,310	53,910	105%
Candler Road (SR 60) (303)	North of Candler	12,940	54,020	317%
Interstate 985 (409)	South Hall	41,860	87,590	109%
SR 365 (215)	Lula	26,400	59,750	126%
Browns Bridge Rd (SR 369) (429)	E of Lake Lanier	15,610	41,510	166%

Source: Cambridge Systematics, Inc.

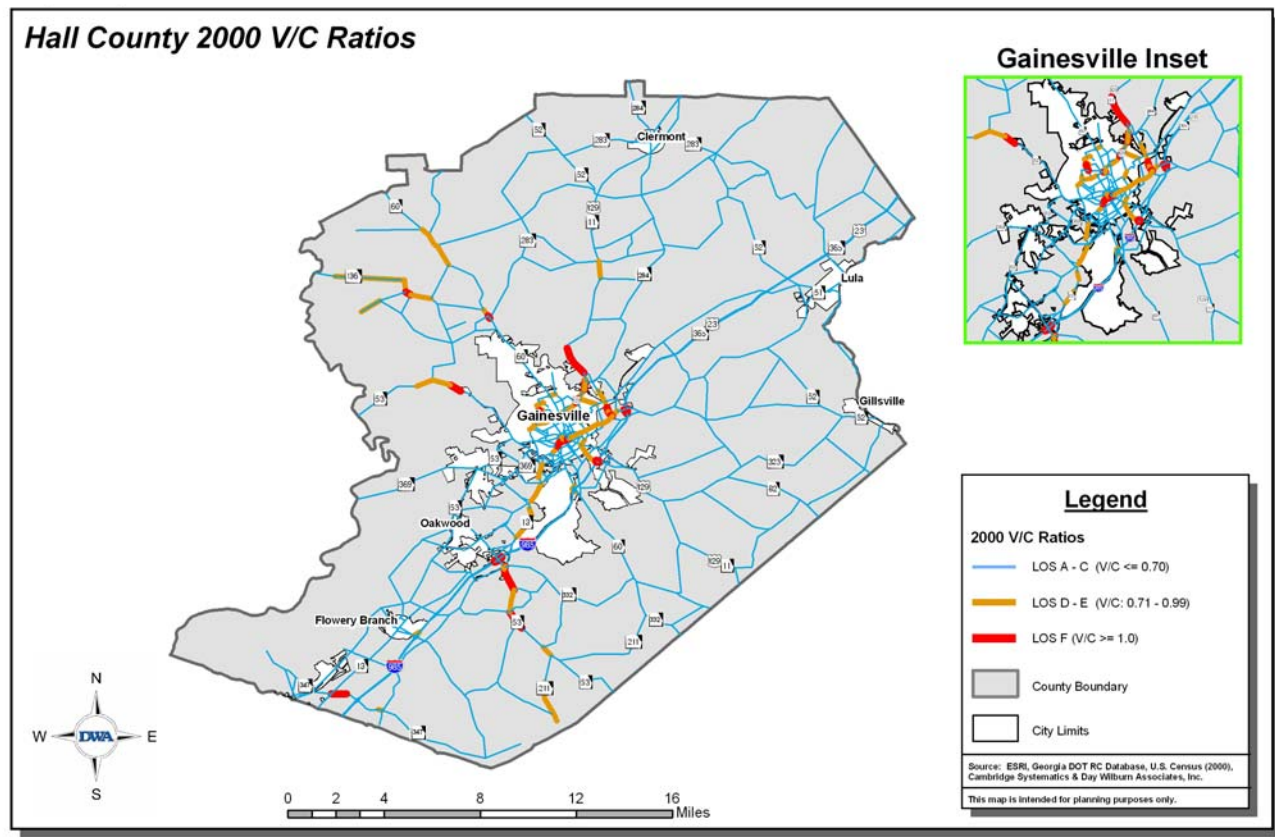


## Volume to Capacity Ratios

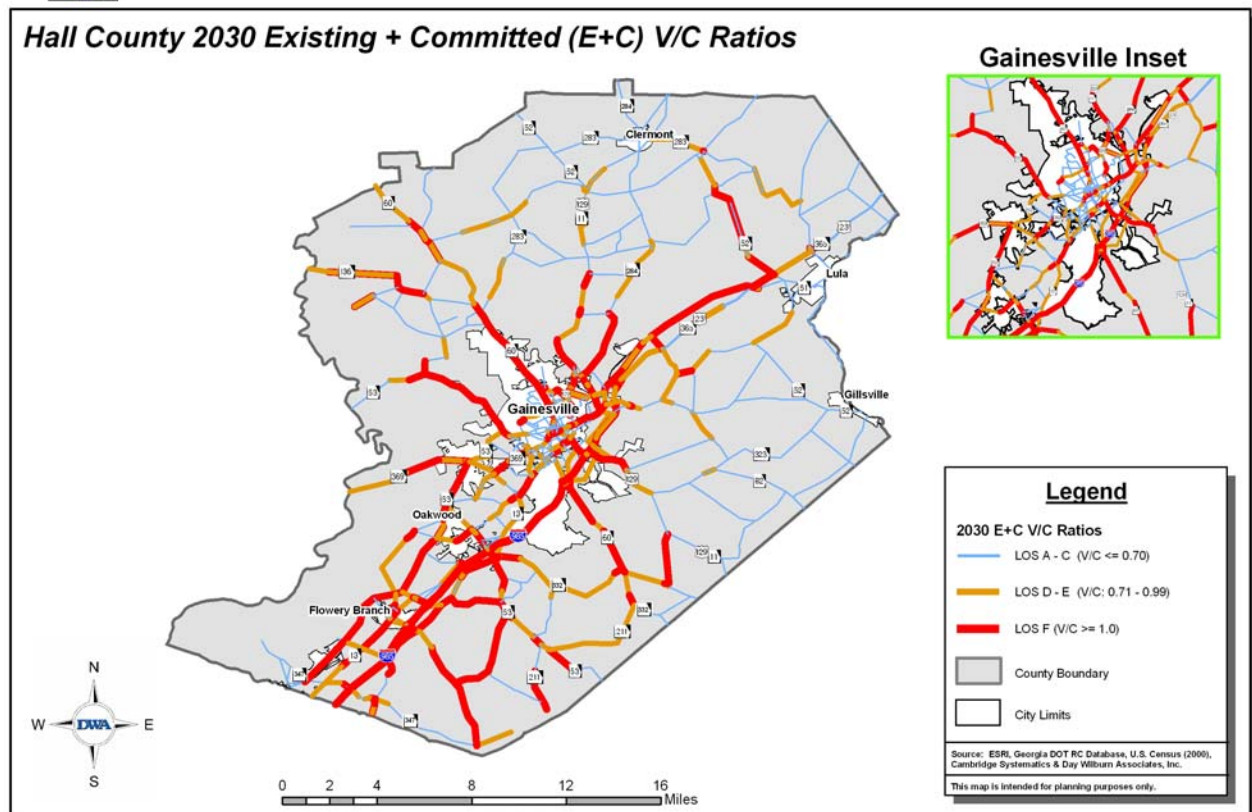
Identifying congestion through the use of daily roadway volume to capacity (v/c) ratios is useful in assessing deficiencies in the transportation system. A v/c ratio compares the amount of traffic on the road to the capacity of the road. A lower v/c ratio indicates less congestion on a segment of roadway than does a higher v/c ratio. For example, a v/c ratio of 1.0 would mean that the road is carrying its full capacity of traffic volume, while a v/c ratio of 0.5 would indicate it is carrying half of the volume that it has the capacity to carry. Generally, a v/c ratio of 0.7 or less is considered to be an acceptable level of traffic congestion on a segment of roadway. The closer the v/c ratio gets to 1.0, the more congested the roadway segment.

Figure 3 shows the year 2000 v/c ratios on Hall County's roadway network. In 2000, 6.4 percent of roadway miles in Hall County demonstrated a v/c ratio of greater than 0.7, which indicates that a majority of the system is operating efficiently on a daily basis. Projected 2030 v/c ratios for the County roadway network, including only the existing network and committed projects, are shown in Figure 4. In 2030, 41 percent of roadway miles in the County are projected to have V/C ratios greater than 0.7 compared to 6.4 percent in the year 2000.

**Figure 3 -  
2000 Volume/Capacity Ratios**



**Figure 4 -  
2030 Volume/Capacity Ratios  
Existing Network plus Committed Projects**



## Vehicle Miles of Travel and Vehicle Hours of Travel

An important objective in developing an efficient transportation system is slowing the growth in trip lengths and congestion on the roadway network. Vehicle miles of travel (VMT) and vehicle hours of travel (VHT) are useful measures for gauging progress in achieving this objective. VMT represents the average daily number of total vehicle miles driven on the roadway network, while VHT represents the average daily travel time of all vehicles on the roadway network during an average day.

The majority of VMT in Hall County occurs on the arterial and collector networks, as shown in Table 6. The importance of these routes is demonstrated in that they carry 78 percent of VMT, yet comprise only 33 percent of the County's centerline roadway mileage. Even though local routes are 65 percent of the total mileage, they support only 16 percent of the total VMT.



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**Table 6 -  
Centerline Miles & Daily Vehicle Miles of Travel (VMT) by Functional Class**

<b>Functional Classification</b>	<b>Centerline Miles</b>	<b>% of Total</b>	<b>VMT</b>	<b>% of Total</b>
Interstates	17	1.3%	685,800	14.9%
Arterial	154	11.4%	2,336,800	50.8%
Collector	227	16.8%	898,300	19.5%
Local Road	953	70.5%	675,500	14.7%
<b>Total</b>	<b>1352</b>	<b>100%</b>	<b>4,596,400</b>	<b>100%</b>

Source: Georgia Department of Transportation

Between 1990 and 2000, the Georgia average travel time to work increased 22 percent to almost 28 minutes, with Hall increasing almost 18 percent to 26 minutes. By year 2030, the total trip time for all Hall County trips is expected to increase, as will congestion. Strategies to reduce congestion and travel, especially during the peak travel periods when most work-related trips occur, need to be developed and encouraged.

Based on the v/c ratio, a significant impact on the transportation system is looming. The overall analysis of future system-wide conditions indicates that system performance could deteriorate significantly in the future without new transportation strategies.

### Safety

Network crash history helps identify intersections and roadways that should be considered for potential safety improvements. Safety projects often demand higher priority and are eligible for GDOT funding.

Identification of potential safety improvements was accomplished through the utilization of geographic information system (GIS) processing. Average crash rates and fatal crash rates were calculated for the state routes by functional class. Crash rates and fatality rates for Hall County by functional classification are shown in Table 7. The crash and fatality rate on Hall County Interstates and arterials is above the statewide average rates, but below the statewide crash and fatality rate on collector roadways.

**Table 7 -  
2001 Crashes and Fatalities by Functional Classification**

<b>Functional Class</b>	<b>Number of Crashes</b>	<b>Number of Fatal Crashes</b>	<b>Crash Rate*</b>	<b>Fatal Crash Rate*</b>
Interstate	1,095	7	393	2.51
Arterials	3,003	16	376	2.00
Collectors	713	2	329	0.92

Source: GDOT Office of State Traffic Safety and Design

\* Crash and fatal crash rates per million vehicle miles traveled (MVMT)



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### Public Involvement Program

#### *Six County Study Public Input*

Several methods were initially used to get community input into the planning process, which was begun as part of the Six County Study. One of the first products of the project was development of a Public Involvement Process to guide the overall transportation planning process. Initial contact with City and County staff and elected officials gave way to more formal contact with the MPO committees as they were formed in early 2004. In addition, a stakeholder committee of local citizens, staff, and elected officials was formed and three meetings were conducted to help identify needs. Key needs identified by the stakeholders included:

#### *South Hall*

- The connection of the Oakwood Industrial Park and Martin Road to the proposed new interchange with I-985, making a link from McEver Road to Winder Highway.
- Winder Highway (SR 53) widening project needs to go all the way to I-85
- Straighten curves on Winder Highway (SR 53)
- Complete 4 lane connection (SR 347) from Lake Lanier Islands to I-85
- McEver Rd. to Gwinnett County needs to be 4 lanes
- Finish Thurman Tanner Parkway to Mundy Mill.

#### *Gainesville Area*

- Four lane SR 53 to Dawson County
- Improve Jesse Jewel & E. E. Butler intersection
- Deal with congestion on Green Street
- Improve Browns Bridge Road
- Improve Mt. Vernon Road
- Need for East-West Connectivity
- South of 365 to Gainesville- Dawsonville traffic should be routed to Exit 20
- Complete 4 lane of Athens Highway from Gillsville Highway down to Talmo
- Four lane US 129 to Jim Hood from Gainesville



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### *North Hall*

- Finish out 4 lane of US 129
- SR 60 from Gainesville to Lumpkin County line could use more passing/turn lanes
- Ledan Rd. from Hwy 60 to Outer Loop area (Hwy 53, Sardis Rd.)
- SR 52 between US 129 & SR 365 – needs new bridge and passing lanes

### **GHMPO Public Involvement Process**

After the creation of the first Draft Long Range Transportation Plan, the GHMPO staff adapted the document for its use, and conducted an additional public involvement process. Public meetings were held on August 31, 2004 and November 4, 2004 to review drafts of the document and take additional public comment. Additional information and comments from these meetings are found in Appendix B.



## **Transportation Needs**

### Roads and Bridges

The backbone of the Gainesville-Hall County transportation system is its roadway network. Gainesville is a crossroads for numerous state highways, as is evident from the number of radial routes, which extend outward from downtown like the spokes of a wheel. As both a major destination and a way point for trips in the northeast Georgia region, the Gainesville-Hall County roadway system serves automobile and truck transportation for both local and regional trips. The mobility of trucks on this network is particularly important to the vitality of Gainesville's industries.

#### *Existing Conditions*

Key transportation routes in Hall County include Interstate 985/SR 365 and arterials such as U.S. 129 (Athens Highway/Cleveland Highway), SR 60 (Thompson Bridge Road/Candler Road), SR369 (Browns Bridge Road), and SR53 (Winder Highway/Dawsonville Highway). Lake Lanier serves as a major traffic generator for residential, tourism and recreation trips in the region and there are five bridges to provide necessary mobility and connectivity for travelers and residents. A center for employment and commercial, medical, and educational facilities and services, Gainesville is a regional transportation hub for Hall County as well as neighboring counties such as Jackson, Banks, Lumpkin, White, and Habersham. As a result, congestion peak periods include commuter periods and a noon time rush hour. A recent study of traffic volumes on Jesse Jewel Parkway (SR369) showed that the noon time vehicles per hour rate was as high or higher than the 5:00 PM count and double that of the 8:00 AM count.

I-985 provides a limited-access connection between Gainesville and the Atlanta metropolitan area. The extension of the interstate northeast as SR365 provides a major 4-lane route into the north Georgia mountains. The GDOT is currently installing the message signs and cameras for an intelligent transportation system along I-985 in Hall County.

U.S. 129 connects from Athens past I-85 in Jackson County north into Hall County. It connects to E.E. Butler Parkway, a four-lane divided arterial that goes through downtown Gainesville. Traffic flows predominantly northbound (or westbound) during the morning and southbound (or eastbound) during the afternoon, peaking during the typical morning and evening heavy travel periods. E.E. Butler Parkway serves significant truck traffic between the industrial areas in the eastern portion of the City of Gainesville and I-985, with traffic volumes highest near I-985 and decreasing slightly approaching downtown Gainesville. U.S. 129 connects north out of Gainesville into White County and the tourist destination of Helen.

SR 60 connects from Dahlonega south into Gainesville along the Green Street/Thompson Bridge Road corridor. Traffic flow is highly directional during peak periods, with the flow predominately southbound in the morning and northbound in the evening. In addition, a mid-day peak period in town, extending from about 11:00 am to 1:00 pm, exhibits a roughly 50/50 directional split. SR 60 provides an important connection between Gainesville and I-985 along Queen City Parkway, serving the Lee Gilmer Airport and major industrial areas. The route





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continues south as Candler Road, serving additional industrial areas, but traffic counts are lower in this area as SR 60 does not have an interchange at I-85.

The western portions of SR 369 (Browns Bridge Road and Jesse Jewel Parkway) are predominantly lined with strip commercial development, such as fast food restaurants, gas stations, shopping centers and automobile dealerships. The traffic characteristics are typical of these adjacent land uses, with morning and afternoon peak periods overshadowed by a long mid-day peak period. The eastern end of this corridor serves the two hospitals and offices of Gainesville's significant medical community. The highest traffic volumes on this corridor are recorded on Jesse Jewel Parkway just west of E.E. Butler Parkway.

SR 53, which intersects I-985 in Oakwood and skirts the center of Gainesville via Mundy Mill and McEver Roads, still carries high volumes of traffic as it connects Gainesville College and major retail areas on the west side of Gainesville.

Downtown Gainesville contains an excellent sidewalk system, which connects government and office buildings, downtown merchants, and major parking areas. However, the location of sidewalks outside of the downtown area is sporadic.

GDOT prepares existing traffic volume field counts and reports Average Annual Daily Traffic (AADT) counts. The raw counts are collected and adjusted to reflect average traffic volumes at particular locations on an annual basis. Table 8 contains Hall County traffic volume data from 1992 to 2002; changes in traffic volumes along the various routes have also been calculated. Reflecting significant growth in population and employment, there is a general trend of significantly increased traffic volume from 1992 to 2002 on the County's road network. The heaviest traveled roadways in the County are Interstate 985 / US 23 / SR 365, Atlanta Highway (SR 13), US 129 (Athens Hwy/Cleveland Hwy), and SR 53 (Winder Hwy/Dawsonville Hwy).

**Table 8 -  
Selected Hall County Traffic Volumes**

<b>Road [Station No.]</b>	<b>Count Location</b>	<b>1992 AADT</b>	<b>2002 AADT</b>	<b>Percent Change</b>
E.E. Butler (SR 11) [121]	Just west of I-985	28,298	37,115	31%
Cleveland Hwy. (SR 11) [134]	Northern Gainesville	30,415	38,035	25%
Atlanta Hwy. (SR 13) [194]	Southern Gainesville	32,866	34,990	6%
Athens Hwy. (SR 11) [116]	Southeast of Gainesville	16,380	28,528	74%
SR 365 [212]	Northeast of Gainesville	18,376	32,057	74%
Dawsonville Hwy. (SR 53) [267]	West of Gainesville	17,043	22,785	34%
Mundy Mill Road (SR 53) [285]	Oakwood	23,584	32,489	38%
Candler Road (SR 60) [303]	North of Candler	6,652	11,367	71%
Interstate 985 [409]	South Hall	26,352	43,834	66%
SR 365 [215]	Lula	18,151	29,160	61%
Browns Bridge Road (SR 369) [429]	East of Lake Lanier	12,305	15,734	28%

Source: Georgia DOT Traffic Count Data



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### *Park and Ride Lots*

Park and ride lots are an important element of the region's transportation system, providing carpooling opportunities and potential express bus pick-up and drop-off points. There is currently one park and ride lot in Hall County, which has 126-spaces and is located at the intersection of I-985 and SR 53/Mundy Mill Road in Oakwood. A second park and ride lot with between 300-400 spaces is planned adjacent to Atlanta Highway and I-985 as part of the Exit 16 Split Diamond Interchange Project. In addition, a significant number of Hall County residents utilize the Park and Ride lot at I-985 and SR 20, approximately 3 miles south of the County line.

### *National Highway System*

The National Highway System (NHS) was established by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 to serve as a network of highways that could link together different modes of transportation such as major shipping ports, airports, intermodal facilities, and public transportation. The linking of these transportation systems allows the NHS to form a quality system important to the nation's economy, defense, and mobility. Interstate 985, and US Routes 129 and 23 are the NHS routes in Hall County.

The advantage of NHS is that it encourages states to focus on a limited number of high priority routes and to concentrate on improving them with federal aid funds. At the same time, the states can incorporate design and construction improvements that address their traffic needs safely and efficiently. With NHS, states can choose from a range of improvements. They can make operational changes, such as a program to locate and remove disabled vehicles that are impeding smooth traffic flow. States can employ available technological improvements, such as intelligent transportation systems (ITS), which will help reduce congestion and keep traffic moving without major, roadway expansion. Federal NHS funds are received by states based on mileage of principal arterials, vehicle miles traveled on arterials, and amounts of diesel fuel used on highways in the state.

### *System Performance by Functional Classification*

GDOT is responsible for classifying all roads in the public road system by geographic location and according to the character of service they are intended to provide. Functional classification was determined for each road in the network using GDOT's classification system to reflect the facility's service characteristics. Functional classification assists in describing the existing and future road network by categorizing the role of various types of roads in the network. Classifications used and their major features are described below.

**Interstates** - Defined as significant highways that feature limited access and continuous, high-speed movements for a wide variety of traffic types. Of the 2,610 lane miles in Hall County, Interstate 985 comprises 66 lane miles (six percent).

**Arterials** - Classified as major or minor, these roads connect activity centers and carry large volumes of traffic at moderate speeds. The arterial system in Hall County totals approximately 253 lane miles, or 10 percent of total lane miles. Examples of major arterials in Hall County are U.S. Highways 23 and 129 and State Routes 13, 53, 60, and 369.





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**Collectors** - Typically allow access to activity centers from residential areas. Their purpose is to collect traffic from streets in residential and commercial areas and distribute it to the arterial system. The collector system in Hall County incorporates almost 575 lane miles, or 22 percent of the total roadway system.

**Local Streets** - Feed the collector system from low volume residential and commercial areas. Usually local streets are found in subdivisions and rural areas. There are approximately 1,702 miles, or 65 percent of roads classified as local in Hall County.

Table 10 provides details about the performance of the base year 2000 roadway network in the GHTS area. Volume to capacity (v/c) ratios for interstates and ramps are approaching levels of congestion that are a concern.

**Table 9 -  
2000 System Performance by Functional Class**

Functional Class	AADT	Avg. Volume/ Capacity Ratio
Interstate	19,333	0.7
Arterial	9,561	0.4
Collector	2,453	0.2
Local Road	1,073	0.1
Ramps	4,665	0.8

Source: Georgia Department of Transportation

### *Pavement Condition*

Pavement condition is described in Table 11. Pavement Service Rating (PSR) is a standard measure of pavement condition used by GDOT to rate pavement statewide. Total lane miles assigned a PSR are provided for each functional classification in Hall County. PSR is collected by GDOT for state system roads only.

**Table 10 -  
2001 Pavement Condition of Lane Miles by Functional Classification**

Functional Class	Poor (PSR <3.5)	Average (PSR 3.5-4)	Good (PSR 4.1-4.5)	Excellent (PSR 4.6-5)	Total
Interstate	0	0	0	66.3	66.3
Arterial	63.4	58.6	43.9	64.3	230.2
Collector	67.0	113.5	51.4	59.0	290.9
<b>Total</b>	<b>130.4</b>	<b>172.1</b>	<b>95.3</b>	<b>189.6</b>	<b>587.4</b>

Source: Georgia Department of Transportation



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A majority of the major road pavement in the GHTS area is in average to excellent condition (78 percent). There are 130 lane miles of pavement rated in “poor” condition (a PSR of less than 3.5). The standard practice of GDOT is to program for rehabilitation or replacement pavement on state roads identified as being in “poor” condition. Local roads are the responsibility of the local governments and are usually improved using City or County resources. These roads are eligible for City/County contracts made available annually by GDOT to assist local governments with local off-system facilities.

### *Level of Service*

The base network performance statistics demonstrate existing congestion and safety needs for the current level of employment and population residing in the GHTS area.

Level of service (LOS) is a performance measure commonly applied to evaluate service and capacity. It is calculated using traffic volumes to road capacity (v/c) ratios. For example, a roadway that is operating at full capacity has a v/c ratio of 1.0; at half capacity, 0.5. Level of service is graded, with LOS A indicating completely uncongested conditions while LOS F represents bumper-to-bumper stop and go traffic. LOS E is identified by a v/c ratio of over one (1.0). LOS C and D are congested but considered acceptable (between 0.7 and 1.0) in urban areas. The existing GHTS network has 51.2 lane miles with a v/c ratio of greater than 0.7 but less than 1.0. There are 6.1 lane miles with v/c ratios of 1.0 and above.

The model computes forecast volumes through a combination of a variety of factors, including current and future (2030) population and employment coupled with the existing roadway network and committed roadway projects. Use of the model helps determine locations of roadway sections that are likely to be congested in the future based on projected growth and committed projects.

Existing 2000 network performance was compared to the current City of Gainesville and Hall County comprehensive plans and the comprehensive plan projected to 2030. Table 11 compares lane mile v/c ratios calculated based on existing and forecast population, employment and land use, and shows the increase of congested lane miles through 2030.

**Table 11 -  
2030 System Performance**

<b>Performance Measure</b>	<b>Base (2000)</b>	<b>2030 Plan</b>
V/C Equal to or Greater than 0.7 but Less than 1.0	51.2 lane miles	264.3 lane miles
V/C Greater or Equal to 1.0	6.1 lane miles	105.6 lane miles

Source: Georgia Department of Transportation



## Public Transportation

### *Existing Conditions*

Hall Area Transit (HAT) provides public transportation for the urban and rural portions of Gainesville and Hall County. The entire fleet consists of 14 vehicles, five of which are assigned to the urban fixed route service (Red Rabbit) and nine are assigned to the rural demand response service (Dial-A-Ride). Hall Area Transit's mission is to provide residents (particularly transit dependent persons) of Hall County with an opportunity to access community resources they need (i.e. work, retail stores, social service agencies, government offices, etc.) through the provision of an urban and rural transportation system that is convenient, dependable and affordable.

**Rural Service** - The rural service has been operating in Hall County since 1983. It is composed of a demand-response Dial-A-Ride van service that picks up and drops off passenger curbside. Initially, its use was generally limited to seniors that participated in activities at the local Senior Center. Today, passengers using the rural service largely include seniors, employees working in the retail/service sector, and persons making the transition from dependence to independence. Six of the nine vehicles are wheelchair lift-equipped for the ability to transport mobility-impaired customers. Boardings for FY2003 were 36,177, with 11,371 service hours and 187,899 service miles.

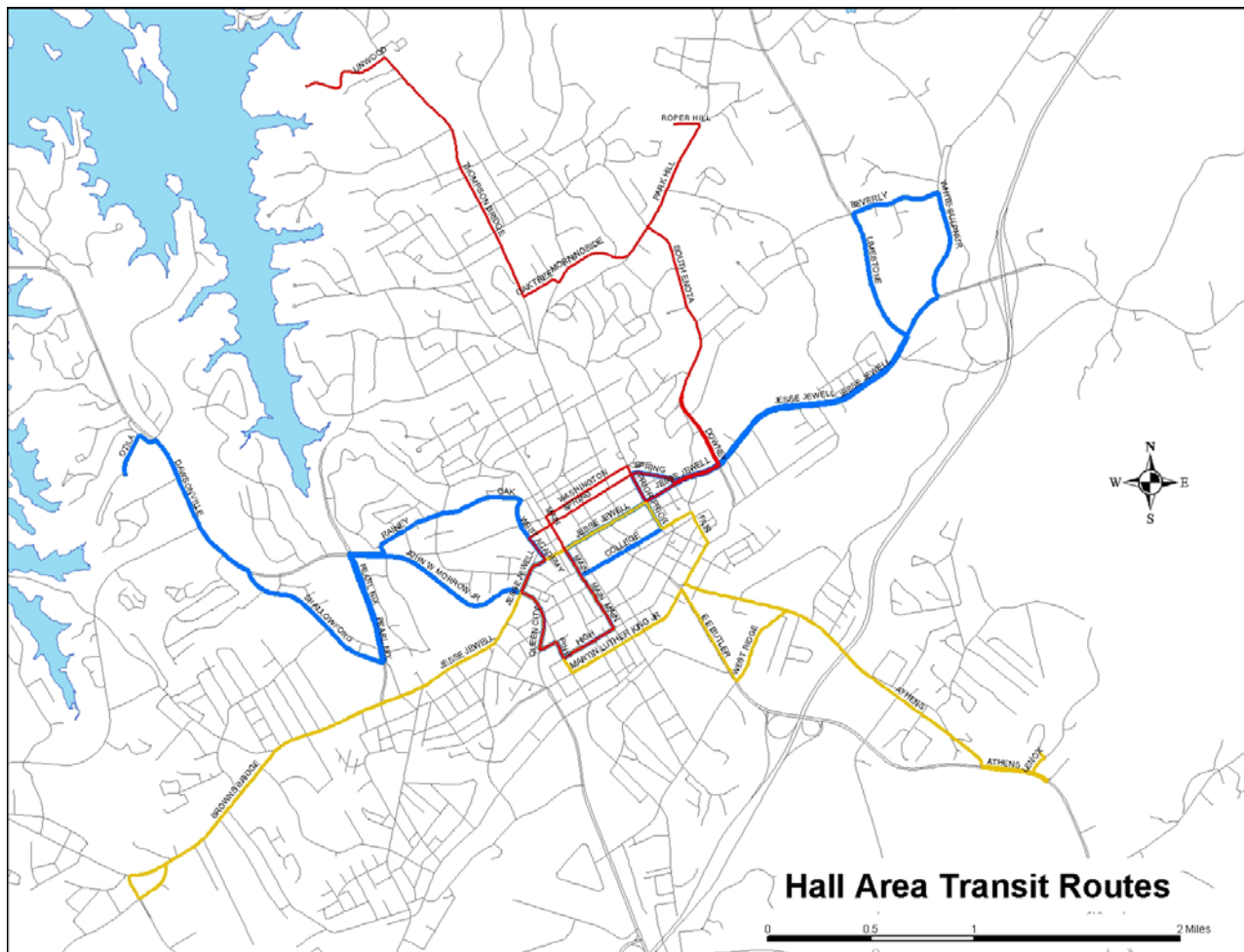
**Urban Service** – The urban service consists of a fixed route system known as the Red Rabbit and a complimentary para-transit service to transport passengers with certain ADA disabilities. Effective October 17, 2004, the urban service was reorganized consistent with the recently completed Hall Area Transit Strategic Plan. The new fixed-route service, depicted in Figure 6, includes three linear bus routes located within the City of Gainesville and a complimentary paratransit service. The fixed routes move along the most heavily traveled corridors in the City to include Jesse Jewell Highway, Dawsonville Highway, E.E. Butler Parkway, Athens Highway and Limestone Parkway. Two routes will operate on a 60 minute headway and one route, which will access the Colonial Lakeshore Mall, Northeast Georgia Medical Center, Gainesville and Hall County government offices and other popular sites, will run on 30 minute headway. Overall, these routes are designed to give riders quick and easy access to the destination of their choice. The fare for riding the fixed route is 50 cents for seniors and children and \$1 for general public.

The aim of the new consolidated route design is to provide service in a concentrated area within Hall County that has the greatest potential of increasing ridership. An important and desired benefit that may result from increased ridership is reduced congestion and travel time along these heavily traveled corridors. Once ridership has expanded along the new routes, additional routes may be added to reach additional areas within the City of Gainesville and other communities within Hall County. Plans are underway to add bus shelters, benches, bicycle racks and other amenities to the buses to give riders even greater access to the community. Figure 6 shows the new route design.

Boardings for the fixed route service for FY2003 (under the old route structure) were 35,616, with 9,849 service hours and 134,004 service miles. Under that old structure, there were four fixed routes: three operating in the City of Gainesville and one that served Gainesville and portions of Oakwood. There was a local transfer station where all buses met once per hour to

allow passenger transferring. HAT has no other transit or intermodal terminals, exclusive rights of way, or public transit corridors. All of the fixed route vehicles are wheelchair lift-equipped with the ability to transport mobility-impaired customers. The complimentary paratransit service is provided to handicapped patrons near the fixed route system.

**Figure 5 -  
New Hall Area Transit Routes**



## Needs Analysis

Several needs have been identified to enhance transit service in the County. As noted above, the Strategic Plan has recommended a new route structure that is projected to increase ridership and cut the service cost per passenger in half.



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The system currently operates out of and parks busses at the Community Service Center in a passenger vehicle parking lot, resulting in excessive pavement wear, traffic congestion and parking shortages at the building. A Facility Feasibility Study is budgeted to evaluate feasibility and alternatives for a stand-alone transit operations and maintenance facility. In addition, riders have expressed concerns about the current transfer station location, which may be converted to another use by the City Public Utilities Department.

### Aviation

The Lee Gilmer Airport (GVL) provides private general aviation air service including fuel sales and aircraft storage. The airport is located on the south side of the City of Gainesville, with access provided by SR 60 and Aviation Boulevard. The airport's main runway is 5,500 feet long by 100 feet wide. The airport also offers a 4,000-foot by 100-foot runway during daylight hours. With 106 based aircraft (including corporate jets), the airport averages approximately 100 operations per day.

GVL is considered a Level III – Business airport of regional impact by GDOT. This is defined as capable of accommodating commercial aircraft or a variety of business and corporate jet aircraft. For Level III airports, a minimum runway length objective of 5,500 feet has been established; ideally, operations at Level III airports should also be aided by a precision instrument approach. Although GVL does not currently have an instrument landing system (ILS), they have been allocated federal funding for implementation. An ILS should be in place within the next two years.

### Rail

Two major active freight rail lines run in a north-south direction through Hall County. The Norfolk Southern Atlanta/Greenville line parallels I-985/SR 365 and passes through Flowery Branch, Oakwood, Gainesville, and Lula. The CSX line runs south from Gainesville to Athens. AMTRAK provides daily passenger service along this line with a Gainesville station stop in each direction. The Georgia Rail Passenger Program (GRPP) envisions future commuter rail service between Atlanta and Gainesville, as well as intercity service to Greenville, South Carolina.

Commuter rail between Atlanta and Gainesville is a second phase development of the Commuter Rail Program. The line would have seven stations beginning at Lenox and going to Norcross, Duluth, Suwanee, Sugar Hill, Oakwood and Gainesville. The GDOT study projects that there would be more than 7,000 daily passenger trips and a substantial part of the operating costs could potentially be recovered from the fare box (estimated recovery about 60 percent)<sup>2</sup>.

The same line would serve as part of an intercity rail program also envisioned by GDOT. The Intercity Rail Passenger Plan explores the possibility of intercity rail passenger services between Atlanta and Greenville, South Carolina, going through Gainesville. The service is projected to attract 128,000 passengers annually by 2020<sup>3</sup>. Neither of these rail programs are reflected in the LRTP due to financial constraints.

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<sup>2</sup> GDOT Commuter Rail Study.

<sup>3</sup> GDOT Intercity Rail Passenger Plan.



### Bicycle and Pedestrian Facilities

There is currently no comprehensive bicycle or pedestrian facility inventory for Hall County. The Georgia Mountains Regional Development Center is currently undertaking a region-wide inventory and plan under contract with GDOT. There were four projects programmed between 1998 and 2002 utilizing approximately \$2,279,000 in federal funds through the Transportation Enhancements Act. These projects include interconnecting bicycle and pedestrian paths, a bicycle route in Gainesville, and two projects for the Rock Creek Greenway. Multiuse trails in the County include Rock Creek Greenway, the Elachee trail system, the Midtown system in Gainesville and a potential conversion of CSX railroad right-of-way to a mixed use trail. There is also an off-road mountain biking trail located at Chicopee Woods in Gainesville. One major bikeway is planned for Hall County as part of the Statewide Bicycle Route System. The Appalachian Gateway (Route 55) includes 32.8 miles in Hall, traversing the length of the County along Hog Mountain Road, Atlanta Highway, Clarks Bridge Road and Cleveland Highway, and bike lanes will be added to this route as major construction takes place along these roads. Similarly, sidewalks will be provided with GDOT funded road widenings in the urbanized area.





## **Planning Considerations**

There are several over-arching considerations that must be taken into account as a Long Range Transportation Plan is developed. Environmental considerations increasingly impact transportation planning in the Atlanta region. Numerous federal and state regulations impact planning, but the key issues are air quality and watershed protection because of their potential to influence transportation programs and strategies as well as related residential and employment considerations. In addition, consideration of environmental justice issues must be an integral part of the transportation planning process. These major issues are highlighted in the following sections.

### Air Quality

Since the adoption of the federal Clean Air Act Amendments (CAAA), the Atlanta region has experienced the challenge of meeting federal clean air standards. Significant amounts of the region's air pollutants come from automobiles and trucks. In an effort to control the formation of ozone in the region, state and federal air quality planners placed a limit on the amount of emissions originating from vehicles. The region has had difficulty meeting its emissions allocation because of rapid population and employment growth. Starting in the late 1990's, the region actually entered a conformity lapse that halted the construction of regionally significant transportation projects. For transportation planning purposes, these regionally significant projects include roadways classified as minor arterials or above and large transit projects such as rail extensions.

A conforming Regional Transportation Plan (RTP), developed by ARC, was approved by the U.S. Department of Transportation in coordination with the Environmental Protection Agency (EPA) in January 2003. New plans will need to be adopted by ARC and GHMPO, conforming to the new 8-hour ozone standard by June 15, 2005.

The GHMPO staff takes part in the Interagency Consultation Group, which was formed to foster greater coordination between the various agencies responsible for ensuring the conformity of the transportation plans with air quality standards. This group includes the U.S. Department of Transportation, the U.S. Environmental Protection Agency (USEPA), the Georgia Department of Transportation (GDOT), the Georgia Environmental Protection Division (EPD), the Georgia Regional Transportation Authority (GRTA), the Atlanta Regional Commission (ARC), and the GHMPO.

### *Air Quality Conformity Determination*

As part of the recently designated 8-hour ozone standard nonattainment area, Hall County must follow additional federal transportation planning and programming regulations. Most importantly, projects that add capacity to the transportation system must undergo the region's testing to ensure they meet CAAA standards. Consequently, Georgia DOT and Hall County no longer have the capability to add certain needed projects into the transportation program without satisfying air quality conformity requirements. If the region is unable to meet federal air quality standards, federal funding for projects that add capacity is withheld. Due to the non-attainment



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status of the 20-county area including the GHTS study area; the LRTP must be updated every three years.

The ARC will be simultaneously performing a conformity analysis for the 8-hour ozone standard along with analysis under the existing 1-hour standard. A methodology was developed by the Interagency Consultation Group, and agreed to by the USEPA, and the US Department of Transportation, that will allow ARC to use Highway Performance Monitoring System (HPMS) Vehicle Miles Traveled (VMT) data to perform the 8-hour ozone analysis in the seven outlying counties, including Hall. A more complete discussion of this methodology and the rationale for its use is included in Appendix F. Cooperation and coordination amongst the Atlanta Regional Commission, the Gainesville-Hall Metropolitan Planning Organization, the Georgia Department of Transportation and the Georgia Department of Natural Resources Environmental Protection Division regarding transportation planning and air quality concerns is laid out in the Memorandum of Agreement found in Appendix G.

### **Wetlands and Environmentally Sensitive Watersheds**

The identification of wetlands and environmentally sensitive watersheds in transportation planning is important for several reasons. In many cases, these areas both create natural barriers to connecting roadways and limit the ability to develop selected areas. Furthermore, federal Clean Water Act regulations and more stringent state watershed protection rules are limiting the amount of impervious surface in key watersheds. Land use and environmental considerations are significant factors to be incorporated into the transportation planning process.

Protection of watersheds is not just an important part of transportation planning but also the overall planning process. The Hall County Comprehensive Plan addresses the identification and protection of sensitive watersheds, particularly large watersheds. Smaller watersheds are considered to be more vulnerable to environmental degradation than larger watersheds. Based on criteria developed by the Department of Natural Resources in *Rules for Environmental Planning Criteria*, large watersheds are defined as 100 square miles or more, with small watersheds defined as those less than 100 square miles.

The key item relating to transportation planning is that the County desires to protect environmentally sensitive areas from higher density land uses. These considerations have been taken into account in the development of transportation plan strategies and programs.

### **Environmental Justice**

As part of the transportation planning process, it is incumbent on the GHMPO to assure that the principles of environmental justice are upheld. These principles are:

To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.

To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.





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To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

In order to integrate environmental justice principles in the planning process, the MPOs need to:

Enhance their analytical capabilities to ensure that the long-range transportation plan and the transportation improvement program (TIP) comply with Title VI.

Identify residential, employment, and transportation patterns of low-income and minority populations so that their needs can be identified and addressed, and the benefits and burdens of transportation investments can be fairly distributed.

Evaluate and - where necessary - improve their public involvement processes to eliminate participation barriers and engage minority and low-income populations in transportation decision making.

Geographic distribution of the minority and low-income communities has been previously discussed. The GHMPO is committed to using extra efforts to involve the identified minority and low-income communities in the transportation planning process. As detailed in the GHMPO Public Involvement Plan, particular effort is made to communicate with the rapidly growing Hispanic population through both broadcast and print Spanish language media outlets. In addition, projects and programs will be screened to determine those projects that may need further evaluation to assure environmental justice principles are upheld.



## **Transportation Investment Strategies**

In order to develop a long range plan, the community must evaluate both potential projects and other strategies to improve mobility in the context of its transportation and larger community goals. Once a plan has been developed and implementation begins, the success of the Plan can be evaluated using the performance measures tied to the goals.

There is a whole series of strategies and projects that have the potential to reduce congestion, increase capacity, and improve the quality of life in Hall County in the future. A brief discussion of these and their potential application to the LRTP is provided below. Discussion of existing facilities and programs is located in the Transportation Needs section.

### Growth Management

These strategies are implemented through the land use regulatory system.

#### *Land Use*

The management of growth through land use planning can have significant impacts on mobility in the community. The current comprehensive plan has the goal of locating higher density areas near community activities and services, which can reduce vehicle trips. By clustering or mixing uses in a small area, community residents have access to many of their daily needs within a short multi-purpose drive, bicycle ride, or walk from home. A more concentrated development pattern also increases the viability of transit and other alternatives to single occupancy vehicle trips. Schools, shopping centers, and places of employment are popular destinations and should be developed in locations with maximum accessibility by the residents of the community or region.

#### *Access Management*

The application of access management standards can improve the efficiency of a transportation network. Access management is a tool that can help prevent traffic congestion by limiting and controlling vehicles entering, exiting, and turning along a travel corridor. Application of access management techniques to arterial and collector roadways enable the roadways to best serve their designated function of moving through traffic. Effective access standards benefit a community by reducing accidents, increasing roadway capacity, providing better access to businesses, and improving mobility. Hall County is currently considering regulatory changes to strengthen access management.

### Alternative Improvements

These improvements involve less capital intensive methods to reduce single occupancy vehicle trips and the impact of congestion on the community.



### *Transportation Demand Management (TDM)*

An important strategy in reducing overall traffic congestion is implementation of Transportation Demand Management (TDM) strategies, which can help reduce traffic congestion by decreasing the number of vehicle trips by increasing occupancy and increasing multiple use trips. A few strategies that reduce vehicle trips by increasing travelers per vehicle include high occupancy vehicle (HOV) lanes, park and ride facilities, express bus routes, and vanpools. Other TDM strategies include lower parking rates for carpools and subsidized transit use. TDM can also impact peak period travel volumes by encouraging business owners to engage telecommuting, flexible work schedules, and compressed work weeks. Using each trip effectively by combining uses such as grocery and dry cleaning should be encouraged. Encouraging installation of features to provide convenient bicycle and pedestrian access is yet another TDM strategy.

The strategic placement of park and ride lots can be successful by providing a central meeting location for commuters to carpool to work or board transit. Park and ride lots provide a safe and convenient location for carpool and transit riders to meet close to their homes without requiring that each passenger be picked up at each individual home. An existing park and ride lot located at the I-985/SR 53 Mundy Mill Road interchange provides 126 spaces

Active employer participation is key to the success of many TDM strategies, and many kinds of businesses can benefit from the results of TDM. Experience has demonstrated that increased productivity can reduce commute trips. Energy, time, and other resources spent on the commute can be allocated more efficiently to enhance productivity. Employers have the power to modify work hours and establish telecommuting programs. They can also share some of their cost savings by providing financial or other rewards to employees who rideshare or hire transportation coordinators to run vanpool programs and personalize ride-matching.

Focusing TDM strategies around activity centers is critical for a variety of reasons. Within activity centers, implementation of strategies is focused on developing public-private partnerships by establishing Transportation Management Initiatives (TMIs) or Transportation Management Associations (TMAs). These are typically comprised of local businesses that partner with government agencies to provide transportation solutions, such as ride-matching services, discount transit passes, and shuttle services. Public education support and initial program start-up and coordination of TDM initiatives is available from GDOT and The Clean Air Campaign.

### *Pedestrian and Bicycle Improvements*

Used for transportation as well as recreation, 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 the ISTEA and TEA-21 surface transportation authorization programs, which have provided more funding for these modes.



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There are two basic categories or forms of bicycle improvements: on-road facilities, including bike lanes, widened curb lanes, and designated bike routes, and off-road paths or trails. Bicycle users have varying levels of expertise; therefore, different types of facilities are desirable to different types of users. Cyclists are typically separated into three groups, Type A, Type B, and Type C, which 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 to visit friends, but prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample roadway width to allow easy overtaking by the faster traveling motor vehicles.

*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 recreational facilities.

On-road facilities, such as designated bike routes, widened curb lanes or striped bicycle lanes immediately adjacent to vehicle travel lanes, serve mostly experienced cyclists (Type A) who use their bicycles as they would a motor vehicle. Less experienced Type B and Type C cyclists favor the security of wider roadways, less traffic, and off-road, multi-use paths.

One bikeway is designated for Hall County as part of the Statewide Bicycle Route System. The Appalachian Gateway (Route 55) would include 32.8 miles in Hall, traversing the length of the County. Entering from Gwinnett County to the south, the route would follow Hog Mountain Rd., SR 13/Atlanta Hwy., Industrial Blvd., Bradford St., Myrtle St., SR 11, SR 13, White Sulphur Rd., Pine Valley Rd., and SR 284, after which it would enter White County to the north. Route 55 would provide bicycle access to the communities of Flowery Branch, Oakwood, Gainesville, and Clermont, as well as Lake Lanier.

### *Cleaner Fuels and Vehicle Inspections*

Hall County is part of a 25-county Department of Natural Resources, Environmental Protection Division Fuel Control Area. Under the DNR publication, *Rules for Air Quality* (Chapter 391-3-1), acceptable sulfur levels and Reid Vapor Pressure are defined. Cleaner fuels minimize harmful fuel emissions from vehicles and other motorized equipment, such as the formulation of seasonal ozone that lead to degraded air quality. Technological advances will continue to provide cleaner fuels.

Vehicle inspection programs detect vehicles that contribute to the degradation of air quality. As such, the DNR considers its implementation in counties with ambient air levels of ozone or carbon monoxide in excess of the National Ambient Air Quality Standards (NAAQS). Since Hall County has been declared in non-attainment of the 8-hour ozone standard, a vehicle inspection program could be instituted.



### Traffic Safety and Operations

Non-capacity adding projects, such as safety and operational projects, can address specific 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 where adding roadway capacity is difficult.

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 10-15%.

### Infrastructure Improvements

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

#### *Intersection and Interchange Improvements*

Many transportation conflicts resulting in congestion and safety issues are found at intersections and interchanges. Improvements to intersections and interchanges are vital to the safety and efficiency of transportation networks and to building a foundation for a network that meets future demands.

Improvements should be considered at intersections and interchanges with a high crash rate or intersections with severe congestion. Intersection and interchange improvements can correct roadway deficiencies, increase safety, and result in improved travel without the need to widen or make any additional improvements to the mainline roadway.

#### *High Occupancy Vehicle Facilities*

Implementing high occupancy vehicle (HOV) facilities reduces congestion and vehicular demands on roadways by reducing single occupancy vehicle (SOV) use. Commuters using multiple occupancy means of travel, from carpools and vanpools to commuter (express) bus and local transit service, are encouraged by the travel time advantages provided. The 2003 HOV Strategic Implementation Plan for the Atlanta Region identified the need for future HOV



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lanes in Hall County along Interstate 985. This study placed all HOV improvements proposed for the Atlanta region into seven prioritization tiers. Tiers 1 through 4 have been identified for implementation before year 2030 and Tiers 5 through 7 after 2030, although some projects in Tiers 5 through 7 may be included in the 2030 implementation plan based on future project-by-project evaluation. The initial segment along I-985 into Hall County, beginning at SR 20/Buford Drive in Gwinnett County and terminating at SR 347/Friendship Road in Hall, was identified as a Tier 6 project. Two additional segments that would extend HOV coverage along I-985 from SR 347 to SR 53/Mundy Mill Road, and eventually to SR 369/Jesse Jewell Parkway near Gainesville, were identified as Tier 7 projects. Three HOV access points are proposed for I-985 in Hall County, including full drop ramps at Mulberry Street in Flowery Branch and Atlanta Highway, and direct merge access at SR 60.

### *Intelligent Transportation Systems (ITS)*

Implementation of Intelligent Transportation Systems (ITS) utilizes technology to improve the safety and efficiency of the roadway system without increasing the physical size of roadway facilities. ITS strategies are used to relay information to travelers concerning congestion and incidents, as well as address railroad crossing safety and efficiency, aid emergency vehicles in efficient operation, and provide emergency operational and medical assistance to motorists. Through real time observation of traffic conditions and vehicle queuing patterns along entire corridors, ITS allows for development and implementation of new strategies to reduce congestion. Quick detection and better management of incidents minimizes congestion, enhancing the overall performance of the network. For example, in the event I-985 is temporarily closed, the coordination of signals on alternate routes would enhance traffic flow in emergencies. ITS technology provides the option of immediate, dramatic, and comprehensive changes from a single computer station during an emergency. ITS is an attractive alternative to explore in the future.

### *Local Transit and Commuter Bus*

The implementation of multimodal transportation alternatives offers sound solutions to meet the County's transportation needs. Local transit, coupled with convenient express bus service, can extend the useful life of the expensive roadway infrastructure. Express bus alternatives can offer commuters a safe and convenient ride to work that, when all factors are considered, is cost-effective for most commuters.

A viable transportation option for Hall County travelers is Hall Area Transit's Red Rabbit fixed route and demand response service. Based on existing capacity and ridership data, the service has the capacity to serve a significant percentage of travelers choosing an alternative to vehicle travel. According to a ridership survey conducted in June 2003, approximately 60 percent of fixed route riders use the system during peak hour. The annual fixed route peak hour capacity of 51,000 compared to current estimated annual fixed route peak hour ridership, 19,900, demonstrates a significant supply of transit capacity. With an expected increase of population of 134 percent by 2030, ridership could increase at the same rate to approximately 46,600, which is within current capacity. Increasing fleet maintenance and operation cost requirements must continue to be met.





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### *Intercity Passenger and Freight Rail*

Commuter rail between Atlanta and Gainesville is a second phase development of the Commuter Rail Program. The line would have seven stations beginning at Lenox and going to Norcross, Duluth, Suwanee, Sugar Hill, Oakwood and Gainesville. The GDOT study projects that there would be more than 7,000 daily passenger trips and could potentially recover a substantial part of the operating costs from the farebox (estimated recovery about 60%).<sup>4</sup>

The same line would serve as part of an intercity rail program also envisioned by GDOT, which would complement existing AMTRAK intercity service to Gainesville. The Intercity Rail Passenger Plan explores the possibility of intercity rail passenger services between Atlanta and Greenville going through Gainesville. The service is projected to attract 128,000 passengers annually by 2020.<sup>5</sup> Implementation of the service is expected to cost approximately \$104 million. In addition, this line forms part of the federally designated Southeast High Speed Rail Corridor (SEHSR) project, which proposes high speed passenger rail service between Atlanta and Washington, DC.

### *Aviation*

Hall County's Lee Gilmer Airport is considered a Level III – Business airport of regional impact by GDOT. This is defined as capable of accommodating commercial aircraft or a variety of business and corporate jet aircraft. For Level III airports, a minimum runway length objective of 5,500 feet has been established; ideally, operations at Level III airports should also be aided by a precision instrument approach. Although the airport does not currently have an instrument landing system (ILS), they have been allocated federal funding for implementation. An ILS should be in place within the next two years.

While Lee Gilmer Airport is a growing facility that offers significant economic development opportunities, passenger and most freight aviation transportation available to Hall citizens and businesses will be offered at Hartsfield-Jackson Atlanta International Airport.

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<sup>4</sup> GDOT Commuter Rail Study

<sup>5</sup> GDOT Intercity Rail Passenger Plan





## **Congestion Management System**

A Congestion Management System (CMS) is a tool to aid in optimizing transportation infrastructure, improving transportation decision-making, and promoting alternatives to single occupancy vehicle travel. The concept of a CMS was first established by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and furthered by the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21). The TEA-21 legislation contains specific details for developing and maintaining a CMS.

The development of a CMS can assist in managing congestion along major routes within a transportation system by establishing performance measures, monitoring the system's performance, and developing strategies to manage or alleviate congestion. GHMPO is required to develop a CMS for the small portion of the County that lies within the Atlanta urbanized area. The CMS enables continual monitoring and evaluation of congestion in the Atlanta region and is a requirement in identifying roadways for capacity-adding projects, such as the addition of through lanes to a roadway.

The transportation model developed for Hall County and the performance measures identified in Section 2 of this document provide the basis for developing a CMS. The performance measures developed to identify needs in Hall County are very similar to those used by many urbanized areas. Three roadway performance measures have been identified to gauge the efficiency of the roadway transportation network: volume to capacity (V/C) ratios, a congestion index (or a measure of declining speeds), and intersection level-of-service (LOS).

The network of facilities monitored by ARC includes all regionally significant roadways functionally classified as arterial or higher, coupled with additional facilities meeting regulatory guidelines. The identification of congested facilities is determined using a base year and future year (with a 25-year horizon peak period) regional travel demand model. All facilities that meet CMS monitoring requirements are subject to review before any capacity-adding projects can be implemented.

The Congestion Management System developed for the Hall County portion of the Atlanta urbanized area is attached as Appendix E. This system has documented congestion in this area and evaluated the two proposed capacity-adding projects along with a menu of improvement alternatives.



## Proposed Projects

Roadway improvements identified through the modeling 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.

The Georgia Department of Transportation, Hall County and its municipalities are actively pursuing the development and maintenance of a road network that accommodates continuing growth. Tables 12, 13 and 14 show the short and long term projects proposed to meet the long term needs in the study area over the next 25 years. The projects are reflected in Figures 6-A and 6-B.

**Table 12 -  
Proposed Projects – 2005-2010**

Map No.	Segment/Location	Description	Cost
			(\$ Mil.)
<b>2005-2010</b>			
1	I-985 – Exit 16 Split Diamond Interchange at SR13 & SR53	Interchange	44.401
2	Thurmon Tanner Parkway (Ph. 3) – Plainview Rd to SR 53/Mundy Mill	New Road	8.300
3	SR 323/Gillsville Hwy at North Oconee River – Bridge	Bridge	1.814
4	SR53/Dawsonville Hwy – Duckett Mill Rd to Lake Ranch Ct incl. Sardis Rd	Widening	15.600
5	SR 53/Winder Hwy – SR 211/Tanner's Mill Road to SR 13/Atlanta Hwy	Widening	15.670
6	Memorial Park Ext/Skelton Rd & Connector – SR369 to Shallowford Rd	Widening	16.321
7	SR 347/Friendship Road From I-985 to SR 211	Widening	33.527
8	US 129/Athens Hwy from SR 323/Gillsville Hwy to Jackson County line	Widening	20.010
9	McEver Road Intersections – Gaines Fy, Lights Fy, Jim Crow, Flat Crk, Stephens	Intersection	7.500
-	FY 2005-2007 Access to Jobs – Hall Area Transit	Transit	0.800
-	FY 2005-2007 Section 5307 Operating Assistance – Hall Area Transit	Transit	1.400
-	FY 2005-2007 Section 5307 Capital – Hall Area Transit	Transit	1.200
-	FY 2008-2010 Transit Funding – Hall Area Transit	Transit	3.420
10	SR 13/ Atlanta Hwy at Hilton Drive	Intersection	0.350
11	Upgrade Traffic Signals at 11 locations along Jesse Jewel Parkway	Signals	0.750
13	I-985 – Exit 22 Ramp Improvements at US 129/E.E. Butler	Interchange	0.500
14	Flowery Branch Historic Streetscape	Enhancement	0.402
<b>Total 2005-2010</b>			<b>171.965</b>



# Gainesville – Hall Transportation Study Long Range Transportation Plan

**Table 13 -  
Proposed Projects – 2011-2020**

Map No.	Segment/Location	Description	Cost
<b>2011-2020</b>			(\$ Mil.)
15	SR 347/Friendship Road – I-985 to Lake Lanier Islands	Widening	5.328
16	I-985 – New Interchange North of SR 13 Near Martin Rd	Interchange	11.010
17	Sardis Road Connector – SR 60/Thompson Bridge to Sardis/Chestatee Rd	Widening	12.625
18	SR 13/Atlanta Hwy and Memorial Park Dr – I-985 to SR 369/Brown's Bridge	Widening	19.665
19	SR 369/Brown's Br Rd – Forsyth Co Line to SR 53/McEver Road	Widening	22.769
20	SR 52/Lula Road – 1 mile north of SR 365 to south of Julian Wiley Road	Passing Lanes	9.100
21	US 129/Cleveland Hwy – Limestone Rd to Nopone Rd	Widening	42.000
22	SR 13-Buford/Atlanta Hwy – Thompson Mill Rd to SR 347/Friendship Rd	Widening	3.146
24	MLK Blvd – SR 60/Queen City Parkway to EE Butler	Widening	2.351
25	Spout Springs Road – Hog Mountain Road to Gwinnett County Line	Widening	18.411
26	Martin Road – New I-985 Interchange To SR 53/Winder Hwy	Widening	11.044
27	SR 211/Old Winder Highway – SR 53/Winder Hwy to Gwinnett County line	Widening	11.657
28	SR 52 at Candler Creek – Bridge	Bridge	1.115
29	SR 52/Lula Road at Chattahoochee River – Bridge	Bridge	5.885
30	SR 332/Poplar Springs Road at Walnut Creek – Bridge	Bridge	1.115
31	US 129/Cleveland Highway at Chattahoochee River	Bridge	3
32	US 129/Cleveland Hwy at East Fork Little River (Bells Mill)	Bridge	3
-	FY 2011- FY 2020 Transit Funding	Transit	13.419
33	Midtown Greenway on CSX right of way	Multi-use Trail	1.0
<b>Total 2011-2020</b>			<b>197.64</b>

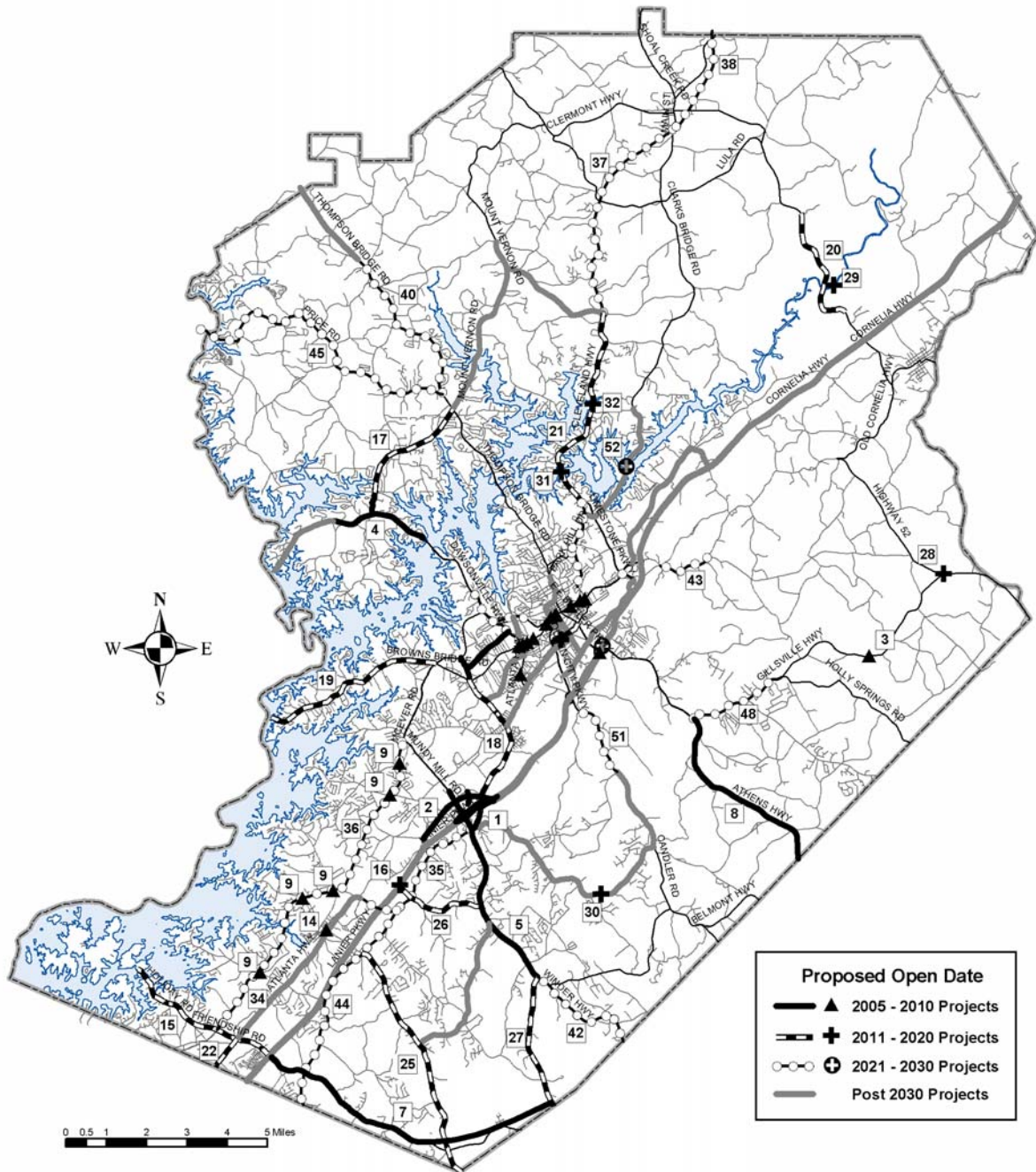


# Gainesville – Hall Transportation Study Long Range Transportation Plan

**Table 14 -  
Proposed Projects – 2021-2030**

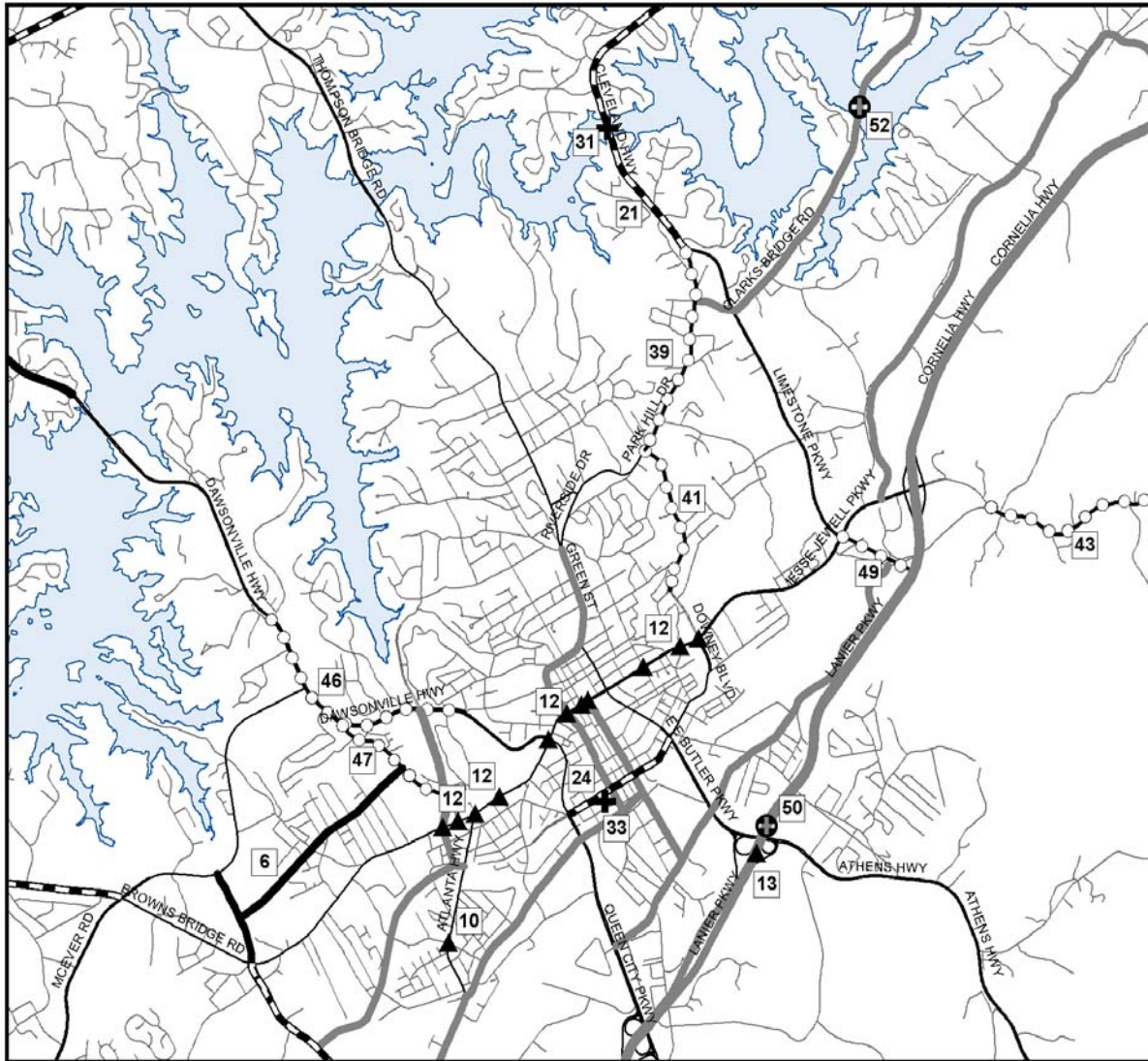
Map No.	Segment/Location	Description	Cost
<b>2021-2030</b>			(\$ Mil.)
34	McEver Rd From SR 347/Friendship Road to Jim Crow Road	Widening	20.950
35	SR13/Atlanta Highway - Radford Road to SR 53/Winder Highway	Widening	11.775
36	McEver Rd - Jim Crow Road to Mundy Mill/SR 53	Widening	14.962
37	US 129/Cleveland Hwy - N of Nopone Road to SR 284/Clarks Bridge Road	Widening	18.986
38	US 129 - SR 284/Clarks Bridge Road to White County line	Widening	12.129
39	SR 11 Bus/Park Hill Dr - South Enota Drive to Limestone Road	Widening	2.551
40	SR 60/Thompson Bridge Road - SR 136/Price Road to Yellow Creek Road	Widening	11.800
41	South Enota Drive - Widen from 2 To 4 Lanes from Park Hill to Downey Blvd.	Widening	5.885
42	SR 53/Winder Hwy – SR 211/Tanners Mill Road to Jackson County line	Widening	13.30
43	Old Cornelia Hwy – Exist. 4-lane E of I-985 to Joe Chandler Rd.	Widening	3.373
44	Hog Mountain Road - Gwinnett County line to SR 13/Atlanta Highway	Widening	17.485
45	SR 136/Price Road - SR 60/Thompson Bridge Road To Dawson County line	Widening	23.313
46	SR 53/SR 53 Conn/Dawsonville Hwy/J Morrow - Ahaluna to Washington St.	Widening	6.669
47	Shallowford Rd. - SR 53/Dawsonville Hwy to Pearl Nix Pkwy	Widening	5.102
48	SR 323/Gillsville Hwy - US 129/Athens Hwy to E of SR 82/Holly Springs Rd	Widening	22.537
49	Limestone Pkwy Extension - Limestone Pkwy to new Interchange at I-985	New Road	14.000
50	I-985/Exit 22 Interchange	Interchange	18.340
51	SR 60/Candler Road - Lee Land Road to Existing 4-Lane Section	Widening	5.522
52	SR 284/Clarks Bridge Road at Chattahoochee River – Bridge	Bridge	5.420
FY 2021 – FY 2030 Transit Funding			Transit 17.175
<b>Total 2021-2030</b>			<b>251.274</b>
<b>Total 2005-2030</b>			<b>620.879</b>

**Figure 6-A -  
Long Range Transportation Plan Projects (Countywide)**









**Figure 6-B -  
Long Range Transportation Plan Projects (Gainesville Inset)**



0 0.5 1 2 3 Miles

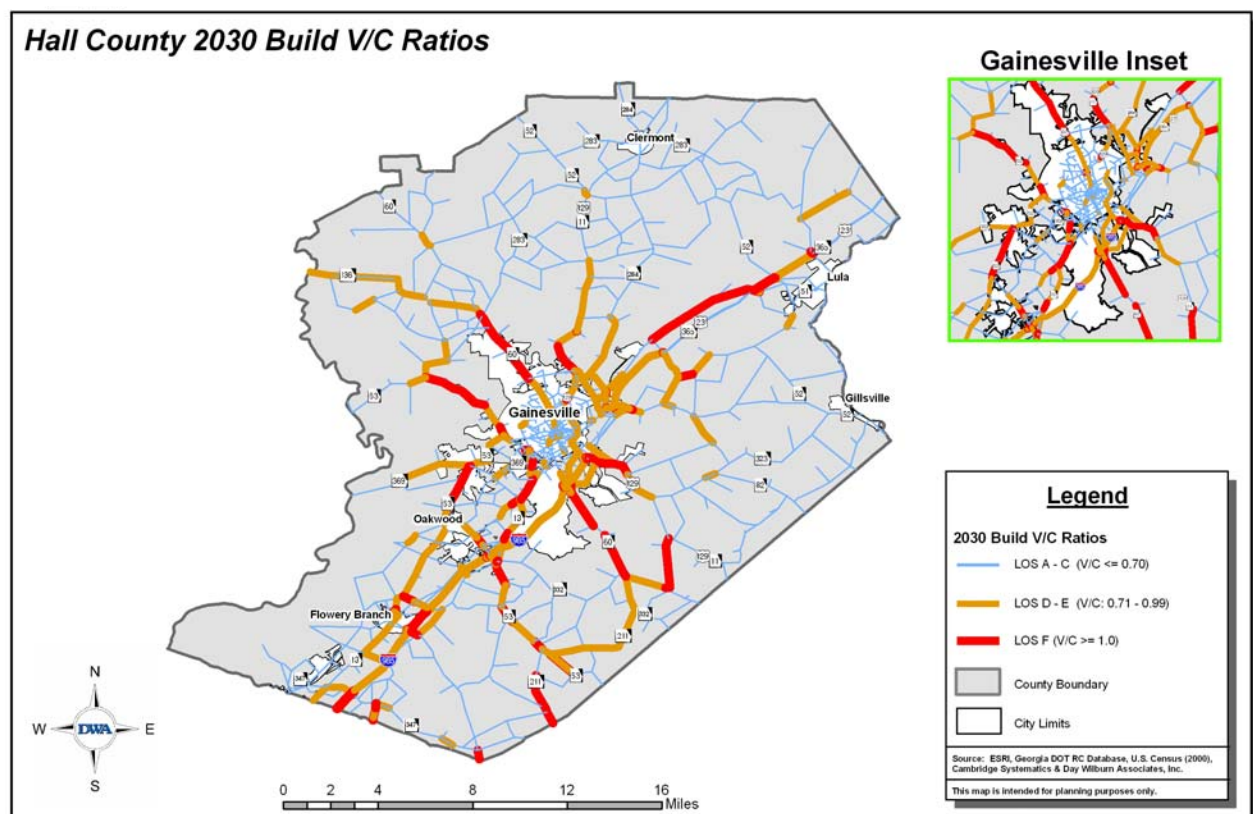
Proposed Open Date	
	2005 - 2010 Projects
	2011 - 2020 Projects
	2021 - 2030 Projects
	Post 2030 Projects

## Other Projects Beyond 2030

Other projects were identified as part of the planning process, but are not included in the LRTP at this time. In most cases, these were local surface street projects that were determined to be of lower priority and for which there was no funding available based on revenue analysis (described in the implementation plan section). Figure 5 shows the remaining deficiencies after the LRTP projects are constructed. Potentially congested roadways in 2030 are Thompson Bridge Road (SR 60) northwest of Gainesville, I-985, Atlanta Highway (SR 13) in south Hall, various sections of SR 53, and others identified in Figure 5.

However, there were two major projects identified that were also not included in the LRTP program at this time. The first is the six-laning of I-985 from the Gwinnett county line to SR 369. The six-laning of this road through Gwinnett County is not a part of ARC's proposed Mobility 2030 plan for the Atlanta urbanized area. The second major project not included is the conversion of SR 365 to a limited access facility from SR 369 to beyond the Habersham County line. This project has been a growing topic of discussion amongst GDOT personnel and local citizens. This project will require significant study to determine costs and impacts, and that study should be initiated soon to provide guidance as development begins to accelerate along this corridor.

**Figure 7 -  
2030 Volume/Capacity Ratios  
with all LRTP Projects Complete**







## *Gainesville – Hall Transportation Study Long Range Transportation Plan*

### Individual Project Fact Sheets

Individual project fact sheets, with maps, more detailed descriptions, project budgets and phasing, are presented in Appendix F for all projects listed in Tables 12, 13 and 14.



## **Implementation Plan**

The Implementation Plan provides financial and project phasing detail, as well as highlighting short-term actions to implement plan strategies. General estimated costs and revenues for the program are also presented. Anticipated costs and revenues are based on the best available information, and will need to be updated in subsequent Plan updates as project information is refined and revenue sources are re-authorized or modified.

### Potential Funding Sources

Hall County is eligible for many types of federal and state funding for transportation improvements. Local sources of funding are often necessary to match state or federal funds, and identifying state and local sources to match potential federal revenues is a challenge. Georgia has one of the lowest motor fuel taxes in the country. To help augment state revenues, counties can enact Special Purpose Local Option Sales Tax (SPLOST) programs, which have specific time frames for collections that make program continuity subject to voter approval. Hall County voters recently approved a new SPLOST program, the County's fifth, which allocates a portion of the funds for transportation projects. Additional SPLOST programs are anticipated during the planning horizon. The details of the revenue projections are also outlined in the Appendix.

Other potential sources of funding include:

- General operating funds;

- Transit farebox revenues;

- Tolls;

- Public/private partnerships, such as Community Improvement Districts (CIDs) and developer contributions; and

- Development impact fees.

### Estimated Revenues

Total estimated revenues available from all sources for the program of projects in 2004 dollars is \$660.7 million, as reflected in Table 15 below. The total estimated state and federal funding available to the year 2030 for the GHTS area is \$497.3 million, plus \$64.4 million in transit specific funding. These funding projects were provided by GDOT based on historical trends. The projection for local dollars, primarily through Special Purpose Local Option Sales Taxes (SPLOST) is \$99.0 million. Most of these funds will be required as local match on projects that can not be fully funded by outside sources. Details on these projections are provided in Appendix D.



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**Table 15 -  
Estimated Revenue (in millions)**

<b>Timeframe</b>	<b>Federal/ State</b>	<b>Local</b>	<b>Transit</b>	<b>Total</b>
2005-2010	\$139.2	\$16.2	\$ 7.5	\$162.9
2011-2020	\$158.8	\$37.4	\$13.4	\$209.6
2021-2030	\$199.3	\$45.4	\$17.2	\$261.9
Total	\$497.3	\$99.0	\$38.1	\$634.4

Source: GDOT and GHMPO Estimates

In addition to capital costs, there will also be operations and maintenance costs that grow as a result of a variety of factors over the next thirty years:

Increased roadway mileage associated with plan improvements;

Increased number of local roadway miles due to new growth in commercial and residential developments;

Implementation of transit improvements requiring on-going operations and maintenance costs; and

Expansion of ITS components and associated monitoring and response capabilities.

These costs and revenues to cover them have been accounted for separately above and beyond the project revenue outlined in Table 15 above. This topic is covered in more detail in the Appendix D.

### Project Phasing

Tables 12, 13, and 14 list the program of projects based on their phasing during the 25 year plan horizon. Projects were phased in accordance with the following criteria:

Need – Projects requiring immediate implementation based on need.

Safety – Higher priority for projects that improve safety.

Connectivity – Prioritization for projects providing improved regional and local connectivity.

Mobility Options – Projects providing low-cost transportation choices and positive benefits to air quality are phased for short term implementation.

Cost – Lower cost projects may be completed first.

The overall phased program compared to available revenues is shown in Table 16. While the overall program is balanced, the breakdown by phase period has some slight discrepancies to be balanced by projects that have funding that spans two phase periods.



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**Table 16 -  
Project Phase Periods versus Revenue (in millions)**

Timeframe	Projected Revenues	Total of Projects
2005-2010	\$162.9	\$171.9
2011-2020	\$209.6	\$197.6
2021-2030	\$261.9	\$251.2
Total	\$634.4	\$620.7

Source: GDOT and GHMPO Estimates

## Project Implementation

Various agencies will have responsibilities for plan implementation over the next several years. Table 17 illustrates specific action items that should occur over the coming years.

**Table 17 -  
Implementation Items**

Strategy Category	Activity	Timeframe	Action Items	Responsible Agencies/Others
<b>Transportation Demand Management</b>	Assess the feasibility of establishing Transportation Demand Initiatives (TDIs) and/or Transportation Management Associations (TMAs)	2-3 years	<ul style="list-style-type: none"> <li>Establish contacts within activity center area businesses to gauge the interest in working together to address transportation needs</li> <li>Based on level of interest, work with GDOT, GHMPO Clean Air Campaign (CAC) and ARC's Commute Connections staff to secure potential financial and staff support for start-up initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Area businesses</li> <li>GHMPO</li> <li>Hall County Chamber of Commerce</li> <li>CAC</li> <li>ARC Commute Connections</li> </ul>
<b>Safety and Operations</b>	Finalize prioritization of projects in the short-term element	0-6 months	<ul style="list-style-type: none"> <li>Finalize prioritization with GHMPO committees</li> </ul>	<ul style="list-style-type: none"> <li>GHMPO</li> </ul>
<b>Transit</b>	Continue to pursue federal funding for needed capital purchases to support the transit system start-up	ongoing	<ul style="list-style-type: none"> <li>Monitor the implementation of the transit system and ridership levels</li> <li>Monitor the status of future funding requests</li> </ul>	<ul style="list-style-type: none"> <li>GHMPO</li> <li>GRTA</li> <li>HAT</li> </ul>
<b>Intelligent Transportation Systems (ITS)</b>	Begin implementation of ITS project recommendations	1-2 years	<ul style="list-style-type: none"> <li>Work with the GHMPO committees to select projects for implementation</li> </ul>	<ul style="list-style-type: none"> <li>GHMPO</li> </ul>



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<b><i>Bicycle and Pedestrian</i></b>	Begin implementation of bicycle and pedestrian project recommendations	1-2 years	<ul style="list-style-type: none"> <li>• Work with the GHMPO committees to select projects for implementation</li> </ul>	<ul style="list-style-type: none"> <li>• GHMPO</li> </ul>
<b><i>Roadways</i></b>	Conduct additional engineering to refine project costs for short-term projects	0-12 months	<ul style="list-style-type: none"> <li>• Refine concepts and project costs</li> </ul>	<ul style="list-style-type: none"> <li>• GHMPO, consultants, engineering staff</li> </ul>
	Add needed projects to the GHMPO and ARC long range plans for conformity determination	0–24 months	<ul style="list-style-type: none"> <li>• Submit projects to GHMPO staff</li> <li>• Submit projects to ARC staff</li> </ul>	<ul style="list-style-type: none"> <li>• GHMPO</li> <li>• ARC</li> </ul>
<b><i>Special Studies</i></b>	Conduct special planning studies, where needed	2-3 years	<ul style="list-style-type: none"> <li>• Conduct studies</li> </ul>	<ul style="list-style-type: none"> <li>• GHMPO, consultants, engineering staff</li> </ul>



## **Conclusion**

Facing continued and likely increasing growth in the foreseeable future, Hall County and its Cities will have great challenges in providing for the community's transportation needs. While the establishment of the MPO process is new, the City of Gainesville and Hall County have had a long tradition of transportation planning that preceded this effort. It is that historical planning that has developed many of the projects and strategies that have formed the basis for this Plan.

While the challenges are great, this Plan does accommodate a large number of projects that address the majority of significant needs identified through this process. There will still be needs that must be addressed, and the priority and magnitude of needs must be continually monitored. The actual impacts of development will need to be compared to projections, and the validity of projections will need to be evaluated against changing economic and political trends. But with a continuing, cooperative and comprehensive planning process in place, the leaders of the County, operating through the GHMPO, should be aware of the issues and prepared to address them.



## **Appendix A– Project Fact Sheets**

The following project fact sheets are completed with the best available data as of the date of this Plan. Project fact sheets will be updated when information is available. When a space is left blank or has the notation “—”, it means that the data is not available. The notation “n/a” means that the specific data or title is not applicable to this specific project. Below is a list of the definitions of categories on the fact sheets to explain various items that are not self-explanatory.

### Project Name

This refers to the project such as road or bridge project.

### Project ID #

This refers to the Georgia Department of Transportation’s internal # for tracking a project from scope to completion. If a project does not have one of these numbers, it is either a totally locally funded project, or a project not yet made active by the DOT.

### Project Description

This describes what will done to the project referred to in the project title. This includes what specific action will be taken on the project (widening, bridge replacement, intersection improvements).

### Regionally Significant

This describes a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sport complexes, etc. or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area’s transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel.

### Capacity Adding

This refers to whether a structure will increase a roadway’s capacity for additional traffic.

### Bike/Ped

This details if there is a bike or pedestrian component that will be completed along with this project.

### Connectivity

This describes how these upcoming projects coordinate with other projects in the Transportation Improvement Program and Long Range Transportation Plan.

### Length

This refers to the length of a project in miles and tenths of miles.

### Number of Lanes – Existing, Future

This section identifies the number of lanes on the roadway presently; lanes planned indicate number of lanes upon completion of project.





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### Number of Lanes – Existing, Planned

This section identifies the number of lanes on the roadway presently; lanes planned indicate number of lanes upon completion of project.

### Existing and Future Volume (ADT)

This details the average annual daily traffic volume on the roadway segment for 2003 and 2030 respectively.

### Project Phase

This section is broken down by fiscal year, showing the year in which work will begin.

### Preliminary Engineering

All work done in development of plans for a particular project.

### Right-of-Way

Refers to the purchase of rights-of way.

### Construction

Refers to the actual construction of a project.



## **Appendix B - Public Involvement**

### Six County Study

The public involvement effort for the Six County Study was a unique program designed to obtain local input through stakeholder discussions. A summary of the public involvement components, purposes, and the use of public input to shape development of the Six County Long Range Transportation Plan Draft is provided in Table B-1.

Building on the experience of previous public outreach efforts, this study developed a process consistent with public involvement efforts at the state and regional levels, while recognizing the impending creation of the Gainesville Hall MPO (GHMPO). Throughout the project, opportunities for citizen input through staff, elected officials, and stakeholders have not only been encouraged but also institutionalized. One of the Six County Study's first products was the transportation public involvement process developed to guide the participation of stakeholders, media, and public in the overall transportation planning process. Regular meetings of the Stakeholder Committee and wide distribution of newsletters stimulated stakeholder interest in and identification of transportation needs.

The objectives of the public involvement activities were threefold. First, it ensured that transportation planning requirements and public involvement goals, as identified in federal regulations, and state and regional plans and policies, were met. Second, it presented guidelines for public involvement that can be used in the metropolitan planning processes for developing and analyzing future projects. Third, it detailed how public comment would be obtained, distributed, responded to, documented, acted upon and evaluated by Hall County.

The approach to public involvement outlined for Hall County considered local needs and conditions while using existing community resources to achieve specific public participation goals. These public participation goals were:

*Involve* the stakeholders with early opportunities for participating in the decision-making process, particularly minorities and low-income persons;

*Listen* to concerns and issues of stakeholders living in these communities;

*Inform* stakeholders in a timely manner of progress and recommendations;

*Learn* from stakeholders about ideas for solutions to transportation problems, and

*Develop* an effective outreach process that can be evaluated, improved and continued.

Specific recommendations for techniques in this public involvement approach were determined using input from project team members and GHMPO staff. County staff members were asked which techniques had worked for Hall County in the past and what could work in the future, given the communities and demographic make-up of the County.

The tools identified and utilized within this study are described in the following paragraphs.



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### *Stakeholder Committee*

A Stakeholder Committee, representing various and diverse views from governmental entities, business, civic and community groups and individuals impacted by the plan, served as the primary tool for public involvement in the transportation planning effort. Stakeholder Committee members were selected in close consultation with the Hall County staff and the Gainesville Hall MPO. Some of the groups represented included members of the Hall County Board of Commissioners, the Hall County Chamber of Commerce, neighborhood associations, MPO committees (Technical Coordinating Committee and Citizens Advisory Committee) and all municipalities. The objective of the stakeholder meetings was to facilitate discussion among the various perspectives found in the county. Staff members from the County, City, GHMPO, GDOT, and the project management team were present to provide information, answer questions and solicit input from the group. Stakeholder input was critical to developing and finalizing the Needs Assessment Report, Planning Process Manual, Long Range Transportation Plan, and Program of Projects. Stakeholders participated in three meetings and provided feedback on the planning process, work products, and tasks through facilitated discussions. Average attendance at the three stakeholder meetings was 25 persons per meeting.

### *Public Information Materials*

A project newsletter was developed and distributed to stakeholders and the general public. The newsletter included announcements of upcoming meetings and events, project status reports, informative articles about the study process, public involvement opportunities and study team contacts. The newsletter served as an effective means of notifying citizens of upcoming meetings. It also provided specific Hall County information as well as a general update of the Multi-County Planning Study.

User-friendly and informative, the newsletter was designed to reach a broad cross section of the County's residents. The mailing list, containing 225 names of Hall County citizens, stakeholders, members of the business community, County and City officials and media groups, was updated with corrected information throughout the study to ensure effective and timely delivery of materials. The newsletter was developed and distributed in September 2003, informing the community of the study's scope and schedule, and providing citizens with the opportunity to comment on the study.

Table B-1 provides a summary of public involvement activities conducted throughout the study period.



## ***Gainesville – Hall Transportation Study Long Range Transportation Plan***

**Table B-1 -  
Summary of Six County Study  
Public Involvement Activities**

<b>Activity</b>	<b>Date</b>	<b>Summary of Activity</b>
Stakeholder Meeting  Newsletter	June 9, 2003  September 2003	<ul style="list-style-type: none"><li>• Introduction of the Multi-County Planning Study</li><li>• Introduction of study's key players, purpose, roles, activities and schedule</li><li>• Presentation of the Planning Process Manual and new transportation planning process</li></ul>
Stakeholder Meeting	February 24, 2004	<ul style="list-style-type: none"><li>• Stakeholder input for the Needs Assessment Report</li><li>• Study update: Presentation of report's preliminary findings</li></ul>
Stakeholder Meeting	May 25, 2004	<ul style="list-style-type: none"><li>• Study update: Announcement of the Hall County Needs Assessment report</li><li>• Stakeholder input on program of projects</li><li>• Discussion of agency roles and responsibilities</li><li>• Study update: Development of the Hall County Long Range Transportation Plan</li></ul>

### **Evaluation of Public Involvement Efforts**

Evaluation of public involvement efforts is critical to the continuing success of the public involvement program. Evaluation determines the effectiveness of the tools utilized and ascertains circumstances under which effectiveness is compromised. Evaluation measures are also important in documenting the level of public involvement achieved. Designed to measure the level of success achieved by the Public Involvement Program, the evaluation process strives to determine effectiveness in achieving public participation goals and obtaining useful feedback from the public.

Table B-2 outlines the evaluation criteria, qualitative and quantitative, used to monitor each public involvement tool and evaluate the effectiveness of the public involvement activities undertaken throughout the process.



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**Table B-2 -  
Public Involvement Evaluation Criteria**

<b>PIP Tool</b>	<b>Evaluation Criteria</b>	
	<b>Quantitative</b>	<b>Qualitative</b>
Stakeholder Group	<ul style="list-style-type: none"><li>• Attendance</li><li>• Diversity of Representation</li><li>• Quantity of Feedback Received</li></ul>	<ul style="list-style-type: none"><li>• Was Input Used in Planning Process?</li><li>• Meeting Convenience: Time, Place, and Accessibility</li><li>• Effectiveness of Meeting Format</li></ul>
Mailing List/Newsletter	<ul style="list-style-type: none"><li>• Number of Additions to a Mailing List</li><li>• Diversity of Representation</li><li>• Quantity of Educational Materials Distributed</li></ul>	<ul style="list-style-type: none"><li>• Concise and Clear Information Portrayed</li><li>• Effectiveness of Newsletter Format</li></ul>

### GHMPO Public Involvement Activities

During the spring of 2004, the MPO staff developed the GHMPO Public Involvement Plan (PIP), and held a public review period of forty-five days to solicit comments from the public on the proposed public involvement process. The PIP was adopted in August 2004, and a public review and comment period will be required for any future revisions proposed for the PIP. The MPO staff will be responsible for the day-to-day management of the Transportation Public Involvement Process.

After receiving the Draft LRTP product created by the Six County Study, GHMPO staff met with the GHMPO committees to seek input on the draft, and further refined the document for public consideration. Public meetings were held on August 31, 2004 and November 4, 2004 at the Georgia Mountains Center in Gainesville, to present the draft plan to the community. The meetings were attended by approximately 50 persons, who heard a brief presentation on the revised draft and were presented with the proposed list of projects making up the LRTP. There were several speakers who addressed transit and bicycle/pedestrian options, as well as speakers who made comments on specific projects. A required 45 day public comment period was advertised in the Gainesville Times and ran from October 18<sup>th</sup> through December 1<sup>st</sup>. Appendix H includes the two public meeting announcements.

#### *Comments from the Public Meeting of August 31, 2004*

Specific comments presented at the meeting and the responses to those concerns are listed below.

- Mundy Mill Road from Gainesville College to I-985 needs to be widened. There are new developments taking place in this corridor that will cause a logjam of traffic along Mundy Mill Road. Is there any possibility that improvements to Mundy Mill Road may be completed although it does not currently show up on the project list? *The Exit 16 Split Diamond*



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*Interchange Project is designed to redistribute trips in this area and provide relief to this road segment. Although the model did not show the need for additional widening at this time, this area will be monitored as part of the ongoing planning process.*

- *There needs to be an intensification and increase in studying of commuter rail from the MARTA Lenox Station in Atlanta to Gainesville. A Georgia group projected the ridership for this route at 7,000 daily. This is the most effective way of dealing with the increasing densities of travel on our existing and projected roads. We will be actively involved in additional future studies on the need for commuter rail service. However this is a regional issue that will need to be addressed at a higher level.*
- *Do any of the new roadway projects include bicycle and pedestrian facilities? Roadway projects in the Gainesville Urbanized Area will automatically include sidewalks. Roadway improvements made along the State Bike Route – principally Hog Mountain Road, Atlanta Highway and Clarks Bridge Road– will include a bike shoulder.*
- *Would like to make the MPO aware of the ability to use flexible funding to use roadway funds for bicycle and pedestrian projects. The GHMPO will look into the flexible funding opportunities.*
- *How realistic is it that the projects in this plan will be built? The plan is put together based on the economic resources available to the community over the next 25 years and therefore is a realistic assessment of potential projects considering the funding available for the community. There are post-2030 projects that were considered but have not made the 25-year plan because there was not sufficient dollars available. As development proposals occurs in the community the plan will be reevaluated, but this is the start of a realistic plan for the community.*
- *How can a property be rezoned for light industrial when the neighboring roads can not handle that additional truck traffic – for example the intersection of Wade Orr Road and Hog Mountain Road is being considered for a rezoning by the City of Flowery Branch. The process of rezoning is a local issue that will be decided upon by the local jurisdiction, but they will hopefully take into account the improvements being put forth in the Long Range Transportation Plan.*
- *In light of the recently initiated changes to the Hall County Comprehensive Plan, how will these changes impact the Long Range Transportation Plan? For instance, will you be looking at changing the timeframe of some of these projects? Will the Sardis Connector be moved up to a higher priority? The recent action by the County Commission was to begin a process to amend the current Comprehensive Plan. Reevaluation of the plan will have to wait until after the county adopts any potential changes. In terms of moving individual projects forward or back in time, the key is that it is a financially constrained process. The reality is that for a project of the Sardis Road Connector's magnitude, the time that it takes to engineer, design and buy right-of-way for such a project, would not allow for it to be built in the 2005-2010 timeframe.*
- *What are the improvements being made to Clarks Bridge? This is a bridge replacement project; the bridge will remain at two lanes but will be widened to have shoulders on each side.*



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- It would be beneficial for new housing projects to include sidewalks and bike paths so that people can walk to schools and work. *There is a lot of opportunity for improvement in this area. We anticipate recommending to the Policy Committee that a bike and pedestrian plan be one of the first special studies to be completed by the GHMPO.*
- Where do I send comments about broadening the greater aesthetic for the county, I am concerned about overall air and water quality and improvements? *Comments can be sent to the Gainesville-Hall MPO. We will review them, incorporate as appropriate and forward on to other appropriate agencies.*
- We must look at commuter rail as a means for moving people back and forth, decreasing the number of cars on the road, and reducing the need for additional roadways. *As previously stated, we will be involved with the further study of commuter rail service.*
- We would like to maintain the enviable quality of life in Hall County while accepting, adopting and embracing growth. Hall County is looking to invest \$660 million dollars in the next 25 years in transportation projects; I recommend that all members of the community stay active in the planning of this county so that we do not become the next Atlanta or Gwinnett County.
- What about the impact of growth on the county? *This larger issue is typically considered under the larger scope of a County's Comprehensive Plan.*

At the meeting of August 31, 2004, the public was invited to provide additional written comments to be considered in the development of the next draft of the LRTP. Written comments received, and the responses to those concerns are listed below.

- Delete the widening of MLK Boulevard, Park Hill Drive and Enota Drive from the Long Range Transportation Plan.

Delete the widening of MLK Boulevard, Park Hill Drive and Enota Drive from the Long Range Transportation Plan. *The City of Gainesville, the sponsor of these projects, notes that these are road widening projects, not new road construction projects. All projects can stand on their individual merits. These projects are an attempt to relieve congestion on Jesse Jewell Parkway, allow for better access to Northeast Georgia Medical Center and to provide an alternative to reaching I-985 rather than traveling highly congested Green Street.*

*The roadway projects will be designed to be sensitive to the environment and neighborhoods in which they are constructed. For example, context sensitive road design and transportation calming measures will be utilized. These projects are all located in the out years of the transportation plan and can be revisited every three years to determine their merits for remaining in the Long Range Transportation Plan.*

- Would like an improved graphic and definition of a split diamond interchange. Also please explore the opportunity to use flexible funding to divert roadway funding toward bike and pedestrian projects. *Ms. Pierce-Kelly was provided with additional information on the split-diamond interchange. The GHMPO staff will be researching the opportunity to use flexible funds, although it is a decision that has to be made by the Policy Committee.*





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- In light of the new Wal-mart and the proposed Mundy Mill development, the Long Range Transportation Plan needs to include widening Mundy Mill Road. *As studies are updated to reflect the specific impacts of such development projects, the GHMPO will consider this concern and potential additional need for further widening.*

### *Comments from the Public Meeting of November 4, 2004*

- I strongly protest the continued plans to widen MLK Boulevard. We have repeatedly told the City of Gainesville that as a city we do not want this project. It is environmental disaster for that neighborhood, it is environmentally racist, it by no means equal protection under the law and is targeting a neighborhood that is seen as an easy mark and it's a part of the inner loop that we have tried so hard to defeat and here we are again. The answer here does not wash, and I would like to go on the record saying that it does not wash. So long as this project remains on the plan, folks are going to continue to get flak about it. Because I do not intend on leaving town, much to many people's chagrin and I do not intend to quit protesting such a blatant exercise of raw and misplaced power. Thank you.
- I too oppose the widening of MLK. It is racism to build this section of the inner loop on this section of the city. There is already have enough traffic in our neighborhood and it is already difficult to access the churches and schools in our neighborhood. I love this community and I really oppose it.
- I oppose the widening of MLK because the people that live there have already been displaced once under urban renewal and then they would have to be displaced again.

*The City of Gainesville, the sponsor of these projects, notes that these are road widening projects, not new road construction projects. All projects can stand on their individual merits. These projects are an attempt to relieve congestion on Jesse Jewell Parkway, allow for better access to Northeast Georgia Medical Center and to provide an alternative to reaching I-985 rather than traveling highly congested Green Street.*

*The roadway projects will be designed to be sensitive to the environment and neighborhoods in which they are constructed. For example, context sensitive road design and transportation calming measures will be utilized. These projects are all located in the out years of the transportation plan and can be revisited every three years to determine their merits for remaining in the Long Range Transportation Plan.*

- I have a question about these projects that are on the plan that many of us are very concerned about that are proposed on this plan. If this plan is adopted, how do we as citizens address and make it clearly known to our elected officials that we do not want these projects. One could possibly make the argument that these projects could remove congestion, but that there are other concerns that go beyond just getting cars from point A to point B. What recourse do we have if this plan is adopted, because projects on plans typically get built. Any suggestions? Any ideas?

*You are here to voice your opinion and concern. There are many people here in this room, hearing your comments that are a part of that decision making process. As part of*



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*the MPO process, these projects have been brought forward by the City of Gainesville and it has responded that it intends to be sensitive in designing these projects. These are projects that are a number of years in the future so that there is plenty of time to address these concerns as well as time for jurisdictions to revise their project lists, if projects are no longer considered feasible.*

- Under the new MPO process, will there be more public meetings, as projects that are long range become short term? Will citizens have another opportunity to comment on projects that are in the mid and long range terms. Because I do not think that anyone wants to get back into the situation that we had with the inner loop, where everyone was surprised by opposition when groups had come out in the past.

*This MPO approval of the Long Range Transportation Plan occurs every three years, so that we will have the opportunity to re-examine the need for projects at that time. There will also be the ability to perform special studies as were discussed earlier and the opportunity to examine in greater depth a project and the community's comfort with it.*

At the meeting of November 4, 2004, the public was invited to provide additional written comments to be considered in the development of the next draft of the LRTP. Written comments received are listed below.

- The first priority should be to get traffic off of Jesse Jewell Parkway. The best way to do it is to extend West Academy East thru the parking area of Mule Camp Springs, across and thru the railroad tracks to Martin Luther King and widen Martin Luther King from Grove Street to connect with Queen City Parkway. This area is mainly warehouse, railroad and commercial property and hardly any residents will be displaced. Thank you for your time and consideration.
- To whom it should concern: The proposed widening of MLK Blvd should be removed from all consideration. Among other things, such work would destroy the safety and integrity of the neighborhoods in that area. Such work would also require the destruction of historic buildings that qualify for NRHP status. State efforts to widen Green Street have met stiff opposition from community leaders for these very reasons. To protect the one (Green Street) and not the other (MLK Blvd) would constitute no less than social and economic discrimination. Worse still, it appears that the case might be that the historical integrity of the one (MLK Blvd) is being sacrificed to preserve the other (Green Street.)
- There are several projects listed on this plan which concern me: the widening of Martin Luther King Boulevard, (both phases), the Park Hill Drive Widening and the South Enota Drive Widening. I am very concerned about negative impacts – i.e. pollution and decreased property values – to the residents along Martin Luther King Boulevard. These neighborhoods have very carefully fought to have quality residences in spite of commercial and industrial encroachments. I also view this widening, as well as the widening of South Enota, as essentially completing the south portion of the infamous “inner loop” to which I am vehemently opposed as a damaging project for our city. In addition, I think the Park Hill Drive widening is ill advised, as it does nothing to encourage through-traffic to use Limestone parkway, instead of coming through Gainesville and causing even more



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congestion, not less. The MLK Boulevard projects and South Enota Drive strike me as unable to hold up environmentally, just one of the planning concerns listed.

- I oppose the MLK project due to the possibility of residents being displaced and the traffic impact it would have on MLK, also the hazard of getting out of my neighborhood. I hope you consider that there are still children walking to the Fair Street School and Hall County Boys Club. It would not be good for the environment in the area.
- On behalf of the officers, members of First Baptist Church, and myself, we respectfully oppose the plans to widen Martin Luther King Jr. Blvd. Our church owns three pieces of property on MLK, our church at MLK and Hwy 129, our parsonage at MLK and McDonald, and another piece of property on the other side of McDonald. First Baptist has been located at its present location since 1923. The church sits right at the sidewalk of MLK, and any construction, widening or otherwise will severely impact our church. Because of heavy traffic, and our proximity to the main highway (Hwy 129), it is already very difficult for members to get in and out of the parking lot, and any widening of MLK will make it next to impossible, and further endanger lives. Further up MLK, north of E.E. Butler, widening MLK will negatively impact our property, and limit our ability to develop the property. Our parsonage will almost certainly have to be relocated, and our property cut in half. We have been a vital part of the New Town community and the downtown area for more than one hundred sixty five years, and we intend to remain. Since its inception in 1838, First Baptist has been in the downtown area of Gainesville. We urgently request that you immediately remove Martin Luther King Jr. Boulevard from any consideration for widening from your Long Range Transportation Plan, and aggressively pursue other alternatives to accomplish your transportation goals. Thanks you very much for your prayerful consideration and cooperation.
- On behalf of the officers, members of the Interdenominational Black Ministers Association, and myself, we respectfully oppose the plans to widen Martin Luther King Jr. Blvd. We represent more than fifty ministers, and more than fifteen churches. Many of our churches are located in and around the New Town community. This community has been plagued by environmental contamination and discrimination for years, and we see this proposed move as just another slap in the face of the black community. This community has had to endure displacement in the past, and it is our desire that this small black community be preserved as a beautiful, clean, safe and healthy community for its African-American residents. Any further disruption and displacement would be devastating to these long time residents. There are neighborhood stores, and elementary school, the Boys and Girls club and other businesses in this area. Many residents, especially young people walk to and fro in this community. Any widening of MLK would make it more difficult to travel on foot, by bicycle, or motor vehicle, and it would prove to be very unsafe. As a matter of fact, the City should be seeking ways to reduce the traffic that is currently using this road. We urgently request that you immediately remove Martin Luther King Jr. Boulevard from any consideration for widening from your Long Range Transportation Plan, and aggressively pursue other alternatives to accomplish your transportation goals. Thanks you very much for your prayerful consideration and cooperation.

*The City of Gainesville, the sponsor of these projects, notes that these are road widening projects, not new road construction projects. All projects can stand on their individual*



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*merits. These projects are an attempt to relieve congestion on Jesse Jewell Parkway, allow for better access to Northeast Georgia Medical Center and to provide an alternative to reaching I-985 rather than traveling highly congested Green Street.*

*The roadway projects will be designed to be sensitive to the environment and neighborhoods in which they are constructed. For example, context sensitive road design and transportation calming measures will be utilized. These projects are all located in the out years of the transportation plan and can be revisited every three years to determine their merits for remaining in the Long Range Transportation Plan.*

- While reviewing the information from the recent GHMPO meeting, I noted the proposed Sardis Connector to Thompson Bridge Road. I am not that familiar with the area involved, nor do I know the proposed route. I would not expect the roadway to affect this particular area; however, please be advised that there is a cemetery along Sardis Road behind Antioch Church. The GPS coordinates of the cemetery are N 34 20 32.7 at W083 53 35.2. This cemetery is that of the Robinson/Whelchel/Smith, et al, families. Portions of this cemetery were moved to this site when the lake was created in the late 1950s. Thank you for your attention to this matter.

*We will bring this issue to the attention of the project sponsor, the Georgia Department of Transportation.*

- Hall County needs to be friendlier to bicycles and pedestrians. Many people are afraid to walk on the roads, so are forced to drive for even short trips. The roads need wide shoulders for bike travel. If you build them, people will use them. Also, please look into an express bus from a Park and Ride lot for commuters into Atlanta. The bus from Mall of Georgia is full. If we only plan for more cars and large lot subdivisions we will become a suburb of Atlanta. Expand transit instead of widening MLK to relieve congestion without community/environmental impacts.

*There is a lot of opportunity for improvement in this area. We anticipate recommending to the Policy Committee that a bike and pedestrian plan be one of the first special studies to be completed by the GHMPO.*

- I hope public meetings will be made as 3 year revisions are made so we can monitor changes to original plans.

*There will definitely be public meetings during the formulation of the next Long Range Transportation Plan in 2007.*

- I reviewed the above draft and found it to be very thorough. I would suggest moving forward on those plans that would divert "through traffic" from passing through Gainesville. "Pass thru" traffic will eventually close down the downtown area of the city. Potential shoppers/businesses will then avoid the area resulting in revenue loss to existing business and thus tax dollars to the city.

*The first goal of the plan is to provide the desired level of accessibility and mobility of people and goods. A critical component is the potential diversion of pass through traffic.*



## **Appendix C – Population Methodology**

### Methodology Overview

Population and employment forecasts for the Long Range Transportation Plan were taken from the recently adopted *Gainesville/Hall County Comprehensive Plan*. Initial projections were based on historical trends and compared to the experience in nearby Counties.

An evaluation was made of the specific capacity of the proposed Future Land Use Plan, and the final population forecasts were developed based on that Plan. These final forecasts reflect the following assumptions:

Past trends represent a valid anticipation of future change in Hall County and its cities;

Past trends will continue with few changes in the market forces that created them; and

Factors that would otherwise limit growth naturally (such as land availability, water resources and air quality) will not begin to affect growth until the later portion of the 2030 forecast horizon. This creates an “S” shaped growth curve that flattens out as the County approached build-out in the last years of the forecast period.

### Growth Allocations - General Population Data

Based on the 2000 Census population and building starts since 2000, the estimated 2003 population for the county is 162,372 persons living in 55,849 households and in Gainesville there are 29,662 persons in 9,980 households. The estimated average household size is approximately 2.86 persons per household in the county and 2.75 persons per household in the city. There are approximately 2,585 persons living in-group quarters in the county and 2,018 are in the city.

The current and future population of the city and county are presented in Table C-1.



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**Table C-1 -  
Population**

<b>City of Gainesville</b>											
<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
29,662	30,731	31,842	32,797	33,781	34,794	35,986	37,188	41,555	48,742	49,569	52,098
<b>Hall County</b>											
<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
162,372	169,966	176,765	183,835	191,189	198,836	206,790	215,061	261,291	298,274	325,051	340,555

Source: Gainesville-Hall County Comprehensive Plan





## Appendix D – Financial Summaries and Methodology

### Revenue Estimates

Initial Revenue estimates were formulated as part of the Six County Study, and then reviewed and finalized for the LRTP.

### *State and Federal Road Funding*

The estimate shown in Table D-1 was developed by the Georgia Department of Transportation based on regression analysis of the historical funding to Hall County. The projections account for both capital and maintenance dollars, and provide for a total of \$497.3 million for new projects through 2030. These figures have been adjusted based on actual TIP figures for the years 2005-2007.

**Table D-1 -  
Projected State and Federal Funding to Hall County**

YEAR	OVERALL PROGRAM FUNDING	MAINTENANCE EXPENDITURES	PROJECT FUNDING
2005	\$12,500,000.00	\$2,238,000.00	\$10,262,000.00
2006	\$13,750,000.00	\$2,250,000.00	\$11,500,000.00
2007	\$14,250,000.00	\$2,750,000.00	\$11,500,000.00
2008	\$15,000,000.00	\$2,875,000.00	\$12,125,000.00
2009	\$16,250,000.00	\$3,000,000.00	\$13,250,000.00
2010	\$17,500,000.00	\$3,160,000.00	\$14,340,000.00
2011	\$18,000,000.00	\$3,225,000.00	\$14,775,000.00
2012	\$18,750,000.00	\$3,500,000.00	\$15,250,000.00
2013	\$19,900,000.00	\$3,625,000.00	\$16,275,000.00
2014	\$20,100,000.00	\$3,750,000.00	\$16,350,000.00
2015	\$21,250,000.00	\$4,000,000.00	\$17,250,000.00
2016	\$22,250,000.00	\$4,160,000.00	\$18,090,000.00
2017	\$22,937,500.00	\$4,225,000.00	\$18,712,500.00
2018	\$23,625,000.00	\$4,500,000.00	\$19,125,000.00
2019	\$24,312,500.00	\$4,625,000.00	\$19,687,500.00
2020	\$25,000,000.00	\$4,750,000.00	\$20,250,000.00
2021	\$26,250,000.00	\$4,875,000.00	\$21,375,000.00
2022	\$27,500,000.00	\$5,000,000.00	\$22,500,000.00
2023	\$28,500,000.00	\$5,225,000.00	\$23,275,000.00
2024	\$29,000,000.00	\$5,400,000.00	\$23,600,000.00
2025	\$30,000,000.00	\$5,600,000.00	\$24,400,000.00
2026	\$31,250,000.00	\$5,750,000.00	\$25,500,000.00
2027	\$32,500,000.00	\$5,875,000.00	\$26,625,000.00
2028	\$32,750,000.00	\$6,000,000.00	\$26,750,000.00
2029	\$33,250,000.00	\$6,225,000.00	\$27,025,000.00
2030	\$34,000,000.00	\$6,500,000.00	\$27,500,000.00
<b>TOTALS</b>	<b>\$610,375,000.00</b>	<b>\$113,083,000.00</b>	<b>\$497,292,000.00</b>

Source: Georgia Department of Transportation



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### *State and Federal Transit Dollars*

Because of the young age of the local transit system, funding is projected using those dollars shown in the current STIP, and projecting operating assistance and capital dollars out to the year 2030, with a 2.5% annual increase based on projected population increases. The overall dollars are reflected in Table D-2 below.

**Table D-2 -  
Projected Transit Funding**

<b>YEAR</b>	<b>PROJECTED TRANSIT FUNDING</b>
2005	\$1,100,000
2006	\$1,850,000
2007	\$1,125,000
2008	\$1,112,000
2009	\$1,140,000
2010	\$1,168,000
2011	\$1,198,000
2012	\$1,228,000
2013	\$1,258,000
2014	\$1,290,000
2015	\$1,322,000
2016	\$1,355,000
2017	\$1,389,000
2018	\$1,424,000
2019	\$1,459,000
2020	\$1,496,000
2021	\$1,533,000
2022	\$1,571,000
2023	\$1,611,000
2024	\$1,651,000
2025	\$1,692,000
2026	\$1,734,000
2027	\$1,778,000
2028	\$1,822,000
2029	\$1,868,000
2030	\$1,915,000
<b>TOTALS</b>	<b>\$38,089,000</b>

Source: Gainesville-Hall MPO and Georgia DOT

### *Local Road Dollars*

Local Road funding is primarily provided through Special Local Option Sales Taxes (SPLOST). Hall County has a strong track record of supporting such taxes, the latest program being approved with an affirmative vote of greater than 70%. The recently adopted Hall County SPLOST V has budgeted \$16.2 million for transportation plan projects that coincides with the 2005-2010 plan period. It is anticipated that four additional SPLOST taxes will be implemented during the plan period (two in each additional 10 year plan periods). In addition, road maintenance dollars of \$7,250,000 were budgeted in SPLOST V. The projections assume a similar level of transportation funding in each SPLOST, with a 10% increase in each successive



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SPLOST based on increases in sales tax due to population growth in the period. This equates to a very conservative 2% revenue growth rate, significantly less than population growth projected in the rest of the Plan. The local revenues are summarized in Table D-3 below.

**Table D-3 -  
Projected Local Revenues**

<b>Timeframe</b>	<b>Projects</b>	<b>Maintenance</b>	<b>Total</b>
2005-2010	\$16.2	\$7.25	\$23.45
2011-2020	\$37.4	\$16.75	\$54.15
2021-2030	\$45.4	\$20.25	\$65.65
<b>Total</b>	<b>\$99.0</b>	<b>\$44.25</b>	<b>\$143.25</b>

Source: Gainesville-Hall MPO

The complete revenues available for construction, maintenance and transit are summarized in Table D-4. Funding available in the various plan timeframes is summarized in Table D-5.

**Table D-4 -  
Revenue Summary**

<b>Source</b>	<b>Projects</b>	<b>Maintenance</b>	<b>Transit</b>	<b>Total</b>
Federal/State	\$497,292,000	\$113,083,000	\$25,504,000	\$635,879,000
Local	\$99,000,000	\$44,250,000	\$12,584,000	\$155,834,000
<b>Total</b>	<b>\$596,292,000</b>	<b>\$157,333,000</b>	<b>\$38,088,000</b>	<b>\$791,713,000</b>

Source: Gainesville-Hall MPO and Georgia DOT

**Table D-5 -  
Expenditure Summary**

<b>Timeframe</b>	<b>Projects</b>	<b>Maintenance</b>	<b>Transit</b>	<b>Total</b>
2005-2010	\$161,986,000	\$23,523,000	\$7,495,000	\$193,004,000
2011-2020	\$193,358,000	\$57,110,000	\$13,419,000	\$263,887,000
2021-2030	\$238,770,000	\$76,800,000	\$17,175,000	\$332,745,000
<b>Total</b>	<b>\$594,114,000</b>	<b>\$157,433,000</b>	<b>\$38,089,000</b>	<b>\$789,636,000</b>

Source: Gainesville-Hall MPO and Georgia DOT



## **Appendix E – Congestion Management System**

### Introduction

Hall County encompasses approximately 394 square miles in northeast Georgia. The 2000 Census found that growth in the area qualified the County as urbanized, leading to the creation of the Gainesville-Hall Metropolitan Planning Organization (GHMPO). Approximately five percent of the County, lying within the Cities of Buford and Braselton and the unincorporated area, is also part of the Atlanta urbanized area. The County is home to six cities - Clermont, Flowery Branch, Gillsville, Lula, Oakwood, and the county seat, Gainesville, and the Cities of Buford and Braselton have annexed into Hall County.

Hall County has been characterized by steady growth over the last decade. It experienced a 45.9 percent growth rate from the years 1990 to 2000, increasing in population from 96,053 to 139,277. This rate is comparable to that of other suburban counties in the exurbs of Atlanta. Future year forecasts project that by 2030 Hall County's population will increase an additional 186,800 (134 percent). This dramatic growth has created new and more complex challenges to adequately address citizen and business mobility needs.

Congestion Management Systems (CMS) are required under USDOT planning regulations for areas over 200,000 population; these areas are called Transportation Management Areas (TMA). The Gainesville-Hall Transportation Study area (which includes all of Hall County) does not meet that threshold itself, however, the small portion of the Atlanta Urbanized Area that extends into southern Hall County must comply with CMS requirements. This report addresses the CMS requirements for that 5 percent of the County, not the entire GHMPO boundary.

An effective CMS is a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet State and local needs. Congestion Management System standard methodology uses the transportation demand model for defining congested facilities. The model's daily volumes are analyzed to identify congested links, facilities and corridors.

### Purpose

The primary purpose of a Congestion Management System is to develop tools that may be used in the regional planning for prioritization of needs and for decision making.

Federal Regulations consider the CMS a key element of how TMA's continuously process "information on transportation system performance and on alternative strategies for alleviating congestion" as well as "enhancing the mobility of persons and goods to levels that meet state and local needs". The regulations also emphasize "efficient and effective use of existing and future transportation facilities" while striving to meet the goals of reduced vehicle demand and improved air quality.

GHMPO is committed to the successful creation and maintenance of a congestion management program that provides a methodology for identifying and prioritizing regionally significant



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improvement projects reflective of the Transportation Equity Act of the 21st Century (TEA-21). This process will become an operational component of the Long-Range Transportation Plan and the GHMPO will use the CMS as a guide for transportation planning activities directed at preventing, alleviating, and reducing traffic congestion.

### Objectives and Methodology

An effective CMS is a process to manage congestion. The process provides information on transportation system performance and strategies for alleviating congestion. This Congestion Management System is established for the Atlanta Urban Area portion of Hall County as part of the Gainesville - Hall County MPO planning process.

This report utilizes traffic count data that reflects average weekday conditions in the year 2000. Based upon the new urbanized area identified as part of the 2000 Census, this is the first CMS report for the Atlanta portion of urbanized Hall County. The 2000 Census was the most recent reliable data and was used in the GDOT approved model.

The roadways in the Hall Congestion Management Network (CMN) (for only the Atlanta Urbanized Area) were analyzed using the Base Year 2000 Network and 2030 Existing plus Committed (E+C) Network of the Six County Study Travel Demand Model (TDM) to evaluate congested links, facilities and corridors. The same model and socio-economic assumptions were used in the Long Range Transportation Plan as a factor in determining needs.

This is separate and apart from the conformity analysis that will be completed by the Atlanta Regional Commission for the twenty counties that were designated nonattainment under the 8-hour ozone standard. A more complete discussion of their methodology and rationale is included in Appendix F.

The Federal Highway Administration (FHWA) defines congestion as the level at which transportation system performance is no longer acceptable due to traffic interference, and this definition is being used in the Hall County CMS. The level of system performance deemed acceptable varies by functional classification of the transportation facility, geographic location, time of day and other characteristics.

To coordinate with the Atlanta CMS 2003 Update, the Volume to Capacity (V/C) Ratio will be used to evaluate roadway congestion in the Atlanta urbanized portion of Hall County. There is an established relationship between v/c ratio and traffic operation, and v/c ratio is a common indicator of congestion. The volume of a facility is the estimated amount of traffic utilizing the facility at a given time. The capacity of a given facility is the amount of traffic the facility has been designed to carry in a given time period at free-flow speed while maintaining safe traveling distance between vehicles.

V/C ratios can be used to illustrate a facility's Level of Service (LOS). The CMS report will use the v/c calculated LOS values outlined in the 2030 Long Range Transportation Plan. LOS measures "A" to "F" reflect the roadway's operation; the higher the ratio, the closer the roadway's capacity is to being filled. During the long range transportation planning process, the LOS values were approved by GDOT as follows:



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- LOS A to C  $\leq 0.70$
- LOS D and E  $\geq 0.71 \leq 0.99$
- LOS F  $\geq 1.00$

LOS definitions qualify traffic conditions in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions and safety. LOS A represents the best operating conditions. Following the LOS guidelines in the Highway Capacity Manual, the criteria are:

- LOS A, B and C indicate conditions where traffic can move relatively freely.
- LOS D - Vehicle speed begins to decline slightly with increasing flows. Speed and freedom of movement are severely restricted.
- LOS E - Describes conditions where traffic volumes are at or close to capacity, resulting in serious delays.
- LOS F - Breakdown in vehicular flow. Condition exists when the flow rate exceeds roadway capacity. LOS F is used to describe conditions at a bottleneck or breakdown as well as the condition of traffic downstream from that point.

Roadways described as “regionally significant” in the model networks that are in the Hall CMN were evaluated. The volume to capacity (V/C) ratios were used as the initial system performance measure in the CMS development process. Table 1 provides the V/C thresholds used to define congestion in this CMS.

**Table E-1 –  
Congestion Thresholds**

	Freeways		Regionally Strategic Arterial System	Other Arterials & Regionally Significant Roadways
	HOV	Others		
Area Type	Volume to Capacity (V/C) Ratios			
Urban	1.0	1.0	1.0	1.0
Suburban	1.0	1.0	1.0	0.8
Exurban/Rural	1.0	1.0	1.0	0.8

Source: Atlanta Regional CMS 2003 Update

The V/C ratio is not the only measure to identify congestion. The Atlanta Regional Commission (ARC) in their 2002 and 2003 CMS ranked facilities by analyzing duration of daily congestion. Ranking facilities by duration of congestion was not used in Hall County for this report. If the CMS area broadens to include additional facilities, then future CMS updates may include such ranking for facilities in Hall County.





## ***Gainesville – Hall Transportation Study Long Range Transportation Plan***

### Gainesville-Hall CMS Network

While the entire county is included in the GHTS, approximately 5 percent of the County is part of the Atlanta urbanized area (depicted in Figure 2) and is subject to the CMS requirement. Based upon a review of functional classifications and traffic volumes, SR 13/Atlanta Highway (Major Collector), McEver Road (Minor Arterial), and SR 347/Friendship Road (Minor Collector) are the only regionally significant roadways that are part of the CMS. As mentioned earlier, V/C ratios were applied to identify the congested links. After congested links were identified, congested facilities and corridors were identified.

### CMS in Non-Attainment Areas

There are special rules for the use of a region's CMS when it is in non-attainment status for carbon monoxide and/or ozone. The federal government has provided the following guidelines for the use of a CMS when a single-occupancy vehicle (SOV) capacity expansion is proposed (per Title 23 Section 500.109 (c) of the Code of Federal Regulations):

*"In a TMA designated as non-attainment for carbon monoxide and/or ozone, the CMS shall provide an appropriate analysis of all reasonable (including multimodal) travel demand reduction and operational management strategies for the corridor in which a project that will result in a significant increase in capacity for SOVs (adding general purpose lanes to an existing highway or constructing a new highway) is proposed ... If the analysis demonstrates that ... additional SOV capacity is warranted, then the CMS shall identify all reasonable strategies to manage the SOV facility effectively ... Other travel demand reduction and operational management strategies appropriate for the corridor, but not appropriate for incorporation into the SOV facility itself shall also be identified through the CMS."*

Thus, there are three points to consider:

1. Before an SOV capacity expansion can be recommended for construction, all other reasonable options must be considered. These options can be evaluated based on the performance measures used in the CMS.
2. After any improvement has been implemented, the CMS can monitor the operation of the improvement and evaluate its effectiveness.
3. Concurrent with the SOV capacity expansion, the CMS can be used to identify complementary strategies to reduce travel demand and enhance mobility in the corridor.

### Congestion Identification

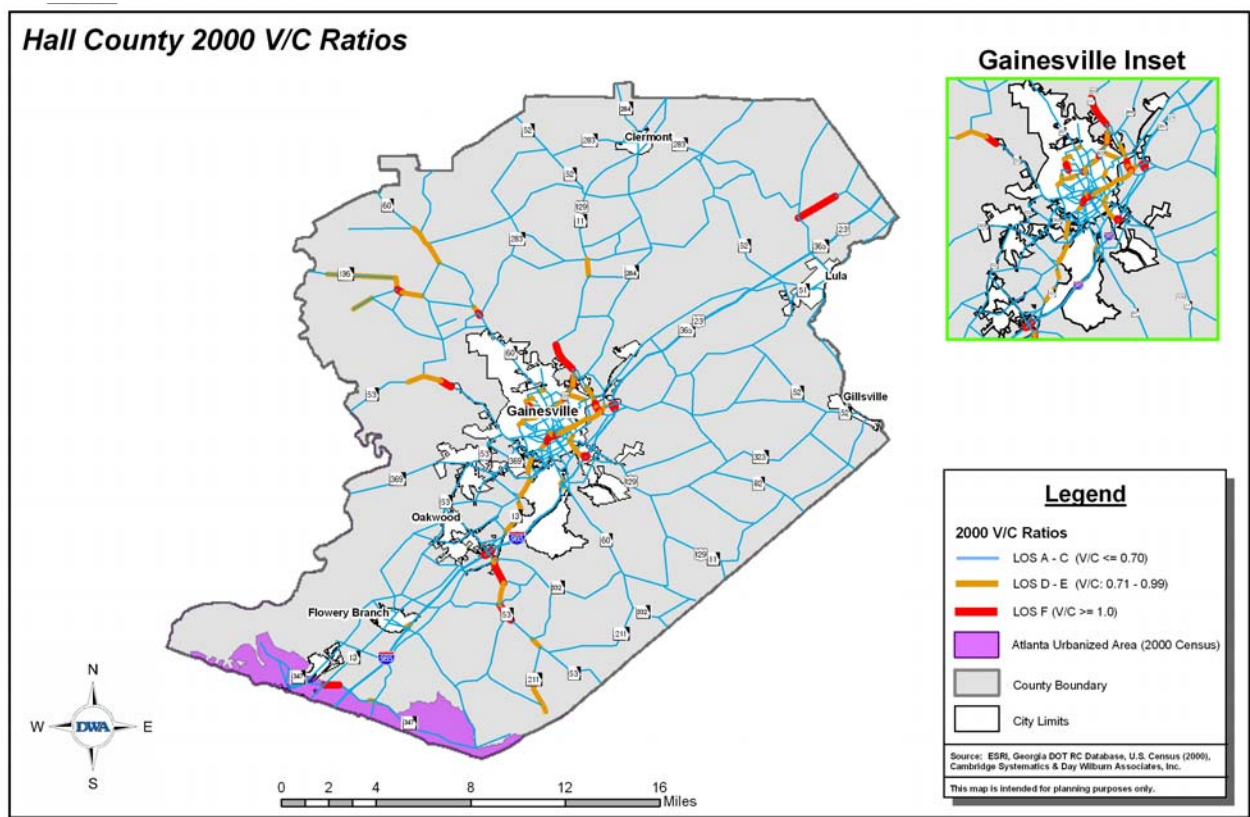
The v/c ratio currently being used in the CMS is from the 21- County (the 20 Counties in the Atlanta 8-hour nonattainment area plus Dawson County) TP+ transportation model provided to the MPO by the Georgia Department of Transportation (GDOT). The data was last updated in 2003 during the Multi-County Study, which produced the first Draft Gainesville-Hall Long Range Transportation Plan. The model was derived from 2000 census data.

Figure E-1 shows the year 2000 congested links in Hall County. Using the definition of congestion identified in Table 1, a list of congested roadway sections are as follows:

## V/C Ratio > 1.0

- SR 347/Friendship Road, between SR 13/Atlanta Highway and I-985

**Figure E-1 –  
Hall County 2000 Congested Links**

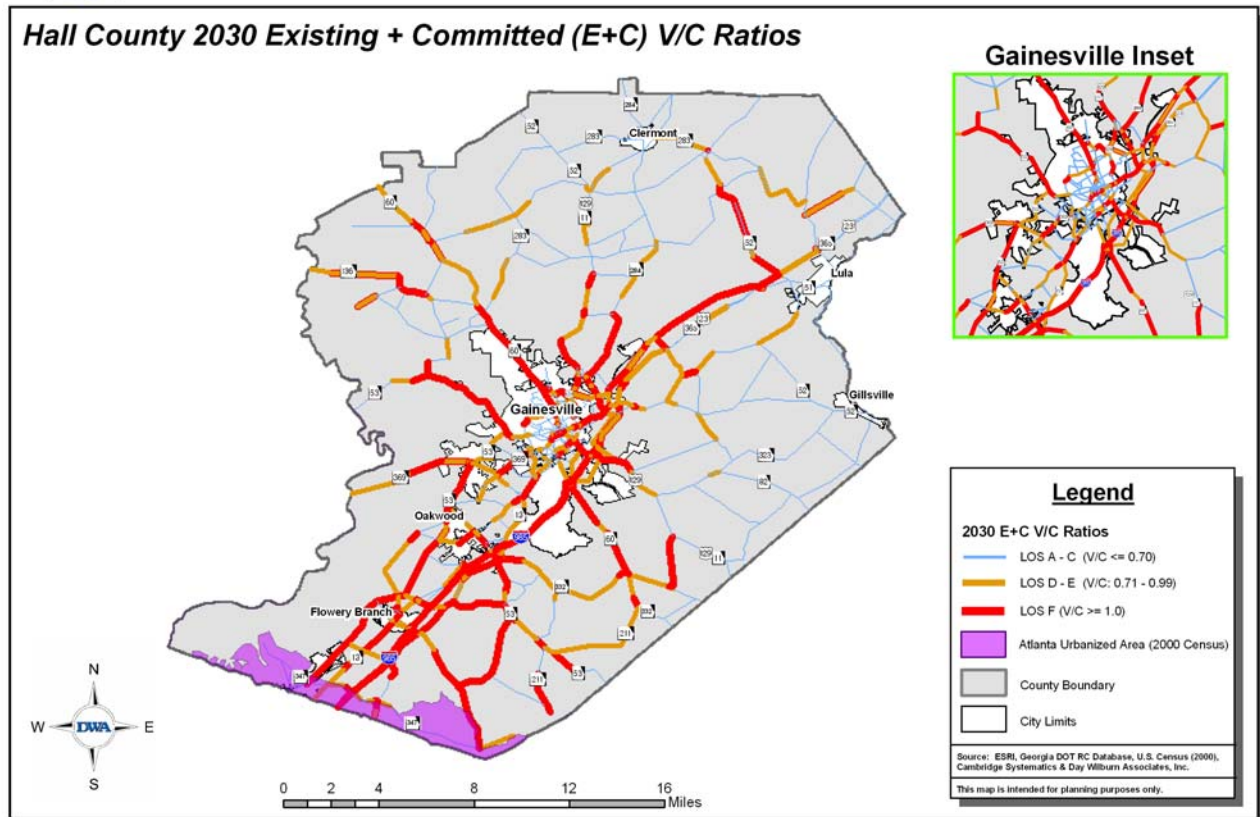


The 2030 E+C analysis forecasts congested conditions likely to occur with near term programmed transportation improvement projects in place. The results of this analysis is presented in Figure E-2.

## V/C Ratio > 1.0

- SR 347/Friendship Road, between SR 13/Atlanta Highway and Ridge Road
- McEver Road from Gwinnett County Line to the urbanized boundary
- SR 13/ Atlanta Highway from Gwinnett County line to the urbanized boundary

**Figure E-2 –  
Hall County 2030 Congested Links**



## Transit, Bicycle and Pedestrian

Transit does not serve the CMS study area, but as transit options are explored, the GHMPO will continue to evaluate transit alternatives that can provide congestion relief. In addition to roadway corridor congestion information, the future CMS should support efforts to monitor public transit and alternative transportation. The intention is to collect transit, bicycle and pedestrian data to measure trends in alternative transportation and facility usage. The GHMPO will continue their efforts to encourage data collection and to be a clearinghouse for such information. Methods to evaluate performance of bicycles and pedestrians at a regional level as of yet have not been addressed by the MPO, and currently, no transit services or bicycle routes traverse through the urbanized area in Hall County. The impact of bicycle and pedestrian travel on the transportation network has not been quantified but will be considered qualitatively in future CMS analyses.



### Identify Candidate Congestion-Reduction Projects

Several congestion-reduction strategies were reviewed for implementation. Candidate congestion reduction projects included Transportation System Management (TSM), Travel Demand Management (TDM), and Intelligent Transportation Systems (ITS) strategies, transit service projects, and highway improvement projects.

### Congestion Mitigation Strategies

Federal regulations cite that “consideration needs to be given to strategies that reduce SOV (single-occupancy vehicle) travel and improve existing transportation system efficiency.” The intent is to find strategies to reduce SOV demand before adding extra lanes or new roads become necessary. The same regulations detail five categories of traditional and nontraditional congestion management strategies that could be considered. The categories are Transportation Demand Management (TDM) measures, traffic operational improvements, public transportation improvements, Intelligent Transportation System (ITS) technologies and, where necessary, additional system capacity. Below are individual congestion management strategies, however some measures may not be appropriate for the urbanized portion of Hall County and the GHMPO will coordinate all mitigation strategies with the Atlanta Regional Commission (ARC).

### Transportation Demand Management (TDM) Measures

- Growth Management and Activity Center Strategies
  - o Promote infill, compact and mixed-use development
  - o Enforce growth boundaries and limit rural growth areas
  - o Develop standards
- Congestion Pricing
  - o Parking fees
  - o Price preference to car- and van-poolers



## *Gainesville – Hall Transportation Study Long Range Transportation Plan*

- Ridesharing Programs
  - o Carpool/vanpool and transit initiatives
  - o HOV priority systems
  - o Employer trip reduction programs
  - o Guaranteed ride home program
  - o Park and ride facilities
- Alternative Work Strategies
  - o Telecommuting
  - o Flexible work hours
  - o Telework
- Shuttle Services
  - o Demand–response transit
  - o Express service
- Nonmotorized Transportation Planning
  - o Traffic calming
  - o Streetscape
  - o Safety education
  - o Transit oriented development
  - o Improved sidewalks, paths, and bike lanes

### Traffic Operational Improvements

- Traffic Signal Improvements
  - o Signal re-timing
  - o Vehicle detection
  - o Highway/railroad signal coordination
- Roadway Geometrics Improvements
  - o Bottleneck alleviations
  - o Turn lane additions at intersections
  - o Re-striping/lane modifications
- Turn Restrictions
  - o Time of day restrictions on turning movements
- Access Management Techniques
  - o Driveway management
  - o Median management
  - o Frontage roads
- High Occupancy Vehicle Lanes



## ***Gainesville – Hall Transportation Study Long Range Transportation Plan***

### *Public Transportation Improvements*

- Public Transit Capital Improvements
  - o Fleet expansion
  - o Transit support facilities
  - o Improved intermodal connectors

### *Intelligent Transportation System Technologies*

- Incident Management
  - o Incident detection and surveillance
  - o Incidence response units
- Advanced Traveler Information
  - o Dynamic message signs
  - o Highway advisory radio
- Advanced Traffic Management Centers
  - o Traffic management center
  - o Traffic signal coordination

### *Additional System Capacity*

- Additional freeway lanes
- Additional roadway lanes
- New roadway construction
- Interchanges

### *Implementation Strategy*

Many of the objectives or specific strategies listed above are projects or part of projects that are either already programmed by the Georgia Department of Transportation (GDOT) or are being considered in the future. Many existing projects and programs contribute to congestion mitigation measures. As a starting point for congestion management planning, it was important to re-evaluate previous initiatives and evaluate current projects for general aspects that may affect congestion and identify new studies targeted towards specific aspects of congestion management. The Congestion Management System is a key tool for identification of projects for plan implementation. It is considered a companion piece to the plan providing the MPO with guidance on the selection and prioritization of projects. The following is a list of proposed projects in the Hall County Atlanta urbanized area:

- Widen SR 347/Friendship Road from Lake Lanier Islands to SR 211/Old Winder Highway
- Widen SR 13/ Atlanta Highway From Thompson Mill to SR 347/Friendship Road .





## ***Gainesville – Hall Transportation Study Long Range Transportation Plan***

The following two tables summarize the evaluation of congestion mitigation strategies along each corridor.

**Table E-2 -  
Congestion Mitigation Strategies - SR347/Friendship Road**

<b>Strategy</b>	<b>Applicability</b>	<b>Remarks</b>
Transportation Demand Management Measures	No	The low density residential development pattern and an absence of major employers or employment centers does not support programs such as alternative work strategies and ridesharing.
Traffic Operational Improvements	Partial	Traffic operational improvements will improve access on and off the facility, but would not significantly reduce overall congestion levels through the corridor.
Public Transportation Improvements	No	The absence of a public transit system in this area does not allow for these measures. The lower density development existent and projected does not support traditional fixed route – fixed schedule (including express commuter service) within the corridor.
ITS Technologies	No	ITS improvements alone will not improve congestion on facility, however, any appropriate ITS technology (variable message signs, signal system interconnects, etc) will be examined further by GDOT during project concept development.
Additional System Capacity	Yes	The widening of this facility is the only strategy that will significantly reduce projected “no-build” congestion on this facility.

**Table E-3 -  
Congestion Mitigation Strategies – SR13/Atlanta Highway**

<b>Strategy</b>	<b>Applicability</b>	<b>Remarks</b>
Transportation Demand Management Measures	No	The low density residential development pattern and an absence of major employers or employment centers does not support programs such as alternative work strategies and ridesharing.
Traffic Operational Improvements	Partial	Traffic operational improvements will improve access on and off the facility, but would not significantly reduce overall congestion levels through the corridor.
Public Transportation Improvements	No	The absence of a public transit system in this area does not allow for these measures. The lower density development existent and projected does not support traditional fixed route – fixed schedule (including express commuter service) within the corridor.
ITS Technologies	No	ITS improvements alone will not improve congestion on facility, however, any appropriate ITS technology (variable message signs, signal system interconnects, etc) will be examined further by GDOT during project concept development.
Additional System Capacity	Yes	The widening of this facility is the only strategy that will significantly reduce projected “no-build” congestion on this facility.



## ***Gainesville – Hall Transportation Study Long Range Transportation Plan***

As noted earlier, congestion-reduction strategies were reviewed for implementation but none were found to be appropriate for these corridors because they would not satisfactorily reduce congestion levels on SR 347/Friendship Road, and SR 13/Buford Highway. The analysis supports the proposal to widen these roadways, and each of the projects listed above are identified in the GHTS Long Range Transportation Plan.

### **CMS Monitoring Program**

An important component to the CMS is evaluating the efficiency and effectiveness of implemented actions. The monitoring of the CMS network, through use of performance measures is intended to be a continual process. This monitoring will help to identify locations needing congestion mitigation and assist with long-range transportation planning needs. Data management and coordination with the Atlanta Regional Commission (ARC) will be necessary for monitoring the CMS in the Atlanta urbanized portion of Hall County. GHMPO staff will strive to update the existing information and acquire new data as it becomes available and coordinate all efforts with ARC staff.



## **Appendix F – Proposed Eight-Hour Ozone Modeling Methodology**

### **Technical Memoranda Summarizing Interagency Consultation Group Discussions**

***The Atlanta Regional Commission***

***Georgia Department of Transportation***

#### **Overview of Interagency Discussions**

On April 15, 2004, The United States Environmental Protection Agency (USEPA) designated 20 counties within the metropolitan Atlanta area as nonattainment under the eight-hour ozone standard. The eight-hour ozone nonattainment area encompasses the current 13-county one-hour ozone nonattainment area plus seven additional “donut” counties: Carroll, Bartow, Hall, Barrow, Walton, Newton, and Spalding counties. The Atlanta eight-hour ozone nonattainment area is designated as Marginal, with an effective date of June 15, 2004. Transportation conformity requirements under the eight-hour ozone standard will be effective one year from the effective date of designation, June 15, 2005. In preparation for the conformity requirements, the Atlanta Regional Commission (ARC) and the Georgia Department of Transportation (GDOT) have jointly developed a proposed methodology for mobile source emissions modeling that will meet the transportation conformity requirements for the expanded eight-hour ozone nonattainment area.

The goal of the ARC is to perform the next scheduled conformity analysis for the 2030 Regional Transportation Plan (RTP) and FY 2005-2010 Transportation Improvement Program (TIP) against both the one-hour and eight-hour ozone standards at the same time. The transportation plan and program will be developed during the spring and summer of 2004, adopted in the fall of 2004, with a conformity determination requisite by January 2005. In order to avoid having to immediately perform an additional conformity analysis on the *same* plan and program before the eight-hour ozone conformity grace period ends only five months later, the ARC intends to perform the conformity analysis under both standards at the same time.

At the Interagency Consultation Group meeting on October 28<sup>th</sup>, 2003, a draft “Proposed Eight-Hour Ozone Modeling Methodology” was presented and comments requested. The methodology was jointly developed by GDOT and the ARC and is presented at the end of this documentation. The proposed methodology to model the expanded eight-hour ozone nonattainment area for conformity is to continue using the ARC’s 13-county travel demand model to generate VMT data within the existing one-hour ozone nonattainment area and to incorporate Highway Performance Monitoring System (HPMS) VMT data for the additional seven counties. Emissions would be estimated using MOBILE6 input files tailored to reflect programs already in place for the one-hour ozone nonattainment area and those programs planned for the additional seven donut counties in the eight-hour ozone nonattainment area, as necessary.

Although GDOT has developed a travel demand model (“needs assessment model”) for network year 2030 that includes the new eight-hour ozone nonattainment counties as part of the 2030 RTP planning process, the ARC and GDOT do not feel it is appropriate to use as part of the upcoming conformity analysis. The following discussion details the reasons for why the ARC and GDOT do not recommend using GDOT’s needs assessment model for the conformity analysis.

Based on the information provided herein and extensive Interagency discussion, USEPA and the US Department of Transportation have agreed, with concurrence from the Interagency Consultation Group, to allow the ARC to use HPMS data to generate VMT estimates for the 2030 network year for the outlying seven nonattainment counties for the upcoming eight-hour ozone conformity analysis. This decision is documented in the June 3, 2004, Interagency Consultation Group meeting summary.



### **Use of the Georgia Department of Transportation's Needs Assessment Travel Demand Model**

- ◆ The Georgia Department of Transportation initiated development of a 21-county travel model system, to include counties outside of the existing ARC planning boundary, but within the proposed eight-hour ozone nonattainment area<sup>1</sup>. This 21-county model is currently in use as a needs assessment tool to aid in project identification and prioritization for the 2030 RTP and FY 2005-2010 TIP for the seven donut counties included in the eight-hour ozone nonattainment area. Although a travel model has been developed and is in use for planning purposes in these counties, the ARC and GDOT agree that additional work remains to be completed to ensure that the model is appropriate for generating VMT estimates for a conformity analysis.
  - *The Atlanta eight-hour ozone nonattainment area is classified as Marginal.*
  - *The ARC currently utilizes a travel demand model for the 13-county one-hour ozone nonattainment area conformity analysis.*
  - *The eight-hour nonattainment area will add seven additional counties outside of the ARC's current modeling domain.*
  - *GDOT has developed a 21-county travel demand model that includes the entire eight-hour ozone nonattainment area (plus Dawson County). This model has been calibrated at an aggregate region-wide level and is in use for the first time for general planning purposes only.*
- ◆ GDOT's contractors are working to calibrate the model to HPMS data, this work will not be complete in time for the next scheduled conformity analysis.
  - *Model output from GDOT's needs assessment model has not been fully calibrated to base year (2000) HPMS data and is therefore inappropriate for conformity purposes.*
  - *Comparison of VMT estimates generated by GDOT's needs assessment model to HPMS data at county and facility level indicate a wide disparity between traffic count data from HPMS and traffic assignment data generated by the needs assessment model.*
  - *GDOT's consultants are now reviewing the needs assessment model and ensuring that it has been effectively calibrated to HPMS data. Once complete, all changes made to the travel model will have to be applied to the 2030 planning horizon year. This effort and subsequent review and concurrence by GDOT will not be available in time to meet ARC's modeling schedule.*
- ◆ The ARC will be working to develop a 20-county model that reflects the entire eight-hour ozone nonattainment area and is in line with current ARC modeling procedures. The Interagency Consultation Group feels that this model, when complete, will serve as the tool for future conformity analyses under the eight-hour ozone standard.

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<sup>1</sup> In 2000 the draft proposed nonattainment area included the 20 counties included in the final designation plus Dawson County. Dawson was subsequently removed from the proposed nonattainment county list due to improved air monitoring data that indicated attainment of the eight-hour ozone standard.



## ***Gainesville – Hall Transportation Study Long Range Transportation Plan***

### ***Proposed Methodology***

#### **Use of the ARC's Travel Demand Model plus HPMS VMT Data for the Outlying Counties**

The following method has been previously proposed in the “Proposed Eight-Hour Ozone Modeling Methodology” as provided at the October 2003 Interagency meeting. It is presented again here for clarification; there are no proposed changes in this process. Both the ARC and GDOT are in agreement with the above assessments and the following proposed HPMS VMT estimation method.

- ◆ **Step 1:** Collect the most recent 6 consecutive years of HPMS county-level data available for each of the 7 “donut” counties in the eight-hour nonattainment boundary, but not in the current one-hour nonattainment boundary. This data will be obtained from GDOT’s 445 reports<sup>2</sup>.
- ◆ **Step 2:** Apply a trend projection method to HPMS VMT data, stratified by county, rural/urban status, and roadway functional classification, to the necessary years for conformity determination (2010, 2020, and 2030). These HPMS VMT trends will be carried out using the linear regression methodology described in section 4.3 of EPA’s Section 187 guidance (Section 187 VMT Forecasting and Tracking Guidance, US EPA, January 1992, <http://www.epa.gov/oms/transp/vmttrack/vmtguide.zip>), with the most recent 6 years of consecutive summer-adjusted HPMS VMT data available substituted for the 1985 through 1990 VMT specified in the Section 187 guidance. The linear regression technique uses VMT for historical years to estimate future year VMT.
  - This forecasting procedure is an approved VMT forecasting method for use in ozone nonattainment areas and one that has been used by the Georgia Environmental Protection Division for such purposes in the previously approved attainment State Implementation Plan. The Georgia Environmental Protection Division has already made available to the ARC the approved excel spreadsheets that implement the Section 187 guidance for counties outside of the 13 county one-hour nonattainment area.
- ◆ **Step 3:** Estimate emissions, by county as necessary, for the 7 counties in the eight-hour nonattainment boundary but not in the current one-hour nonattainment boundary using MOBILE6, tailoring the input file(s) to represent “donut” county characteristics and using the extrapolated HPMS VMT data as outlined in Step 2.
- ◆ **Step 4:** Estimate emissions for the existing 13 county one-hour nonattainment area with MOBILE6 using VMT estimates from the ARC’s current 13 county travel demand model.
- ◆ **Step 5:** Aggregate total emissions over the entire eight-hour nonattainment area.
- ◆ **Step 6:** The ARC will prepare the Conformity Determination Report for the entire eight-hour nonattainment area.

Source: Atlanta Regional Commission, Georgia Department of Transportation, June 3, 2004

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<sup>2</sup> The 445 reports contain the AADVMT reported to FHWA for HPMS.



## **Appendix G – Memorandum of Agreement**

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**Memorandum Of Agreement  
Transportation Planning & Air Quality Planning Coordination and Cooperation  
Between The Atlanta Regional Commission,  
The Gainesville-Hall Metropolitan Planning Organization,  
The Georgia Department of Transportation  
The Georgia Department Of Natural Resources Environmental Protection Division**

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### **SECTION 1: PURPOSE**

This Memorandum of Agreement (MOA) is intended to provide a framework for continuing, cooperative and comprehensive transportation planning to avoid duplication of effort and optimize transportation planning and investments for the portion of the Atlanta Urbanized Area within Hall County. This MOA also provides a framework for transportation planning within the 20-county (under the 8-hour standard) Atlanta Nonattainment Area for ozone, which encompasses Hall County in total.

### **SECTION 2: DEFINITIONS**

The following terms used in this MOA shall have the meanings set forth in this section and as now or hereafter defined in the referenced federal or state statutes or regulations:

- A. Atlanta Metropolitan Transportation Planning Area** means the political subdivisions encompassed in the Transportation Planning Boundary established by ARC and the Governor pursuant to 23 CFR 450.308(b) to reflect the Atlanta Urbanized Area identified by the U. S. Census Bureau in the most recent census. In October 2003, the Atlanta Regional Commission adopted an expanded planning area based on the 2000 Census which includes a portion of Hall County. In April 2004, the Governor of the State of Georgia approved this expanded boundary.
- B. Atlanta Nonattainment Areas**
1. For ozone under the 1 hour standard means the 13 county area designated by the U. S. Environmental Protection Agency as nonattainment under the Clean Air Act, as amended, which includes Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale Counties.





## ***Gainesville – Hall Transportation Study Long Range Transportation Plan***

2. For ozone under the 8-hour standard means the 20-county area designated by the U. S. Environmental Protection Agency in April 2004 as nonattainment under the Clean Air Act, as amended which includes the 13-county area plus Barrow, Bartow, Carroll, Hall, Newton, Spalding and Walton Counties.
- C. **Atlanta Regional Commission (ARC)** means the multipurpose, comprehensive regional planning agency created pursuant to State law and designated as the planning agency for the Atlanta Region for all federal and state programs which require or encourage areawide planning. ARC is designated by the Governor of the State of Georgia as the Metropolitan Planning Organization for the Atlanta area pursuant to the Federal Aid Highway Act (23 U.S.C. § 101 et seq.), the Federal Transit Act (49 U.S.C. Appx § 1601 et seq) and other applicable federal and state laws.
- D. **Gainesville-Hall Metropolitan Planning Organization (GHMPO)** means the metropolitan planning organization for the Gainesville Urbanized Area, which was designated by the Governor of Georgia in February 2003.
- E. **Gainesville-Hall Transportation Study (GHTS) Planning Area** means the planning area adopted by the Gainesville-Hall MPO in January 2004 which includes all of Hall County.
- F. **Georgia Department of Natural Resources Environmental Protection Division (EPD)** means the Department designated as the chief air quality agency in the State. EPD regulates emissions from industrial and mobile sources, monitors levels of air pollutants throughout the State, and has the responsibility to prepare the State Implementation Plan for attaining air quality standards. EPD also consults with and assists transportation planning agencies in assessing emissions of transportation plans, programs, and projects.
- G. **Georgia Department of Transportation (GDOT)** means the Department designated as the state transportation agency under Georgia law to carry out a statewide transportation planning process as required by Title 23 USC 135. GDOT is authorized by Georgia Code to organize, administer, and operate an efficient modern system of public roads and other modes of transportation including public transit, rail, aviation and ports.
- H. **Metropolitan Planning Organization (MPO)** means the forum for cooperative transportation decision-making for the metropolitan planning area.
- I. **Transportation Management Area (TMA)** means an urbanized area with a population over 200,000 such as the Atlanta Urbanized Area. The TMA designation applies to the entire metropolitan planning area.

### **SECTION 3: ORGANIZATIONAL ROLES & RESPONSIBILITIES**

**ATLANTA REGIONAL COMMISSION**, as the Atlanta MPO, only to the extent that it may be bound by contracts which may hereafter be entered into, shall be responsible for the following with respect to the Atlanta Metropolitan Transportation Planning Boundary established in 2003 with the exception of the portion shown in Hall County:



## ***Gainesville – Hall Transportation Study Long Range Transportation Plan***

1. Prepare, publish and maintain the long range transportation plan and short range transportation improvement program for the Atlanta Metropolitan Transportation Planning Area pursuant to and consistent with federal requirements for a metropolitan planning organization.
2. Comply with additional federal requirements for a Transportation Management Area such as the Atlanta Urbanized Area, such as:
  - i. Have the lead responsibility in the development of the Congestion Management System (CMS) and ensure, to the extent appropriate, that the CMS be part of the metropolitan transportation planning process; and that the CMS shall be considered in the development of the long range transportation plan and short range transportation improvement program.
  - ii. Have the lead responsibility in the triennial certification of the transportation planning process for the Atlanta Metropolitan Transportation Planning Area.
3. Comply with additional federal requirements for a nonattainment area for air quality such as:
  - i. Develop, maintain, update and validate regional transportation demand and network models for the Atlanta Nonattainment Area for ozone under the 1-hour standard, and data necessary to apply the latest planning assumptions used in the regional emissions analysis to determine the conformity of long range plans and short range programs.
  - ii. Develop the regional emissions analysis for the Atlanta Nonattainment Area for ozone under the 8-hour standard with the support of the Georgia Department of Transportation, the Environmental Protection Division and applicable counties, to determine the conformity of long range plans and short range programs through demonstration that air quality limits are not exceeded.
  - iii. Develop the regional emissions analysis for any future expanded or new Atlanta Nonattainment Area with the support of the Georgia Department of Transportation, the Environmental Protection Division and applicable counties, to determine the conformity of long range plans and short range programs through demonstration that air quality limits are not exceeded.
4. Perform all other federally-required responsibilities of a metropolitan planning organization.
5. Provide other assistance as mutually agreed upon.

**B. GAINESVILLE-HALL METROPOLITAN PLANNING ORGANIZATION**, only to the extent that it may be bound by contracts which may hereafter be entered into, shall be responsible for the following with respect to the Gainesville-Hall Transportation Study Planning Area, which includes the Gainesville Urbanized Area as well as the portion of the Atlanta Metropolitan Transportation Planning Boundary within Hall County:

1. Prepare, publish and maintain the long range transportation plan and short range transportation improvement program for the Gainesville-Hall Transportation Study



## ***Gainesville – Hall Transportation Study Long Range Transportation Plan***

- Planning Area pursuant to and consistent with federal requirements for a metropolitan planning organization.
2. Comply with additional federal requirements for a Transportation Management Area for the portion of the Atlanta Urbanized Area within Hall County, such as:
    - i. Assure development of a Congestion Management System (CMS) for the Hall County portion of the Atlanta Urbanized Area, to the extent appropriate. Assure that this CMS shall be part of the metropolitan transportation planning process; and that the CMS shall be considered in the development of the long range transportation plan and short range transportation improvement program.
    - ii. Participate in the triennial certification of the transportation planning process for the Atlanta Metropolitan Transportation Planning Area.
  3. Comply with additional federal requirements for any future new or expanded Atlanta Nonattainment Area for air quality that includes Hall County, by coordinating with the Atlanta Regional Commission, the Georgia Department of Transportation and the Environmental Protection Division in development of required technical analyses of transportation plans and programs to assure deadlines for the nonattainment area are met and that air quality limits are not exceeded.
  4. Perform all other federally-required responsibilities of a metropolitan planning organization.
  5. Provide other assistance as mutually agreed upon.

**C. GEORGIA DEPARTMENT OF TRANSPORTATION (GDOT) AND GEORGIA DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION DIVISION (EPD)**, are parties to this Memorandum of Agreement pursuant to the requirements of 23 CFR 450.310(g) which states that where more than one MPO has authority within a metropolitan planning area that is a nonattainment or maintenance area, an agreement must be executed between the State department of transportation, the state air quality agency and the MPOs describing how the transportation planning process will be coordinated.

### **SECTION 4: CONFLICT RESOLUTION**

All parties to this agreement agree to participate in and utilize interagency activities to resolve any potential conflicts.



## **SECTION 5: PUBLIC INVOLVEMENT**

To coordinate effective planning and programming activities, ARC and GHMPO shall, to the maximum extent practical, coordinate their public information efforts and seek joint opportunities for public involvement as provided in 23 CFR 450.316 (b)(1)(xi).

ARC will take the lead role in seeking and obtaining public involvement in the Atlanta metropolitan transportation planning and programming process. ARC and GHMPO agree that this process will also satisfy the program-of-projects requirements of the Federal Transit Administration's Urbanized Area Formula Program.

## **SECTION 6: COMPLIANCE WITH APPLICABLE LAWS & REGULATIONS**

All parties shall comply with all applicable local, state, and federal laws and regulations. Nothing in this MOA alters, or seeks to alter, the existing statutory authority of any party under state or federal law. If any of the provisions of this MOA are held to be illegal, invalid or unenforceable, the remaining provisions shall remain in full force and effect.

## **SECTION 7: AMENDMENTS & MODIFICATIONS**

Any party may request changes to this MOA at any time by written notice to the other parties' signatory of this agreement. Such changes as are mutually agreed upon by and between the parties shall be incorporated in written amendments to this MOA executed in the same manner as original MOA approval.

## **SECTION 8: NOTIFICATION**

Any official notifications between the parties to this MOA that would substantially affect the terms or conditions of this MOA shall be directed to the office of the signatories to this agreement.



***Gainesville – Hall Transportation Study  
Long Range Transportation Plan***

*In witness whereof, the parties hereto have executed this Memorandum of Agreement, this  
\_\_\_\_\_ day of \_\_\_\_\_, 2004.*

*Attest:*

***Atlanta Regional Commission***

\_\_\_\_\_

\_\_\_\_\_  
*Chairman*

***Gainesville-Hall MPO***

\_\_\_\_\_

\_\_\_\_\_  
*Chairman*

***Georgia Department of Transportation***

\_\_\_\_\_

\_\_\_\_\_  
*Commissioner*

***Georgia Department of Natural Resources  
Environmental Protection Division***

\_\_\_\_\_

\_\_\_\_\_  
*Director*



## **Appendix H – Public Meeting Announcements**

# **Public Meeting**

## **Gainesville-Hall Long Range Transportation Plan**

**Tuesday, August 31, 2004, 5:30 P.M., Georgia Mountains Center**

The Gainesville-Hall Metropolitan Planning Organization (GHMPO) conducts the federally mandated Gainesville Hall Transportation Study, which gives residents of Hall County a greater say in the prioritization of transportation improvements in our community.

The Draft Long Range Transportation Plan (LRTP) has been developed by Day Wilburn Associates, Inc. for the Georgia Department of Transportation. The GHMPO, made up of local citizens, government staff and elected officials, now wants to know your thoughts on this Plan.

Please come out to tell us how you feel about topics such as:

Major road projects in the County and their priority

Dealing with traffic congestion in Gainesville

Air quality and other environmental impacts of the transportation system

The role of Hall Area Transit in our plans

Incorporating bicycles and pedestrians into our transportation planning

Transportation planning for freight movement and economic development

For additional information contact John McHenry, GHMPO Transportation Planner at 770-531-6809.



# Public Meeting

## Gainesville-Hall Long Range Transportation Plan

Thursday, November 4th, 2004, 5:30 P.M.,  
Georgia Mountains Center  
301 Main Street, Gainesville GA

The Gainesville-Hall Metropolitan Planning Organization (GHMPO) conducts the federally mandated Gainesville Hall Transportation Study, which gives residents of Hall County a greater say in the prioritization of transportation improvements in our community.

Following up on our initial public meeting on August 31<sup>st</sup>, the Plan has been revised based on the input of affected governments, agencies and the public. The GHMPO, made up of local citizens, government staff and elected officials, now wants to know your thoughts on the revised Plan.

Please come out to tell us how you feel about topics such as:

Major road projects in the County and their priority

Dealing with traffic congestion in Gainesville

Air quality and other environmental impacts of the transportation system

The role of Hall Area Transit in our plans

Incorporating bicycles and pedestrians into our transportation planning

Transportation planning for freight movement and economic development

This plan is projected for an official adoption by the GHMPO Policy Committee on December 14, 2004. For a copy of the Plan or additional information, contact John McHenry, GHMPO Transportation Planner at 770-531-6809, x286.

**Mire al otro lado para la version en Espanol.**





# **AVISO DE VISTA PÚBLICA**

## **Plan de Transportación a Largo Plazo Para Gainesville y el Condado de Hall**

*Jueves, 4 de noviembre de 2004, 5:30 P.M.*

*En el “Georgia Mountains Center, 301 Main Street Gainesville, GA”*

El GHMPO, por sus siglas en inglés, lleva a cabo el Estudio de Transportación para Gainesville y el Condado de Hall. Esta reunión es un requisito del gobierno federal para brindarle a los residentes del Condado de Hall una oportunidad para compartir las prioridades en las mejoras de transportación en nuestra comunidad.

A manera de seguimiento a nuestra primera vista pública celebrada el 31 de agosto, el Plan ha sido revisado basado en el insumo de las agencias de gobierno y público en general involucrado. El GHMPO, compuesto por ciudadanos locales, empleados del gobierno y oficiales electos, ahora desean conocer lo que piensas del Plan revisado.

Se ofrecerá traducción al español. Por favor participa y comparte tus ideas acerca de temas tales como:

- **Proyectos de carreteras principales en el condado y sus prioridades**
  - **Tratando la congestión vehicular en Gainesville**
- **Calidad del Aire y otros impactos al ambiente causados por el sistema de transportación**
  - **El papel de “Hall Area Transit” en nuestros planes**
- **Incorporar las bicicletas y peatones en nuestra planificación de la transportación**
- **Planificación de la Transportación para movimiento de mercancías y el desarrollo económico**

Este plan está propuesto para ser adoptado oficialmente por el Comité de Política Pública del GHMPO el 14 de diciembre de 2004. Para solicitar una copia del plan o información adicional, por favor contactar al Sr. John McHenry, Planificador de Transportación del GHMPO al 770-531-6809, x286 (en inglés).

Please turn over for the English version.