



# Needs Assessment Report

Prepared for:  
**Clayton County**  
Department of Transportation and  
Development

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# Needs Assessment Report

## Table of Contents

<u>Section</u>	<u>Page</u>
<b>1.0 Needs Report Introduction.....</b>	<b>1</b>
1.1 Purpose.....	1
1.2 Organization.....	1
<b>2.0 Needs Assessment Approach .....</b>	<b>2</b>
2.1 Assessment Areas .....	2
2.2 Evaluation Approach and Measures .....	2
2.2.1 CTP Goals and Objectives .....	3
2.2.2 Evaluation Methodology and Criteria.....	5
2.2.3 Community Input .....	5
2.3 Evaluation Tools.....	7
2.4 Travel Demand Model.....	7
2.4.1 Model Overview.....	8
2.4.2 Model Refinement for Clayton County.....	9
<b>3.0 Demographic, Land Use and Market Assessment.....</b>	<b>10</b>
3.1 Evaluation Approach .....	10
3.2 Demographics .....	10
3.3 Market Analysis of Economic Trends.....	12
3.4 Land Use and Development Patterns .....	13
3.5 Environmental Considerations .....	36
3.6 Transportation Impacts.....	37
3.7 Technical Assessment .....	38
3.8 Community Input.....	41
<b>4.0 Roadway System Assessment .....</b>	<b>44</b>
4.1 Mobility Evaluation Measures.....	44
4.2 Mobility Assessment.....	44
4.2.1 Level of Service.....	45
4.2.2 Travel Characteristics.....	59
4.2.3 Travel Time .....	61
4.3 Safety .....	61
4.3.1 Safety Assessment Approach .....	61
4.3.2 Roadway Safety Findings.....	61
4.4 Operations.....	70

4.5	System Preservation .....	73
4.5.1	Preservation Assessment Approach .....	73
4.5.2	Preservation Assessment Findings .....	74
4.6	Community Input .....	78
<b>5.0</b>	<b>Public Transit Needs Assessment .....</b>	<b>85</b>
5.1	Transit Assessment Approach .....	85
5.2	Transit Needs Assessment .....	87
5.2.1	Transit Accessibility .....	87
5.2.2	Intra-County Mobility: Origin-Destination Trip Analysis .....	91
5.2.3	Ridership and Operational Performance Analysis .....	94
5.2.4	Peer Performance Analysis .....	97
5.2.5	Demographic Analysis .....	101
5.2.6	Mobility Analysis .....	104
5.2.7	Planning Recommendations .....	106
5.2.8	Technical Assessment .....	109
5.3	Community Input .....	111
<b>6.0</b>	<b>Freight Needs Assessment .....</b>	<b>114</b>
6.1	Evaluation Approach .....	114
6.2	Findings .....	114
6.2.1	Over-the-Road Freight .....	114
6.2.2	Major Freight Areas .....	118
6.2.3	Truck Restriction Considerations .....	121
6.2.4	Freight Rail .....	122
6.2.5	Air Freight .....	123
6.2.6	Needs .....	124
6.3	Community Input .....	125
<b>7.0</b>	<b>Pedestrian and Bicycle System Needs Assessment .....</b>	<b>126</b>
7.1	Evaluation Approach .....	126
7.2	Bicycle/Pedestrian Connectivity and Proximity Findings .....	128
7.3	Greenway Suitability Findings .....	129
7.4	Safety Findings .....	131
7.5	Technical Assessment .....	133
7.6	Community Input .....	136
<b>8.0</b>	<b>Aviation Needs .....</b>	<b>138</b>
8.1	Assessment Methodology .....	138
8.1.1	Findings .....	140
8.1.2	Community Input .....	141
<b>9.0</b>	<b>Natural Hazard Preparedness Assessment .....</b>	<b>142</b>
9.1	Natural Hazard Preparedness Evaluation Approach .....	142

9.2	Findings.....	142
9.2.1	Evacuation Considerations.....	142
9.2.2	Flooding Considerations.....	144
<b>10.0</b>	<b>Summary of Clayton County Major Issues and Needs .....</b>	<b>145</b>
10.1	Mobility .....	145
10.2	Accessibility.....	146
10.3	Connectivity.....	147
10.4	Efficiency.....	148
10.5	Safety .....	148
10.6	Preservation .....	149
10.7	Community Input.....	150
10.8	Next Steps.....	151

## Appendices

**Appendix A – Clayton County Model Modification Documentation**

**Appendix B – Subarea Major Roadways and Estimated Capacity**

## List of Figures

Figure 3-1: Existing Land Use.....	15
Figure 3-2: Future Land Use.....	16
Figure 3-3: Clayton County Unified Growth Policy Map (UGPM) .....	19
Figure 3-4: High Growth Areas .....	20
Figure 4-1: Clayton County 2005 Model-Based Peak Hour Level of Service (LOS).....	46
Figure 4-2: Clayton County 2010 Model-Based Peak Hour Level of Service (LOS).....	47
Figure 4-3: Clayton County 2020 E+C Peak Hour Level of Service (LOS).....	48
Figure 4-4: Clayton County 2030 E+C Peak Hour Level of Service (LOS).....	49
Figure 4-5: Clayton County 2030 <i>Envision 6</i> Peak Hour Level of Service (LOS) .....	50
Figure 4-6: Post Model LOS Analysis for 2005.....	54
Figure 4-7: Post Model LOS Analysis for 2010.....	55
Figure 4-8: Post Model LOS Analysis for 2020 E+C.....	56
Figure 4-9: Post Model LOS Analysis for 2030 E+C.....	57
Figure 4-10: Post Model LOS Analysis for 2030 <i>Envision 6</i> .....	58
Figure 4-11: Clayton County High Frequency Intersection Crash Locations .....	67
Figure 4-12: Clayton County High Crash Rate Locations .....	69
Figure 4-13: Clayton County Existing and Proposed ITS Devices and Infrastructure.....	71
Figure 4-14: Clayton County Bridge Status .....	80
Figure 5-1: Access to Transit Buffer Analysis .....	88
Figure 5-2: Clayton County Population within Two and One Half Miles of GRTA Park and Ride Lot.....	89
Figure 5-3: Clayton County Employment Densities within Two and One Half Miles of a Proposed Commuter Rail Station.....	90
Figure 5-4: TAZ Subareas .....	92
Figure 5-3: C-TRAN Monthly Ridership .....	95
Figure 5-5: Transit Target Markets by Block Group.....	105
Figure 6-1: Vehicular Crashes on Truck Routes in Clayton County 2000-2004 .....	119
Figure 6-2: Major Freight Coverage Areas .....	120
Figure 7-1: Greenway Suitability.....	130

## List of Tables

Table 2-1: Clayton County CTP Goals and Objectives.....	3
Table 2-2: Needs Assessment Evaluation Matrix .....	6
Table 2-3: Summary of Public Involvement Activities .....	7
Table 3-1: Clayton County DRI Submittals from 2003-2007 .....	25
Table 3-2: DRI Submittals from Surrounding Counties from 2003-2007 .....	26
Table 3-3: Clayton County Livable Centers Initiatives .....	27
Table 4-1: Mobility Assessment Scenarios .....	45

Table 4-2: Total Person Trip Patterns .....	60
Table 4-3: Vehicle Trip Patterns .....	60
Table 4-4: Transit Trips and Mode Split.....	60
Table 4-5: Estimated Travel Time Change from 2005 to 2030 .....	62
Table 4-6: Clayton County Crash Summary, 2004-2007 .....	63
Table 4-7: Location of Impact, 2004-2006 .....	63
Table 4-8: Collision Type, 2004-2007 .....	64
Table 4-9: Pedestrian Crashes, 2004-2007 .....	64
Table 4-10: Cyclist Crashes, 2004-2007.....	64
Table 4-11: Mid-block versus Intersection Crash Location, 2004-2007 .....	65
Table 4-12: High Frequency Crash Intersections, 2004 through 2006 .....	66
Table 4-13: High Segment Crash Locations .....	68
Table 4-14: Resurfacing Activity between 2004 and 2008.....	74
Table 4-15: GDOT 2006 Bridge Inspection Report, Summary of Findings.....	76
Table 4-16: GDOT 2006 Bridge Inspection Report, Bridge Structures Requiring Posting of Weight Limits <sup>1</sup> .....	79
Table 4-17: Constrained <i>Envision 6</i> and FY 2008-2013 TIP Planned and Programmed Bridge Capacity Projects, Clayton County .....	81
Table 5-1: Summary of Home-Based Work Trips in Clayton County.....	91
Table 5-2: Summary of Intra-Zonal Other Purpose (Home-Based Other and Non-Home-Based) Trips in Clayton County.....	93
Table 5-3: Summary of Inter-Zonal Other Purpose (Home-Based Other and Non-Home-Based) Trips in Clayton County.....	94
Table 5-4: C-TRAN Annual Performance Data.....	95
Table 5-5: C-TRAN Average Daily Performance Data.....	95
Table 5-6: C-TRAN System-Level Efficiency Data (Trips per Revenue Mile, Trips per Revenue Hour, Vehicle Revenue Speed) .....	96
Table 5-7: C-TRAN System-Level Performance Data (Revenue miles to total Miles, Revenue hours to Total hours, On-Time Performance) .....	96
Table 5-8: C-TRAN Route Performance Summary, July 2005 - September 2006.....	97
Table 5-9: Selected C-TRAN Peer Service Providers .....	98
Table 5-10: C-TRAN Fixed Route Peer Analysis.....	100
Table 5-11: C-TRAN Paratransit Peer Analysis.....	100
Table 5-12: Recommended Transit-Supportive Densities .....	102
Table 6-1: Freight Shipments in Millions of Tons.....	115
Table 6-2: Freight Shipments in Millions of Dollars.....	115
Table 6-3: Existing and Projected Freight Movement (millions of tons).....	116
Table 6-4: Top Five At-Grade Rail Crossings Based on AADT .....	123
Table 6-5: Cargo in Metric Tons .....	123
Table 7-1: Greenway Suitability Analysis Summary .....	129
Table 8-1: Annual Aircraft Operations.....	139
Table 9-1: Subarea Hazard Preparedness Evaluation Matrix.....	143

## 1.0 Needs Report Introduction

The Clayton County Comprehensive Transportation Plan (CTP) *Needs Assessment Report* presents a summary of activities and findings of long-range, multimodal transportation needs for the County. The *Needs Assessment Report* is the second of several supporting technical documents for the CTP. An *Inventory of Existing Conditions* preceded this report, with a draft issued in September, 2007. As much as is practicable, findings included in the *Existing Conditions* report are not replicated in this report, though findings from the existing conditions assessment have informed needs identification and highlighted areas for additional evaluation.

### 1.1 Purpose

The CTP was initiated in June, 2007 by the Board of Commissioners of Clayton County, Georgia. The final Clayton County CTP will be developed in August, 2008. For the purposes of the study, the CTP study area encompasses Clayton County and its seven municipalities: Jonesboro (the County seat), College Park, Forest Park, Lake City, Lovejoy, Morrow, and Riverdale. The study area also extends beyond the County into the adjacent area with an approximate five-mile buffer surrounding the County in order to identify potential spill-over impacts from adjacent counties. Needs identified within this documentation will provide the basis for identifying potential projects and strategies.

### 1.2 Organization

A systematic approach has been taken to identifying potential transportation needs. However, for ease of reporting, the assessment and findings are presented by category: roadway, rail and roadway freight, pedestrian facilities, bicycle facilities, transit, and aviation. Assessment criteria used regionally by Atlanta Regional Commission (ARC) and the Georgia Regional Transportation Authority (GRTA) have been utilized for the assessment, where applicable.

The *Needs Assessment Report* is presented in ten sections. Following this introduction Section 2 presents the needs assessment approach, the CTP purpose and County transportation vision, goals and objectives for the CTP, and evaluation criteria. Section 3 examines the trends and issues resulting from demographic changes, market dynamics, land use patterns and environmental considerations in Clayton County that suggest specific transportation needs. Sections 4 through 9 present the transportation assessment by mode and evaluation area: roadway, public transit, freight and intermodal, pedestrian and bicycle, aviation, and natural hazard preparedness. Section 10 provides a summary of major needs and issues. Findings presented in this report will provide the basis for developing long-range transportation policies, strategies and programs.

## 2.0 Needs Assessment Approach

An important step in the planning process is to develop an evaluation framework. The evaluation framework provides the measures or thresholds by which to perform the needs assessment as well as assess potential improvements and prioritize program recommendations. The framework is based on the overall transportation vision and goals developed for the County. The following presents an overview of goals, objectives, and evaluation measures developed for the Clayton County CTP.

### 2.1 Assessment Areas

Early in the plan development process, the County identified specific areas for evaluation:

- **Demographic, Land Use and Market Trends** - Evaluate demographic, market and land use trends, environmental considerations and their impacts on the transportation system.
- **Roadway System** - Identify existing and future operating capacity of the roadway system. Evaluate roadway system conditions, including pavement and bridge condition.
- **Public Transit** - Evaluate long term C-TRAN facility needs and how future travel needs may be met using alternative modes. Review both existing system operations and identify future system needs. Identify potential need for high occupant vehicle (HOV) lanes and park and ride lots to support transit.
- **Freight and Intermodal** - Assess adequacy of the transportation system for goods movement.
- **Pedestrian and Bicycle** - Evaluate suitability of roadway system for inclusion in a countywide bicycle and pedestrian greenway plan.
- **Aviation** – Examine local aviation needs.
- **Natural Hazard Preparedness** - Consider transportation system adequacy in the event of a natural disaster.

The planning horizon for the needs assessment is over 20 years, ending in the year 2030. Each of the assessments considered how changes in growth and development over the planning horizon would impact needs. A guiding principle has been a sustainable framework of protecting natural and cultural resources within the County.

### 2.2 Evaluation Approach and Measures

The study purpose statement, goals and objectives were established through coordination with the project's Technical Study Committee, Stakeholder Advisory Committee, County staff, and community. Goals established through previous planning processes were also reviewed. The

purpose statement is intended to define the core direction for plan implementation as well as what the plan should accomplish. The CTP purpose statement is as follows:

*The Clayton County Comprehensive Transportation Plan will guide the development of a multimodal transportation system that ensures safe and efficient movement of people and goods, supports mobility and accessibility for all citizens, protects natural, historic and cultural resources, and has community and regional support. The system will support quality of life and economic development by providing improved public transportation, an expanded network of sidewalk and bicycle facilities as well as roadway improvements that reduce congestion and provide access to employment, schools, and other destinations. System management and operations will be strengthened through strategic investments that emphasize system preservation and maintenance, provide improvements within financial constraints, and are planned and coordinated with land use planning at the municipal, county, and regional levels.*

### 2.2.1 CTP Goals and Objectives

Goals are intended to be broad and categorical. Objectives provide greater detail for each goal and generally contain statements of action. Seven overarching multimodal transportation goals have been identified for the CTP. Complementary objectives establish specific actions for goal. The CTP goals and supporting objectives are summarized in Table 2-1.

**Table 2-1:  
Clayton County CTP Goals and Objectives**

Goal	Objectives
Enhance and maintain transportation system to meet existing and future needs	<ul style="list-style-type: none"> <li>• Develop a plan for transportation improvements that can be afforded and implemented considering financial constraints</li> <li>• Ensure that structurally deficient bridges are improved and maintained</li> <li>• Implement operational improvements such as ITS, intersection improvements, striping, and signalization to improve system performance and safety</li> <li>• Provide for the proper maintenance of the existing transportation system</li> <li>• Ensure that needs for all modes appropriate to a corridor are incorporated during improvement (complete streets)</li> <li>• Expand transit system to include Bus Rapid Transit (BRT)</li> </ul>
Ensure the transportation system promotes and supports appropriate land use and development	<ul style="list-style-type: none"> <li>• Maintain consistency with local comprehensive land use plans (transportation serves future population and proposed land uses)</li> <li>• Preserve right of way for future transportation facilities</li> <li>• Encourage more transit-oriented development (high density with easy access to transit system)</li> <li>• Provide transportation alternatives that are suited to, and supported by, existing and future land uses</li> </ul>

Goal	Objectives
Encourage and promote safety and security	<ul style="list-style-type: none"> <li>• Identify safety concerns and improvements at intersections, railroad crossings, transit stops, for pedestrians and bicyclists, and along major roadways</li> <li>• Improve intersections that have the high crash rate history</li> <li>• Provide safe access from residential subdivisions to major roadways serving the subdivisions</li> <li>• Incorporate multimodal facilities into transportation planning</li> <li>• Increase public awareness on safety issues, and bring about changes in behavior that lead to a safer transportation system</li> <li>• Provide dedicated truck only lanes on the interstate system</li> </ul>
Improve connectivity and accessibility	<ul style="list-style-type: none"> <li>• Ensure that planned improvements incorporate reasonable access to downtown Atlanta, major employment centers, public land uses and recreation sites</li> <li>• Expand regional transit options to connect to areas outside of Clayton County.</li> <li>• Expand transit routes to serve more of the County's population.</li> <li>• Improve access to Hartsfield-Jackson-Atlanta International Airport (HJIA)</li> <li>• Improve amenities for alternative transportation (sidewalks to transit stops, bicycle racks, benches, crosswalk signals, etc.)</li> <li>• Improve system connectivity (sidewalks to bikeways to transit to roadways) to create a seamless intermodal network</li> <li>• Develop a partnership to establish and maintain a seamless integrated regional transit network</li> <li>• Ensure that planned improvements incorporate reasonable access to schools</li> <li>• Limit access on major corridors (limit driveway cuts, provide frontage roads, etc.)</li> <li>• Provide additional grade separations (one road over, one road under) where major corridors intersect</li> <li>• Provide additional park and ride lots in strategic locations (connected to transit system)</li> </ul>
Enhance mobility for all users of the transportation system	<ul style="list-style-type: none"> <li>• Designate routes to serve commuters while maintaining routes to serve local trips</li> <li>• Implement efficient routes to reduce travel time for work commutes</li> <li>• Identify freight movement corridors and develop improvements to accommodate freight movement</li> <li>• Relieve congestion for vehicles on the surface transportation system</li> <li>• Transportation programs and projects will serve the population equitably per geographic area, racially, and by serving the needs of all income levels.</li> </ul>

Goal	Objectives
Promote and support economic development and redevelopment	<ul style="list-style-type: none"> <li>• Build transportation facilities near potential economic development areas</li> <li>• Provide a transportation system that supports economic development/redevelopment potential of disadvantaged communities</li> <li>• Support development of commuter rail throughout Clayton County and the region</li> <li>• Improve intermodal freight connectivity (roadways to railroads) to enhance freight movement</li> <li>• Protect the economic health in the downtown areas by ensuring that transportation improvements enhance, not harm, the character</li> </ul>
Improve quality of life, preserve the environment, and protect neighborhood integrity	<ul style="list-style-type: none"> <li>• Identify priority environmental resources and ensure their protection</li> <li>• Incorporate alternative modes that reduce negative air quality impacts</li> <li>• Minimize adverse community, historical, and environmental impacts during the planning and construction of transportation programs and projects</li> <li>• Preserve existing neighborhoods characteristics and aesthetics</li> <li>• Promote energy conservation in the future transportation system</li> </ul>

### 2.2.2 Evaluation Methodology and Criteria

Using the established goals and objectives, an assessment approach and criteria were developed for each major evaluation area. The matrix presented in Table 2-2 provides an overview of the integrated assessment approach. The cross-section of each evaluation area by goal theme lists the general approach on how the area was evaluated. The gaps result from the fact the applicability of the goals is not universal across the evaluation areas. However, the most critical assessments for the planning evaluation are presented. A more detailed discussion of each area’s assessment is presented within the respective evaluation sections.

### 2.2.3 Community Input

In addition to the development of quantitative assessment methodology, long-range needs and issues were also identified through engaging Clayton County staff, stakeholders and the general public through the public involvement program. Specific activities conducted to elicit input from the community during the needs assessment task include meetings with the Technical Study Committee, Stakeholder Advisory Committee, and public. These activities are listed in Table 2-3.



Table 2-2:  
Needs Assessment Evaluation Matrix

**Table 2-3:  
Summary of Public Involvement Activities**

<b>Activity</b>	<b>Purpose</b>	<b>Date</b>
Stakeholder Interviews	Identify needs and issues from community leaders in a one-on-one setting	September - December, 2007
Focus Group	Gain input from minority and underserved populations not typically represented at traditional public meetings	December 8, 2007
Public Information Meetings	Provide opportunity in all four commission districts for the public to provide input on the CTP. This set of meetings presented initial baseline conditions and provided an opportunity to express needs and issues.	September 17, 2007 September 24, 2007 October 1, 2007 October 2, 2007
Stakeholder Advisory Committee Meetings		September 6, 2007 October 30, 2007
Technical Study Committee Meetings		August 29, 2007 October 23, 2007

## 2.3 Evaluation Tools

The approach for identifying long-range transportation needs combines both technical analyses and qualitative input from County leaders, staff, local stakeholders, and the general public. The tools used to perform the technical analyses for the needs assessment included the travel demand model, spatial analysis using Geographic Information System (GIS) processing and statistical analysis. The Atlanta Regional Commission's (ARC) 20-county travel demand model has been used to help understand future travel trends, based on anticipated growth and development in Clayton County as well as the surrounding region. The travel demand model provides indication on what changes may be expected for total travel demand, travel patterns, trip distribution, and means of travel. The focus of the model is primarily roadway vehicular travel.

Spatial analysis was used to perform much of the multimodal transportation assessment, particularly bicycle facility, pedestrian facility, transit and freight analyses. Statistical analysis was used to evaluate travel trends and conduct the safety assessment. Statistical methods are integrated into GIS analysis as well. The following provides an overview of how the travel demand model was developed and utilized for the study.

## 2.4 Travel Demand Model

The ARC travel demand model was used to determine existing and future transportation travel demands and establish future year transportation needs for Clayton County. The model used for this analysis represents the most accepted approach of projecting future transportation demand and evaluating investment strategies to serve projected demand. This summary is

intended to provide an overview of the operating principles of the ARC travel demand model and describe how the model was used for the CTP.

### 2.4.1 Model Overview

In order to predict future travel demand, a number of inputs into the model are developed, including:

- Existing and future population, household, and employment data allocated to geographic areas called traffic analysis zones (TAZs); and
- Major roadway network (generally roadways classified as collectors or above).

While it is unusual to find two models that have identical model structures, software, and data requirements, the majority of travel models used in the United States are similar in that they include the following basic four steps or components:

1. Trip generation;
2. Trip distribution;
3. Mode split / auto occupancy factors; and
4. Traffic assignment.

Trip generation is a prediction of the number of trips that are produced in a TAZ and attracted to all other TAZs. This process is only concerned with estimating the number of trips that start or end in each zone and is based on the population and employment characteristics identified for each TAZ.

The determination of where the generated trips desire to travel is predicted through the trip distribution process. In the model, trips are produced at the home end and are attracted to a non-residential activity destination. The flow, or number, of these trips is predicted with the use of a gravity model. This model observes that traffic activity between any two TAZs is a function of their size or attractiveness and inversely proportional to the distance separating them. Added to this equation is a measure of friction, or the difficulty of travel between the zones. In short, the exchange of trips between two TAZs is based on their size and the time required to travel between them.

Mode split, the third step in the travel demand modeling process, is a prediction of the choices that individuals make in choosing a transportation mode for any particular trip purpose. The goal is to estimate the number of trips made by automobile, public transit or non-motorized travel. This estimate is calculated for three different trip purposes:

1. Home Based Work – trips going from home to work;
2. Home Based Other – trips made from home to all non-work locations; and
3. Non-home Based – trips that do not begin or end at home.

The ARC model further relies on population and employment data to determine mode choice travel characteristics. Person trips, estimated in trip generation, are split into highway trips and transit trips. Highway trips are further divided into single occupancy vehicles, group ride trips and drive to transit trips. Similarly, transit trips are divided into local transit and premium transit trips (fixed route bus or passenger rail, respectively).

Once the number of trips by TAZ is determined—where these trips are most likely to travel and the mode by which they travel—the model begins a process of assigning these trips to the highway network. Traffic assignment is the key component in the urban travel demand forecasting process. This process predicts the network flows that are associated with future planning scenarios and generates estimates of link travel times and other related attributes.

Typically, there are many different travel routes that can be used to travel from a single origin zone to a single destination zone. Because of this, the model conducts a series of traffic assignments where traffic flows are assigned to one route (all or nothing). In each iteration, network link flows are computed and incorporate link friction and adjusted travel times. Equilibrium is achieved when no alternative travel path can be used without increasing the total travel time of all trips in the roadway network.

The model assigns trips into four time periods consistent with the following:

1. AM Peak – 6 AM to 10 AM;
2. Mid-Day – 10 AM to 3 PM;
3. PM Peak – 3 PM to 7 PM; and,
4. Night/Evening – 7 PM to 6 AM

Daily traffic volumes in the ARC model are computed by adding the four time periods. Associated roadway link attributes for the daily period are also either summed from the time period assignments or are calculated as weighted averages.

#### 2.4.2 Model Refinement for Clayton County

To better predict travel within Clayton County, the ARC model inputs were modified to better reflect conditions within Clayton County. These changes included increasing the number of TAZs from 62 to 107, adding additional roadway coverage into the model, and recoding roadway functional classification within Clayton County. Overall, these modifications resulted in a better performance of the model's predictive capabilities, measured by comparing model traffic and transit ridership predictions to actual traffic counts and ridership figures for the year 2005. The modified model's overall deviation in traffic volume prediction when compared to actual counts is only – (0.1) percent compared to 1.7 percent in the original model. Likewise, model volumes were compared to traffic counts at several strategic crossing points, known as screenlines. In this analysis, the modified model's deviation was only – (0.07) compared to – (5.5) percent in the original model. Finally, transit ridership within Clayton County in the modified model deviated by – (13.5) percent compared to 0.7 percent in the original model. Although this suggests that the modified model has a reduced predictive capability for transit ridership, a more detailed analysis shows that generally, the model has better predictive capabilities on individual routes. In effect, the seemingly better deviation in the original model is more the result of the total deviation balancing out extreme high and low deviations. For a full technical documentation of the model refinement process, please refer to the *Clayton County Model Modification Documentation*, which is included as Appendix A to this report.

## 3.0 Demographic, Land Use and Market Assessment

This section examines the trends and issues resulting from demographic changes, market dynamics and land use patterns in Clayton County that suggest specific transportation needs. These trends and issues are important considerations in developing a viable transportation plan and ensuring that the County's transportation system is responsive to the context in which it operates. The *Existing Conditions Inventory* provides a detailed overview of the County's socioeconomic and demographic composition, existing and future land use as well as planned development and redevelopment opportunities. The following sections will recap the important trends and issues as they relate to transportation needs.

### 3.1 Evaluation Approach

A variety of socioeconomic, demographic, environmental, historical data sources, as well as land use and development plans were reviewed and evaluated to determine their impact on transportation planning in Clayton County. In most cases, historical data were measured in an attempt to forecast the County's future development, but, in other cases, policies, programs and other strategies were considered to set a more amenable context for achieving the community's expectation of the transportation system.

The assessment examines availability and adequacy of facilities and services with existing and future land uses and identifies growth centers to identify critical planning areas and areas of regional impact. The assessment also looks at the impacts of other planned development and redevelopment.

### 3.2 Demographics

According to the U.S. Census Bureau, population of Clayton County in 2000 was 236,517. The 2006 estimate was 271,240, reflecting a 14.7 percent increase in just six years. Between 2000 and 2030, the County's population is projected by the ARC to increase by 26.8 percent to 299,916, with employment increasing by 24.2 percent to 168,726. At 2.96 persons per acre, Clayton County has the third greatest population density in the 20-county region, behind only DeKalb County (4.2 persons per acre) and Cobb County (3.1 persons per acre).

In 2006, Clayton County's population represented 5.3 percent of the total 20-county Atlanta region population of 5,127,562.<sup>1</sup> Since 2000, the region has grown by nearly 900,000 persons; Clayton County has captured 3.9 percent of that growth. Clayton County's rate of growth was less than the region overall between 2000 and 2006, 14.7 percent versus 21.3 percent. Like the rest of the region, Clayton County residents are also getting older. According to the ARC *Envsion6 Profile* for Clayton County, it is projected that the 55 and older population will increase by 107 percent by 2030.

According to ARC *Envsion 6 Profile*, by the year 2030, Clayton County is anticipated to experience the following growth trends:

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<sup>1</sup> The 20-county Atlanta region includes the 18 counties in the Atlanta Metropolitan Planning area (Barrow, Bartow, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, Rockdale, Spalding, and Walton Counties) plus Hall and Carroll Counties. ARC has developed future population and employments estimates for all 20 counties.

- The number of households will increase by 18,000.
- The total number of vehicles will increase by 22,000, resulting in 838,000 more vehicle miles traveled.
- Residents will consume more water, withdrawing 42 million gallons of water daily.

According to the 2000 Census, Clayton County has many well-educated citizens, with almost 17 percent having a college degree. These high education levels could support a nearby concentration of high paying jobs, but the lack of office developments and the high percentage of blue collar jobs in the study area indicate that this college-educated population has limited options for suitable employment near their homes. As a percentage of total jobs, Clayton has the largest percentage of Transportation, Communications and Utilities (TCU) jobs in the 20-county region; over 35 percent in 2005. This compares to 8.2 percent for the entire 20-county region. Jobs categorized as TCU jobs are usually lower paying, approximately \$56,000 per year.<sup>2</sup> In the metropolitan Atlanta area, the Finance, Insurance and Real Estate (FIRE) category represents the highest-paying job category. As a percentage of total jobs, Clayton ranks last in the percentage of FIRE jobs, just 2.1 percent in 2005, compared to 6.8 percent in the region.

The lack of white collar jobs, reinforced by the absence of office centers and transportation options to the few employment centers that do exist in the county, contributes significantly to long commutes and subsequent traffic congestion. As indicated in the *Existing Conditions Inventory*, 62 percent of the working population left the County to work each day in 2000 and the percent of commuters who experience travel times 45 or more minutes increased by 11 percentage points between 1990 and 2005, while the proportion of commuters traveling 30 minutes or less declined by 12 percentage points.

According to ARC, between 2000 and 2005, the county saw a 4.4 percent decline in employment, losing over 6,000 jobs. In 2005, Clayton County had approximately 5.6 percent of the total 20-county Atlanta region employment of 2,307,041 jobs. By 2030, employment is projected to increase by more than 24 percent, adding nearly 33,000 jobs. The county needs to place emphasis on attracting higher paying jobs to provide local employment opportunities closer to home. By 2030, the share of jobs in Clayton County to the 20-county region is anticipated to decline to 4.4 percent of all jobs.

In terms of employment concentrations, only the airport offers the employment densities to qualify as a regional center, and most of the multimodal connections from the airport are to the north, with few to the immediate south. The county's major retail area, Southlake Mall, is much smaller in commercial square footage than most north-side malls and is struggling to maintain tenants. The remaining developmental nodes have much lower job densities, and most are spread out along linear corridors such as Tara Boulevard-US 19/41, SR 85, SR 138 and Mt. Zion Boulevard.

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<sup>2</sup> Source: *Local Employment Dynamics*. Wage cited was for TCU jobs in the 28-county Atlanta MSA as of 4<sup>th</sup> quarter 2005.

Based on population and employment growth statistics alone, the need for an enhanced transportation network to address these future issues is crucial to the future of Clayton County. There must be more of an investment in alternative modes of transportation, particularly transit.

### 3.3 Market Analysis of Economic Trends

In 2006, Clayton had approximately 105,000 housing units, of which 69,217 were single-family housing units and 32,159 were multi-family units. Clayton County's housing growth rate of 21.4 percent since 2000 was slightly higher than the region's growth rate (20.7 percent) during the same time period. According to *Atlanta Journal-Constitution Home Sales Report for 2007*, average sales prices of new homes in Clayton County in 2006 was \$160,400, while the average price for existing homes was \$118,000. Home prices were generally lower than what was found around the region.

The County has the third highest share of multi-family units in the region, with 31 percent of Clayton's total housing units being multi-family. Only Fulton County (44 percent) and DeKalb County (37 percent) have a greater share of multi-family units. The multi-family housing building permit request has fallen due mostly to moratoriums, while the local governments upgrade their respective development codes. In 2006, less than one percent of all units permitted in 2006 were for multi-family housing units in Clayton. Regionally, 27 percent of the units permitted in 2006 were for multi-family housing units.

With the anticipated growth in Clayton County, population and housing density will increase as developable land becomes increasingly scarce. The potential for increased densities presents opportunities to enhance local bus service on major thoroughfares throughout the County such as Tara Boulevard-US 19/41, SR 42, SR 54, SR 85, SR 138 and SR 314.

Clayton County was included in the sub-regional study conducted by ARC in 2006 and 2007, the *Southern Regional Accessibility Study (SRAS)*. Counties included in the SRAS study were: Clayton, Coweta, Fayette, Henry, Fulton (South Fulton), and Spalding. As part of the SRAS study, a market assessment was undertaken. A review of the market analysis findings from SRAS showed several market trends that have significant implications for land use and transportation planning.

- The counties with the highest rental rates (Spalding and Clayton) were also those with the lowest household incomes. Spalding and Clayton Counties both have over 37 percent of their housing units identified as renter-occupied, and their annual median household incomes are \$36,200 and \$47,700, respectively. Comparatively, the annual median household incomes for the SRAS area and the rest of the ARC region were \$50,109 and \$53,405, respectively.
- For the local business sector, those in the SRAS area generate annual revenues of approximately \$59,000 per establishment. This was lower than the figure for the rest of the Atlanta MSA which is \$70,000. Clayton had the highest number of businesses (7,000), but Coweta was the leader in business revenue (\$129,300). Overall, SRAS has 16 percent of the MSA's businesses accounting for \$1.7 billion in gross revenue. Of the top five employers for each county, the most common were airline-related businesses, institutions of higher education, healthcare services/hospitals, and Wal-Mart.

- The office market in the SRAS area is underdeveloped in terms of available office space. This lack of office space is mostly attributed to shortage in the supply of office development. Compared to the core Atlanta regional office market, the SRAS office market has experienced a much smaller level of investment and slower growth rate in square footage and even today only accounts for one percent of the total speculative office market. Findings indicate that existing SRAS office spaces are better utilized. This is evident by the decrease in vacancy rates and increase in absorption rates. This trend suggests that the SRAS area should pursue future diversification of its real estate base into more office developments.
- In 2005, the SRAS area differed from the rest of the region in terms of jobs-to-household ratios (1.25 vs. 1.6, respectively). Both the SRAS area and the ARC region jobs-to-household ratios are expected to decline by 2030, with SRAS declining to 1.17 and the region shrinking to 1.57. Household growth in the region overall is anticipated to outpace job growth. The SRAS area is expected to have a dramatic increase in future population without adequate jobs to complement this growth. Clayton, with a ratio of 1.59, is the only county in the SRAS area that currently has a higher ratio than the national standard of 1.4 jobs per household (i.e., 100 jobs for every 71.4 households). Clayton is expected to continue to be a dominant county for jobs within the SRAS area, and thus maintain a better overall balance in 2030. The county benefits from its proximity to Hartsfield-Jackson-Atlanta International Airport (HJAIA). Airport related jobs increase the jobs-to-household ratios much higher than they would be otherwise.

### 3.4 Land Use and Development Patterns

As stated in the *Existing Conditions Inventory*, Clayton County completed its *2005-2025 Comprehensive Plan* in 2004. The *Comprehensive Plan* contains both an existing land use map (Figure 3.1) and a future land use plan and development map (Figure 3.2) to guide ongoing development and investment. The existing land use map indicates that the northern and western areas of the unincorporated County are characterized by predominantly suburban density single-family home developments and limited pockets of multi-family housing. Within the County as a whole, the dominant land use is medium density residential. Commercial, office and industrial uses constitute very small percentages of total land use in Clayton County.

According to the *Comprehensive Plan*, the dominant future land use will shift from residential to mixed-use development. A major increase is also anticipated for other types of land uses such as parks/open space, neighborhood commercial and conservation residential.

Through the visioning process the Clayton County community identified the following priorities:

- Stabilization of single-family residential neighborhoods and the development of new, high quality and “executive” style single-family housing;
- Use of conservation subdivision ordinances to conserve open space and natural features;
- Development of new office and industrial parks to increase the County’s tax base and provide local employment opportunities;
- Capitalizing on the economic development potential provided by HJAIA; and
- Minimization of the negative impacts of the airport on the immediate community.



**Figure 3-1:**  
**Existing Land Use**

Figure 3-2:  
Future Land Use

Current land use and development practices in the County promote a proliferation of suburban-style residential development and favor motor vehicle use. The emphasis has been on low to medium density, single-family subdivisions, typically located in areas distant from employment centers, shopping, and other destinations and, thus, extremely automobile dependent. This type of development has in turn served to reduce the economic feasibility of introducing alternative transportation options. Additionally, an increasing number of access points, roadway improvements/upgrades, and parallel facilities serving new subdivisions have contributed to a rise in roadway congestion during morning and evening peak hours. It is evident that the County's development policies have not encouraged higher density developments such as mixed-use developments, planned unit developments, and transit-oriented development.

Current development trends indicate that:

- The dominant land use will remain residential for the foreseeable future. Residential land uses comprise 52 percent of the land use in Clayton County. Residential land uses are marginally increasing.
- An area of concern in Clayton County development pattern is the low percentage of land reserved for conservation and open space in the County. Parks/Recreation/Conservation comprises 1.2 percent of the land use in Clayton County. Current trends indicate that this land use will increase due to the efforts by local governments to preserve land for green space and other recreational activities.
- Vacant and undeveloped land comprises only 1.2 percent of the County's land use and that percent is decreasing rapidly. In 1999, there were 28,136 acres of available vacant land for development; however, in 2005 there were only 18,488 acres of vacant land left in the County. The annual average rate of land consumption is 2,078 acres per year. Based on those estimates around the year 2015 all the available vacant land in Clayton County will be exhausted. The largest concentrations of undeveloped land are located in the southern panhandle and in the northeast corner of Clayton County, in the vicinity of Rex and Ellenwood communities.
- The northeastern corner of the County (Ellenwood/Rex area) is in a state of transition. The northeast portion of the County is becoming denser. Development is most prevalent in the northern portion of the County primarily because of its close proximity to the City of Atlanta and I-75. Low density developments occurring in the southern portions of the County are automobile dependent. They are located at distances that are deemed too far to walk by citizens.
- Redevelopment efforts are producing marginal and sometimes undesirable commercial uses such as discount stores and pawn shops. Older commercial corridors (i.e., Tara Boulevard and Upper Riverdale Road) are experiencing an increase in the number of retail vacancies.

In 2007, the County placed a moratorium on development along several major corridors including Tara Boulevard and SR 138 to allow for a review and revision of land use and zoning ordinances. Currently, the County, as well as a majority of its incorporated areas, are in the process of updating and modernizing their respective development codes to establish policies

and practices, regulation/codes, and standards that favor alternative transportation modes and urban design. The revision of the County's zoning ordinance and development regulations is intended to promote consistency with the comprehensive and land use plan and to better protect resources, maintain community character and promote sustainable economic development while balancing public and private needs. The proposed zoning changes will allow for higher densities along key transit corridors, provide for the creation of transit-oriented developments and other mixed-used zoning classification, and require the installation of sidewalks in all new developments. These changes will also assist to improve transportation connectivity and transitional buffers between different land uses.

The county's future land use plan provides the basis for ARC's Unified Growth Policy Map (UGPM) which illustrates future development for the entire region and is a tool for refining the socioeconomic datasets for the travel demand model to forecast future travel conditions. The growth and development policies used to develop the UGPM served as a guide for the *Envision6* Regional Transportation Plan forecasts and investments used in the model scenario analysis presented in Section 4.2. According to the UGPM for Clayton County, shown in Figure 3.3, significant portions of the county, in the northern and central sections, are identified as urban neighborhoods on both sides of Interstate 75. The UGPM also indicates:

- Interstate 75 as a mega corridor
- the Southern Panhandle as suburban neighborhoods
- the Northwestern Clayton LCI, Southlake Mall Retail District, Clayton State University, National Archives, State Archives, Fort Gillem and Jonesboro LCI, Riverdale LCI and Forest Park LCI areas are identified as regional centers
- Lovejoy, Jonesboro, Morrow and Forest Park LCI areas as future transit stops
- Tara Boulevard (US19/41), SR 54 and SR 85 are identified as urban redevelopment corridors

The development concepts indicated in the UGPM are also reflected in various local planning efforts, through which the County has identified many of the areas identified by the UGPM as areas for focused redevelopment efforts and higher density development. These areas are described below and shown as high growth areas in Figure 3-4. This figure also depicts the location of the Developments of Regional Impact (DRIs) and Livable Centers Initiatives (LCIs) in Clayton County. All of these areas will require development and redevelopment policies that encourage higher densities and infrastructure that supports connectivity and transportation alternatives.



**Figure 3-3:**  
**Clayton County Unified Growth Policy Map (UGPM)**

Figure 3-4:  
High Growth Areas

### ***Northwest Tax Allocation District***

The Northwest Tax Allocation District is made up of several development/redevelopment proposals, including:

- *Atlanta Tradeport* -The Atlanta Tradeport is a 260-acre, totally integrated, mixed-use domestic and international business complex. It has been designated as Atlanta's only general purpose Foreign Trade Zone. Atlanta Tradeport is directly east of HJAIA and has direct access to the major highways, bordered by I-75 (west), I-285 (south) and U.S. 41 (east). It is the only development in Clayton County served by MARTA, which links the center to the airport via the College Park MARTA Station and includes stops in Hapeville, College Park and East Point. Railroad access (Norfolk Southern) is also available, which directly connects the Tradeport to the Savannah and Brunswick ports. Although a significant portion of the Atlanta Tradeport has been developed, expansion opportunities exist within the designated area and to the east in the Mountain View Redevelopment Area. Future redevelopment activities are expected north of C.W. Grant Parkway to include office and hotel development adjacent to I-75. Commercial services such as banks and restaurants are anticipated near C.W. Grant Parkway and the relocated Old Dixie Highway intersection.
- *Mountain View Redevelopment* - The redevelopment plan targets a portion of unincorporated Clayton County that is located directly east of the airport along the Aviation Boulevard axis and includes the Atlanta Tradeport area as well as East Mountain View. Redevelopment plans for Mountain View call for a "community of commerce" surrounding the planned multimodal Southern Crescent Transportation Service Center. The core area will be organized along C.W. Grant Parkway, extended into East Mountain View, and will include a mixture of office, service commercial, public and business park development. To the north and south of this mixed-use office and commercial area, districts of light industrial and business distribution uses are planned to meet area needs such as that for air cargo related facilities. The redevelopment plan was amended in 2007 to capitalize on the extension of C.W. Grant Parkway to connect with Conley Road and accommodate the future parking needs for the new International Terminal at HJAIA.
- *Southern Crescent Transportation Station* - The proposed Southern Crescent Transportation Station (SCTS) is a multimodal transit-oriented district (TOD) to be located immediately adjacent to the Mountain View Redevelopment area (north of Forest Park) in the area of the intersection of C.W. Grant Parkway and Old Dixie Highway on approximately 20 acres with direct connections to HJAIA. Plans for the TOD include office, retail, hotel, and industrial and green space land uses. The SCTS is proposed to meet regional transportation needs through the integration of commuter rail, MARTA, community buses, shuttles and taxis, with a direct connection to the new East International Terminal at HJAIA. Development is projected to occur across several phases, with each phase increasing the level of transportation service. Initially, the SCTSC would serve bus and airport shuttle services, with future expansion of service into a commuter rail station, a MARTA station, and an Automated People Mover to the HJAIA International Terminal.

- *Southside Hartsfield Redevelopment and Stabilization Plan* - This redevelopment plan was initiated as a joint effort of the Development Authorities of Clayton and Fulton Counties. It proposes the redevelopment of 3,400-acre area south of HJAI A as an important step towards shaping the future of metropolitan Atlanta's south side. The plan covers an area in Clayton and Fulton Counties between I-285 and Flat Shoals Road and that is bounded by I-85 and the Old National Highway corridor to the west, and to the east a line running north from the intersection of Flat Shoals Road and Riverdale Road to I-285. The plan encourages redevelopment in the northern portion of the area while supporting neighborhood stabilization in the southern portion. A higher intensity of land use is recommended near I-285 with a mixture of commercial, office, business and distribution development. Land use intensity decreases and transitions from commercial to higher density residential (multi-family, mixed-use) to lower density residential (single-family) neighborhoods.

### ***Atlanta State Farmers Market***

The 146-acre Atlanta State Farmers Market is the largest wholesale distribution hub for the Southeast and contributes over \$1 billion in economic impact to the immediate community. It features a garden center, wholesale and retail activities, a restaurant, welcome center, and USDA Federal-State office. Plans are underway to expand the potential of the Farmers Market as both a retail and tourism generator and as an international destination for agribusiness as part of a Livable Center Initiative (LCI) in the City of Forest Park. A new Market Hall is planned for development in next few years. This hall will provide approximately 50,000 square feet that will house 50 merchants and 250 employees, and is anticipated to generate \$42 million in sales annually. Highlights of the expansion plan include:

- Creation of a tax allocation district (TAD)
- Retail public market and improvements
- People mover to the airport
- Relocation of state agriculture offices and internationally focused federal offices for commodities and produce exchange with South America
- Atlanta to Macon commuter rail station
- Improvements to truck distribution flow and gateways
- I-75 and I285 exits and state route access and intersection improvements and signage
- Accessibility improvements for transit and high-occupancy vehicle travelers.

### ***Redevelopment of Fort Gillem***

Fort Gillem is a 1,500-acre military base east of the City of Forest Park. Fort Gillem is a logistical support hub for Fort McPherson and is currently home to 51 tenants including organizations from the Active Component, Reserve Component, Georgia Army National Guard, and other Department of Defense and federal agencies. The fort houses the Army's Atlanta Distribution Center, the equipment concentration site #43 for the 81st Army Reserve Command, and the Army's CID Criminal Investigation Laboratory.

Fort Gillem is being closed under the Base Realignment and Closure Act (BRAC) of 2005. As a result of BRAC, Fort Gillem underwent a community redevelopment planning process which

identified potential uses and infrastructure improvements for the almost 1,017 acres available for redevelopment.

In July 2007, the Local Redevelopment Authority approved a preferred alternative which includes 800 acres of revenue producing uses, the majority of which are located in a 642-acre industrial/business park campus in the northern portion of the property. Aside from the significant industrial/business park space, the preferred alternative calls for approximately 500 residences, 435,000 square feet of retail and 280,000 square feet of the office uses. Based on preliminary projections, this alternative represents a revenue potential of over \$50 million. The preferred alternative requires a roadway modification which connects Main Street to Hood Avenue and transit through the property tying into the residential area.

### ***Gateway Village Project***

Gateway Village is a public-private partnership to develop 165 acres of land located within Morrow and Lake City between Clayton College and State University and Reynolds Nature Preserve. Planned adjacent to a future commuter rail station, the project creates a community and university planned district with educational, governmental, commercial, and residential uses. The master plan calls for 1.5 million square feet of development which includes office, housing, retail, and hotel/conference uses as well as the new location for the Southeastern Regional Headquarters for the National Archives and Records Administration and the Georgia State Archives. The development is within minutes of HJAI and has access to three major interstate highways: I-85, I-75, I-285.

### ***Upper Riverdale Road Corridor Redevelopment (Riverwalk)***

Clayton County, the Development Authority of Clayton County, and the Southern Regional Medical Center (SRMC) have prepared a redevelopment plan for the Upper Riverdale Road corridor. The plan for a community hospital district includes a SRMC Campus Village with neighboring parcels redeveloped to create a mix of office/professional and residential development. The plan also calls for significant improvements to Upper Riverdale Road and upgrading of that roadway into a parkway. The project has been named "Riverwalk" due to its proximity to the Flint River. The Riverwalk plans consider the Flint River and its floodplains and wetlands as a regional asset and propose the development of a boardwalk skirting its edges and penetrating the floodplain at various locations including a series of open spaces and educational exhibits focused on wetlands ecology and preservation.

### ***The Ellenwood Town Center Redevelopment Plan and Tax Allocation District***

Approved in 2003, this district encompasses approximately 400 acres at the intersection of I-675 and Anvil Block Road, just south of I-285 in Clayton County. The focal point of the development will be a major new shopping, dining and entertainment "lifestyle center" called Ellenwood Town Center that will offer distinctive retail on a pedestrian-friendly scale. The use of TAD financing to fund construction of infrastructure will enable the County to leverage the increased property tax increments from these developments to provide the infrastructure necessary to generate an estimated \$248 million in private sector development. This investment would generate new jobs, new tax revenue, increased incomes for County residents, and increased revenue for area businesses.

### ***Rex and Ellenwood Areas of Northeast Clayton County***

The triangular shaped area roughly bounded by I-675 on the west, the County line to the north, Bouldercrest Road on the east and a point between Ellenwood and Double Bridges Road to the south is classified as light industrial from a mixture of low density residential in the northern portion of the area and light industrial in the southern portion. The area from C.W. Grant Road and property facing Bouldercrest Road eastward to the County line, bounded on the north by the County line and on the south by a line approximately halfway between Rex and Ellenwood is classified for a combination of undeveloped and low density residential to suburban residential (a density of two units per acre) with office/institutional land uses also allowable. The area surrounding the community of Rex, bounded by I-675 on the west and the County line on the east is classified as low density residential to medium density residential.

### ***SR 138 Corridor***

The SR 138 corridor, from its intersection with Walt Stephens Road to I-75 is reclassified from low density residential to a number of land uses including nodes of industrial, office, commercial, residential, and park/open space. SR 138 is a major east-west corridor through the county and the anticipation of pressure for major land use changes resulting from the widening of the road from two to four lanes (east of Walt Stephens Road, the roadway remains a two lane road) has prompted the county to protect against strip style commercial development and limit commercial development to major intersections.

### ***Lovejoy/Panhandle Area***

In the southern portion of the County, including the City of Lovejoy and an unincorporated area referred to as the Panhandle, land is classified for low density residential land use (a mixture of one-acre and one half-acre building lots). Generally, the area south of McDonough Road was designated for one-acre lots as was the area east of Tara Boulevard and south of Freeman Road. The area to the north of these areas and south of SR 54 was designated for half-acre residential lot development.

### ***Developments of Regional Impact (DRIs)***

Under the Georgia Planning Act, development projects that are of sufficient size to have an impact beyond a local government's jurisdiction are subject to review as Developments of Regional Impact (DRI). For Clayton County and its municipalities the ARC and the Georgia Regional Transportation Authority (GRTA) administer the DRI review process. Clayton County has approved a number of DRIs over the last four years that will have significant transportation impacts. Table 3-1 lists DRIs in Clayton County from 2003 to 2097 and Table 3-2 lists DRIs within a five-mile radius of the County. The DRIs within Clayton County are also depicted in Figure 3-1.

**Table 3-1:  
Clayton County DRI Submittals from 2003-2007**

<b>DRI #</b>	<b>Name</b>	<b>Year</b>	<b>Local Jurisdiction (Clayton) Decision</b>
354	Northeast Water Reclamation Facility	2003	Approved
392	Lee's Mill Road Concrete Plant	2003	Approved Subject to Conditions
390	Ellenwood Township	2003	Approved
482	River's Station at West Fayetteville Road	2004	Approved Subject to Conditions
949	Walker Concrete Plant (Old Morrow Plant)	2006	Approved Subject to Conditions
1163	Project Lucky	2006	NA
967	Waldon	2006	Approved
1270	Airport Disposal	2006	NA
1330	Aviation Park	2007	Approved
1363	Athens Atlanta Asphalt Recycling Facility	2007	NA
1618	Anvil Block Road Project	2007	NA

- **Lee's Mill Road Concrete Plant** – The expansion of an existing facility New Concrete Mixing Plant, New Concrete Product Manufacturing Facility (Cement Blocks) and a small maintenance facility.
- **Ellenwood Township** - A mixed-use development of retail office apartments, townhomes and single-family residences. This project encompasses approximately 400 acres at the intersection of I-675 and Anvil Block Road, just south of I-285 in Clayton County.
- **River's Station @ West Fayetteville Road** - The development includes 20,000 square feet of office space, 200,000 square feet of retail space, 200 single-family detached homes, 140 detached townhouses, 120 attached townhouses, and 417 multiple family units on 112 acres of land. There is a central recreational amenity located within 20 acres of designated open space. The development is located along the east and west sides of West Fayetteville Road to the south of I-285 in unincorporated northwest Clayton County.

- **Walker Concrete Plant** - The project is the relocation of an existing concrete plant to a 9 acre site located across Old Morrow Road in Clayton County. Access to the proposed development is located on Old Morrow Road.
- **Project Lucky** - The proposed project is 43 acre distribution warehouse development located in Clayton County. The proposed development will include 625,000 square feet of distribution space in one building. The proposed development is located along Mount Zion Road at the interchange of SR 138 and I-75.
- **Waldon** - The proposed development is a 167.8 acre mixed-use development in Clayton County. The proposed development will include 210,000 square feet of commercial space, 522 townhome units, and 276 single-family units. Site access is proposed at 9 locations along Tara Boulevard, Old Poston Road, and Poston Road.
- **Airport Disposal** - The proposed project is the relocation of an existing airport debris gasification plant to a 2.178 acre site in Clayton County at the intersection of Clark Howell Parkway and Weems Street. Access to the proposed development is located on Weems Street.
- **Aviation Park** - The proposed park is an 86 acre industrial development is in Clayton County. The proposed development will consist of 693,300 square feet of industrial warehouse space in 8 buildings of which 15 % may be office use. The site is proposed to have two full movement driveways along Gilbert Road.
- **Athens Atlanta Asphalt Recycling Facility** - The proposed project is the construction of a new asphalt recycling facility on 3.64 acres in Clayton County. The proposed development will have one access point along Lees Mill Road.
- **Anvil Block Road Project** - The proposed project is a 50.75 mixed-use development located west of I-675 along Anvil Block Road. The proposed development will consist of 750,000 square feet of industrial/warehousing space, 6,000 square foot convenience store (20 fueling stations), and 12,500 square feet of restaurant space.

**Table 3-2:  
DRI Submittals from Surrounding Counties from 2003-2007**

<b>DRI #</b>	<b>Name</b>	<b>Year</b>	<b>Local Jurisdiction Decision</b>
652	JAMDAT Development, LLC (West Erma)	2006	Henry County/ Approved Subject to Change
1108	Olde Towne Hapeville	2006	City of Hapeville/ Approved Subject to Conditions
1147	Southside Industrial Park Business Center	2006	City of Atlanta approved/Subject to Conditions
1390	Arrow Waste DeKalb	2007	DeKalb County Approved
1451	Lovejoy Realty FBO	2007	Henry County Approved/Subject to Conditions

- **JAMAT Development, LLC** –the Henry County projects includes 675 proposed residential units.
- **Olde Towne Hapeville** - The proposed project is a mixed-use development on almost 30 acres in the City of Hapeville. The proposed development will include 1,194 residential units comprised of 63 single-family units, 108 townhomes, 56 flats, 967 condominium units, and 74,450 square feet of retail. There are existing commercial and church sites within the site boundaries that will remain. The project site is bounded by South Central Avenue, Oak Street, Atlanta Street, and the railroad line running parallel to Elm Street.
- **Southside Industrial Park Business Center** – The proposed light industrial development will include 1,000,120 square feet of warehouse space within three buildings. There are five proposed access drives onto Southside Industrial Parkway with the development.
- **Arrow Waste DeKalb** – The proposed project is the construction of a 20,000 square foot construction and demolition debris transfer facility to be located at 4039 Bonsal Road.
- **Lovejoy Fixed Base of Operations (FBO)** - The proposed Lovejoy FBO is located on 96.63 acres in Henry County adjacent to Clayton County’s Tara Field. The proposed development plans to develop 20,000 square feet of FBO, 873,600 square feet of hanger space, 352 residential units, and 45,544 square feet of retail space. The development proposes automobile access at three driveways along Selfridge Road and will have aircraft access to Tara Field.

**Livable Centers Initiatives (LCIs)**

The ARC’s LCI program encourages local jurisdictions to plan and implement strategies that link transportation improvements with land use development strategies to create sustainable, livable communities consistent with regional development policies. Through participation in the LCI program, local funds are combined with federal transportation funds to provide planning grants.

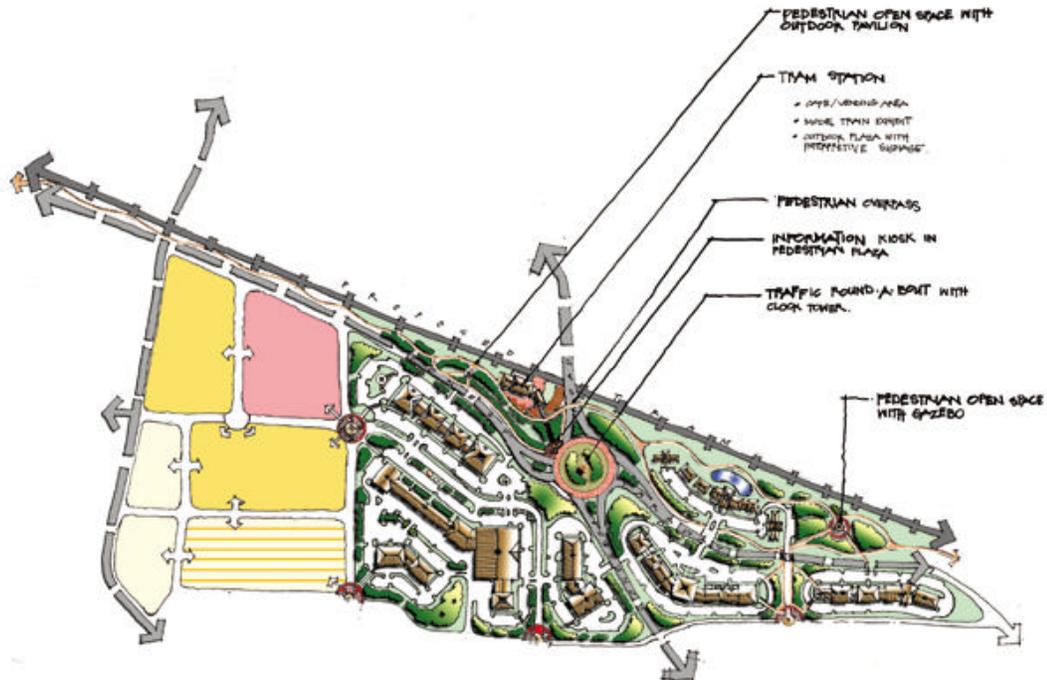
An inventory of LCIs was performed to identify potential transportation and related impacts of large-scale developments proposed in Clayton County. Table 3-3 presents a list of LCIs completed in the County since 2003. LCIs are also depicted in Figure 3-1.

**Table 3-3:  
Clayton County Livable Centers Initiatives**

<b>LCI Recipient</b>	<b>Year Awarded</b>
Forest Park	2001
Jonesboro	2003
Morrow	2000
Northwest Clayton	2004
Riverdale Town Center	2006

- **Forest Park LCI**

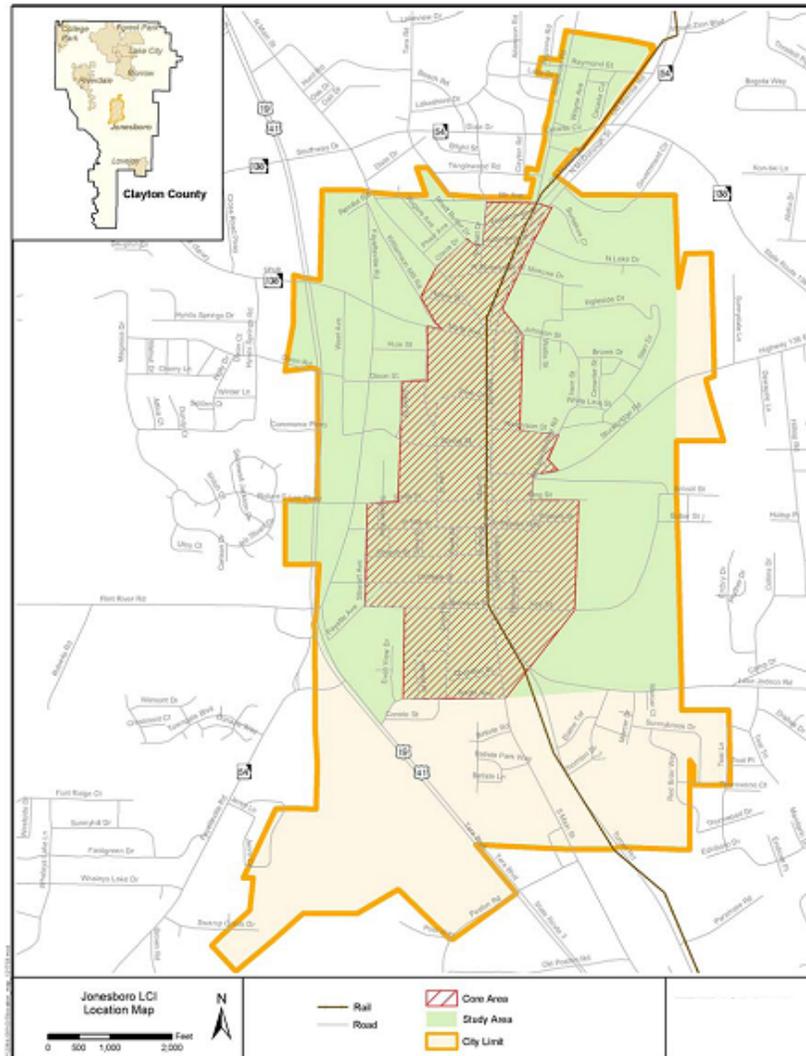
The study area encompasses the proposed commuter rail station, but also a 292-acre area that includes Forest Park's Main Street and transit-oriented district. The study evaluated and recommended residential opportunities and a system of parks and recreational amenities connected by sidewalks, a three-mile multi-use trail, and public transportation including a People Mover to HJAIA.



Source: Forest Park LCI Plan, December 2003

- **Jonesboro LCI**

The study provides an action plan for redeveloping Jonesboro's historic downtown. The plan aims to utilize existing infrastructure in downtown Jonesboro to expand retail, housing, transportation and tourism options. The town plaza is also meant to provide a signature space which is unique to Jonesboro. A parking structure is proposed to replace surface lot spaces lost to redevelopment. This plan calls for framing the Green with a new County Administration Building and some retail space. A commuter rail station is recommended just north of the historic rail station on West Mill Street. To help pedestrian movement across the tracks and minimize pedestrian and vehicular conflicts, this plan also recommends closing the West Mill Street rail crossing and leaving it open only to pedestrians.



Source: Jonesboro LCI Plan, December 2003

- **Morrow LCI**

The proposed development is centered on the development of a commuter rail station which will serve as the focus for a mixed-use residential community in the areas immediately adjoining the station. Major elements of the development include residential units, retail, offices, live/work units, parking and community green, are all part of a compact walkable development. The station has an auto drop-off that acts as a focal point for the residential development and also serves as a community building with amenities for community use. A critical feature of this Master Plan is the creation of a roundabout on SR 54.



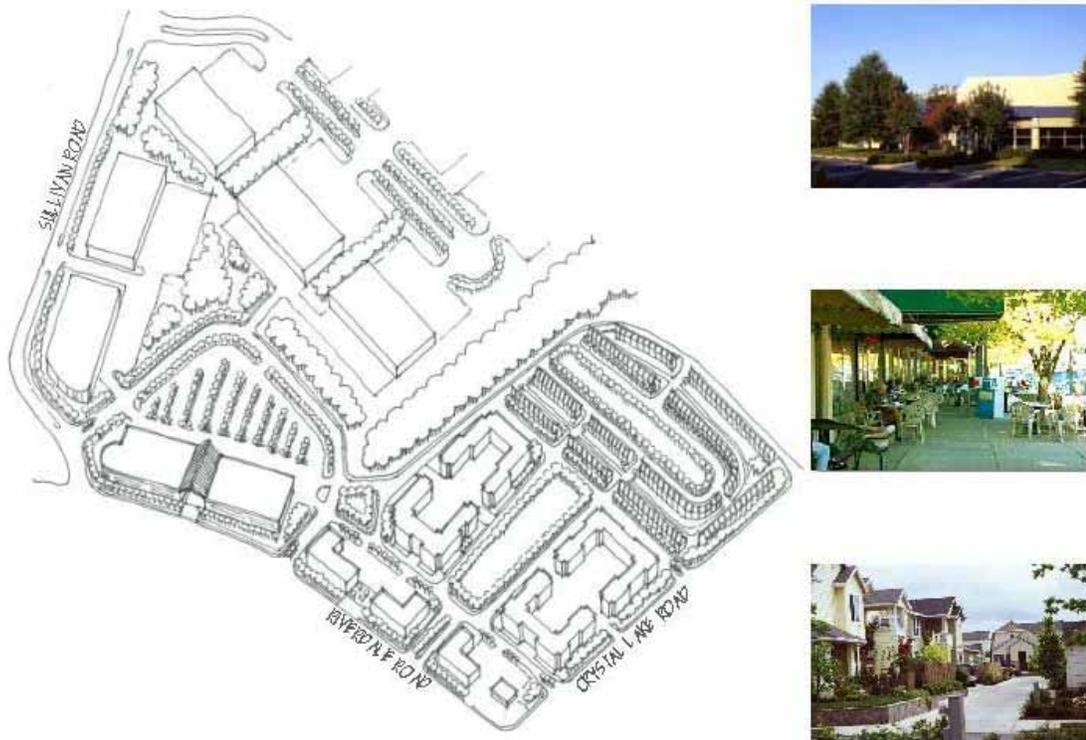
Source: Morrow LCI, February 2001

- **Northwest Clayton LCI**

The Northwest Clayton LCI Study Area includes approximately 1,569 acres of land in northwest Clayton County. This geographic area extends immediately south from I-285 and is also immediately to the south of the location of the HJAIA's 5<sup>th</sup> Runway. The north edge of the study area is I-285. Other boundaries are Flat Shoals Road to the south, the Fulton County/ Clayton County line to the west, and to the east a land lot line running north from the intersection of Flat Shoals and Riverdale Road to I-285. This study area contains a portion of the City of College Park that is located in the northernmost section. A number of residential neighborhoods exist in the southern and eastern portions of the study area. Key redevelopment areas include:

- **Cherry Hills Subdivision** located in the northeast corner bounded by I-285, Riverdale Road, Crystal Lake Road and the eastern edge of the Cherry Hills neighborhood. The area is approximately 220 acres which includes approximately 450 single family residences with some small-scaled commercial development along Riverdale Road. Riverdale Road and Sullivan Road provide excellent access to the transportation network and airport. Study recommendations include:
  - The northern portion of Cherry Hills is recommended for light industrial (warehouse and distribution) redevelopment.
  - A high-density residential development with some preserved greenspace is recommended for the southern portion of Cherry Hills.

- A commercial center is recommended at the intersection of Riverdale Road and Sullivan Road, and existing commercial development along Riverdale Road should be retained and revitalized with the addition of limited mixed-use buildings.

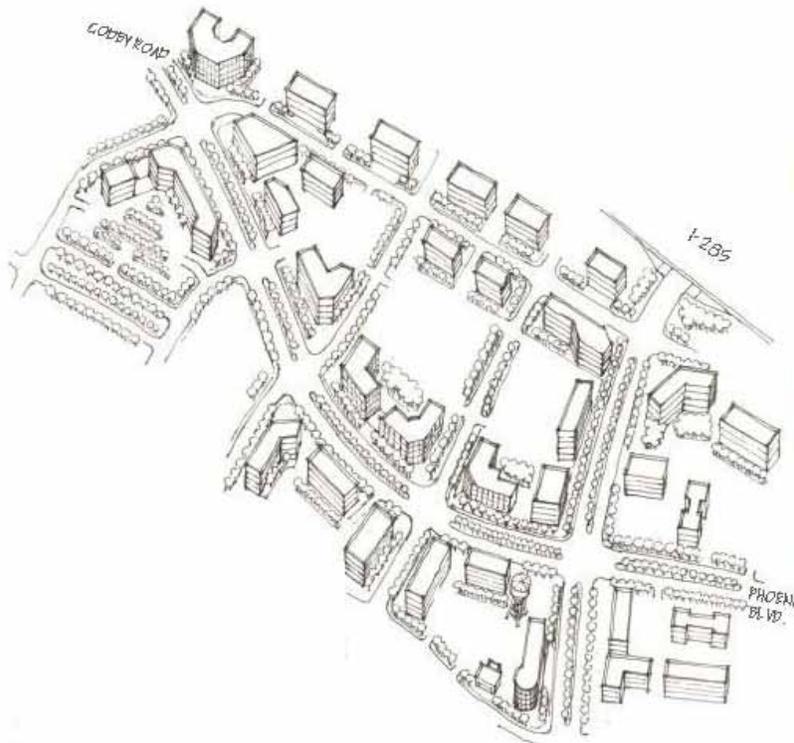


Source: Northwest Clayton LCI Plan, December 2004

Transportation recommendations include:

- Construction of bus shelters for stops along existing routes. Roadway redesign, and possible construction of a new on/off ramp to I-285 connecting Cherry Hills via Sullivan Road with the interstate to keep industrial truck traffic out of residential areas off Riverdale Road
  - Intersection improvements to ease traffic flow along Phoenix Boulevard and Riverdale Road, and Riverdale Road and Norman Drive
  - Streetscape project for Crystal Lake Road.
- **Godby Road @ Phoenix Boulevard Area** is located in the northern and northwestern portions of the study area along the Godby Road extending from West Fayetteville Road to Southhampton Road and I-285. The area is approximately 85 acres with a mix of single and multi-family developments and small scaled commercial and office uses. Study recommendations include:

- Redevelopment should focus on the extension of the mid-rise office development along West Fayetteville Road to the west. Phoenix Boulevard, located directly south of I-285 between W. Fayetteville and Riverdale Road are identified as the study area's primary office market and includes the Royal Phoenix Business Park.
- The area's excellent accessibility to the airport and regional transportation routes adds to the appeal and continued development of office space in this area.



Source: Northwest Clayton LCI Plan, December 2004

#### Transportation recommendations include:

- Improvement of intersection of Phoenix Boulevard, West Fayetteville Road, and Godby Road
- Improvement of Godby Road from West Fayetteville Road to Southampton Road, including widening, a median and sidewalks with streetscape
- Construction of new local streets to create a more distributed network in this area and ease traffic congestion
- Construction of sidewalks along Phoenix Boulevard
- Expand C-TRAN bus routes to provide service east of the Royal Phoenix Business Park along Godby Road

- **The Norman Drive @West Fayetteville Road** represents the civic hub due to the location of three schools; North Clayton High School, North Clayton Middle School and Northcutt Elementary School. Study recommendations include:
  - Continued institutional and mixed-use development
  - Redesign of Norman Drive to become a major pedestrian corridor connecting residential, commercial and civic uses.
  - The location of the proposed Clayton County Recreation Center on the undeveloped tract of land on W. Fayetteville Road, north of the schools.
  - Residential development for the large tract of undeveloped land south of East Pleasant Hill Road
  - To provide services for this new residential area, a small node of neighborhood focused commercial uses is recommended for the intersection of W. Fayetteville and East Pleasant Hill Roads.

Transportation recommendations include:

- Undertake a study to determine the feasibility of installation of a traffic light at the intersection of West Fayetteville Road and East Pleasant Hill Road
  - Extend East Pleasant Hill Road west to Fulton County line
  - Extend Deny Drive
  - Expand C-TRAN bus routes to provide service south of Phoenix Boulevard, along West Fayetteville Road and Pleasant Hill Road
- **Riverdale Town Center LCI**

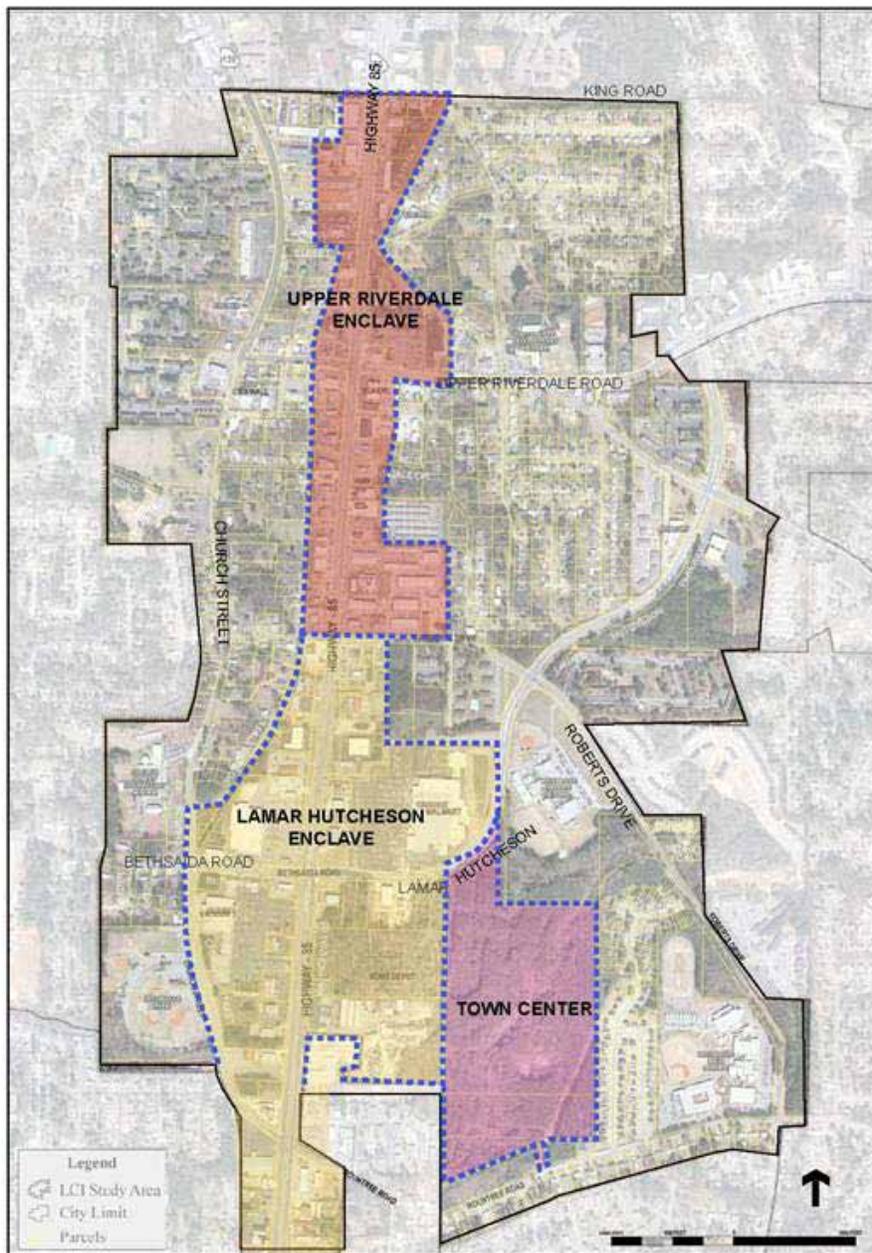
The City of Riverdale is located just south of the City of Atlanta and HJIA. The study area is comprised of 835 acres and 1.7 miles along SR 85 between King Road (on the north) and Rountree Road (on the south). Its western border includes the parcels along Church Street and extends eastwards to parcels lying upon a line which runs roughly along Voyles Drive, Lamar Hutcheson Parkway, and Roberts Drive. A major goal of the study is to encourage development and redevelopment and promote a variety of land uses and activities and create a pedestrian friendly environment. Key redevelopment areas include:



Source: Northwest Clayton LCI Plan, December 2004

- **Upper Riverdale Road Corridor** to consolidate and redevelop smaller parcels into developable tracts – mainly along GA 85. The redevelopment of shopping strip mall, storage facility and aging auto/warehouse businesses at the northeast corner of Upper Riverdale Road and GA 85, access management, and develop area into mixed-use - predominantly retail/commercial along GA 85, with housing on larger consolidated parcels – mostly on the east side of GA 85 that is adjacent to residential neighborhood. Transportation amenities include:
  - New compact street network
  - Pedestrian/ green space connectivity to the civic node (existing city hall and police facility)
  - Multi-path trail connectivity and enhancement
- **Lamar Hutcheson Enclave** to redevelop aging/declining grey field retail and isolated single retail buildings and underutilized parcels. Higher density mixed-uses that offers variety of housing types and products and retail and commercial services and amenities Transportation amenities include:
  - Street grid and connectivity to existing network
  - The intersection of GA 85 and Lamar Hutcheson Parkway is the main node and gateway to the new town center.
  - Multi-path trail connectivity and enhancement

- **Riverdale Town Center** is a new town center with civic buildings, an amphitheatre, public plaza, village green and mixed uses; retail/commercial, condos, live/work apartments, town homes, and detached and attached single family homes. The project is intended to create a focal point for the community. Transportation amenities include:
  - Connectivity to adjacent uses
  - Access management and inter-parcel connectivity
  - Multi-path trail connectivity and enhancement



Source: Riverdale Town Center LCI Plan

### 3.5 Environmental Considerations

An extensive review of natural, cultural, historic and recreational resources was undertaken as part of the *Existing Conditions Inventory*. Clayton County is rich in resources, which, as the planning process continues and alternatives are identified, will require transportation projects to undergo an environmental screening process. All federally-funded projects are subject to environmental evaluation per the National Environmental Policy Act (NEPA). The NEPA process requires a review of impacts to historic, cultural, and natural environments related to specific projects. At 98.8 percent built out, Clayton County must place an emphasis on protecting and preserving its historic, cultural, and natural environments from development and development impacts, including those that can incur due to transportation infrastructure investment.

Surface water, in the form of streams, rivers, wetlands, and lakes are found throughout Clayton County. Thirty-six lakes or ponds and 18 named streams are located within the County, as well as high concentrations of wetlands. The highest concentration of wetlands occurs within the eastern and central portions of the County.

Crossing surface water and environmentally sensitive areas is a concern for developing transportation facilities because water crossings are accomplished through structures, and building structures (bridges, culverts, and the like) are more costly than building facilities on dry land. In addition, every built transportation facility fundamentally changes the surface of the ground, in most cases making it impervious to water, leading to a need for stormwater management. As redevelopment and development continues throughout the County, downstream impacts of increased stormwater runoff can lead to flooding in low lying areas. Severe flooding can degrade or destroy existing roads. Overall, within the County, as development and redevelopment continues and additional transportation infrastructure is constructed, care should be taken to minimize harm to the surface water system.

Clayton County is also home to several historic sites such the Crawford-Dorsey House and Cemetery, the Jonesboro Historic District, Rex Mill, the Orr House/Stately Oaks, and the Orkin Early Quartz Site, the Lovejoy Historic District, the Rex Historic District, the Stephen Randolph Adams; and the Pittard House. Cultural resources include the Jonesboro Depot Welcome Center and Museum and Road to Tara Museum, the Orr House/Stately Oaks Museum, the Old Jail History Center, the Landmarks Through History Trolley Tour, the Drive-Up Antique Funeral Museum and Margaret Mitchell Playhouse, the Georgia State Archives, the National Archives Southeastern Division, the Clayton County Performing Arts Center, Spivey Hall at Clayton State University, and Arts Clayton. In addition, numerous parks and recreational areas can be found throughout the County. These assets are important considerations as the County examines tourism and economic development opportunities. It is critical that connectivity and access to these heritage and preservation tourism areas be considered as the County looks to expand transit, pedestrian and bicycle facilities. Transportation infrastructure can also negatively impact these important cultural, historical, recreational, and archaeological resources. Again, at the planning stage, plans and policies can be developed in consideration of the resources, resulting in protection and avoidance of irreplaceable County assets.

### 3.6 Transportation Impacts

The roadway system in Clayton County is well developed. The network provides direct access to most major interstates (I-75, I-285, I-85, and I-675), as well as to a network of state routes, County roads and City streets. However, in order to accommodate future growth and leverage redevelopment opportunities, Clayton County will require improvements to the majority of its existing major thoroughfares and corridors. Most of the major thoroughfares are four lane roads with turning lanes and are congested during peak traffic hours, primarily due to commuters from neighboring counties such as Fayette, Henry, and Spalding Counties to access I-75.

There continues to be a need for more policies in Clayton County that promote medium to high density development, encourage connectivity around and to transit stations via sidewalks, transit, roadways, and bike lanes. The County must provide transportation alternatives to provide for improved health through physical activity and offer residents transportation mobility options. Further, County policies must encourage funding opportunities that support proper transportation planning initiatives, development and urban design investments. Although public transit is limited in Clayton County, the demand for service is high although funding is not readily available for expansion and improvements. Policies and projects that provide mobility options to driving must be incorporated to help alleviate the strain on the current transportation network.

The *Existing Conditions Inventory* lists over \$240 million in multimodal transportation improvements funded over five years through the 2003 Special Local Option Sales Tax (SPLOST) as well as over \$980 million in multimodal improvements included in the draft *ARC Envision 6 RTP/FY 2008-2013 TIP*. The County has proposed a new six-year SPLOST that includes over \$125 million in transportation improvements. These projects, once constructed, will have a positive impact on the Clayton County transportation system and promote greater land use/development coordination in surrounding the area. Transportation needs over and above these planned and proposed projects are identified in the following sections of this needs assessment report. Planned projects of major significance include:

#### *Atlanta-Macon Commuter Rail*

The 104-mile proposed commuter rail line from Atlanta to Macon is designed to carry the equivalent capacity of two general purpose highway lanes and includes five transit stations in Clayton County. These proposed stations include Southern Crescent Transportation Services Center, Forest Park, Morrow, Jonesboro, and Lovejoy. The Cities of Forest Park, Morrow and Jonesboro have each developed plans for redevelopment around the proposed stations which incorporate greater coordination of land use and transportation options to create nodes within the transportation network where mobility options are offered to residents. An environmental impact study was completed from Atlanta to Macon and funding was released for rail improvements and purchase of land for the station areas. The section from Atlanta to Lovejoy will be the first leg for commuter rail service in Georgia and is anticipated to be operational by 2010. With initial plans for providing six trips a day, the system is forecasted to carry between 900-2,300 commuters each weekday, and is expected to produce associated economic opportunities for the County.

### *Transit Expansion Plans*

The extension of the MARTA South Line to the Airport and the Georgia International Convention Center in southern Clayton County has had a significant impact on providing transportation options to the southern region and provides residents access to alternative means of transportation through the region. GRTA has implemented express bus service inside Clayton County and some of its surrounding counties (Henry and Fayette) to offer alternative forms to the automobile. The long range plans include the implementation of arterial bus service along US 19/41 (Tara Boulevard) from Lovejoy and express bus from Fayetteville (Fayette County), McDonough and Stockbridge (Henry County). C-TRAN is preparing to complete an expansion plan to provide more service within the County. This study should begin in mid to late 2008. A multimodal transit station has been proposed along the northern edge of Forest Park and will include linkages to MARTA, the commuter rail line, and the airport, etc.

## **3.7 Technical Assessment**

Significant population growth is anticipated in Clayton County by 2030 and employment growth is forecasted to occur at a slower rate than growth in households. Employment in the County is expected to be mostly lower paying, or "blue collar" jobs (i.e. service and retail) and this lack of job diversity reinforces the County's over-reliance on the rest of the metropolitan region for employment and retail options. More employment growth and job diversity is needed in Clayton County to reduce trip lengths and travel costs.

Land use and development practices in recent years have favored automobile use/reliance, focusing primarily on low-density, single-family subdivisions located throughout the County in areas distant from employment centers. This trend has resulted in longer and costlier trip-making and limited opportunities for multimodal transportation options. However, steps are being taken both locally and regionally, to adopt policies and practices, regulations/codes, and standards that favor transit and non-motorized transportation modes, higher densities, improved connectivity between adjoining parcels and other good practices. The County is performing a complete revision of its zoning ordinance and development regulations to promote consistency with the comprehensive land use plan, better protect resources, maintain community character and promote sustainable economic development while balancing public and private needs. Future trends indicate a transition to clustering large-scale, mixed-use developments along select major corridors presenting opportunities for multimodal transportation options, such as transit.

At 98.8 percent built out, future development will focus on redevelopment and in-fill development opportunities. The few undeveloped or vacant areas within Clayton County are larger tracts in the southern and northeastern portions of the County due to airport expansion, and the new Georgia International Convention Center. Clayton County needs to carefully manage remaining developable land and redevelopment efforts to attract the kinds of high-end housing, diverse retail, and high-paying jobs that the County currently lacks. Future growth and development needs to be directed into areas with existing infrastructure. The County's comprehensive plan recommends the use of conservation subdivision development principles as a means to promote open space conservation in the panhandle area. It has further identified the Rex/Ellenwood as a prospective location for executive low density housing development (2 units per acre).

Protecting areas with rural landscapes, environmentally sensitive lands, watershed supply areas, and historic/cultural resources is necessary to maintain the quality of life and cultivate a unique identity for Clayton County. An area of concern in Clayton County's development pattern is the low percentage of land reserved for conservation and open space. Clayton County created a Greenspace Plan and established the Greenspace Trust Board in September 2001. Since then, the County has received grants from the state for purchase of greenspace and is looking to pursue additional opportunities for obtaining and preserving open space.

Clayton County has a strong jobs-to-household ratio. However, with the dominance of airport-related employment, many of the current employment opportunities are lower paying and bring limited job diversity to Clayton County as well as a limited range of pay scales. The jobs-to-household ratio is expected to remain strong through 2030, but most of the new jobs attracted to the County are expected to be in the lower to middle income categories, reinforcing the need to make commutes outside the study area for access to higher paying employment opportunities.

There are several important land use related market issues that emerged during the needs assessment as well. Clayton County's housing mix consists mostly of low density, single-family housing with some multi-family housing. Currently, average single-family home prices are below the average single-family home price for the rest of the region. This affordability of housing has not been accompanied with a diversification of job types, pay scales, and a broad retail mix. Thus, the levels of discretionary income necessary to support high-end retail are lacking, and a lack of significant office space discourages higher paying jobs from locating to Clayton County.

Recent studies of peer cities indicate that metropolitan Atlanta residents are driving more daily miles per capita and, as noted in recent Census reports, and Clayton County residents have seen increased travel times as well. Without changes in land use and development patterns, current trends could create even longer commutes and impact overall quality of life. It will be important that growth in population and employment be more concentrated in close proximity in order to make multimodal options feasible in Clayton County. The creation of more viable transit could provide better access to jobs, and ultimately leverage land use and economic development opportunities for the County.

Transit-oriented developments (TODs) can provide the impetus for walkable neighborhoods and density necessary to warrant expansion of fixed route transit service. TODs, combined with the implementation of overlay districts, which impose development and design restrictions in specific locations in addition to standard zoning requirements, can introduce new quality residential, retail, and even office uses to the County, thus supporting many of the economic and quality of life goals detailed earlier in this report. Encouraging TODs can also support the expansion of bike/pedestrian networks which complement dense developments. Thus, land use policies can have a major impact on the satisfaction of mobility needs.

The County also has plans to implement Traditional Neighborhood Development (TND), planned communities designed to reduce traffic and eliminate sprawl. The Villages of Ellenwood, supported by the Tax Allocation District, is one such planned TND development, where a mix of homes, retail, parks, and neighboring communities are placed within easy walking distance. Other examples in the metropolitan Atlanta region include Atlantic Station, Centennial Place, and Glenwood Park.

Accommodating smart-growth practices and policies in the suburban communities of most metropolitan areas typically involves new development, with connections to existing development. However, with the virtual build-out of undeveloped space in Clayton County, the opportunities to promote TOD, TND, and conservation subdivisions while expanding office land use and diversifying residential land use will occur primarily through redevelopment and infill development activities. For city and county governments, a proactive approach to development supportive of multimodal transportation is needed. As one example of possible opportunities to engage development proactively, General Growth Properties, Inc., manager of Southlake Mall, announced in 2007 its plans to convert several malls nationwide into open-air “lifestyle centers,” which can include mixed-use town center environments that better integrate with surrounding communities while improving pedestrian activity, consolidating vehicle parking and offering a more diverse array of retail opportunities. The Southlake Mall area could benefit from such a redevelopment opportunity.

Clayton County needs to continue implementation of the ARC’s Unified Growth Policies recently approved as part of *Envision 6*, which include:

- Developed Area Policies
  - Promote sustainable economic growth in all areas of the region.
  - Encourage development within principal transportation corridors, the Central Business District, activity centers and town centers.
  - Increase opportunities for mixed-use development, transit-oriented development, infill development and redevelopment.
  - At strategic regional locations, plan and retain industrial and freight land uses.
  - Design transportation infrastructure to protect the context of adjoining development and provide a sense of place appropriate for our communities.
  - Promote the reclamation of brownfield development sites.
- Housing and Neighborhood Policies
  - Protect the character and integrity of existing neighborhoods, while also meeting the needs of communities
  - Encourage a variety of home styles, densities, and price ranges in locations that are accessible to jobs and services to ensure housing for individuals and families of all incomes and age groups.
  - Promote new communities that feature greenspace and neighborhood parks, pedestrian scale, support transportation options and provide for appropriate mix of uses and housing types.
  - Promote sustainable and energy-efficient development
- Open Space & Preservation Policies
  - Protect environmentally-sensitive areas including wetlands, floodplains, small water supply watersheds, rivers, stream corridors.
  - Increase the amount, quality, connectivity, and accessibility of greenspace.
  - Provide strategies to preserve and enhance historic resources.
  - Through regional infrastructure planning, discourage growth in undeveloped areas of the region.

- Coordination Policies
  - Assist local governments to adopt growth management strategies that make more efficient use of existing infrastructure.
  - Inform and involve the public in planning at regional, local and neighborhood levels.
  - Coordinate local policies and regulations to support regional policies.
  - Encourage the development of state and regional growth management policy.

As the County transitions its future development patterns coordination with local municipalities, the residents, and business owners is critical. Coordination between jurisdictions will be critical to achieving common economic goals, avoiding overburdened infrastructure, and maintaining transportation system functionality. Multimodal connections to the rest of the region will be needed to allow Clayton County residents access to better employment opportunities and justify high-density development. A successful transition will also require an aggressive massive public education campaign to help facilitate the implementation of future land and transportation infrastructure investment.

### 3.8 Community Input

Planning for future growth was a common concern among those participating in the public outreach activities. As a part of the growing Atlanta metropolitan region, Clayton has experienced marked growth in population. Planning for this growth should focus on improving and creating additional infrastructure and capacity increases of facilities such as water and sewer (including some spot drainage issues around the County) as well as establishing zoning to accommodate growth.

Specific to the relationship between land use and transportation, concerns about how the transportation system fits within the land use and development context was often cited. The County should identify where traffic is desirable and funding should be focused on those areas. Traffic should be minimized in sensitive areas such as residential and rural areas. County control over land use through zoning should be used to support/influence transportation investments. Emphasis should be on “smart growth” and mixed-use development to avoid sprawl. Greenspace preservation and protection is needed. The County should ensure that the development policies and the transportation policies work together. In addition, rights-of-way (ROW) must be preserved now for future roadway needs. Development policies should be reexamined to ensure ROW preservation. Interparcel access should be required in all commercial activity areas.

Stakeholder and public input included identification of specific development locations with emerging or unique transportation demands or needs. Traffic generators identified include the following:

- Atlanta Motor Speedway - As a major economic generator, accessibility and mobility needs around the Atlanta Motor speedway should be reviewed.
- Clayton State University - The University is growing. Traffic patterns around the University should be evaluated and potential improvements to SR 54 should be identified to accommodate growth at Clayton State University and Southlake Mall.
- Commuter rail stations (proposed) - Land uses around the proposed commuter rail stations should be examined to ensure compatibility with the stations.

- Fort Gillem - The Fort Gillem redevelopment will impact transportation system, with an estimated 7,000 to 9,000 new jobs and new single-family housing. As redevelopment occurs, accessibility and mobility needs should be examined.
- Healthcare facilities - The new trend in healthcare is to spread service providers throughout the County and the transportation system needs to accommodate this trend.
- HJAIA - Mobility and accessibility needs near the airport should be reviewed. With the expansion of HJAIA, parking will be a very serious issue. Parking is already at capacity, and there is very little opportunity to expand parking facilities.
- Lovejoy - New residential development will result in additional transportation demands, particularly for Talmadge Road and Panhandle Road.
- State Farmers Market - There is potential for 25 to 30 additional acres available for development as a wholesale distributor, resulting in additional truck traffic. GDOT is looking at ways to improve accessibility.
- Southlake Mall - The Mall is a major traffic generator, and accessibility and mobility needs should be examined.
- Southern Regional Medical Center Satellite Facility - The Southern Regional Medical Center Satellite Facility under development near SR 138 will have transportation impacts.
- West Fayetteville and Norman - A DRI is underway at West Fayetteville and Norman, where roadways are already congested.

Stakeholders and residents also provided the following comments about the County's needs as they relate to land use and transportation:

- Future development opportunities to be primarily redevelopment and infill development projects, with some new development in the southern panhandle area and the northeastern quadrant.
- As population levels continue to increase, most of the residents have a growing distaste for suburbia and strip development and welcome the new urban style redevelopment and infill development projects while maintaining some of the small town characteristics of its cities.
- A growing demand for alternative modes of transportation options, including walking trails, bike trails, sidewalks and connectivity between residential and commercial/retail/office districts.
- A growing support for the implementation of more smart growth tools in the redevelopment and infill development of the County.
- Lack of major East – West corridors greatly impacts mobility in and around the County.
- Lack of funding to implement the needed infrastructure improvements to the transportation network.
- Need to diversify housing mix from primarily low density to higher density housing
- Need to address the traffic impact of new developments or redevelopment, particularly congestion, safety and access/connections to surrounding neighborhoods
- Need to create an identity for the County to attract new businesses and more “blue collar” employment opportunities
- Great demand for transit in the County and access to services which connect residents to opportunities within the region.

- Support for the implementation of a commuter rail with a financial plan which does not burden any one group, but provides mobility options to the area.
- Coordination with School Board on developments and the impacts of land use decision on the system's operations and transportation of students.
- Address the need to attract jobs to the County which could reduce the number of residents having to leave the County for employment opportunities.
- Greater degree of partnership between the County and its cities in future land development, economic development and marketing.

## 4.0 Roadway System Assessment

The roadway system provides the backbone of the transportation network. The roadway needs assessment focused on capacity, operations, safety and system preservation. The level of system performance varies by type of transportation facility, geographic location, time of day and other characteristics. The approach for evaluating the roadway system is presented, followed by the findings of major needs and issues identified for Clayton County's roadways.

### 4.1 Mobility Evaluation Measures

The ARC travel demand model was used to analyze several of the quantitative performance measures in several scenarios/years. These measures include:

Level of Service - Generally, level of service (LOS) is an assessment of roadway congestion during times of peak usage. Two separate analyses were conducted using the concept of LOS. The first LOS analysis was conducted within the travel demand model as the calculated ratio of traffic volume to roadway capacity. The following ratios were assumed to correlate to LOS:

- LOS A/B: less than 0.5
- LOS C: 0.5 through 0.7
- LOS D: 0.7 through 0.84
- LOS E: 0.84 through 1.0
- LOS F: greater than 1.0

The second LOS analysis analyzed changes in traffic volumes between model years and scenarios and applied these changes to actual traffic counts. The advantage of this methodology is to apply the model-based forecasts to real-world traffic data. The resulting traffic forecast was then processed through a high level planning LOS analysis using generalized LOS thresholds identified by the *Highway Capacity Manual (HCM)*. Taken together, these two analyzes are meant to indicate those locations where current and future traffic congestion are at their most severe.

Travel Characteristics - An analysis was conducted focusing on travel patterns and characteristics associated with Clayton County. This included analysis of the origins and destinations of person trips to and from Clayton County, their purpose (home-based work or home-based other/non-home based), and the mode shift (number of trips being made via transit). Additionally, this analysis focused on vehicle trips characteristics to determine whether the trips were made in a single occupant vehicle (SOV), a high occupant vehicle (HOV), or in a commercial, medium, or heavy truck.

Travel Times - An analysis was conducted to determine changes in peak period travel times along major Clayton County routes in order to assess the impact of congestion.

### 4.2 Mobility Assessment

The ARC travel demand model was used to measure mobility through LOS, travel characteristics and travel times. These analyses were conducted through a total of five different year scenarios, as summarized in Table 4-1.

**Table 4-1:  
Mobility Assessment Scenarios**

<b>Model Year</b>	<b>Description</b>	<b>Projects Included</b>
2005	Existing system	
2010	Assumes the construction and opening of projects prior or during the year 2010	CL-031: SR 138 widening CL-059: Lee Street extension over I-75 CL-AR-031: I-75 Interchange Capacity Improvements
2020 Existing + Committed (E+C)	Includes projects from 2010 model plus those which have construction funding through the year 2012	CL-230A: Anvil Block Road widening CL-017: Battle Creek Road widening CL-019: Mt. Zion Parkway widening CL-239: Panola Road widening CL-041: Fayetteville Road widening CL-238: Godby Road widening
2030 E+C:	Assumes the same projects as in the 2020 E+C	
2030 <i>Envision 6</i>	Assumes the construction and opening by the year 2030 of all projects in the current <i>Envision 6 RTP</i>	

Although year 2010 and 2020 scenarios are considered in the analysis, the main comparisons are made between 2005 base year and the 2030 horizon year. The advantage of comparing an E+C scenario to an *Envision 6* scenario in 2030 is that it allows the analysis to consider the potential benefit of those projects that are currently planned through the year 2030 without necessarily assuming that their construction will take place. As a result, this analysis will feed directly into future alternative analyses for Clayton County in order to consider the best mix of projects for CTP evaluation.

#### 4.2.1 Level of Service

As indicated previously, two separate LOS methodologies were considered in analyzing Clayton County's roadway system. Taken together, these analyses are intended to indicate those locations where future transportation improvement needs are most critical.

The model-based LOS considers the calculated ratio of model generated traffic volumes to model capacity using the ratios presented in section 4.1, where each ratio equates to a LOS ranking from A to F. The LOS results are presented in Figures 4-1 through 4-5.

Figure 4-1:  
Clayton County 2005 Model-Based Peak Hour Level of Service (LOS)

Figure 4-2:  
Clayton County 2010 Model-Based Peak Hour Level of Service (LOS)

**Figure 4-3:**  
**Clayton County 2020 E+C Peak Hour Level of Service (LOS)**

**Figure 4-4:**  
**Clayton County 2030 E+C Peak Hour Level of Service (LOS)**



**Figure 4-5:**  
**Clayton County 2030 *Envision 6* Peak Hour Level of Service (LOS)**

Major roadways experiencing LOS E or F conditions in 2005 include the following locations.

- The I-75 corridor operates at either LOS E or F as far south as the Mt. Zion Road interchange.
- Individual segments of I-675 operate at LOS E and F.
- Individual segments of Tara Boulevard/US 19/41 operate at LOS F through the entire County.
- SR 85 operates at LOS E from I-75 to SR 138.
- Jonesboro Road/SR 54 operates at LOS E and F in the immediate vicinity of the I-75 interchange.
- The SR 138 Spur experiences LOS E and F between Tara Boulevard/US 19/41 and Jonesboro Road, while SR 138 experiences LOS E and F at individual locations across the County.
- Fayetteville Road experiences LOS E from Tara Boulevard/US 19/41 to the Fayette County line.
- Valley Hill Road operates at LOS E and F from SR 85 to Tara Boulevard/US 19/41.
- Fielder Road operates at LOS F from SR 42 to Mt. Zion Road.

The 2030 E+C scenario indicates a progression of LOS E and F throughout more of the County. The limited projects assumed within the E+C scenario appear to have some benefit in select locations for improving LOS despite population and employment growth. However, overall conditions in this scenario are worse, as follows.

- LOS E and F on I-75 extend further south to the interchange at SR 138.
- I-675 operates at LOS E or F from Panola Road to SR 138 and through to I-75.
- SR 85 operates at LOS E and F from I-75 to SR 138.
- Jonesboro Road/SR 54 is relieved somewhat from improvements associated with I-75 interchange projects. However, a segment of Jonesboro Road, south of the I-75 interchange, operates at LOS E.
- Individual segments of SR 138 operate at LOS E and F from SR 85 through Jonesboro Road, including the SR 138 Spur. However, widening of SR 138 through the eastern part of the County appears to produce some benefit, with only limited locations experiencing LOS E.
- Despite a widening project, the majority of Fayetteville Road operates at LOS E from Tara Boulevard/US 19-41 through the Fayette County Line.
- The majority of Valley Hill Road operates at LOS E and F from SR 85 to Tara Boulevard/US 19-41.
- Fielder Road continues to operate at LOS F from SR 42 to Mt. Zion Road.

Other notable LOS E and F observations in this scenario not observed in 2005 include the following.

- Individual segments of Riverdale Road operate at LOS E from I-285 to SR 85.
- Parts of McDonough Road operate at LOS E and F, with a specific concentration in the area between Lovejoy and the Henry County line.
- The area of Flint River Road immediately west of Jonesboro operates at LOS E.
- SR 42 operates at LOS E from Forest Parkway to Old Rex Morrow Road.

The 2030 *Envision 6* scenario resembles 2005 conditions even though the County is forecasted to experience additional population and employment growth. This is largely due to various roadway improvements assumed in this scenario. Particular trends noted in this scenario are as follows.

- The I-75 corridor continues to operate at LOS E or F as far south as the SR 138 interchange.
- The locations of I-675 LOS E and F observations appear nearly identical to year 2005 conditions.
- Tara Boulevard/US 19-41 conditions are notably improved due to planned capacity additions, resulting in limited LOS E and F conditions between I-75 and Jonesboro, with no LOS E or F observations south of Jonesboro.
- Likewise, SR 85 LOS E and F conditions from I-75 to SR 138 are similar to year 2005.
- Jonesboro Road operates at LOS E or F for a short distance south of I-75 and again through downtown Jonesboro.
- The SR 138 Spur continues to experience LOS E and F from Tara Boulevard/US 19-41 to Jonesboro Road, with a similar cluster of LOS E and F in the immediate vicinity of the I-75 interchange.
- Fayetteville Road experiences no LOS E or F conditions from Tara Boulevard/US 19-41 to the Fayette County line.
- Only a limited segment of Valley Hill Road operates at LOS E, an improvement from both the 2005 and E+C scenarios.
- Fielder Road continues to operate at LOS F from SR 42 to Mt. Zion Road.

Notable LOS failures specifically observed in the 2030 E+C scenario are resolved in the *Envision 6* scenario.

- Only a limited segment of Riverdale Road operates at LOS E.
- There are no observed instances of LOS E or F on McDonough Road through Clayton County.
- Only a limited segment of Flint River Road immediately west of Jonesboro operates at LOS E.
- There are no observed instances of LOS E or F on SR 42 through Clayton County.

The other LOS analysis is referred to as the “Post-model LOS analysis” because it uses output from the model, but the model is not used as the primary tool of analysis. This methodology uses the magnitude of traffic volume changes observed in each model year and scenario and applies them to actual 2005 traffic counts to forecast future traffic volumes. This process is a high level version of the more detailed traffic forecasting processes used for project level forecasts and as such is similar to the methodology described in Georgia Department of Transportation (GDOT) *Design Manual*, Chapter 13 for such forecasts.

The LOS analysis component is derived from assuming generalized roadway characteristics used for more detailed operational level analysis such as peak to daily ratios, peak directional characteristics, and truck percentages. Specifically, the traffic forecasts were compared with LOS thresholds developed by the Florida Department of Transportation and documented in the

*2002 Quality Level of Service Handbook.* Although developed in Florida, this publication is considered a national standard for conducting planning-level analyses, and its methodologies have been incorporated into the most recent version of the *Highway Capacity Software*, which itself is the software tool used to implement analyses described in the *Highway Capacity Manual*. In addition, the generalized thresholds used for this analysis are updated LOS thresholds as used by the Georgia Regional Transportation Authority (GRTA) for application of transportation analysis.

The results are categorized by traffic count locations and are provided in Figures 4-6 through 4-10. Overall, the results indicate a similar LOS portrait for each year and scenario as the model-based analysis. However, the more detailed data indicates slightly less optimistic LOS at individual locations. For instance, although the model indicates many locations that will operate at LOS A or B through the year 2030, this analysis does not produce any locations with LOS A or B. LOS C is the best LOS observed.

Significant differences in projected LOS results were observed at the following locations.

- Portions of Forest Parkway, which do not experience any LOS E or F in the model-based analysis, are shown to operate at LOS F by 2030 in both the E+C and *Envision 6* scenarios.
- Main Street in Jonesboro is shown to operate at LOS E and F as early as 2010, which is not recognized by the model.
- SR 42 is observed to have many instances of LOS E and F, despite limited observations in the model-based analysis.
- Although the model indicates various levels of improvement depending on scenario and year for the Tara Boulevard/US 19-41 corridor, this analysis indicates widespread LOS F in 2005 through both 2030 scenarios.
- The West Fayetteville Road corridor is observed to have widespread LOS F, which has limited recognition by the model based analysis.

The divergent results are not intended to suggest one analysis is more appropriate or more accurate than another, as they are both high level, generalized analyses with different sets of limitations. Instead the results are intended to complement each other by pointing out locations that may be more critical that one methodology might not recognize.

Figure 4-6:  
Post Model LOS Analysis for 2005

Figure 4-7:  
Post Model LOS Analysis for 2010

**Figure 4-8:**  
**Post Model LOS Analysis for 2020 E+C**

**Figure 4-9:**  
**Post Model LOS Analysis for 2030 E+C**

Figure 4-10:  
Post Model LOS Analysis for 2030 *Envision 6*

#### 4.2.2 Travel Characteristics

Travel characteristics for trips associated with Clayton County were analyzed in several ways to determine changes over time and with different scenario assumptions. The results of all the travel characteristics analyses are presented in Tables 4-2 through 4-4.

Total person trips to and from Clayton County are forecasted to increase from 1.1 million trips in 2005 to approximately 1.28 million trips by 2030, an increase of 16.4 percent. Most notable is the substantial increase in trips beginning inside and also ending inside Clayton County, from 423,000 to 520,000, an increase of 23 percent. A substantial portion of these trips are home-based work trips. Home-based work trips within Clayton County are anticipated to increase from 54,000 trips in 2005 to around 74,000 trips in 2030 (depending on 2030 scenario), an increase of 37 percent. This indicates that along with projected increases in population and employment in Clayton County, a substantial increase in amount of internal work trips in Clayton County can be expected.

Likewise, vehicle trips are expected to increase from about one million in 2005 to 1.3 million in 2030, an increase of 30 percent. SOV trips in 2005 are estimated at 765,000 compared to 995,000 in 2030, an increase of 30 percent, while HOV trips in 2005 are estimated at 162,000 compared to 186,000 in 2030, an increase of 15 percent. This analysis indicates that the majority of vehicle trip growth between 2005 and 2030 will be SOV-based. Both total vehicle trips and SOV trips are anticipated to grow by 30 percent, while a smaller portion of that growth will be HOV-based (15 percent).

Finally, the model indicates a growth in transit trips from 6,630 in 2005 to 7,670 in the 2030 E+C scenario, an increase of 16 percent. Likewise, total mode shift—how a trip is made—is projected to remain constant (at 0.6 percent), assuming an E+C scenario in the year 2030. Some changes are observed in the 2030 *Envision 6* scenario. Despite several additional transit routes in this scenario, transit trips actually decrease from 2005 to only 4,820 trips, representing a reduced mode shift of 0.4 percent. However, there are several nuances to this result. First, it must be noted that the decrease in total transit trips is likely due to additional roadway capacity in this scenario, making it more attractive to travel via automobile. However, the number of internal Clayton County transit trips in this scenario increases dramatically from 2005 (only 954 trips) to 2030 (1,638 trips), an increase of 72 percent. This is also an increase from the 2030 E+C scenario where there are only 1,393 trips. As a result, the additional transit routes planned within Clayton County appear to induce more transit ridership within the County.

[Table 4-2: Total Person Trip Patterns](#)  
[Table 4-3: Vehicle Trip Patterns](#)  
[Table 4-4: Transit Trips and Mode Split](#)

### 4.2.3 Travel Time

An analysis of travel time change during the afternoon (PM) peak period between the 2005 and 2030 scenarios was conducted, the results of which are presented in Table 4-5. The PM peak period was selected as it is the most congested period of time, and generally travel times during the AM peak period are lower. The results indicate some deterioration in travel time from 2005 scenario to the 2030 E+C scenario, with the most significant increase occurring on SR 54/Jonesboro Road from I-75 to Tara Boulevard/US 19/41. The projected time to traverse this segment increases from 17.94 minutes to 21.74 minutes, an increase of 3.8 minutes. Focusing on the *Envision 6* scenario, the various roadway improvements result in significantly reduced travel times from the 2030 E+C scenario, in some cases reductions from even the year 2005. For instance, the travel time on SR 85 from Forest Parkway to Flint River Road is 20.25 minutes in 2005, compared to 16.16 minutes in the 2030 *Envision 6* scenario. Even at its worst, the *Envision 6* scenario appears to generally maintain travel times from the year 2005.

## 4.3 Safety

The roadway analysis involved investigating vehicle crashes throughout Clayton County and identifying the locations that experience a high number of crashes, determining where those crashes occur and the causes, obtaining roadway segment crash rates, and investigating motorist and pedestrian fatalities.

### 4.3.1 Safety Assessment Approach

Three consecutive years of GDOT crash data, from 2004 to 2006, were obtained from the Georgia Department of Motor Vehicle Safety (DMVS) for assessing motor vehicle and pedestrian safety related needs throughout the County. The data provided by DMVS was supplemented with data obtained from the accident database maintained by Clayton County, to provide a complete summary of the crash characteristics in Clayton County. The data was evaluated using GDOT's Critical Analysis Reporting Environment (CARE) database, summarized for analysis and applied to compute crash rates, evaluate crash frequencies and map crash and fatality locations. It should be noted that the Clayton County data was not included in the calculations since they are derived from different sources.

### 4.3.2 Roadway Safety Findings

General crash statistics were computed to assess traffic safety conditions in Clayton County. The number of crashes computed for a three-year period beginning in 2004 are summarized in Table 4-6 to provide an overview of the County's crash characteristics. The total number of crashes throughout the County numbered 32,906 for the three-year period, of which 25 percent (8,638) were injury crashes, 74 percent (24,192) were property-damage-only crashes, 0.8 percent (278) were pedestrian-related crashes, and 0.02 percent (76) were fatal crashes.

Table 4-5:  
Estimated Travel Time Change from 2005 to 2030

**Table 4-6:  
Clayton County Crash Summary, 2004-2007**

<b>Description</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>Total*</b>	<b>Average*</b>	<b>2007*</b>
Crashes	11,205	11,271	10,430	32,906	10,969	4,803
Injury Crashes	2,914	2,934	2,790	8,638	2,879	1,205
Injuries	4,399	4,359	4,286	13,044	4,348	1,771
Fatal Crashes	21	27	28	76	25	22
Fatalities	22	30	31	83	28	25
Property Damage Only (PDO) Crashes	8,270	8,310	7,612	24,192	8,064	3,576
Pedestrian Related Crashes	90	92	96	278	93	30
Crashes Involving Cyclist	24	26	21	71	24	5

Source: GDOT CARE Database and Clayton County’s Accident Database

\*The totals and averages are computed for 2004 through 2006 and do not include the 2007 data since the data was obtained from separate sources.

Crash characteristics, including the location of impact for crashes, the location of high frequency crash intersections and roadway segments that experience a higher crash rates, as well as the collision type have been identified.

Table 4-7 provides a summary of the location of impact for all crashes, while Table 4-8 provides collision type for all crashes. Of all crashes, 88 percent (28,938) occurred on the roadway, seven percent (2,296) occurred off the roadway, and three percent (987) occurred on the roadway shoulder. Additionally, 44 percent (14,561) of the total crashes were “rear-end” type collisions, 27 percent (8,917) were “angle” type collisions, 14 percent (4,639) were collisions that did not involve a motor vehicle, and ten percent (3,341) were “sideswipe-same direction” type collisions.

**Table 4-7:  
Location of Impact, 2004-2006**

<b>Location of impact</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>Total</b>	<b>Average</b>
On Roadway	9,876	9,958	9,100	28,934	9,645
On Shoulder	315	276	396	987	329
Off Roadway	802	788	706	2,296	765
Median	52	60	47	159	53
Ramp	133	170	160	463	154
Gore*	27	19	21	67	22

Source: GDOT CARE Database

\*A gore refers to the area between a through roadway and an exit or entrance ramp and is defined by two wide solid white lines that guide traffic entering or exiting a roadway.

**Table 4-8:  
Collision Type, 2004-2007**

<b>Collision Type</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>Total*</b>	<b>Average*</b>	<b>2007*</b>
Angle	3,082	3,126	2,709	8,917	2,972	1,327
Head On	259	232	210	701	234	151
Rear-End	4,977	4,907	4,677	14,561	4,854	2,082
Sideswipe - Same Direction	1,074	1,157	1,110	3,341	1,114	506
Sideswipe - Opposite Direction	249	247	251	747	249	129
Not A Collision With A Motor Vehicle	1,564	1,602	1,473	4,639	1,546	604

Source: GDOT CARE Database and Clayton County's Accident Database

\*The totals and averages are computed for 2004 through 2006 and do not include the 2007 data since the data was obtained from separate sources.

Pedestrian and cyclists crashes were also reviewed. As shown in Table 4-9, a total of 278 pedestrian crashes occurred from 2004 through 2006, of which five percent (14) were fatal pedestrian crashes. During the same time period, a total of 71 crashes involved cyclists of which 1.4 percent (one) were fatal, as shown in Table 4-10.

**Table 4-9:  
Pedestrian Crashes, 2004-2007**

<b>Pedestrian Crashes</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>Total*</b>	<b>Average*</b>	<b>2007*</b>
Fatal Crash	4	3	7	14	4.7	2
Non-Fatal Injuries	70	75	79	224	74.7	22
PDO Crash	16	14	10	40	13.3	6
Total Crashes	90	92	96	278	92.7	30

Source: GDOT CARE Database and Clayton County's Accident Database

\*The totals and averages are computed for 2004 through 2006 and do not include the 2007 data since the data was obtained from separate sources.

**Table 4-10:  
Cyclist Crashes, 2004-2007**

<b>Cyclist Crashes</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>Total*</b>	<b>Average*</b>	<b>2007*</b>
Fatal Crash	1	0	0	1	0.33	0
Non-Fatal Injuries	18	20	16	54	18.0	4
PDO Crash	5	6	5	16	5.3	1
Total Crashes	24	26	21	71	23.7	5

Source: GDOT CARE Database and Clayton County's Accident Database

\*The totals and averages are computed for 2004 through 2006 and do not include the 2007 data since the data was obtained from separate sources.

Table 4-11 provides detailed information related to the location of the crashes. Approximately 50 percent of the total crashes occurred at intersection locations, while the other 50 percent occurred at mid-block locations.

**Table 4-11:  
Mid-block versus Intersection Crash Location, 2004-2007**

Location	2004	2005	2006	Total*	Average*	2007*
Mid-Block	5,722	5,574	5,093	16,389	5,463	2,694
Intersection	5,483	5,697	5,337	16,517	5,506	2,109

Source: GDOT CARE Database and Clayton County’s Accident Database

\*The totals and averages are computed for 2004 through 2006 and do not include the 2007 data since the data was obtained from separate sources.

Crashes at intersections were compiled to identify high frequency crash intersections throughout the County. The highest crash intersections were identified and are listed in Table 4-12 and shown in Figure 4-11. Of the 32 high crash intersection locations, 22 have planned or future projects that will provide intersection upgrades and/or operational improvements at those locations via a County SPLOST project, a GDOT project, or long range project as identified in the ARC 2030 Regional Transportation Plan listing.

The ten remaining intersections without planned projects include:

- Old Dixie Road at Upper Riverdale Road
- Tara Boulevard/US 19/41 at North Avenue
- Tara Boulevard/US 19/41 at Mt. Zion Road
- SR 54 at Forest Parkway
- Conkle Road at Mt. Zion Road
- SR 138 at I-675 S
- Jonesboro Road at SR 138
- Riverdale Road at Flat Shoals Road
- Tara Boulevard/US 19/41 at Sherwood Drive
- Tara Boulevard/US 19/41 at Upper Riverdale Road

Motor vehicle crash rate is a measure that considers the number of crashes against the volume of traffic. Crash rates combine crash frequencies with exposure (traffic volumes) and provide a useful measure which can be compared with other facilities in a jurisdiction (or region) having similar characteristics. Crash rates are expressed per 100 million vehicle miles traveled (100 MVM) and are determined by the following equation:

$$\text{Crash Rate} = \frac{\text{Total \# of Crashes} \times 100,000,000}{(\text{Average Annual Daily Traffic} \times \text{Length of Segment}) \times 365}$$

Roadway segments in the County greater than 0.2 miles in length with Average Daily Traffic (ADT) volumes greater than 400 vehicles per day (vpd) were analyzed to identify those segments that experience a higher incidence of crashes. The crash rates for each segment were reviewed. The 30 highest segment crash rate locations are listed in Table 4-13, along with their corresponding crash rate and mile points. The high segment crash rate locations are illustrated in Figure 4-12.

Table 4-12:  
High Frequency Crash Intersections, 2004 through 2006

**Figure 4-11:**  
**Clayton County High Frequency Intersection Crash Locations**

Table 4-13:  
High Segment Crash Locations

Figure 4-12:  
Clayton County High Crash Rate Locations

The crash analysis was conducted as a first step in identifying safety related transportation needs throughout Clayton County. The process of identifying safety needs included the crash data analysis, public input and preliminary field investigations. The field investigations have provided insight into corridor conditions and assists the study team in verifying needs identified through data analysis and outreach activities. The data was used to identify intersection and mid-block crashes, critical intersections, fatal motor vehicle crash locations, and the collision type associated with the crashes. The needs statements presented below are the result of the data analysis, field observations, and input obtained from the representatives of the County.

The needs for Clayton County are summarized below:

- Minimize rear-end crashes
- Improve pedestrian facilities
- Enhance/Refurbish pavement striping
- Adjust/Replace overhead signs as required for clarity
- Provide enhancements for nighttime visibility

#### 4.4 Operations

The Clayton County Department of Transportation and Development (CCDOTD) Traffic Control Center (TCC) currently operates a number of traffic control equipment and Intelligent Transportation System (ITS) related equipment/systems, including:

- 253 traffic signals
- 54 Closed Circuit Television (CCTV) Cameras
- 3 Changeable Message Signs (CMS)
- 1 Portable Changeable Message Sign
- 13 Radar Detection System (RDS) Stations
- 78 miles of fiber optic cable
- Traffic Information Channel
- 3 Satellite operations (County 911, Morrow 911, Atlanta Motor Speedway)
- 74 centrally controlled school flashers
- Central-to-field communications with 170 traffic signals

There are a number of projects (under construction, under design, planned, programmed) that will provide both enhancements to the existing County infrastructure via upgrading of old equipment; and improvements to the County infrastructure by expanding the various systems and fiber optic communications cabling throughout the County. These projects come from a variety of sources including the Georgia Department of Transportation (GDOT), ITS Bond, and Special Purpose Local Option Sales Tax (SPLOST) monies. Once complete the County will have an additional 90+ CCTV cameras not including existing CCTV upgrades, over 60 school flashers, an additional 37 miles of fiber optic communications cable, and upgrades to or new ATMS infrastructure at nearly 200 traffic signals.

Figure 4-13 illustrates Clayton County's existing and proposed ITS devices and infrastructure.

Figure 4-13:  
Clayton County Existing and Proposed ITS Devices and Infrastructure

While these projects are being programmed, planned, designed and/or constructed, there are other areas/corridors within Clayton County that need to be investigated to look at the benefits of advanced ATMS equipment at intersections and/or ITS components along a corridor. After some investigation, the corridors/intersections listed below are good candidates for improvements/upgrades:

- West Fayetteville Road between Clayton County Line and Riverdale Road – Provides a communications link on the west most arterial in the County. Also facilitates connections to existing fiber on Riverdale Road (north) and proposed fiber on Jonesboro Road (south).
- Ash Street between Morrow Road and Forest Parkway – Along with improvements along Morrow Road (see below), will provide an alternate north-south route between I-75 and Forest Parkway.
- Morrow Road between Old Dixie Road and Ash Street – Along with improvements along Ash Street (see above), will provide an alternate north-south route between I-75 and Forest Parkway.
- Intersections of Morrow Road and Skylark Drive/Phillips Drive; Phillips Drive at Reynolds Road; Phillips Drive at South Avenue; Morrow Road at Hammack Drive; and, Springdale Road at Whatley Drive – Provides ATMS upgraded intersections in the City of Forest Park in the vicinity bordered by I-75 to the West and South, Forest Parkway to the North and Jonesboro Road to the East.
- Huie Road/Harper Drive/Rex Road between Reynolds Road and US23 – Provides an east-west link between Hwy. 54 and US23 that parallels the east-west routes along Lake Harbin Road to the South and Forest Parkway to the North.
- Stagecoach Road between Rex Road and West Panola Road – Provides a missing fiber optic Ethernet communications link, which in turn provides a redundant communications path in NE Clayton County, once other proposed fiber optic projects are completed.
- South Main Street between Tara Boulevard and College Street **OR** Freeman Road between Tara Boulevard and Dixon Industrial Boulevard to Dixon Industrial Boulevard/Thornton Road between Freeman Road and Jodeco Road to Jodeco Road between Thornton Road and Camp Avenue to Camp Avenue between Jodeco Road and Walt Stephens Road to Walt Stephens Road between Camp Avenue and Stockbridge Road – Either route taken provides a redundant communications path for communications on the South side of the County in case there are problems along Tara Boulevard.

The corridors/intersections mentioned are candidates for a variety of upgrades, including, but not limited to:

- ITS upgrades to the Ethernet network communications
- CCTV installations at key locations along the corridor
- Signal equipment upgrades
- Video detection at intersections
- Central communications to the Clayton County TCC
- Emergency and Transit Vehicle Pre-emption (applicable throughout Clayton County)

## 4.5 System Preservation

Clayton County has about 2,334 miles of existing roadways of which 1,603, or 69 percent, are classified as local with maintenance responsibility falling to the County. The NBI database lists 87 state, 57 County and six privately owned/maintained bridges within Clayton County for a total of 150 bridges. Ninety-nine percent of the existing County-owned roadway system is paved (this does not include roads in city limits or private property), while five of the County highway bridges listed in the NBI were rated with a sufficiency rating below 50. One of the goals of the CTP is to enhance and maintain the transportation system to meet existing and future needs. Within the context of the CTP, the long range needs of maintaining existing infrastructure assets is an important consideration. Currently, the County spends approximately \$ 41 million per year on roadwork (including capital expenses, materials, and wages), which is funded through the General Fund, GDOT State Aid, and the SPLOST program. As such, asset management has become a significant element in transportation system management. System preservation needs within the County include replacing, rehabilitating, or improving the transportation system infrastructure already in place. The following provides an overview of system maintenance needs for pavement and bridges.

### 4.5.1 Preservation Assessment Approach

To examine resurfacing needs, the County's resurfacing program over the last five years was reviewed. The County's Department of Transportation and Development uses the Pavement Surface Evaluation and Rating (PASER) Manual to evaluate pavement condition (roughness, surface distress, surface skid characteristics and structure. Upon evaluation, roadways are assigned a rating from 10 (excellent) to 1 (failed). Based on the PASER rating, roadways that need resurfacing are submitted in priority for funding assistance under GDOT's LARP program or the County's SPLOST program.

For bridge rehabilitation or replacement needs, the GDOT *2005 Bridge Inspection Report* was reviewed as part of the *Inventory of Existing Conditions* conducted for the Clayton County CTP to identify bridge conditions for County and federal-aid secondary bridges. Since the *Inventory of Existing Conditions* was compiled, GDOT has issued the *2006 Bridge Inspection Report*. For the needs assessment, the recently issued inspection results were compared with the previous year's report to ensure that the two reports were not in conflict. Bridges identified previously as being in need of some form of attention were reviewed to determine if action was taken by the County to repair or maintain the bridge or if the bridge remains listed for repair or maintenance. New observations, indicating degradation of bridge condition since the last inspection was performed, were highlighted to provide some indication of the urgency to repair any particular structure.

In the recent *Bridge Inspection Report*, bridge structures were inspected in 2006 and were identified as requiring posting of weight limits or were assigned a rating of good, fair or satisfactory or serious to indicate the condition as part of GDOT's Bridge Maintenance and Inventory Program. The ratings and the descriptive information were applied to identify those bridge structures that either require posting, closure or are in serious condition and need of repair.

Additionally, bridges incapable of sustaining school bus loads were also identified. It is the County's responsibility to forward a copy of the *Inspection Report* to the local jurisdictions and advise school boards of the location of any bridge structure incapable of sustaining school bus loads as noted by the state's findings, such as the structure at West Lee's Mill Road over the Flint River.

#### 4.5.2 Preservation Assessment Findings

Approximately 1.98 percent of County owned roadways (8 roads) are currently unpaved. Prior to the 2003 SPLOST, the County resurfaced between 15-20 miles annually. With the current SPLOST, the County is resurfacing between 70 - 160 miles (90 miles on average over the last 2 years) depending on funding for that year.

Current trends in asset management, led by the U.S. Department of Transportation (USDOT) and Federal Highway Administration (FHWA), indicate a shift to establishing pavement preservation programs, which emphasize ongoing pavement maintenance, rather than allowing pavement to degrade to such extent that it requires rehabilitation. As indicated in a FHWA fact sheet, *Optimizing Highway Performance: Pavement Preservation*, ongoing preventative treatments for pavement can be less costly and can extend the pavement service life, thus avoiding rehabilitation or reconstruction.<sup>3</sup> The preservation and protection of existing and future roadway infrastructure has been and will continue to be a long term consideration for Clayton County and its cities in order to protect and preserve existing and future roadway infrastructure. Table 4-14 summarizes resurfacing activities since 2004 when the County authorized its first SPLOST program.

**Table 4-14:  
Resurfacing Activity between 2004 and 2008**

		2004	2005	2006	2007*	2008 (Estimate)	Total
District 1	Area (sq. yds.)	526,395	136,930	192,064	216,774	835,397	1,907,560
	Cost	\$1,619,134	\$1,635,778	\$2,242,236	\$2,661,077	\$10,935,347	\$19,093,572
District 2	Area (sq. yds.)	607,722	119,830	185,784	236,363	869,279	2,018,978
	Cost	\$1,869,287	\$1,231,421	\$2,712,290	\$2,856,478	\$11,378,862	\$20,048,338
District 3	Area (sq. yds.)	463,900	135,672	179,080	222,866	953,326	1,954,844
	Cost	\$1,426,906	\$1,564,683	\$2,563,926	\$3,114,688	\$12,479,037	\$21,149,240
District 4	Area (sq. yds.)	500,879	115,164	213,939	197,195	986,694	2,013,871
	Cost	\$1,540,650	\$1,481,416	\$2,812,754	\$2,764,517	\$12,915,824	\$21,515,161
<b>Total Area</b>		2,098,896	507,596	770,867	873,198	3,644,696	7,895,253
<b>Total Cost</b>		\$6,455,977	\$5,913,298	\$10,331,206	\$11,396,760	\$47,709,071	\$81,806,312

Source: Clayton County Department of Transportation and Development – SPLOST Program

\*2007 shows the total bid price not actual cost.

<sup>3</sup> U.S. Department of Transportation, Federal Highway Administration, Office of Asset Management, *Optimizing Highway Performance: Pavement Preservation* (January 2000).

The updated 2006 inspection findings, issued in October 2007, are summarized in Table 4-15. A comparison of the 2005 inspection results with the findings of the 2006 inspection reveals new issues associated with Clayton County bridges as highlighted below.

- Collision damage to the guardrail under bridge structure on Airport Road (Structure number: 063-0060-0).
- The condition of the bridge structure along Panhandle Road over Shoal Creek was downgraded from good to satisfactory (Structure number: 063-5017-0).
- The roadway along CR 228, Conveyor Belt over Sullivan Road, was previously rated as fair in 2005 but was not assigned a rating and was inspected for clearances only in 2006 (Structure number: 063-5055-0).
- The condition of the roadway bridge culvert along Sullivan Road over Sullivan Creek was downgraded from good to satisfactory (Structure number: 063-5036-0).
- The bridge culvert along Morrow Road over Jester Creek was downgraded from good to satisfactory condition (Structure No. 063-5040-0).
- Extensive substructure repairs have been performed on the structure at Valley Hill Road over Flint River since 2005. As a result, the load carrying capacity of the structure has been upgraded. GDOT recommends replacing load limit signs now that the capacity has been upgraded. A replacement substructure, however, is still required to update the structure to a point where posting is no longer required.
- The condition of the bridge at Ellenwood Road over Big Cotton Indian Creek has been downgraded from good to satisfactory (Structure number: 063-0121-0).
- The condition of the bridge at Bethsaida Road over Camp Creek has been downgraded from good to satisfactory (Structure number: 063-0068-0).
- The condition of the bridge at Mt. Zion Boulevard over Panther Creek has been downgraded from good to satisfactory (Structure number: 063-0083-0).
- The condition of the bridge at Morrow Industrial Boulevard over Jesters Creek Tributary has been changed from fair to satisfactory. The restrictive load limit signs are not required and may be removed (Structure number: 063-0084-0).
- The condition of the bridge at Morrow Industrial Boulevard over Jesters Creek Tributary has remained unchanged, however some new issues have been identified as part of the 2006 inspection and are in need of attention (a barrel obstruction and cracked wing wall) (Structure number: 063-0085-0).
- The condition of the bridge structure at Fielder Road over Reeves Creek has been downgraded from good to fair condition (Structure number: 063-0066-0).
- The condition of the bridge at Maddox Road over Panther Creek has been downgraded from good to a satisfactory rating in 2006. In 2005, no structural defects were identified, but in 2006 inlet and outlet scour damage was noted (Structure number: 063-5053-0).
- The condition of the bridge structure at Double Bridges Road over Big Cotton Indian Creek has been downgraded from good to satisfactory (Structure number: 063-5002-0).
- The condition of the bridge structure at Homestead Road over Big Cotton Indian Creek has been downgraded from good to satisfactory (Structure number: 063-5003-0).

[Table 4-15:](#)  
[GDOT 2006 Bridge Inspection Report, Summary of Findings](#)

- The condition of the bridge structure at West Lee's Mill Road over the Flint River Tributary has been downgraded from good to serious condition (Structure number 063-5010-0). The structure is in serious condition due to excessive deterioration of a timber cap. Also, scour below the structure has eroded end fills. This structure is located on a school bus route and requires posting.
- The condition of the bridge structure at West Lee's Mill Road over Sullivan Creek has been downgraded from good to fair condition (Structure number: 063-5045-0).
- The condition of the bridge structure at Roxbury Drive over Flint River Tributary has been downgraded from good to fair condition (Structure number: 063-5014-0).
- The condition of the bridge structure at Freeman Road over Pates Creek has been downgraded from good to fair condition, as outlet scour identified previously had begun to undermine the apron (Structure number: 063-5048-0).
- The condition of the bridge structure at Hilltop Road over Rum Creek has been downgraded from good to satisfactory condition (Structure number: 063-5021-0).
- The condition of the bridge structure at Aviation Boulevard at Mud Creek has been downgraded from good to satisfactory condition (Structure number: 063-5034-0).
- The condition of the bridge structure at Southridge Parkway over Sullivan Creek has been upgraded from fair to satisfactory condition (Structure number: 063-5037-0).

The ratings of serious, fair, satisfactory or good condition for which repairs/upgrades are prescribed may be used for the purpose of prioritizing locations to ensure that serious structural defects are addressed, that proper maintenance activities are performed in a timely manner, and ensuring overall compliance.

Overall, the condition of 16 bridge structures has been downgraded as part of re-inspection. This may in part be due to a degradation of the condition of the bridge structures for which repairs have not yet been made. It could also reflect some change in the evaluation process. Among the 69 bridges re-inspected, a total of eight structures were identified as requiring posting of weight restrictions. These structures are listed in Table 4-16 and their locations are shown in Figure 4-14. None of the bridges were identified as requiring closure. One bridge structure, at CR 299/West Lee's Mill Road over the Flint River Tributary, was reported as being in serious condition. For the eight bridges identified for weight limit posting, GDOT has indicated that if the repair or replacement substructure or other upgrade measure is taken, then the posting requirement can be lifted. It is important to note that seven of the eight bridges identified in the 2006 inspection were also highlighted in the previous year's (2005) inspection report.

Table 4-17 lists a number of programmed and long-range bridge capacity projects that have been identified in the ARC *Envision 6 RTP* and *FY 2008-2013 TIP*. Three of these projects involve upgrades to bridges requiring posting of weight limits, including those at Valley Hill Road over the Flint River, E. Conley Road over Conley Creek, and Rex Road over Big Cotton Indian Creek as indicated in Table 3-16. However, additional projects are needed to address CR 392, Upper Riverdale Road, CR 1342, Battle Creek Road, CR 299, West Lee's Mill Road, CS 800, Huie Road, CR 1340, Conkle Road, with the bridge at West Lee's Mill Road given the highest priority.

## 4.6 Community Input

Excessive traffic and traffic congestion are top concerns expressed by metropolitan Atlanta residents, and Clayton County residents are no exception. Again, the types of comments range from the very general, such as more east-west connections are needed, to the very specific; Jonesboro Road should be widened from I-75 to US 19/41. Comments related to the roadway system can generally be grouped into the following categories: system-wide needs, site-specific capacity needs, safety needs, operational needs, or system preservation needs, as follows.

### System-Wide Needs

Concerns about lack of roadway connectivity and accessibility were expressed at the numerous public outreach activities. The primary east-west roadway in the County is SR 138, and there are not many east-west alternatives. Increased connectivity could generate positive economic development and create a larger sense of community. Some expressed a need for greater north-south connectivity as well. Access to the interstate highway system and to schools should be preserved. County emergency responders should be involved in the planning process to identify accessibility and connectivity needs from a safety perspective. Specific locations cited for connectivity improvements include the following:

### East-west Connectivity Needs

- Anvil Block Road through Fort Gillem
- Flint River Road
- New road from Woolsey to Hampton to connect to SR 20
- SR 54 from Jonesboro to Riverdale and McDonough Road
- Walt Stevens Road

### North-South Connectivity Needs

- Main Street/Smith Street/McDonough Street
- Panhandle Road north extension
- SR 42
- SR 54 between Jonesboro and Fayetteville
- Major travel corridors cannot accommodate travel during peak hours
- Major travel corridors cannot respond to changes in travel patterns and land use changes
- More HOV/HOT lanes are needed on the interstate to encourage shared trips and reduce single person trips. More HOV exits would encourage HOV use. Consider letting hybrid vehicles use the HOV lane
- Congestion relief on major roadways
- Increased congestion will be the issue that drives all others.
- East-west connection - protecting the area near Nash Farm Battlefield from development
- Representing a neighborhood homeowners' association and concerned about traffic congestion getting out of neighborhoods, particularly on SR 314
- Tara Boulevard – will be widened at some time so should design it so other roads run parallel so not everything exiting on Tara Boulevard

Table 4-16:  
GDOT 2006 Bridge Inspection Report, Bridge Structures Requiring Posting of Weight Limits<sup>1</sup>

Figure 4-14:  
Clayton County Bridge Status

Table 4-17:  
Constrained *Envision 6* and FY 2008-2013 TIP Planned and Programmed Bridge Capacity  
Projects, Clayton County

- Changeable Message Signs (CMS) signage needs to provide more specific information related to the location of bottlenecks
- Vary the message on interstate boards to indicate travel times at least 20 miles down the interstate.
- Possible need for additional CMS signs at new locations

### Site-specific Capacity Needs

- Clayton State University to the Mall - Congestion
- Fielder Road and Mt. Zion - Congestion
- Jonesboro Road and Hastings Road - Congestion bottleneck at McDonough results in severe delay; congestion due to growth in the Lovejoy area
- Jonesboro Road from Wal-Mart to the Mall - Congestion
- Tara Boulevard/US 19/41 at Upper Riverdale Road - Congestion bottleneck; may need grade separation
- I-285 - Congestion
- I-285 at Old National Highway - Congestion at interchange and on ramps (in Fulton County)
- I-75 - Congestion
- I-75 - Need new bridge over I-75 in Morrow, east of the railroad
- I-75 at I-675 interchange - Needs reconstruction
- Main Street (Jonesboro) - Serves as primary through route; congestion at railroad crossing; lack of turn lanes
- Mt. Zion Boulevard at Richardson Parkway - Congestion between Richardson and Maddox near car dealership
- Phoenix Boulevard - Congestion
- Riverdale Road - Congestion from I-285 to Main Street in Riverdale
- SR 54 at I-75 (Southlake) - Congestion bottleneck; bridge and turning lane problems
- SR 54/Jonesboro Road - Congestion
- SR 85 - Congestion
- SR 85 and Garden Walk - Congestion from SR 85 to Webb Road
- SR 138 - Congestion
- SR 314 - Congestion during commute; difficulty accessing SR 314 from neighborhoods
- Tara Boulevard/US 19/41 - Congestion; inconsistent cross-section (six lanes, four lanes, six lanes); limited access needed
- Tara Boulevard-US 1941 at Upper Riverdale Road - Congestion through signal cycles; needs emergency access improvements
- West Fayetteville Road - Congestion from SR 138 to HJAIA

### Safety Needs

- Forest Parkway at SR 85/I-75 - Needs street lighting
- Tara Road at Panhandle Road - Many accidents; no traffic signal
- Upper Riverdale Road eastbound - Confusion regarding lane striping and number of lanes (two to three) at intersection with Tara Boulevard, Old Dixie Highway, and I-75

- Consider pro-active traffic signal installation prior to multiple crashes at particular intersections
- Riverdale/SR 85/Roundale/Roberts – has this red light running camera had an impact on the problem?
- SR 85 and SR 138 – SR 138 lane needs to be pushed by from 85 to prevent accidents
- Traffic light at SR 138 and Lake Ridge Parkway needs to be reviewed – too many accidents
- The traffic light at SR 138 and Lake Ridge Parkway needs to be addressed – too many accidents
- Roadway very, very bad from SR 85 onto SR 138 through Union City – very bad near car dealerships
- SR 42
- For motorists, the Jonesboro Road corridor can be quite difficult around I-75 and Mt. Zion.
- Street lighting should be improved at major intersections on Tara Blvd.
- The traffic light at SR 138 and Lake Ridge Parkway needs to be addressed – too many accidents
- Roadway very, very bad from SR 85 onto SR 138 through Union City – very bad near car dealerships
- Access management in Lovejoy/Wal-Mart exiting onto McDonough Road (Publix across the street). Dangerous intersection, high accident area.
- Concern over traffic lights with photo cameras on SR 85 which provide little or no warning
- SR 85 and Valley Hill – accidents

### Operational Needs

- Amberwood and Creekside Subdivisions - Need better/safer access to major roadways
- Clayton State Boulevard and North Lee – foreign design and limited site distance
- Evans Drive, Need left turn lanes to access SR 42
- I-75 south at Jonesboro Road (Southlake Mall) – ramp is short so when it backs up you have to stop on the interstate then have to quickly increase speed back to 60-70 mph
- I-675 - Difficult access at interchange on Anvil Block toward Bouldercrest and Rex
- Garden Walk at Southern Regional Medical Center - Emergency safety needs for fire trucks (new light planned)
- Mt. Zion and Jonesboro Road going north and south, left hand turn going over tracks
- Mt. Zion and Kelly near Mall - need turn signals
- Mundy's Mill Road at Tara Boulevard/US 19/41 - Consider double left-turn lanes
- Southlake Mall to Jonesboro Road - Traffic signal timing needed
- SR 85 at the Little Giant, Waffle House, and Hispanic grocery - Cannot access shopping center; traffic signal needed
- SR 85 - Difficult to cross
- SR 85 and Garden Walk – the lights are too short
- SR 85 at Forest Parkway - Traffic signals needed to permit safe turns; traffic signal timing needed
- SR 138 - Access management needed to limit curb cuts

- SR 138 at Tara Boulevard/US 19/41 - Consider double left-turn lanes
- Traffic light need – new mini mart front of Little Giant Food Mart on SR 138 to entrance of new mini mart in front
- SR 314 and West Fayetteville Road - Limited site distance; on state bicycle route; needs bicycle facilities, sidewalks, and bus shelters
- Tara Boulevard and Tara Road - Signal timing; light is short so traffic backs up onto Tara Road near the CVS and Kroger
- Tara Boulevard/US 19/41 - Access management needed
- Upper Riverdale Road - Implement improvements from previous study
- West Fayetteville Road and Godby/Phoenix Boulevard - Intersection improvements
- West Fayetteville Road - Access management from Fayetteville into Clayton County needed
- West Fayetteville - Difficult access to subdivision

### **System Preservation**

General improvements to infrastructure were mentioned many times by stakeholders. Spot intersection improvements around the County could aid in congestion. Repaving was also a common concern. In order to handle the weight capacity of school buses, transit buses and other large vehicles a new form of repaving should be adopted. Widening the turning radii was also suggested at intersections to accommodate large vehicles. Drainage was also mentioned several times as an important part of roadway planning to expand the life of roads. In addition, means to repair or replace structurally deficient bridges should be addressed.

- Implement new repaving standards to exclude the use of “soil-cement”

## 5.0 Public Transit Needs Assessment

CTP goals and objectives address an interest in enhancing mobility, connectivity and accessibility for all users of the County's transportation system. Public transit demand in Clayton County has grown substantially in the past decade, due to the presence of new local services (C-TRAN) and regional commuter services (GRTA Xpress). Future transit services may expand on the existing system, provide new connections, and introduce new high-capacity services such as bus rapid transit or commuter rail.

### 5.1 Transit Assessment Approach

The transit needs assessment combined a review of existing service performance and an evaluation of transit mobility and accessibility with input from stakeholders and the general public. Quantitative performance measures utilized in the needs assessment include:

- County population within one-quarter-mile of local, fixed route bus stops;
- County population within three-quarter mile of local bus routes, the paratransit service area;
- County population within two and one-half miles of GRTA Xpress bus stops;
- County population and employment within one-half mile of a planned fixed guideway station;
- Projected intra-county home-based work trips through 2030;
- Projected intra-county other-purpose (home-based other and non-home-based) trips through 2030;
- Monthly system-wide C-TRAN ridership trends;
- Route-level C-TRAN productivity analyses:
  - Passenger trips per revenue vehicle hour;
  - Passenger trips per revenue vehicle mile;
  - Revenue vehicle miles per hour; and
- Comparisons of operating ratios with peer agencies.

The assessment also included review of transit market demographic trends since 2000 within Clayton County and the core 10-county Atlanta regional planning area. Several demographic factors were used to identify possible transit markets for comparison with existing fixed route bus service levels. The following presents the assessment approach for determining transit needs. Other methods for identifying needs involved a qualitative assessment of demographics and mobility as well as a summary of needs identified through regional and community-level planning initiatives.

Accessibility Assessment - A transit accessibility evaluation was conducted to identify the access of Clayton County residents to various transit services currently in operation. GIS buffer analysis tools were applied to estimate the Clayton County residential population living within one-quarter-mile of C-TRAN bus stops (identifying potential for pedestrian access), three-quarter-mile of the C-TRAN bus route lines (identifying residents' presence within the C-TRAN paratransit service area), and within two-and-one-half-miles of GRTA park-and-ride lots. The latter represents a travel market shed supporting short trips to the commuter bus facilities, covering an estimated 50 percent of the total demand. Most of the remaining travel demand via

this mode is estimated to extend in the direction of travel away from the Atlanta central business district.<sup>4</sup>

Intra-County Mobility Origin-Destination Trip Analysis - Travel demand modeling analyses at the TAZ subarea level were performed to identify zones of highest travel propensity within Clayton County. In consideration with current and projected transit service levels, land use and activity centers, this origin-destination data contributes to an assessment of areas which may possess the strongest potential demand for improved transit services.

Ridership and Operations Performance Analysis - Using existing data from GRTA and C-TRAN, an assessment of performance measures for ridership, vehicle travel time and vehicle mileage for C-TRAN fixed route and paratransit services was undertaken. Data was summarized at the route level for the period from July 2005 through September 2006.

Peer Performance Analysis - A peer analysis was conducted for Clayton County's C-TRAN service to compare service efficiencies with similar transit providers. Service statistics from peer transit providers were derived from the most recently available National Transit Database (NTD) summaries produced annually by the U.S. Department of Transportation. Screening categories to identify potential peers included:

- Similar-sized counties within major metropolitan areas, with populations between 250,000 and 300,000;
- Counties with transit services to or near major airports; and
- Paratransit operational characteristics (vehicle revenue hours, passenger miles, and/or unlinked passenger trips).

Demographic Assessment - Key demographic factors indicative of the propensity to consider transit as a mode choice were combined at the Census block group level, establishing a transit target market index for Clayton County. Demographic variables in this block group assessment included:

- Percentage of persons age 65 and above;
- Percentage of persons age 18 and below;
- Percentage of persons with disabilities;
- Percentage of non-white population; and
- Percentage of households living below the poverty level.

These demographic factors help determine potential unmet need for groups of persons who are more likely to need or use transit. This type of assessment is more appropriate to determine need for local bus service than commuter services. Commuter services are more likely to attract with higher incomes and less likely to appeal to riders with physical disabilities.

Mobility – Qualitative Analysis - Frequency and span of existing services were analyzed to identify current and future mobility needs.

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<sup>4</sup> Spillar, Robert J., P.E. and Parsons Brinckerhoff, Inc. "Park-and-Ride Planning and Design Guidelines" (October 1997), pp. 58-69. [www.365jg.com/transportation/transportparking/200609/8292.html](http://www.365jg.com/transportation/transportparking/200609/8292.html)

## 5.2 Transit Needs Assessment

### 5.2.1 Transit Accessibility

The results of the transit accessibility buffer analyses are outlined below. Based on the accumulation of census block populations, approximately 114,000 Clayton County residents (42 percent) live within one-quarter-mile of C-TRAN bus stops as illustrated in Figure 5-1. While one-quarter-mile represents a reasonable walking distance to a C-TRAN stop, numerous areas lack the pedestrian infrastructure necessary to support and access bus stops. In addition, the winding and disconnected configurations of many residential subdivision streets require that those living within one-quarter-mile of a bus stop have to walk a much longer distance to reach a stop.

A number of areas are currently unserved by existing C-TRAN fixed route bus service, including areas south of the Clayton County Justice Center, the City of Lovejoy, the unincorporated Bonanza, Panhandle Road and Tara Road communities. Areas east the C-TRAN service area that lack access to the fixed route bus service include the unincorporated areas of eastern Conley, Ellenwood, Lake Jodeco/Lake Spivey, and Rex communities. Unincorporated areas west of the C-TRAN service area lacking access are primarily along the West Fayetteville Road corridor south of Flat Shoals Road. East-west thoroughfares in northern Clayton County generally lacking C-TRAN fixed route access include SR 138 and Valley Hill Road. Finally, within northern Clayton County, much of the Old Dixie Road corridor between south Forest Park and I-75 does not have reasonable access to C-TRAN fixed route services. Among incorporated areas, residents in the City of Morrow have very limited access to fixed routes, particularly those lacking pedestrian access to bus stops at the Clayton State University, Southlake Mall and Wal-Mart activity centers. Safety provisions are needed for any future on-street bus stops along northbound Jonesboro Road or southbound Lee Street, as these roads are adjacent to the Norfolk Southern railroad line and lack accommodations for pedestrians.

Further, approximately 158,000 Clayton County residents (58 percent) are within  $\frac{3}{4}$ -mile of C-TRAN bus routes. This distance currently represents the extent of the service area for C-TRAN paratransit. Much of the aforementioned communities lacking fixed route transit services are similarly not within the  $\frac{3}{4}$ -mile paratransit service area as well, particularly the unincorporated areas and the City of Lovejoy.

Based on TAZ data, approximately 65,000 Clayton County residents (24 percent) live within 2  $\frac{1}{2}$  miles of a GRTA park-and-ride facility in Clayton County as illustrated in Figure 5-2. This population represents the source for about one-half of the demand for park-and-ride and express bus services.

Further, nearly 37,000 Clayton County residents (13 percent of all residents) and approximately 37,000 County employees (34 percent of all workers) are within  $\frac{1}{2}$ -mile of a proposed commuter rail station site as shown in Figure 5-3. Such figures reveal the need for sufficient parking in station areas to support persons driving beyond  $\frac{1}{2}$ -mile to stations from Clayton and surrounding counties, as well as the strong likelihood of reverse commuting from Atlanta if there are appropriate connections for pedestrians and bicyclists between stations and destinations.

Figure 5-1:  
Clayton County Population within One Quarter Mile of C-Tran Stops



**Figure 5-2:**  
**Clayton County Population within Two and One Half Miles of GRTA Park and Ride Lot**

Figure 5-3:  
Clayton County Employment Densities within Two and One Half Miles of a Proposed  
Commuter Rail Station

### 5.2.2 Intra-County Mobility: Origin-Destination Trip Analysis

Origin-destination analyses were separated by home-based work and “other” trip purposes, the latter category representing a combination of home-based other and non-home-based trips. A map delineating TAZ subareas is provided in Figure 5-4.

Suburban local transit services are conventionally oriented to support travel to major employment destinations. Table 5-1 below presents the largest home-based work trip volumes by zonal pairs, based on a minimum projection of 1,000 annual average daily trips regardless of mode in model year 2030.

**Table 5-1:  
Summary of Home-Based Work Trips in Clayton County**

Trip Pattern		Year/Scenario			
From Zone	To Zone	2005	2010	2020 E+C	2030 E+C
8	8	1,498	1,542	1,795	2,515
6	6	1,787	1,961	2,146	2,325
6	1	1,946	2,049	2,100	2,159
9	1	1,570	1,762	1,986	2,151
5	1	1,760	1,915	1,973	2,110
5	5	799	914	1,172	1,385
9	9	889	961	1,157	1,380
9	6	947	1,046	1,202	1,298
8	11	951	979	1,137	1,262
8	1	1,011	1,084	1,160	1,165
11	11	841	940	983	1,131
5	6	797	824	939	1,032

Zone 1, which is inclusive of HJAIA and Clark Howell Highway, represents the top projected Clayton County destination for work trips. The Sullivan Road/SR 85/Upper Riverdale subarea (Zone 6) immediately south of Zone 1 is the second-largest projected zone for work destinations in 2030, and also provides the highest number of home-based work-trip origins. Zone 6 is also highest among projected origins for home-based work trips, followed by the Flint River Road/Pointe South subarea (Zone 9) and the Clayton State University/Rex subarea (Zone 8).

Three of the top home-based work trip patterns in Table 5-1 involve non-adjacent zones. These include the airport-oriented trips from Zones 9 and 8, respectively. The highest projected number of non-airport home-based work trips between non-adjacent zones is the trip pairing from Zone 9 to Zone 11 (South Mount Zion Boulevard/South Fielder Road subarea) via the City of Jonesboro.

Figure 5-4:  
TAZ Subareas

Several top work-trip pairs include home-based origins and work destinations within the same zone. This is evident in Zone 8, projected to exhibit nearly 67 percent growth in internal home-based work trips from 2005-2030, and in Zones 6, 5 (West Fayetteville Road/West Flat Shoals Road/Bethsaida Road), 9 and 11. Each zone is served by C-TRAN fixed route transit, in some locations by two routes sharing the corridor. The nature of C-TRAN routes traveling along major arterial and collector roads results in many instances where alignments are along the periphery of a zone and rarely traverse the zone, particularly Zones 5 and 8.

Compared to home-based work trips, non-home-based and home-based other trips at the household level are characteristically more numerous and can often be shorter in length if destinations are close to home. Transit can support such trips if the points of origin and destination are within convenient walking distances and the availability, frequency, cost, and quality of transit services are favorable to traveling consumers. Table 5-2 below presents the zones with at least 10,000 annual average daily other-purpose trips to occur internally within a zone. Zone 9 is the top origin zone for other-purpose trips in model year 2030, followed closely by Zones 6 and 8. Zones 11, 6, and 9 represent the top destination zones.

**Table 5-2:  
Summary of Intra-Zonal Other Purpose (Home-Based Other and Non-Home-Based) Trips  
in Clayton County**

Trip Pattern		Year/Scenario			
From Zone	To Zone	2005	2010	2020 E+C	2030 E+C
9	9	20,384	23,255	26,062	27,784
8	8	17,496	19,224	17,597	18,409
6	6	17,386	17,482	17,161	17,720
11	11	13,356	15,039	16,402	17,246
15	15	8,038	10,076	13,105	14,580
5	5	10,033	11,050	12,496	13,804
7	7	10,476	9,908	9,649	10,084

The previously noted top zones for internal home-based work trips are also among those projected to produce more than 10,000 daily other-purpose trips by model year 2030. Other zones in this group include Zone 7 (Old Dixie Highway/Morrow Road) and Zone 15 (Lovejoy/Panhandle Road). The latter zone, not currently served by C-TRAN, is projected to exhibit an increase in internal other-purpose trips by more than 80 percent from 2005 to 2030.

Table 5-3 presents the largest projected trip volumes between subarea zones, based on a minimum 5,000 annual average daily other-purpose trips in model year 2030. Consistent with the characteristic of relatively short trips, each of these trip patterns involve adjacent zones. The pairing with the highest unidirectional volume, Zone 8 and Zone 11, are separated by I-75 but are linked by SR 54/Jonesboro Road, Mount Zion Boulevard, SR 138, and Fielder Road. Only SR 54/Jonesboro Road and a small portion of Fielder Road are currently served by one or more C-TRAN routes.

South of HJAIA, the western portion of the County (Zones 5, 6, and 9) display the next largest volumes of trip interchanges. Three of the five C-TRAN routes serve this area, although transfers and extensive walking distances may be necessary to reach destinations not situated on major streets.

**Table 5-3:  
Summary of Inter-Zonal Other Purpose (Home-Based Other and Non-Home-Based) Trips  
in Clayton County**

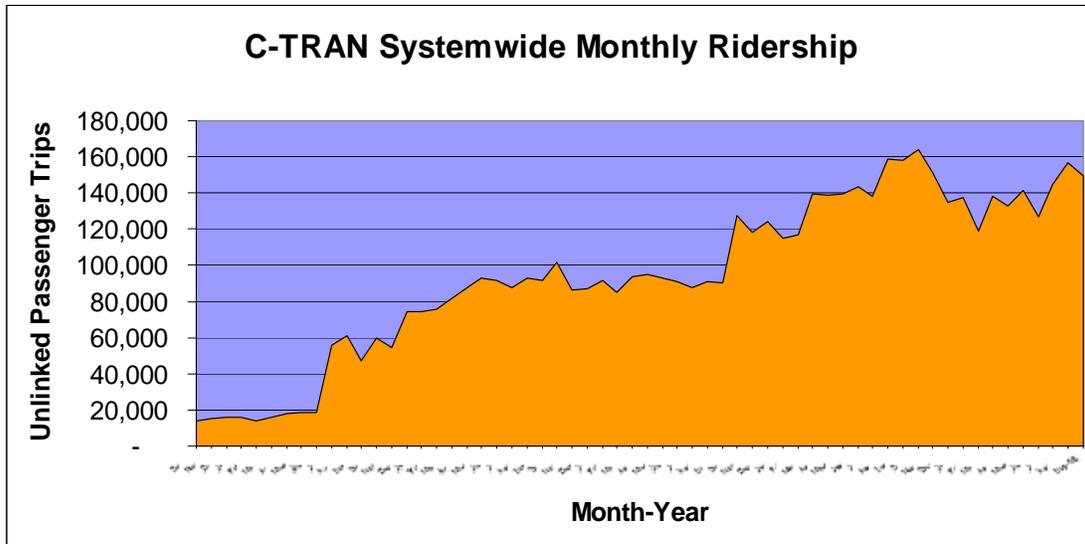
Trip Pattern		Year/Scenario			
From Zone	To Zone	2005	2010	2020 E+C	2030 E+C
8	11	8,213	8,948	9,336	9,830
9	6	7,949	8,646	8,979	9,269
6	5	6,601	7,137	7,676	8,289
5	6	7,056	7,342	7,534	7,862
6	9	5,736	6,425	6,763	7,226
6	10	6,471	6,620	6,525	6,521
9	5	4,316	5,074	5,795	6,326
6	7	5,580	5,369	5,161	5,278
13	11	3,868	4,293	4,830	5,204
10	11	4,674	4,941	4,986	5,152

Zone 6 provides the largest number of other-purpose trips to Zone 10, the Southlake Mall/Jesters Creek subarea. Two C-TRAN routes provide access to the Southlake Mall area via Tara Boulevard/US 19/41, although the segment of Tara Boulevard/US 19/41 between Mount Zion Road and Battle Creek Road is currently unserved by C-TRAN bus stops. Each of the zones identified in Table 4-3 were previously noted except Zone 13 (Lake Jodeco Road/Walt Stephens Road/Noahs Ark Road subarea), where persons can reach a C-TRAN route via a single bus stop in downtown Jonesboro.

### 5.2.3 Ridership and Operational Performance Analysis

Ridership growth is a continued expectation for C-TRAN fixed route services. Figure 5-3 illustrates the vast growth in monthly ridership from October 2001 through September 2006. Ridership has grown significantly since January 2005, following the realignment of Routes 501, 503, and 504 and the introduction of Routes 500 and 502.

**Figure 5-3:  
C-TRAN Monthly Ridership**



Combined performance figures for C-TRAN fixed routes are presented in Tables 5-4 through 5-7 below:

**Table 5-4:  
C-TRAN Annual Performance Data**

Fiscal Year (FY)	Vehicle Revenue Miles	Vehicle Revenue Hours	Unlinked Passenger Trips
2004	1,138,624	71,880	1,099,423
2005	1,292,937	78,087	1,432,324
2006	1,202,110	79,797	1,724,190
2007	1,141,681	84,242	1,757,896

FY = July through June

Source: Georgia Regional Transportation Authority (2007)

**Table 5-5:  
C-TRAN Average Daily Performance Data**

Fiscal Year (FY)	Vehicle Revenue Miles	Vehicle Revenue Hours	Unlinked Passenger Trips
2004	3,128	197	3,020
2005	3,562	215	3,946
2006	3,312	220	4,750
2007	3,145	232	4,843

FY = July through June

Source: Georgia Regional Transportation Authority (2007)

**Table 5-6:  
C-TRAN System-Level Efficiency Data (Trips per Revenue Mile, Trips per Revenue Hour,  
Vehicle Revenue Speed)**

Fiscal Year (FY)	Unlinked Trips per Vehicle Revenue Mile	Unlinked Trips per Vehicle Revenue Hour	Vehicle Revenue Speed (mph)
2004	0.97	15.3	15.8
2005	1.11	18.3	16.6
2006	1.43	21.6	15.1
2007	1.54	20.9	13.6

FY = July through June

Source: Georgia Regional Transportation Authority (2007)

**Table 5-7:  
C-TRAN System-Level Performance Data (Revenue miles to total Miles, Revenue hours to  
Total hours, On-Time Performance)**

Fiscal Year (FY)	Vehicle Revenue Miles / Total Miles	Vehicle Revenue Hours / Total Hours	On-Time Performance (%)
2004	0.76	0.86	93%
2005	0.91	0.96	93%
2006	0.87	0.95	93%
2007	N/A	N/A	N/A

FY = July through June

Source: Georgia Regional Transportation Authority (2007)

Improved efficiencies in service provision and routing have effectively reduced the total FY 2007 vehicle mileage to the FY 2004 level, despite the expansion of C-TRAN routes from three to five in January 2005. While the rate of annual ridership growth has slowed, likely due to peak-period capacity constraints on the highest-ridership routes, annual ridership grew nearly 60 percent from FY 2004 to FY 2007, and 22 percent from FY 2005 to FY 2007.

Also noteworthy within the statistics is the probable impact of congested mixed-traffic corridors on the transit operation. Despite a reduction in revenue-miles driven, total revenue-hours continues to climb. Although the rise in vehicle hours can be partially attributed to passenger boarding and alighting time, from FY 2006 to FY 2007 the average daily ridership rose by merely 83 passengers (1.8 percent), while the average daily revenue hours for the entire C-TRAN fleet rose by an increment of 12 hours (5.5 percent). During revenue operation, the average vehicle speed for C-TRAN routes declined from 16.6 miles per hour (mph) in FY 2005 to 13.6 mph in FY 2007. Declining speeds during revenue service may not have impacted on-time performance from FY 2005 to FY 2006 (FY 2007 data is unavailable). However, individual routes may be affected along corridors.

Data provided by GRTA at the route level between July 2005 and September 2006 was sufficient to analyze the operating ratios for each route. Results for this 15-month analysis period are provided in Table 5-8 below:

**Table 5-8:  
C-TRAN Route Performance Summary, July 2005 - September 2006**

July 2005-September 2006	C-TRAN Route Number					All Routes
	500	501	502	503	504	
<b>Passenger Trips</b>	32,810	425,123	188,108	986,969	517,967	2,150,977
<b>Revenue Miles</b>	82,270	332,943	198,992	572,919	274,655	1,461,778
<b>Revenue Hours</b>	4,709	29,301	7,393	38,624	22,444	102,471
<b>Avg. Monthly Passenger Trips</b>	2,187	28,342	12,541	65,798	34,531	143,398
<b>Avg. Monthly Revenue Miles</b>	5,485	22,196	13,266	38,195	18,310	97,452
<b>Avg. Monthly Revenue Hours</b>	314	1,953	493	2,575	1,496	6,831
<b>Avg. Daily Passenger Trips</b>	110	1,024	633	2,378	1,248	5,183
<b>Avg. Daily Revenue Miles</b>	277	802	670	1,381	662	3,522
<b>Avg. Daily Revenue Hours</b>	16	71	25	93	54	247
<b>Trips/Revenue Mile</b>	0.40	1.28	0.95	1.72	1.89	1.47
<b>Trips/Revenue Hour</b>	6.97	14.51	25.44	25.55	23.08	20.99
<b>Revenue Speed (Miles/Hour)</b>	17.47	11.36	26.92	14.83	12.24	14.27

Source: GRTA (2007)

Hourly and per-mile passenger trip ratios for Route 500 are outliers due to the route configuration, circulating the HJAIA via the Loop Road to reach a limited number of accessible stops, and service hours that do not include weekends. All other operating ratios are within 50 percent of the system-wide averages. Route 502, which also does not operate on weekends, produces fewer trips per revenue mile than Route 501 but operates more efficiently per revenue hour. The closed-door portion of its alignment along I-285 between the HJAIA and Forest Park is a contributing factor. Congestion levels along north-south arterial roads contribute to the relatively low revenue speeds along Routes 501 and 504.

#### 5.2.4 Peer Performance Analysis

Table 5-9 presents the results of the C-TRAN peer screening process. Eight transit services were considered most suitable for analysis, based on the peer screening criteria.



**Table 5-9:**  
**Selected C-TRAN Peer Service Providers**

Data from the latest available National Transit Database (NTD) analysis year for each agency were used to compare measures of service supplied, ridership, and operational efficiency with C-TRAN data provided by GRTA. The resultant fixed route peer analysis is provided in Table 5-10 below.

One noteworthy difference when comparing transit providers is the provision of both suburban commuter/express and local bus services by most peer systems, absent a regional express bus provider similar to GRTA. The extent to which express services are provided solely during peak travel periods on certain routes inflates the average peer revenue vehicle mileage while reducing average peer service hours, relative to C-TRAN's entirely local routes. Also unlike C-TRAN, many of the peer services have limited services on weekends and, in some cases, no service for certain routes on Sundays.

The high outlier among peers, SamTrans of San Mateo County, California, is notable for its much larger service area, the level of service supplied (54 total routes) and the fact that several local and express routes connect with at least one of four Bay Area Rapid Transit (BART) heavy rail stations, and/or with one of four Caltrain commuter rail stations. Without the outlier, C-TRAN's annual passenger volume and service supplied exceeds the average of its remaining peers. Even when including the outlier, C-TRAN's operational efficiency ratios are highly competitive with its peer systems, particularly given its relatively fewer routes and limited service area. Vehicle speeds during revenue service are competitive, although C-TRAN fixed route data collected from 2005-2007 indicate the average speed is declining, from 16.6 miles per hour in 2005 to 13.6 miles per hour in 2007.

Among operating funds expended by peer agencies during the 2006 NTD reporting year, passenger fare revenue subsidies for fixed route services averaged 18.8 percent, representing a range of fare recovery ratios between 8.9 and 31.1 percent. Comparatively, C-TRAN data from Fiscal Years 2004 through 2006 indicate annual fare recovery ratios have ranged between 32.4 and 36.3 percent.

Some peer agencies do not operate or contract for demand-responsive paratransit services within their jurisdiction, as this task is managed by either a separate county entity or a regional body. Table 5-11 compares the latest available NTD among peer demand-responsive services with NTD data for C-TRAN paratransit for the 2005 analysis year and with Fiscal Year 2007 paratransit data provided by GRTA.

[Table 5-10: C-TRAN Fixed Route Peer Analysis](#)  
[Table 5-11: C-TRAN Paratransit Peer Analysis](#)

Similar to the fixed route peer analysis, the data from San Mateo County's Redi-Wheels/RediCoast services appear to be a quantitative outlier relative to other peers. With or without the outlier, one can surmise that the ridership levels for C-TRAN Paratransit, while improving substantially, are not on par with those of its peers. This is in part due to its relatively smaller size, and due to the limited reach of the paratransit service area within the County (i.e., within a ¼-mile distance of C-TRAN bus routes).

### 5.2.5 Demographic Analysis

Several demographic factors confirm the presence of transit markets within Clayton County. Within the core 10-county ARC planning area, Clayton County's estimated 2006 population density of 2.96 persons per acre of land ranks third, behind DeKalb County (4.14 persons per acre) and Cobb County (3.01 persons per acre). Clayton County's 2006 residential density of 1.15 dwelling units per acre ranks fourth behind DeKalb County (1.71 units per acre), Cobb (1.24 units per acre), and Fulton County (1.21 units per acre), with the latter county including the primary portion of the City of Atlanta. The residential density growth rate in Clayton County from 2000 to 2006 (21.4 percent) has outpaced Fulton County (16.7 percent) and ranks fifth among the ten counties. Taking into account the less dense areas in the southern part of Clayton County, the density figures suggest the presence of dense residential markets in the northern areas conducive to fixed route transit operations, particularly in the incorporated areas of Riverdale, Forest Park, Morrow and Lake City. Minimum service levels of hourly bus frequencies are conventionally supported in areas exceeding three dwelling units per gross acre. Achieving minimum residential and employment densities, in tandem with safe and attractive streetscape environments for pedestrian and bicycle travel in current and proposed transit market areas, will significantly enhance overall passenger demand, per-capita accessibility and service efficiencies. Such achievement is strongly linked to the establishment of transit-supportive land use and redevelopment policies at the City and County levels. Recommended transit-supportive densities for both residential and non-residential land use types are provided below in Table 5-12.

**Table 5-12:  
Recommended Transit-Supportive Densities**

Transit Mode and Service	Recommended Minimum Transit Supportive Densities	
	Residential (dwelling units per gross acre)	Non-Residential (million square feet of commercial and/or office floor space)
Commuter Rail, 20 trains/day	1*	100*
Local Bus Service, 60-minute headway	3	5**
Express Bus Service	3***	35***
Local Bus Service, 30-minute headway	7	8
Bus Rapid Transit	9	35
Light Rail Transit, 5-minute	9	35
Heavy Rail Transit, 5-minute	12	50****
Local Bus Service, 10-minute	15	20

\* Assumes connection via existing track between stations near residential areas and at least one non-residential center with 100 million square feet of floor space or above (usually major urban central business districts)

\*\* Alternatively, minimum 4 jobs per acre

\*\*\* Assumes connection between existing park-and-ride lots or stops near residential areas and at least one non-residential center with 35 million square feet of floor space or above

\*\*\*\* Alternatively, minimum 20 jobs per acre

<b>Sources:</b>	Institute of Transportation Engineers (ITE) (1989). <i>A Toolbox for Alleviating Congestion</i> . Washington, D.C.: ITE Pub. No. IR-054A, pp. 92-93
	Georgia Regional Transportation Authority (GRTA) (2003). <i>Regional Transit Action Plan, Draft Concept Plan</i> . Atlanta, GA: GRTA, 30 June, ch. 3, pp.6
	Transit Cooperative Research Program (TCRP) (1996). <i>Transit and Urban Form</i> . Washington, D.C.: National Academy Press, TDRP Rpt. 16, pp. 11-17

Race factors also suggest the presence of emerging markets for transit. ARC estimates suggest Clayton County has the highest percentage of non-White residents in the 10-county ARC planning area as of 2006 (67.8 percent), surpassing DeKalb County (67.2 percent). College Park, Forest Park, Jonesboro, Lake City, Morrow, and Riverdale have non-White percentages exceeding 50 percent, with Jonesboro and Lake City recently surpassing 50 percent. Nationally, in metropolitan areas non-White workers have had a greater propensity to use transit for commuting than White workers. In metropolitan areas, persons of Hispanic ethnicity (all races) as well as immigrants, regardless of the number of years in the United States, have also shown greater propensities of transit use for commuting purposes.

Multi-family housing units represented 30.6 percent of the 2006 housing stock in Clayton County, according to ARC estimates. This proportion ranks third among the ten counties in the core ARC planning area, behind Fulton County (44.2 percent) and DeKalb County (36.7 percent). At varying household income levels, multi-family household units can provide transit-supportive densities, and residents have a higher likelihood of taking non-automobile transportation trips where alternative modes are available, particularly wherever per-unit vehicle parking is constrained. The ARC-estimated number of multi-family housing units in Lovejoy grew from 2 to 929 between 2000 and 2006, as multi-family housing now represents more than half of its total housing stock. The multi-family share of housing stock is also high in the Clayton County portion of College Park.

Census 2000 data collected by ARC for the draft Coordinated Human Services Transportation Plan (February 2007) indicates the Clayton County population is young relative to other counties

in the urbanized area. Among 18 counties, only Paulding County (26.7 percent) had a higher percentage of youth below age 15 than Clayton County (25.4 percent) in 2000. Similarly, only Gwinnett County (5.4 percent) had a smaller percentage of residents age 65 and above than Clayton County (5.9 percent). The Census 2000 data indicated 29.4 percent of the County population had a disability, but only 5.5 percent of the population represents persons with disabilities of age 65 and above, a percentage ahead of only Gwinnett County (4.6 percent). Clayton County residents living below 150 percent of the poverty level in 2000 represented 18.7 percent of the population, the third highest percentage in the urbanized area after Spalding County (26.6 percent) and Fulton County (22.7 percent). Within the 10-county ARC planning area, the percentage of households without vehicles (5.5 percent) was highest among counties lacking fixed route bus transit services at the time of the Census 2000 survey. Transit and paratransit services must be cost effective for the transportation disadvantaged population. Transit must also accommodate trips involving parents and children to destinations including daycare, social services and recreational areas.

The ARC-estimated proportion of residents age 55 and above in Clayton County (14.5 percent through 2005) is below the percentage (16.5 percent) for the 10-county core ARC planning area, and the projected growth in this cohort from 2000 to 2030 (107 percent) lags behind the core regional projection (127 percent). However, the growth rate for this demographic group (33.9 percent) surpassed the regional growth rate for the period from 2000 to 2005 (30.6 percent). According to a 2006 survey conducted by the Carl Vinson Institute of the University of Georgia, more than one-third of the County's senior adults are working at least part-time, including 22 percent employed on a full-time basis. Within this subgroup of working adults above age 55, nearly two-thirds (66 percent) plan to continue working at least part-time in the foreseeable future, including 40 percent planning to work full-time. When asked in this survey how they will get around once they are no longer capable of driving, 62 percent intend to be driven around by others, while 10 percent expect to use public transportation. As workers with limitations affecting work or mobility grow within the County, the need for effective and accessible demand-responsive transportation options is likely to rise.

ARC employment estimates for 2005 show that Clayton County has the highest percentage of jobs in the Transportation, Communications and Utilities (TCU) sector, among 20 counties in the Atlanta urbanized area. ARC cited an average wage for TCU jobs at \$56,000 per year, or approximately \$28.00 per hour, through the 4<sup>th</sup> quarter of 2005 in the metropolitan Atlanta area. Some of the higher-wage industries have low representation among employment available in Clayton County. Clayton ranked last among 20 counties in percentages of jobs in the Finance, Insurance and Real Estate (FIRE) sector, which represents the highest-paying jobs in the metropolitan area. Transit can be a cost-effective option for low-income households, particularly those with household incomes below \$25,000.

Census 2000 and 2005 American Community Survey data suggest that the share of workers age 16 and above in Clayton County (3.9 percent) choosing public transportation has grown since 1990 (1.4 percent) and 2000 (1.5 percent). Unlike the 2005 survey, the 1990 and 2000 figures included taxicabs as well as public transit, and were taken prior to the introduction of C-TRAN and Xpress services. Since those surveys, the 2005 transit mode share among surveyed Clayton County workers has surpassed the statewide percentage (2.4 percent).

Results of the transit target markets by block group are depicted in Figure 5-5. Target markets were placed in five tiers. Generally, the lowest current index ratings were in southeast Clayton County and the Panhandle area. Market index ratings were highest in largely unincorporated areas, including the northern SR 85/Clark Howell Highway area (south of I-285 and HJAIA), the Conley community north of Forest Park, and the Rex community south of Fort Gillem. Of the three block group areas, only the Conley community was served by a C-TRAN bus, with Route 502 stops along Jonesboro Road at Conley Road and Scott Road. Scores may be high due to one or more high percentages within relatively low block group populations. Such areas may lack population and/or employment levels sufficient to support more direct improvements to service levels in the near term.

Other block group areas with above average transit target market indices include the Jonesboro Courthouse area (served by C-TRAN Route 502), southside Flint River Road area (served by C-TRAN Route 504), east Valley Hill Road/Museum Circle area (served by Route 501), west Valley Hill/Roberts Drive area (served by GRTA park-and-ride and Xpress Route 442 at Lamar Hutcheson Parkway, and by C-TRAN Routes 503 and 504), northwest Riverdale (served by C-TRAN Routes 503 and 504), Southlake Mall area (served by C-TRAN Routes 501, 502, 503 and GRTA Xpress route 440), northern Riverdale Road area (served by C-TRAN Routes 503 and 504), and the College Street section of Forest Park (served by Route 502 along Jonesboro Road).

Underserved areas with above average market index ratings include the southside Lake Harbin Road/Maddox Road area, northwest Forest Park area east of the Norfolk Southern Railroad and the south Forest Park/Old Dixie Road area (served partially by C-TRAN Route 501). While C-TRAN stops are geographically within a half-mile of these zones, roadway configurations and/or physical barriers (railroad, interstate highways) greatly limits bus stop accessibility for residents in these areas.

### 5.2.6 Mobility Analysis

C-TRAN is among a limited set of suburban bus transit operations in the U.S. providing local fixed route and paratransit services seven days per week. The weekend services and early morning-to-late evening hours support many of the varied and flexible needs of working Clayton County residents, as well as employees residing in other counties that benefit from the connections with MARTA heavy rail.

Paratransit services allow for connections to destinations within the C-TRAN service area, as well as the College Park MARTA Station in Fulton County. This heavy rail station provides a more convenient location for customer pickups and dropoffs, compared to the Airport MARTA Station. Improvements in accessibility and reliability for the fixed route services can help bolster the interest of some paratransit riders to independently transition to fixed route transit.

**Figure 5-5:**  
**Transit Target Markets by Block Group**

Thirty-minute headways (or frequencies of two buses per hour), exhibited on C-TRAN Routes 503 and 504, support the needs of transit-dependent populations while offering minimum appeal to “choice riders,” i.e., persons who will forgo driving or riding in automobiles to complete a trip along transit corridors. Persons in the latter category are likely to consider other mobility options when potential waiting times for buses exceed 30 minutes. Bus stops served by two or more routes offer effective (combined) headways of 30 minutes or less. Such stops are found along C-TRAN route segments in College Park (Phoenix Boulevard/West Fayetteville Road), Lake City (SR 54/Jonesboro Road), Morrow (Clayton State University and Wal-Mart), along northern Riverdale Road, and in the Southlake Mall/Commerce Road area.

In addition to C-TRAN transfer locations at HJAI, Southlake Mall, Clayton State, and the Justice Center, other locations offering the possibility of bus-to-bus transfers currently include the intersections of Garden Walk Boulevard and Riverdale Road, SR 85 and Main Street/Valley Hill Road in Riverdale, and Flint River Road and Tara Boulevard/US 19/41.

C-TRAN buses are equipped with front-loading bicycle racks. Reliability on a bike-to-transit connection depends on the availability of supportive facilities at the destination, such as secure bicycle storage and changing facilities at places of employment, as well as the vicinity of the originating transit stop, such as bicycle racks in secure locations, in the event racks on buses are periodically full. The trip between the transit stops and their respective origin and destination points must also include pathways that are safe and convenient.

### 5.2.7 Planning Recommendations

As C-TRAN completes the transitioning of service operations and related functions from GRTA/First Transit to MARTA, ongoing C-TRAN objectives include the continued expansion of bus shelters throughout the service area, transition of the fare card system to the existing Breeze system on MARTA, and identification of facilities for passenger transfers and vehicle operations and maintenance.

Ongoing C-TRAN objectives specifically related to paratransit include the implementation of an Elderly and Disabled Access Advisory Committee to support the administration of service appeals by elderly persons and persons with disabilities, and a functional assessment program that provides benchmarks for the service’s economic efficiency and effectiveness.

The C-TRAN Service Review performed for GRTA in October 2004 suggested the vicinity of Southlake Mall as a desirable location for a passenger transfer center. Options along Commerce Road are currently being explored. The review also recommended the identification of feasible bus stop locations for trip generators in the City of Morrow, such as the local U.S. Social Security Administration office. Recommendations for passenger amenities included new bus stops and improved signage, coordinated schedules with GRTA Xpress services. One policy recommendation included the development of specific standard for measuring local bus route productivity, such as route-level trips per revenue vehicle hour relative to the system-wide average.

The Clayton County *2005-2025 Comprehensive Plan* update recognizes the areas in the County that are underserved by transit, and recommends the development of a feasibility study for countywide transit expansion.

Final recommendations for transit service expansion in the ARC Southern Regional Accessibility Study (SRAS) (September 2007) include:

- an extension of MARTA heavy rail to the proposed Southern Crescent Transportation Service Center,
- commuter rail service connecting Atlanta to Griffin with stops at the Southern Crescent center, the Fort Gillem redevelopment area in Forest Park, Morrow/Gateway Village, Jonesboro and Lovejoy,
- a bus passenger transfer center in the Clayton State University area, and
- inter-county local and express bus connections with Butts, Coweta, Fayette, Fulton, Henry, Spalding Counties.

Subject to revision following ongoing public/stakeholder input, the current Transit Service Vision Plan (December 2007) prepared by the Transit Planning Board for metropolitan Atlanta includes:

- a non-mode-specific transitway circulating HJAI, A,
- the MARTA heavy rail service extension to the Southern Crescent center,
- the Atlanta-Griffin commuter rail service via Clayton County stops,
- a transit center in the Morrow/Southlake area,
- arterial rapid bus routes along SR 3 (south of I-75), SR 54 (south of the Southlake Mall area), and SR 85,
- inter-county regional suburban bus connections with Coweta, Fayette and Henry Counties

The Multimodal Corridor Study final report for Tara Boulevard/US 19/41 completed in April 2007 by ARC did not recommend bus rapid transit service along this corridor between East Point (Fulton County) and Lovejoy, particularly one requiring a designated right-of-way, due to insufficiently supportive densities and transit markets. The study did recommend an enhanced local bus service with limited stops and coordinated intelligent transit systems (ITS) applications such as preferential bus signals at key intersections. Regional commuter bus services would operate along the limited-access super arterial proposed for this corridor, while parallel access roads would support both local C-TRAN routes and the enhanced local bus service. Additional recommendations include ITS-supported transit traveler information, sidewalk connections to cross streets, and improved amenities at transit transfer centers and bus stops.

The commuter rail line between Lovejoy and the Multimodal Passenger Terminal in Atlanta, an initial phase expected to eventually extend southward to Griffin and Macon, remains the primary priority for implementation among proposed lines in the Georgia Rail Passenger Program. Norfolk Southern and GDOT have a tentative agreement in place for the operation of commuter rail in this corridor. Year 2015 estimates for the Lovejoy line from a December 2007 update to the GDOT Commuter Rail Plan indicate ridership forecasts of 900 daily trips (assuming three trains per peak travel period) and 2,300 daily trips (assuming six trains per peak travel period). With future phases extending to Macon, year 2030 projections estimate daily boardings per peak period of 1,700 to 2,200 in the three-train scenario, and 3,700 to 4,500 in the six-train scenario. Both operating scenarios assume the provision of mid-day service. Depending on the

scenario, estimated capital costs for the Atlanta-Lovejoy line range from \$78 to \$107 million, while annual operating costs range from \$8.6 to \$12.3 million.

In addition to regional and corridor-specific plans, subarea plans in Clayton County include a variety of transit recommendations. The “Riverdale Trail” plan proposed as part of the Riverdale Town Center Livable Centers Initiative (LCI) encourages the development of a pedestrian-oriented transit station within a new town center area south of Lamar Hutcheson Parkway, and a local bus transfer station in the vicinity of Main Street and Valley Hill Road.

The Forest Park Commuter Rail Transit Village Plan from its LCI study (December 2001) recommends an automated people mover connecting the Airport MARTA Station to the Atlanta State Farmers Market, Main Street in Forest Park, and a transit village around the proposed commuter rail station near Fort Gillem. The City of Forest Park’s Market Analysis Development Plan for the Atlanta State Farmers Market (December 2002) and the Fort Gillem Strategic Reuse Plan (July 2007) by the Forest Park/Fort Gillem Local Redevelopment Authority acknowledge the need to develop mixed-use environments and pedestrian-friendly gateways supportive of the transit village concept.

The Jonesboro LCI summary report (December 2003) recommends a town center circulator route as well as a route extension along South Street and West Mill Street, connecting to the proposed commuter rail station and West Mill Street parking deck.

The Morrow LCI Master Plan (February 2001) establishes the proposed location for the commuter rail station with a bus drop-off site at Clayton State Boulevard, as well as the preliminary design of the planned Gateway Village transit-oriented development west of the station.

The Mountain View Redevelopment Plan Update (May 2007) by the Redevelopment Authority of Clayton County references the positive findings in the feasibility study for the Southern Crescent center by the Clayton County Board of Commissioners, and recommends a tax allocation district to support all necessary infrastructure improvements.

The Northwest Clayton LCI study (December 2004) recommends an expansion of transit routes in the area to include East Pleasant Hill Road, Godby Road, and West Fayetteville Road (south of Phoenix Boulevard), and the addition of shelters and covered bus stops along routes in the study area.

The Southside Hartsfield Redevelopment and Stabilization Plan (2003) recommends the short term need to enhance local bus services in the study area and a long term need to identify feasible light rail or heavy rail options connecting to the existing MARTA system, particularly south of I-285.

The Redevelopment Corridor Master Plan (2002) for the Upper Riverdale Road corridor (Riverwalk), completed by Clayton County with assistance from the Development Authority and the Southern Regional Medical Center, calls for a heightened level of transportation services, with alternative transportation modes and improvements to the aesthetic appeal of the corridor for pedestrians.

### 5.2.8 Technical Assessment

In the short term, C-TRAN will benefit from the resources at MARTA to operate and manage its transit network. In this regard, an in-depth comprehensive operations analysis (COA) of C-TRAN fixed route and paratransit services can integrate operations data, ridership figures and projections, and input from customers, vehicle operators and technicians, into a forward-looking assessment of service productivity and needed improvements.

The short term findings from the COA can provide the impetus for a longer-range countywide transit development plan (TDP). The future of transit in Clayton County is likely to expand the existing network of local and express buses while including commuter rail and inter-county suburban arterial buses. The TDP can explore the linkages between current and proposed services in the context of land use and related transportation infrastructure plans, producing a network that connects transit-oriented environments while meeting the diverse needs of intra-county and regional travelers. Through the TDP process, an assessment of financing options for transit improvements and long term operations within the County should be conducted, resulting in a comprehensive financial plan to sustain and build the array of services. Another necessary product of the process is a study providing factors to incorporate in identifying candidate sites for a C-TRAN administrative/maintenance facility and passenger transfer facilities. Transfer facilities can include a central transfer station, with a full range of customer service amenities, as well as “superstops” at locations with high passenger traffic levels and visibility, where the range of amenities exceeds that of a typical C-TRAN stop or shelter.

Various activities can occur in the interim period while the TDP is under development. The data collected in this needs assessment revealed potential markets for fixed route transit that are currently underserved within the County. A potential new route in the short term may include stops along Flat Shoals Road, West Fayetteville Road, and Bethsaida Road between HJAIA and the proposed Riverdale Town Center area, bolstering transit demand and options in the westernmost section of the County. Another route option may include an additional east-west connection to the Jonesboro/Mount Zion area or the Lake Spivey area, using SR 138 or Battle Creek Road/Valley Hill Road. A third option may include a new connection from Forest Park to Jonesboro through SR 3, filling service gaps along Old Dixie Road and Tara Boulevard.

However, any expansion or extension plans for the C-TRAN system must consider the quality of the surrounding pedestrian environment. Ongoing coordination to upgrade conditions for pedestrians and bicyclists, prior to the advent of new services, is essential to the future effectiveness of transit. Similarly, roadway surface conditions must be analyzed and addressed where necessary to advance new fixed route bus transit services. Some new routes may be more effectively served using smaller fixed route vehicles.

Opportunities to expand the reach of paratransit services within Clayton County can be pursued. Federal “New Freedom” program funds may be sought competitively within the region to expand paratransit services beyond the ADA-complementary requirements. Any service-area expansion project must be included within the coordinated human services transportation plan under development by the ARC.

In the short term, demand for vanpooling, carpooling and park-and-ride appears to be met by the existing set of park-and-ride facilities in Clayton County and neighboring jurisdictions. As

part of the TDP, coordination with GRTA will be necessary to assess whether capacity expansion or new facilities will be necessary beyond the short term.

Marketing and public outreach for transit can be coordinated with municipal governments and business-oriented partnership groups such as HATMA, the Clayton County Collaborative Authority and the Clayton County Chamber of Commerce. System maps and route-level transit schedules can be available at HJAIA and at facilities providing public services, such as health centers, libraries, recreation centers, and senior centers. Working with local and regional tourism bodies, C-TRAN routes can be included in navigational maps to enhance exposure of the service to visitors and new residents. Considerations can also include incentives for private employers to display and promote the availability of transit materials and contact information. Improved signage and customer information at bus stops can improve the attractiveness of the transit mode.

As several cities and unincorporated communities have embarked upon plans for new “town center” environments, opportunities to firmly incorporate transit-oriented land use policies, development, and infrastructure into these plans can be pursued. Notable projects and plans underway include the Forest Park Transit Village, Fort Gillem Redevelopment, Gateway Village, Jonesboro Town Center Plaza, Riverdale Town Center, Riverwalk, Southside Hartsfield Redevelopment, and the Villages of Ellenwood. Efforts to revise and establish zoning and subdivision regulations accordingly will be beneficial to future coordination efforts.

Beyond short-range activities, actions should address the needs for swifter and higher-capacity services. Recommendations from LCI master plans and other subarea and corridor-level plans should be fully integrated into station-area development plans for each commuter rail station. While the Tara Boulevard corridor study did not include a recommendation for bus rapid transit on dedicated lanes, the introduction of “queue jumper” technologies and infrastructure can enhance arterial bus operations at the most congested intersections in the corridor, specifically during peak travel periods. Demand and feasibility for MARTA heavy rail extension opportunities, to the Southern Crescent Transportation Service Center and beyond, can be explored during this intermediate period.

Similarly, mid-term opportunities for C-TRAN fixed route expansion will grow as underserved areas of the County continue to develop. A future option may include the northeastern portions of the County, inclusive of the Conley and Rex communities, the Fort Gillem redevelopment area, the South Park industrial district, and the Villages of Ellenwood. Long term options for new or extended local routes may arise south of Jonesboro, via either SR 3 or SR 54.

New regional bus services via major arterials may come from the eventual recommendations of the Transit Planning Board. In the event that a regional body to oversee development, financing and operations is absent, opportunities to share responsibilities for suburban inter-county bus services can be pursued with neighboring counties and transit authorities.

Feasibility of town-center circulators and connectors, such as the Forest Park-Airport tram and the Jonesboro Town Center circulator, can be analyzed more thoroughly once commuter rail services are in operation. Communities can consider pricing options for town center parking that incentivize transit and shared-occupancy vehicle travel as mode choices.

### 5.3 Community Input

Feedback from the public meetings and stakeholder interviews for the CTP consistently referred to needs for alternative forms of transportation, particularly transit and pedestrian improvements, to enhance the current mobility network in Clayton County. Frequently, stakeholders noted that infrastructure and environs needed to properly support desirable transit services are not in place, and are subject to varying decisions regarding land use policies, local investment and funding sources, pedestrian linkages, streetscape design and roadway surface quality. Both citizens and stakeholders noted that future transit improvements should consider the need for east-west mobility across the County.

As a transportation mode, transit involves service markets and service types, infrastructure investments, and varied operations. Due to its complicated nature, the types of comments received from the general public and stakeholders varies considerably, from requests for better transit service overall to specific service requests for particular persons (such elderly or disabled persons) or specific types of service (such as commuter rail). Comments have been sorted as much as possible by topic to gain a better understanding of what the community wants and expects from transit.

Comments received from all sources indicate a desire for improved transit service which serves more residents, runs more frequently, provides a suitable alternative to traveling via private vehicles, and connects to top destinations. Transit planning should be comprehensive and consider the entire County's needs. The current C-TRAN service should be supported with amenities, including sidewalks and shelters to encourage transit use. C-TRAN service should be considered within the larger travel region. The service should maximize use of existing and future park and ride lots. The service should be marketed more. Finally, environmental factors (air quality) and energy impacts (alternative fuels) should be considered for transit.

Expanding the current transit system to serve additional markets was indicated. Additional transit modes that should be considered for the County include express or commuter bus service, rail expansion of the MARTA system into Clayton County, and neighborhood shuttle bus service. There was concern expressed for people who had limited means by which to get to work. Transportation services are needed to ensure aging population can reach medical services and have access and mobility within the community.

A number of comments were received about the existing C-TRAN service. Issues and needs expressed include:

- Using ridership and operator input to identify locations for new shelters
- Expanding access to desired destinations
- Coordinating service between C-TRAN local buses and GRTA Xpress buses
- Getting more bus stops in Morrow
- Providing evening service to the Eula Wilborn Ponds Perry Center for Learning; classes are held from 5 to 9 PM
- Increasing service frequencies to alleviate overcrowding
- Increasing the number of bus stops, particularly in residential areas; patrons have to walk very far
- Ensuring buses are accessible for those with disabilities

- Procuring new buses
- Providing street lighting and sidewalks at bus stops
- Improving the C-TRAN website for better communication
- Increasing east-west service in the County
- Posting bus schedules at bus stops
- Keeping the current buses maintained and replacing older equipment
- Coordinating bus schedule with business needs
- Providing monthly C-TRAN and MARTA passes for Clayton State University students and others
- Providing daily service at the new park and ride lot at Lamar Hutchinson, not just peak period service
- Having the ability to transfer between C-TRAN and GRTA at the new park and ride lot at SR 138 and I-75

Specific comments about proposed transit services include:

- Impacts and benefits of the Atlanta to Lovejoy Commuter Rail
- Stop locations for high speed rail from the Carolinas to HJAIA to Macon

Locations where transit is desired include:

- Atlanta Motor Speedway to HJAIA
- County recreation centers
- Ellenwood
- Employment centers in south Clayton County
- JC Penney Logistics center at Frontage Road and Penney Road and adjacent warehouse distribution centers
- Lovejoy
- Lovejoy shopping complex
- Morrow
- New residential development along SR 138 from the Fayette County line to HJAIA
- New residential development along SR 314
- New residential development at Riverdale Center
- Population centers to the airport and Consolidated Rental Car Facility (CONRAC)
- Tara Boulevard/US 19/41 as far south as Wal-Mart at the intersection of Tara Boulevard and Lovejoy Road
- Fort Gillem redevelopment
- Rex
- SR 85 and SR 138 to SR 314
- Social security and all state offices
- Train Station closer to Riverdale County Line and Fayetteville County Line

A discussion regarding park and ride lots to serve transit and ridesharing was undertaken. In general, public and stakeholder comments indicated support for park and ride lots, but locations for new park and ride lots should be selected considering demand and use. Specific locations identified for potential new park and ride lots include:

- I-675 at exit 5
- I-75 near the Farmer's Market
- Mt. Zion/Southlake Parkway, include C-TRAN transfer facility
- Riverdale Station
- Southlake Mall
- Upper Riverdale Road

## 6.0 Freight Needs Assessment

Rail, over-the-road, and air freight needs have been evaluated. Identification of rail freight needs focused on review of at-grade rail crossings, while over-the-road freight needs examined the performance of the existing freight network along with current and future land use to ensure the roadways will continue to adequately serve freight movements. Air freight needs focus primarily on activity at Hartsfield Jackson Atlanta International Airport (HJAIA).

### 6.1 Evaluation Approach

An extensive inventory of data, gathered as part of the existing conditions report, was available and employed for conducting the freight/mobility analysis. The quantitative portion of the assessment considered available data on rail, air, and truck freight. Regional and county level freight network data (routes and connectivity), freight movement (flows), traffic operations (congested roadways), safety (at-grade rail crossings), land uses and other data types were employed, where available, for the evaluation of freight mobility needs.

The qualitative portion of the freight mobility assessment considered other data gathered via field observation and based on review of existing plans and studies with relevance to Clayton County such as the *Tara Boulevard/US 19/41 Multimodal Corridor Study*, *Southern Regional Accessibility Study*, and the *Atlanta Regional Freight Mobility Plan*. Additional information was sought as *Georgia Statewide Truck Lanes Needs Identification Study* part of the public involvement outreach program. Little direct input was provided by the general public and stakeholders on freight; however, the information regarding related issues (of mobility, etc.) was obtained and considered as part of this analysis.

A number of performance measures were employed in the course of data analysis. For example, the results of application of the level of service measure, employed as part of the existing conditions analysis, was evaluated against the primary freight routes in Clayton County to see where truck freight use and roadway operations issues coincide.

Truck routes were also compared with roadway safety data, obtained from GDOT's Critical Analysis Reporting Environment (CARE) database, to identify locations with high segment crash rates and critical high frequency crash locations at intersections along freight corridors.

### 6.2 Findings

#### 6.2.1 Over-the-Road Freight

In Georgia, trucks move the largest percentage of the tonnage and value of shipments as shown in Tables 6-1 and 6-2. Truck traffic is expected to grow over the next 20 years, with much of the growth in urban areas and on the interstate system. The major through routes in Georgia are I-75, I-95, I-85 and I-20. In the Atlanta metropolitan area, I-285 also serves as a major regional connector for freight movement.

[Table 6-1: Freight Shipments in Millions of Tons](#)  
[Table 6-2: Freight Shipments in Millions of Dollars](#)

Regionally, trucks are the primary mode for freight movement with approximately 87 percent of all freight moved throughout the region. In terms of volume, rail is the second most significant mode, accounting for approximately 12 percent of the region’s freight tonnage. Air cargo accounts for only 0.25 percent of total freight tonnage; however, it is associated with higher percentages of total value and represents the fastest growing segment in the region. According to the *Atlanta Regional Freight Mobility Plan*, the regional percentages for truck and air are expected to increase to 91 percent and one percent, respectively, while the rail share is expected to decrease to 8 percent.

The *Atlanta Regional Freight Mobility Plan* is in the final stages of development by ARC and has been a useful source of data for the freight mobility needs assessment. County profile data compiled to date reveal the critical importance of over-the-road freight transportation to Clayton County’s local economy.

About 54 percent of Clayton County jobs are in industries dependent on efficient freight movement (manufacturing, construction, wholesale trade, retail). Of the jobs depending on efficient freight movement in Clayton County manufacturing accounts for 23 percent, wholesale trade 27 percent, and retail 39 percent, while construction provides 11 percent of jobs.

In the context of the national and global economy, just-in-time freight movement is critical to Clayton County’s local economy. Clayton County businesses ship more goods outbound than they receive inbound, providing a freight surplus of 26 percent. According to the ARC data, nearly one-quarter (24 percent) of all freight originated in Clayton County reaches destinations outside of the state of Georgia. Meanwhile, 20 percent of outbound Clayton County freight reaches destinations outside of metropolitan Atlanta and 56 percent within the Metro Atlanta area. Local businesses and their consumers are highly dependent not only on the efficient movement of outbound freight, but on the timely arrival of inbound freight. Inbound freight represents approximately 37 percent of the total commodity flow in Clayton County. About 43 percent of this freight originated from points outside of Georgia, 26 percent from parts of Georgia outside the Atlanta metro region and 31 percent from within Metro Atlanta.

Table 6-3 details the current and projected levels of freight mobility within Clayton County. Freight movement can include rail, over-the-road transportation, and other modes. Clayton County ranked 6<sup>th</sup> in total commodity flow among Atlanta regional counties in 2005. The County moves into 5<sup>th</sup> behind Fulton, Cobb, Gwinnett and DeKalb Counties by 2030. Projected growth rates are highest for intra-county freight (87 percent) and originating freight (101 percent).

**Table 6-3:  
Existing and Projected Freight Movement (millions of tons)**

Year	Originating	Terminating	Intra-County	Total
2005	3,354,408	14,231,485	3,774,695	21,360,588
2030	6,754,031	22,142,065	7,085,212	35,981,308

Source: Atlanta Regional Commission (2007)

I-75, I-285 and I-675 serve as the primary routes for freight movement through Clayton County, and provide vital links from Savannah and other Atlantic and Gulf seaports to the north and northeastern parts of the country. The Macon, Georgia region, currently the Atlanta area’s top

trading partner, is accessible through Clayton County via I-75 and I-675. I-75 is also an important regional and statewide link to major freight gateways such as Hartsfield-Jackson Atlanta International Airport and Norfolk Southern's Whitaker Intermodal Terminal in Austell, Georgia, the largest intermodal facility east of the Mississippi River, accessible from I-20 westbound to Cobb County. Average Daily Traffic (ADT) on I-75 is 54,322 vehicles per day (vpd) of which 12 percent is truck traffic. ADT on I-285 and I-675 is 73,833 vpd and 32,275 vpd respectively, of which 14 percent is trucks along I-285 while I-675 has 10 percent.

Several other secondary routes also support the truck route network; SR 85, from its interchange at I-75 to Fayetteville in Fayette County; Tara Boulevard/US 19/41/SR 3, connecting to Griffin in Spalding County; SR 54 from I-75 through Morrow and Jonesboro; SR 138, a main east-west link between I-85 and I-675; and SR 331 (Forest Parkway) are multilane corridors that carry a significant amount of truck traffic. Some over-the-road freight traffic from several neighboring counties, such as, Fayette, Henry, and Spalding Counties, rely on these arterials through Clayton County to access interstates.

In general, the high amount of traffic and peak time congestion on the primary route system impact the service capability of the freight transportation industry due to the unpredictability of the system. Interstate to interstate interchanges are also another issue that exists on the primary freight network. For example, merging issues occur as I-75 approaches I-285 and I-675. Due to congestion on primary freight routes, secondary routes are used to relieve carriers serving the region. These routes are often not optimal for truck operations due to interchange design, access issues and signal timing. In addition, to general capacity constraints, lane capacity often inhibits safe navigation of these roads by trucks. Another deficiency of the secondary system is the difficulty merging from primary routes to secondary routes resulting from design standards.

Completed in November 2007, the ARC's *Southern Regional Accessibility Study (SRAS)* identified east-west corridors as a priority for improvement. North-south movements, it also noted, are twice the volume of east-west movements (1,181,930 versus 628,000) in 2005 and are projected to be in 2030 (1,909,480 versus 993,880) due to the higher capacity of north-south facilities, and most of the highly congested corridors (I-75 and US 19/41, and SR 85) are north-south corridors.

The results of the level of service analysis conducted for the *Existing Conditions Inventory* was revisited to identify congested locations on truck freight routes. Congested traffic flow in these locations can impact the timeliness of inter-county freight movement, as well as the ability for freight traffic from neighboring counties to travel to or from interstates. Several congested corridors during evening peak hours coincide with the primary truck freight routes. These roadways include:

- I-75 southbound, from the Fulton County line through the Tara Boulevard/US 19/41 interchange;
- Tara Boulevard/US 19/41 southbound, from the I-75 interchange through Tara Road, with some relief in the Jonesboro area where parallel facilities, such as SR 54/Jonesboro Road/Main Street, exist;
- SR 85 southbound, from Forest Parkway to Thomas Road, with some relief through Riverdale, where Riverdale Road acts as a parallel facility;

- West Fayetteville Road southbound, from I-285 through Flat Shoals Road;
- Old Dixie Highway southbound, from the Fulton County line to Penny Road in Forest Park; and
- SR 42 southbound, from the Fort Gillem area through Rex Road, with additional LOS deficiency in the area between the I-675 interchange and Henry County line.

As discussed in Section 4.3, the top high frequency crash locations were identified as part of the existing conditions safety assessment. Of the remaining intersections without planned improvement projects, four are located along a major freight route, Tara Boulevard/US 19/41. The analysis identified 32 high priority intersections. When compared with the non-interstate routes in Clayton County, 19 of the 32 high frequency intersections identified are located along major freight routes:

Of the 30 high crash rate locations identified, 5 were observed to occur on collectors associated with either I-285 or I-85 collector roads.

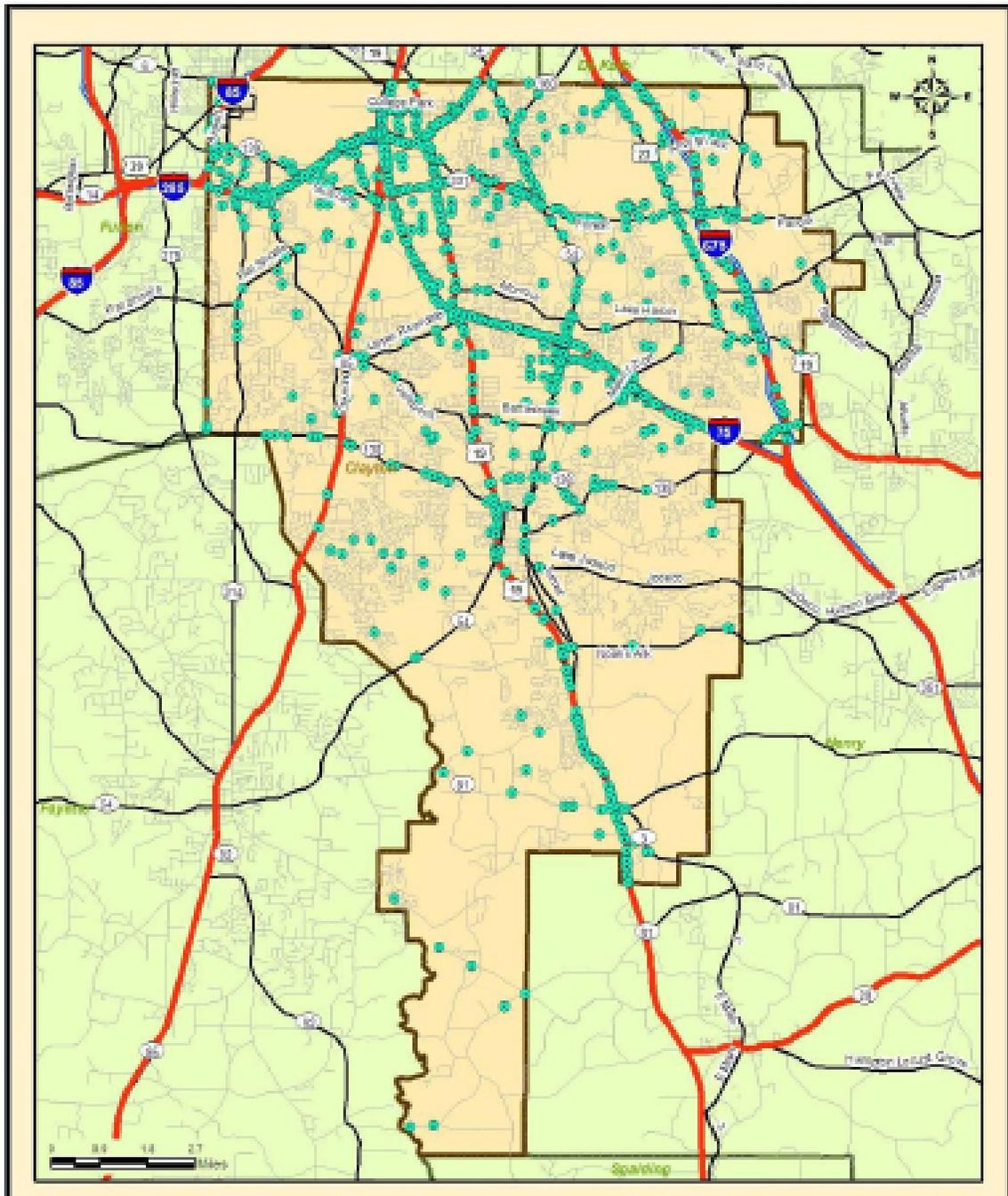
- I-285 collector south from SR 3 Old Dixie Road to I-285 eastbound
- I-285 collector south from I-75 Northbound to Old Dixie Highway
- I-85 collector north from to CR 191100 Airport Road to I-85 northbound
- I-285 collector north from CD 4011 to Loop Road
- I-85 collector north from Sullivan Road to SR 139/Riverdale Road

The *Atlanta Regional Freight Mobility Plan* looked at commercial vehicle crash locations along the primary interstate freight routes in the region, based on 4 years of crash data obtained for the period between 2000 and 2004. The crashes, when analyzed did not appear to be especially clustered at specific segments, instead they were dispersed along the length of various freight routes, including I-75, I-675, I-285 as shown in Figure 6-1. The portion of I-285 in Clayton County and I-75 between I-285 to SR 138, in particular, were among the list of key corridors, identified by ARC, as being in need of additional attention.

### 6.2.2 Major Freight Areas

The major freight generators in Clayton include HJAIA, distribution centers in the Forest Park area, the State Farmers Market, distribution centers along SR 54 in Morrow near the Southlake Mall, along SR 3 south of Jonesboro, and the Rex area along I-675 as shown in Figure 6-2. These freight areas were identified using data from the ARC's *Regional Freight Mobility Plan* and *Unified Growth Policies Map*. With the exception of the industrial area along SR 3 south of Jonesboro, all of the major freight/industrial areas are conveniently sited within 0.5 to 2 miles of an interstate entrance or exit ramp. During evening peak periods, however, several roadways in the vicinity of the interstate interchanges operate at less than acceptable levels of service as previously discussed.

**Figure 6-1:**  
**Vehicular Crashes on Truck Routes in Clayton County 2000-2004**



Source: Georgia DOT- ARC Freight Mobility Study

**Figure 6-2:**  
**Major Freight Coverage Areas**

With regard to major freight generators, the importance of the Atlanta State Farmers Market has been noted previously. As the largest wholesale distribution hub for the Southeast, it contributes significantly to the local economy. Plans are underway to expand the potential of the Farmers Market as both a retail and tourism generator and as an international destination for agribusiness along with proposed improvements to truck distribution flow and gateways, I-75 and I-285 exits and state route access, intersections, and signage.

### 6.2.3 Truck Restriction Considerations

The *Southern Regional Accessibility Study* identified a need for truck only lanes. The study found that much of the regional freight is re-routed to facilities throughout the study area (Clayton, Coweta, Fayette, Henry, and Spalding Counties, as well as South Fulton), which often results in conflicts with car and pedestrian traffic, particularly near interstate access points and historic downtown areas. They recommended that, in order to minimize conflicts between vehicular and pedestrian traffic as well as community related impacts, truck routes should be analyzed to identify if any re-routing options are available; where improvements to accommodate existing facilities and operations can be made; and/or where opportunities exist to construct new truck routes.

In Clayton County, there are some County roads that are being used by trucks because a suitable state route is not available or the state route system does not provide direct access to industrial areas or areas with truck trip generators. While the County has not developed a formal truck route plan, they have identified several restricted routes where truck traffic is prohibited based on requests from the community. The restricted routes are primarily classified as collector roads, first, and minor arterials, second. Several local roadways are also identified as “no truck routes”. It is in the County's best interest to establish screening criteria for truck routes in order to determine where trucks should travel based on land use compatibility, system maintenance, and economic development purposes. Data from the ARC's *Regional Freight Mobility Study* can be used to inform freight route designations as well. Some general considerations for developing roadway freight routes are as follows:

Issues and needs related to freight movement include freight volumes, intermodal connectivity with railroad operations, compatibility with people movement, economic development, roadway design, and system preservation. Freight routes should be established where there are heavy freight volumes. Connections to intermodal facilities and the rail system for intermodal transfers should be considered. At-grade rail crossings are also a concern when roadway freight movement is inhibited by rail usage.

The compatibility of moving freight on the same roadways as moving people should be considered, both from a usage and development perspective. The size and mass differences between passenger cars and some freight vehicles can be accommodated better on some roadways than others. The noise generated by freight movement is generally more acceptable in commercial and industrial districts than in residential areas. Access to local businesses by freight vehicles is a concern for local economic development interests. Ease of access to industrial areas, freight transfer facilities, and manufacturers is often a major determinant on new business location decisions. Roadway design and system preservation are additional considerations in identifying roadway freight routes. Roadways must be designed to

accommodate the turning movements of large freight vehicles, and the roadway pavement and bridge capacities need to accommodate the mass of large freight vehicles.

Input obtained as part of public involvement outreach activities was supportive of truck only lanes. GDOT's *Georgia Statewide Truck Lanes Needs Identification Study* recently completed a needs assessment, which identified a need for truck lanes on the major interstates in the Atlanta region. The preliminary recommendations of the study include two potential alternative scenarios, which propose construction of truck-only lanes on I-75 north, I-285 west, and I-75 south, to separate truck traffic from other mixed-flow traffic and to enhance safety and/or stabilize traffic flow.

#### 6.2.4 Freight Rail

As was presented in the *Existing Conditions Inventory*, the County is served by three rail lines – one in the extreme northwestern portion of the County operated by CSX, one centrally located, and one moving southeast throughout the County (both of the latter lines are operated by Norfolk-Southern). The State Farmers Market and the Atlanta-Clayton Industrial District west of Forest Park and Morrow are all served from a track that branches from a line near the north end of Forest Park Yard.

Fort Gillem is a U.S. Army military base, which lies entirely within the city limits of Forest Park. Fort Gillem is slated for closure in 2011 under the Department of Defense Base Realignment and Closure (BRAC) process. The Forest Park Local Redevelopment Authority (LRA) was formed to develop a Comprehensive Re-use Plan for the base, which includes a proposal for the City of Forest Park to purchase the land for redevelopment, except for a small area, in the southwestern portion of the installation, which would be maintained for U.S. Army and Georgia Army National Guard units, a Criminal Investigation Lab, and a Military Entrance Processing Station. The remainder of the installation, under the most current plan, would be redeveloped to include an industrial area, commercial development, single-family homes and green space.

Fort Gillem is bounded by I-285 to the north, Forest Parkway to the south, Jonesboro Road to the west and I-675 to the east. *The Strategic Re-use Plan* for the base points out that the primary access to the east side of the base is provided by I-675. According to the *Atlanta Regional Freight Mobility Plan* findings, the resolution of capacity limitations is a consideration affecting long term development of freight rail services in greater Atlanta. In other words, congestion on the major truck freight routes would really need to be addressed before any continued major investment in freight rail services development is made. The plan highlights Fort Gillem as a prime example because of the unique opportunities that exist for redevelopment of the base property, especially with the property served by rail near I-285 and I-675 in the City's truck terminal district. According to ARC, this area could be redeveloped for industry and used to preserve Atlanta manufacturing in an efficient location for freight logistics.

Data from the Federal Railroad Administration (FRA), Office of Safety Analysis, was obtained for the purpose of inventorying at grade rail crossings and identifying safety issues. Safety records were compiled on accidents or incidents occurring within the last 15 years.

The *Existing Conditions Inventory* included the evaluation of the FRA *Highway-Rail Crossing Inventory* data and identified 12 at-grade railroad accidents/incidents occurring within Clayton

County between 1992 and 2007. A review of the accident reports reveals that, among the crashes identified, no fatalities occurred. Only one accident resulting in injury occurred, at the crossing on Old Dixie Highway. Seven of the crashes involved vehicles moving over crossings; three were associated with vehicles stopped on crossings, and two involved stalled vehicles. More detailed analysis of the accident reports and via an on site investigation of crossing locations would be required to better understand potential causes and to identify strategies to minimize impact to freight mobility and safety.

Freight rail crossings were also considered by ARC as part of the *Atlanta Regional Freight Mobility Study* where the top at-grade crossings based on AADT were identified by county. Relative to other counties in the region, Clayton County crossings were observed to be moderate (15,100 AADT) to high (35,740 AADT), particularly at the Norfolk Southern crossing at SR 54/Jonesboro Road as shown in Table 6-4. The train activity at these crossings, however, ranges from 2-8 per day, which is relatively low compared to other metropolitan Atlanta counties.

**Table 6-4:  
Top Five At-Grade Rail Crossings Based on AADT**

RR Crossing Owner	Road Name	AADT	Trains per Day
Norfolk Southern	SR 54 Jonesboro Rd.	35,740	2
Norfolk Southern	Jonesboro Bypass	17,200	7
Norfolk Southern	Clayton State Blvd.	16,720	7
Norfolk Southern	Mt Zion Rd.	15,300	2
Norfolk Southern	SR 331-Forest Pkwy.	15,100	8

Source: *Atlanta Regional Freight Mobility Study, ARC 2007*

### 6.2.5 Air Freight

Hartsfield Jackson Atlanta International Airport (HJIA) ranks as the world’s busiest airport for passenger travel and ranks high among international airports for air cargo. HJIA accommodated 84.8 million passengers and 976,447 flights in 2006. In the same year, HJIA also handled 391,909 metric tons of international cargo and 347,364 metric tons of domestic cargo as shown in Table 6-5. The airport includes three main air cargo complexes: North, Midfield and South, a Perishables Complex and an Equine Complex. The total on-airport air cargo warehouse space measures two million square feet.

**Table 6-5:  
Cargo in Metric Tons**

	Freight/ Express/Mail	Landings and Takeoffs
Domestic	347,364	915,691
International	390,816	60,756
Transit	0	0
<b>Total</b>	<b>738,180</b>	<b>976,447</b>

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Source: HJAIA Fact Sheet 2006

Overall, access and mobility improvements at HJAIA are needed as the airport expands its role as a regional air freight hub and multimodal facility. As part of its capital improvement program, HJAIA has plans to expand its Air Cargo and Aircraft Maintenance facilities.

### 6.2.6 Needs

A series of general needs statements have been prepared as a culmination of the investigations performed to date as part of the Clayton County comprehensive transportation planning effort. As they relate to freight/mobility, the transportation needs include:

- Balance the need for movement of goods with other uses of county arterials and state highways by maintaining efficient through movement on major truck freight routes.
- Address conflicts between freight movement and pedestrians, and general traffic that occur at high volume freight intersections.
- Address obstacles/barriers to efficient truck movement on county highways and coordinate with state highway projects to address freight movement/needs and infrastructure (e.g. access to interstates).
- Continue coordination with ARC and GDOT on the development of corridor plans or highway capacity projects that manage access and integrate land-uses, and analyze traffic flows to improve traffic carrying capacity and safety on highways and county-to-highway road connections.
- Consider and use strategies along corridors that balance the need for effective access control with land use planning (e.g. rear access/service roads for truck freight destined for local delivery or local markets).
- Identify transportation and land use strategies to maximize the economic development potential of interchange areas for freight forwarding and related industrial facilities (e.g. Fort Gillem).
- Employ technologies, such as Intelligent Transportation System Technologies, Commercial Vehicle Operation technologies, traveler information, and incident response to improve freight mobility.
- Identify management and operations strategies such as routing via a formal routing plan.
- Examine options to designate freight routes as expressways where the routes are outside the urban growth boundaries and unincorporated communities.
- Identify access and mobility improvements around HJAIA to support its expanding role as a regional multimodal and air freight hub.
- Continue planning for rail service as a viable long term transportation option (e.g. Fort Gillem).
- Promote preservation of rail corridors and explore methods of improving rail infrastructure to improve its role as a viable system.
- Conduct a field review of problem at-grade rail crossing locations to reduce time losses, increase efficiency of railroad operations, and increased public safety/convenience.
- Enhance the integration and connectivity of the transportation system across and between modes (e.g. redevelopment of sites for rail accessible warehousing and for air-rail-truck freight operations).
- Correct severe bottlenecks in locations that impede freight mobility and cause inefficient routing.

- Reduce the number and severity of commercial vehicle related crashes.

### 6.3 Community Input

Following the evaluation of baseline conditions, existing and future needs were identified based on analysis of available data and via input solicited through the project's intensive public outreach program.

General public, stakeholder, and local leader input are crucial for understanding issues and to identify how best to address needs. Overall, a wide range of general issues and opportunities were identified through public outreach:

- Dedicated lanes for trucks needed on the interstates, truck only lanes, congested roadway segments and intersections, access management issues, intra-county connectivity, signage and advance warning for avoiding bottlenecks, and existing and future mobility/ access in the vicinity of the HJAIA, the State Farmers Market, and other major traffic generators
- Examine additional railroad grade separation opportunities
- Southlake Parkway at Mt. Zion Road by the Circle K – dead track, need exempt sign for bus movement
- Kelly Road – dead track, need exempt sign for bus movement
- Commerce at Jonesboro Road - crossing is dark and tankers block sight field - needs gates and lights and signage
- College and Main Street near Jonesboro First Baptist Church - even when the gates are down, cars still come across – lighting allows Main Street to go and College Street backs up
- Old Dixie Road at Old Dixie Highway – two tracks - crossing has no warning lights and no signs
- McDonough Street near Old Courthouse – C-TRAN bus stop needs to be moved as it is located adjacent to tracks – need sidewalks
- Trucks need to be restricted to certain routes – Jonesboro Road

## 7.0 Pedestrian and Bicycle System Needs Assessment

In growing suburban counties, bicycling and walking are increasingly important transportation modes, serving as desirable means of mobility for short-length trips. Provided the appropriate infrastructure and supportive services are in place, bicycle and pedestrian travel modes have the potential to contribute to the overall performance of the transportation system by taking motorized vehicles off the road, thereby reducing congestion. Bicycling and walking can also contribute to improving the overall quality of life in Clayton County by improving air quality, promoting safer mobility activities, and encouraging healthy lifestyles.

Bicycling and walking are important transportation modes, particularly for shorter length trips. Bicycle and pedestrian travel has the potential of contributing to the overall performance of the transportation system by taking vehicles off the road (reducing congestion); and it has potential of contributing to improving the overall quality of life by improving air quality and promoting a healthy lifestyle.

### 7.1 Evaluation Approach

The evaluation approach used existing data to examine the availability and connectivity of pedestrian and bicycle facilities throughout Clayton County. Quantitative performance measures applied in this assessment of needs for pedestrian and bicycle travel include:

- Miles of marked bicycle lanes and/or bicycle-friendly roadway shoulders,
- Miles of sidewalks,
- Injuries from pedestrian- and bicycle-related collision incidents per 100,000 residents,
- Sidewalks within ½-mile of schools, commercial activity centers, parks and recreational areas, Livable Centers Initiative (LCI) study areas, and heritage and preservation tourism areas,
- Bicycle-supportive facilities within 2 miles of sidewalks, schools, commercial activity centers, parks and recreational areas, Livable Centers Initiative (LCI) study areas, and heritage and preservation tourism areas,
- Greenway suitability, based on roadway service levels, functional classification, safety data, land use and existing infrastructure, and
- Roadway segments averaging more than one pedestrian/bicycle collision incident per year from 2004 through 2006.

Bicycle/Pedestrian Connectivity and Proximity Analysis - GIS data of existing sidewalks, on-street pathways, off-street trails and bicycle facilities were collected and collectively analyzed for proximity to key activity centers and areas of interest. Such locations included a major commercial center (Southlake Mall), schools, parks and recreational areas, and heritage and preservation tourism areas.

Greenway Suitability Analysis - Part of the methodology for assessing Clayton County's bicycle and pedestrian needs builds upon the results of the 2007 update to the ARC *Atlanta Region Bicycle Transportation and Pedestrian Walkways Plan*. A matrix identifying potential greenways includes a more comprehensive set of indicators assessing safety, connectivity, and the

presence of existing facilities, in addition to the measures of land use, roadway characteristics, and facility location from the ARC analysis.

The greenway suitability analysis assigns scores relating to the suitability level of road segments. Base measures in the analysis include:

- Traffic Counts (Source: GDOT), measured by Annual Average Daily Traffic (AADT)
  - Segments with AADT less than 2500 vehicles per day (vpd) receive a suitability score of '4';
  - Segments with AADT between 2500 and 5000 vpd receive a suitability score of '2';
  - Segments with AADT exceeding 5000 vpd receive a suitability score of '1'.
- Posted Speed Limits (Source: GDOT Roadway Classification (RC) Data)
  - Segments with posted speed limits below 30 miles per hour (mph) receive a suitability score of '4';
  - Segments with posted speed limits between 30 and 40 mph receive a suitability score of '2';
  - Segments with posted speed limits above 40 mph receive a suitability score of '1'.
- Percent Truck Traffic (Source: GDOT RC Data)
  - Segments where truck traffic accounts for less than 3 percent of AADT receive a suitability score of '4';
  - Segments where truck traffic accounts for a percentage of AADT between 3 and 8 percent receive a suitability score of '2';
  - Segments where truck traffic exceeds 8 percent of AADT receive a suitability score of '1'.
- Functional Classification (Source: GDOT RC Data)
  - Segments with functional classification representing local streets and collector streets receive a suitability score of '4';
  - Segments with functional classification representing minor arterials receive a suitability score of '2';
  - Segments with functional classification representing major arterials, highways and expressways, receive a suitability score of '0'.

In addition to base measures, bonus measures relating to proximity and sidewalk presence are assigned to roadway segments:

- Proximity of Preferred Land Uses (Source: ARC LandPro 05 Data)
  - Segments with preferred proximal land use types within a half-mile buffer of the segment are provided a '+1' bonus. Preferred land use types, categorized from the ARC LandPro database, include:
    - Commercial and Services (ex. urban central business districts, suburban shopping centers)
    - Industrial and Commercial Complexes (ex. industrial parks)
    - Institutional (ex. educational, religious, health, correctional, and military facilities)
    - High density Single-family Residential (less than 0.25 acre lots)

- Medium density Single-family Residential (0.25 - 2.00 acre lots)
  - Multi-family Residential (ex. apartment, condominiums, townhomes), and
  - Transitional (recently cleared land in transition to an unknown or undeterminable land use);
- Proximity of Community Facilities
    - Segments with community facilities within a half-mile receive a '+1' bonus. Community facilities are defined to include schools, activity centers/places of interest, business districts, heritage and preservation tourism areas, and parks and recreational areas;
  - Presence of Existing Sidewalks and Bicycle Facilities
    - Segments with an existing sidewalk infrastructure, marked bicycle lanes and/or striped bicycle-friendly shoulders receive a '+1' bonus;
  - Absence of pedestrian or bicycle collision incidents (source: GDOT Crash Analysis, Statistics and Information CASI data, 2004-2006)
    - Segments that were not within a quarter-mile of a collision incident involving either pedestrians or cyclists during this three-year period receive a '+1' bonus.

Safety Analysis - Safety is of utmost consideration in the identification of needed improvements for pedestrians and bicyclists. In addition to public feedback, available traffic incident information from the GDOT Crash Analysis, Statistics and Information (CASI) database is analyzed to identify locations and situations where safety issues have the greatest tendency to arise.

## 7.2 Bicycle/Pedestrian Connectivity and Proximity Findings

A total of 68.5 miles of sidewalks were identified in Clayton County. The ratio of sidewalks to total roadway length in Clayton County represented is 0.0443, suggesting a low level of connectivity on a countywide scale.

However, buffers of one half-mile revealed the significant presence of existing sidewalks in the vicinity of key Clayton County areas of interest. This suggests that the sidewalk infrastructure completed to date has been strategically located with priority given to areas most likely to experience pedestrian activity. About 67.8 miles (98.9 percent) of existing sidewalks were within a half-mile of parks, recreation areas, and heritage and preservation tourism areas, while 65.2 miles of sidewalks (95.1 percent) were within a half-mile of schools. Study areas analyzed as part of the ARC Livable Centers Initiative (LCI) currently have 49.8 miles of sidewalks (72.6 percent), consistent with the town-center nature of the majority of LCI study areas (e.g., Forest Park, Jonesboro, Riverdale). There are approximately 3.5 miles of sidewalks within a half-mile of Southlake Mall.

Sidewalks are supplemented by 24.8 miles of off-street trails, as well as 2.4 miles of on-street bicycle pathways (specifically, the Riverdale Road trail in College Park) and 10.3 miles of bicycle-friendly roadway shoulders. Analyzed together, all of these bicycle-oriented facilities are located within a two mile distance of schools, parks, recreational areas, and heritage and preservation tourism sites. Supporting pedestrian-bicycle connectivity, 34.7 miles of these

bicycle-oriented facilities (92.5 percent) are within two miles of sidewalks. There are 15.0 miles of bicycle facilities within a two-mile distance of LCI study areas, and 11.0 miles of bicycle-supportive paths and trails within two miles of Southlake Mall.

### 7.3 Greenway Suitability Findings

Using the GDOT Roadway Classification database, over 15,700 roadway segments were analyzed with the Greenway Suitability Analysis, and were separated into five tiers. As summarized below in Table 7-1, more than three-quarters of Clayton County’s roadway segments are determined to be highly suitable for pedestrian and bicycle traffic, if accommodations such as sidewalks, bicycle paths and/or multi-use paths were available.

**Table 7-1:  
Greenway Suitability Analysis Summary**

<b>Greenway Suitability Level</b>	<b>Category Score</b>	<b>Suitability Scores</b>	<b>Roadway Segments</b>	<b>Roadway Miles</b>
Very High Suitability	5	19-20	1,346 (8.5%)	119.4 (11.3%)
High Suitability	4	14-18	10,918 (69.5%)	700.8 (66.1%)
Moderate Suitability	3	11-13	1,862 (11.9%)	126.8 (11.9%)
Low Suitability	2	6-10	1,552 (9.9%)	112.5 (10.6%)
Very Low Suitability	1	1-5	24 (0.2%)	1.0 (0.1%)

The results of the suitability analysis are displayed on Figure 7-1. Highly suitable roadway segments for greenways were found in all areas of the County. Many of these segments are situated in town centers and in residential areas near streams and recreational areas. The high-suitability residential subdivision areas suggest a modest level of connectivity with neighboring subdivisions and multiple collector or arterial roads.

Most major collectors and arterials are rated at low-to-moderate levels for suitability, and the importance of pathways parallel to these roadways and crossings to connect highly-suitable segments is apparent. Connectivity among developments with highly-suitable greenway segments is also hindered in part due to natural features, such as the Flint River watershed, where crossings are generally limited to major thoroughfares. Adequate accommodations for pedestrian and bicycle traffic along existing and planned bridges will help improve connectivity for users. Additional assistance can be provided in the form of multi-use trails tied to stream improvements. Planned extensions of the Jesters Creek trail north of Southlake Mall, for example, will connect highly-suitable segments in Morrow and Lake City.

**Figure 7-1:**  
**Greenway Suitability**

## 7.4 Safety Findings

According to data from the GDOT CASI database, a total of 278 vehicular collision incidents involving pedestrians were recorded along Clayton County roadways between 2004 and 2006. These events resulted in 15 fatalities and 247 persons injured. The 96 incidents in 2006 translate to 35.4 incidents per 100,000 County residents. A summary of findings from the 2004-2006 pedestrian incident data follows:

- On average, in Clayton County there was one collision incident involving at least one pedestrian every 3.94 days.
- There were at least three pedestrian fatalities per year on thoroughfares in Clayton County between 2001 and 2006. This included seven in the latest available calendar year of 2006, higher than any number of fatalities during the previous ten calendar years (1996-2005).
- More than one half (58 percent) of all pedestrian incidents occurred between 3:00 p.m. and 11:00 p.m. Visibility during dark conditions, hampering driver perception-reaction times and pedestrian judgments of traffic gaps, can be a contributing factor. Heightened activity on roadways due to the afternoon peak-period traffic conditions, the presence of second-shift employees reaching work destinations, and the evening and late-night closures of retail establishments also contribute to this finding.
- Most pedestrian incidents (56 percent) occurred on roadway segments between intersections, a potential indicator of the propensity for pedestrian crossings at mid-block locations. However, a relatively even percentage (47 percent) of fatalities occurred at intersections.
- A majority of incidents occurred on roadways with a posted speed of 45 miles per hour (mph). Eleven of the 15 fatalities (73 percent) were recorded along roads at this posted speed, along with 87 of the 247 persons injured (35 percent). Comparatively, there was a single fatality on roads with a posted speed of 25 mph, but the second-highest proportion of incidents (23 percent) and non-fatal injuries (24 percent) occurred on these slower-speed roads.
- A majority of incidents (70 percent) and fatal collisions (64 percent) occurred during reportedly clear conditions. Cloudy conditions were reported for 22 percent of all incidents, while rainy or foggy weather made up only eight percent of all incidents. Wet road conditions were reported in 13 percent of all incidents.
- There were relatively equal percentages of incidents during daylight periods (50 percent) and dark periods (46 percent). However, ten of the 14 fatal collisions (including one dual-fatality collision) occurred during dark conditions. Six of these ten instances were on roads that were not lighted.
- Incidents on state routes accounted for about 49 percent of all collisions involving pedestrians, as well as 12 of the 15 fatalities. 46 percent of pedestrian incidents occurred on County roads, while five percent occurred on City streets. Nearly half of all pedestrian incidents on state highways occurred along roadway segments between intersections, compared to 60 percent for County roads and 79 percent for City streets.

A total of 71 collision incidents involving cyclists were recorded along Clayton County roadways between 2004 and 2006. The incidents resulted in a single fatality and 57 persons injured. A summary of findings from the cyclist incident data follows:

- A large majority (83 percent) of incidents involving cyclists occurred between 2:00 p.m. and 10:00 p.m. Factors similar to those involving pedestrians prevail, in addition to the conclusion of school days prior to the outset of peak-period weekday travel.
- Nearly one-third (32 percent) of all cyclist incidents occurred on weekends. Of all seven days of the week, the largest share of incidents (21 percent) occurred on Sundays.
- July and August were the two months with the largest share of cyclist incidents. In addition to the increased likelihood of cyclist travel during warmer and drier months, the presence of school-age children while schools are in summer session is a likely factor.
- Children below the age of 16 were involved in nearly one-third (31 percent) of all incidents involving cyclists.
- Unlike pedestrian incidents, the majority of cyclist incidents (58 percent) occurred at intersections.
- Unlike pedestrian incidents, a majority of cyclist incidents (73 percent) occurred during daylight conditions. Relative to pedestrians, cyclists have a higher likelihood of traveling during daylight conditions. Cyclists, particularly those following Georgia safety laws, are likely to have reflective devices or lights on their bicycles during nighttime conditions, improving their visibility relative to pedestrians.
- Incidents on County roads accounted for 56 percent of all collisions involving cyclists, while 31 percent occurred on state routes, and 13 percent on City streets. Only ten percent of cyclist incidents on County roads resulted solely in property damage (the remaining 90 percent representing non-fatal injuries), compared with just over 45 percent of collisions on state highways.

With bicycle and pedestrian incidents taken together, the following roadway locations were areas with the greatest number of incidents during the three-year analysis span:

- SR 3 (Old Dixie Highway, Old Dixie Road, Tara Boulevard)
  - 42 incidents (37 pedestrian, 4 bicycle)
  - 5 fatalities, including 4 at mid-block locations
  - 35 persons injured
  - 20 incidents at intersections
  - Highest incident levels in unincorporated area between cities of Forest Park and Jonesboro (60 percent) and in the City of Jonesboro (26 percent)
- SR 139 (Riverdale Road)
  - 32 incidents (all pedestrian)
  - 3 fatalities
  - 31 persons injured
  - 16 incidents at intersections, including Garden Walk Boulevard (6 incidents) and Flat Shoals Road and Norman Drive (3 incidents each)
  - Highest incident level in unincorporated area between Walker Road and Flat Shoals Road (61 percent)
- SR 54 (Jonesboro Road, Fayetteville Road) and SR 54 Connector
  - 22 incidents (14 pedestrian, 8 bicycle)
  - 1 fatality
  - 18 persons injured

- 12 incidents at intersections, including 4 incidents at Forest Avenue/Watts Road intersection
- Highest incident level in Forest Park/Lake City, between Forest Parkway and Curtis Drive (Fort Gillem area) (36 percent)
- SR 85 (Highway 85)
  - 21 incidents (16 pedestrian, 5 bicycle)
  - 1 fatality
  - 16 persons injured
  - 11 incidents at intersections
  - Highest incident levels in the City of Riverdale between Main Street and Church Street/Rountree Road (48 percent) and the unincorporated area between the Fayette County line and Webb Road (24 percent)
- SR 138 (Highway 138)
  - 15 incidents (13 pedestrian, 3 bicycle)
  - 1 fatality
  - 11 persons injured
  - 10 incidents at intersections
  - Highest incident levels in unincorporated areas between Kendrick Road and North Avenue (33 percent) and between Lake Ridge Parkway and Lyle Drive (27 percent)
- CR 392 (Upper Riverdale Road)
  - 12 incidents (8 pedestrian, 4 bicycle)
  - 11 persons injured
  - 9 incidents at intersections
  - Highest incident level near Arrowhead Boulevard (east of Southern Regional Medical Center) (33 percent)
- CR 486 (Kendrick Road)
  - 6 incidents (5 pedestrian, 1 cyclist)
  - 3 persons injured
  - All 6 incidents at intersections, including 3 incidents at Flint River Road

Other roadways averaging more than one pedestrian or bicycle collision incident per year during this period included:

- CR 28 (Mount Zion Boulevard)
- CR 29 (Rex Road)
- CR 142 (Rockcut Road)
- CR 288 (Rountree Road)
- CR 377 (Morrow Industrial Boulevard)
- CR 501 (Thomas Road)

## 7.5 Technical Assessment

In a county where available land is becoming increasingly scarce, strategic development decisions and investments in alternative modes can effectively diverge system users from the customary necessity of automobile-oriented living, thereby stemming the effects of sprawl on natural resources. Clayton County is about to embark on the development of a comprehensive *Greenspace Master Plan* that will account for vital countywide interests in resource

preservation, recreation, and human-scaled mobility. Greenway priorities that integrate natural resource preservation with pedestrian and bicycle needs are worthy of consideration within the *Greenspace Master Plan*.

Building from the successes and lessons learned to date from the award-winning Jesters Creek Trail project, a number of new stormwater restoration and stream preservation projects can include elements supporting the needs for multi-use trails and connections. Consultation and coordination can help identify future candidate stream-trail projects within the County. A sample of segments from the following streams has been assessed by the Clayton County Water Authority (CCWA) for existing conditions and preliminary improvements:

- Flint River
- Big Cotton Indian Creek
- Hurricane Creek
- Panther Creek
- Reeves Creek
- Swamp Creek
- Wallis Creek

Pedestrian paths can be constructed within ¼-mile of public schools, and bikeable roadway shoulders and/or multi-use paths can be placed within 1 ½-mile of these educational facilities. CCPS policy allows for school bus pickups of all pupils residing beyond 1 ½ miles from their designated school. Students within this distance can be accommodated by CCPS so long as school bus seats are not at capacity. As student enrollment is projected to continue rising at least in the short term, providing adequate support for their accessibility needs makes safe paths and crossings a necessity. In addition to encouraging non-motorized trips for short distances, adequate pedestrian and bicyclist options for students can improve the service efficiency of longer-distance bus routes.

Given limited right-of-way and the cost of expansion where some crossings of rivers and streams exist, feasibility of pedestrian bridges adjacent to the roadway can be considered to enhance connectivity. As one example, SPLOST funding is currently supporting the construction of a pedestrian bridge across a creek along the south side of East Fayetteville Road, in conjunction of the realignment of Flat Shoals Road.

The pedestrian incident assessments and visual observations of pedestrian activity on Clayton County roadways revealed there are ample crossings at mid-block locations during all times of the day and evening. This is particularly evident where block lengths are high, sidewalks are incomplete between intersecting streets, and/or terminal destinations have pedestrian entrances located far from intersections. While pedestrians are obligated to cross at intersections, many pedestrians are likely to take the most direct route to reach a destination, even where difficult judgments of traffic gaps are required across multiple high-speed lanes in two directions. Marked mid-block crossings with pedestrian-actuated signals can help guide pedestrian traffic along major arterial and collector thoroughfares, primarily along roads where distances exceed 1000 feet between signalized intersections. Crossing placement and signal phasing must be designed within the context of traffic arriving from nearby intersections, and provide adequate crossing time for pedestrians with less-than average pace speeds. Where pedestrian actuation

is not possible, marked mid-block crossings can be supported with signage and flashing signals conforming to MUTCD standards, as well as ADA-accessible refuge islands that allow pedestrians safer means of identifying acceptable gaps in two-way traffic.

As developers construct new sidewalks per subdivision requirements, priorities can be established by the County and City governments to identify and aid in the filling of sidewalk gaps along these thoroughfares, specifically where sidewalks were not previously required. The municipal governments can also identify where sidewalks and crossings may have been installed prior to the establishment of ADA accessibility guidelines, and program improvements to upgrade the facilities to current standards. Particular consideration can be given to the realignment of utility poles, fixed signage and street furniture, the smooth transition between gutters and curb ramps, the provision of detectable warning materials at curb ramps, the accessibility of pedestrian features such as signal actuation buttons, and the addition of passing spaces for wheelchair mobility where narrow sidewalks are frequently used.

“Sharrow” pavement markings can be constructed along roadways likely to experience the frequent sharing of automobile and bicycle travel, where marked bicycle lanes are not feasible due to right-of-way or other constraints. Short for “shared-use arrows,” sharrow markings identify the shared use of a travel lane by passing motorists and bicyclists. The marking formally notifies motorists to pass bicyclists with adequate clearance, while informally identifying a path of travel for bicyclists free of obstructions such as curbside parking, uneven curbside pavement and drainage utilities. Within the southeastern U.S., sharrows are presently in place in the collegiate cities of Athens, Georgia and Tallahassee, Florida. Possible applications for sharrows in Clayton County include town centers, mixed-use developments, and thoroughfares with curbside parking. Generally, suitable roads for sharrows support low-to-moderate through traffic and posted speeds not greater than 35 mph, where minimums of a four-foot striped bicycle lane adjacent to minimum ten-foot automobile travel and turn lanes cannot be accommodated. Design standards for sharrows are likely to be included by FHWA in the forthcoming update of the *Manual on Uniform Traffic Control Devices (MUTCD)*.

C-TRAN buses equipped with bicycle racks help strengthen the viability of both the bicycle and transit mode choices. Even more beneficial for bicycles as a mode choice would be the provision of secure and supportive facilities for bicyclists at their points of destination, including places of employment, shopping and recreation. Pertaining to employment trips, HATMA can serve as a partner in the identification and engagement of employers, and the provision of incentives and training resources that encourage employees to ride bicycles to and from work.

ARC established a countywide bicycle suitability map in 2003 identifying roadways with the most suitable conditions for bicycling. With the assistance of ARC, HATMA, the Clean Air Campaign and metropolitan bicycle support groups such as the Atlanta Bicycle Campaign and the PATH Foundation, Clayton County can produce an updated bicycle suitability map that incorporates the results of both the greenway suitability analysis in the CTP and the updated 2007 ARC *Bicycle Transportation and Pedestrian Walkways Plan*, illustrating connections to recreational facilities and other key points of interest.

## 7.6 Community Input

In general, participants in the CTP process have indicated that infrastructure for facilitating alternative modes is inadequate within Clayton County, particularly bicycle and pedestrian infrastructure. Pedestrian facilities are needed throughout the County, but priority should be placed on locating facilities where there is demand, including around Clayton County schools, school bus stops, recreation areas, neighborhoods, libraries, C-TRAN bus stops, city and state offices, and county water treatment facility parks. Need for greenway or multi-use path connections to various points of interest was also cited, particularly links to the downtowns and adjacent activity centers such as Peachtree City and the Fayette Pavilion. Overall, bicycle and pedestrian infrastructure is needed to support mixed-use developments.

Promoting health, safety and welfare were identified as reasons for increasing pedestrian and bicycle infrastructure. Improving the health, quality of life, and accessibility through providing facilities for youth, elderly, those without vehicles, and disabled persons was cited. Bicycle and pedestrian facilities should be safe for all users. Buffers between roadways and sidewalks are needed to provide greater separation from the traffic for pedestrians. Bicyclists and pedestrian facility needs are not the same, so consideration of all modes of travel should be undertaken on County roads. Access for persons with disabilities is limited in some places due to lack of continuous sidewalks, safe cross-walks, and accessible ramps. Street lighting and grade separation of pedestrian facilities may be needed at some locations to ensure pedestrian safety. An alternative off-road trail network should be developed to connect the County. In addition to the general need for improved facilities, specific locations identified for improvements include the following:

- Babb Middle School at Reynolds Road - Sidewalks
- Battle Creek Road - Sidewalks and bicycle facilities; wider outside shoulder for bicycle lane
- Clayton State Boulevard - Safe pedestrian crosswalks and infrastructure
- Clayton State University - Sidewalks around university, particularly to serve transit stops
- Department of Family and Children's Service (DFCS) Trail - More connections, maintenance, and upgrades; the trail is currently in poor condition
- Evans Drive - Sidewalks
- Fielder Road - Sidewalks, street lighting, maintenance; pedestrians currently walk on dirt paths
- Forest Parkway near Jonesboro Road - Pedestrian and bicycle facilities
- Garden Walk to Riverdale Road - Pedestrian facilities
- Georgia Archives - Sidewalks
- Jesters Creek Greenway Trail - Connect to greenway with pedestrian and bicycle infrastructure; connect to Battle Creek Road with sidewalks
- Jim Huie Recreation Center - Sidewalks, crosswalks, and street lighting; connections to several surrounding neighborhoods
- Jonesboro Road - Sidewalks
- Lovejoy - Sidewalks in downtown
- Mountain View, Forest Park, Lake City, Morrow, Jonesboro, and Lovejoy - Bicycle route along the roads parallel to the Central of Georgia (Norfolk Southern) route through these cities; improve for bicyclist safety

- Mt. Zion new elementary school - Sidewalks to connect adjacent neighborhoods to school; High speed traffic in area (50 to 60 mph)
- Mt. Zion Road from Richardson Parkway to Fielder Road to SR 138 - Wider street for bicycling; pedestrian facilities for walking to elementary school; street lighting
- Mundy's Mill High School at SR 54 and Mundy's Mill Road - Sidewalks; pedestrian-safe crosswalks
- National Archive - Pedestrian connections to nearby points of interest
- North Lee Street from Harper to the enhanced North Lee - Sidewalks; street lighting
- Old Dixie Road from County line past I-285 - Sidewalk redesign and accessible ramps; safe bicycle facilities
- Panhandle Road Wetlands Center - Sidewalks
- Performing Arts Center by high school - Sidewalks
- Phoenix Boulevard - Sidewalks
- Rex Road - Pedestrian facilities; sidewalks; pedestrian-safe crosswalk at SR 42
- Rex Mill - Pedestrian connections to adjacent subdivisions and public transit
- Reynolds Nature Preserve - Sidewalks
- Riverdale Road to I-285 - Pedestrian facilities
- Stagecoach Road - Pedestrian facilities
- SR 42 - Bicycle trail; pedestrian-safe crosswalk at Rex Road
- SR 65 - Pedestrian infrastructure
- SR 85 - Safe pedestrian crossings and sidewalks; separated grade pedestrian overpass; section from Valley Hill to Garden Walk has dirt paths
- SR 138 from SR 314 to SR 85 - Sidewalks; pedestrians currently walk on dirt paths
- SR 314 - Bicycle route
- Sullivan Road - Bicycle path
- Tara Boulevard/US 19/41 - Safe pedestrian crossings; separated grade pedestrian overpass; street lighting; connections to transit stops and shelters
- Upper Riverdale Road - Street lighting repair and maintenance
- Upper Woolsey Road - Bicycle-friendly shoulder kept free from debris

## 8.0 Aviation Needs

### 8.1 Assessment Methodology

Clayton County is served by two airports: one that is located within the County, HJAIA and one that is located to the south in neighboring Henry County, Tara Field. HJAIA is the world's busiest airport, with nearly 85 million passengers passing through its terminals (2006) and nearly 747,000 metric tons of processed freight and cargo. Covering about 4,700 acres of Clayton County with its five runways, the airport is operated by the City of Atlanta's Department of Aviation.

The impact of Hartsfield-Jackson Atlanta International Airport on Clayton County is immeasurable. The largest portion of the nation's busiest airport in passenger traffic lies mostly within Clayton County's borders, along with the midfield terminal and the international concourse. The airport's largest carrier, Delta Air lines, also has offices and operations located within Clayton County. Cargo companies in close proximity to the airport put every major U.S. city within direct reach of the Clayton County industrial community and the international routes bring the entire world close to Clayton's borders.

In 2000, the Airport began a ten-year, \$5.4 billion capital improvement project, which includes four key elements: (1) construction of a consolidated rental agency complex for rental cars; (2) enhancements to the airports central terminal; (3) construction of a fifth runway; and (4) building a new terminal. Due to the increasing demands upon the existing on-airport car rental facilities, the need for a consolidated rental car structure has become necessary. Traffic flow around the airport and air quality will benefit from the consolidation of these facilities. The new Consolidated Rental Agency Complex (CONRAC) will be located south of Camp Creek Parkway and west of I-85. The facility will accommodate the ten existing rental car companies operating at HJAIA (with room for expansion in the future) and will provide for approximately 8,700 ready and return spaces. Additionally, this project will include accommodations for customer service centers, storage and minor maintenance areas, wash lane facilities and vehicle fueling positions to support the quick turn around operation used by the rental car agencies. The CONRAC project also includes an Automated People Mover (APM) System to ferry passengers to and from the Central Passenger Terminal Complex (CPTC) and the CONRAC. Three transit stops are proposed for passengers, along with an elevated rail line over I-85.

A new four-lane airport access road will connect from the airport roadway system to the CONRAC providing vehicular access both coming and going to the facility. The roadway includes bridges to cross I-85, CSX Railroad and MARTA tracks. The Central Passenger Terminal Complex will be enhanced to accommodate the rising number of travelers passing through HJAIA. To enhance passenger service, improvements will include upgrades to curbside services, security checkpoints, ticket counters, interior finishes, concessions, baggage, baggage claim areas, vertical transportation, moving sidewalks and expansion of existing concourses. Further modification plans include taxiway enhancements as well as the expansion of Air Cargo and Aircraft Maintenance facilities.



Tara Field is a Level II airport as designated by GDOT, capable of accommodating all business and personal use single and twin-engine general aviation aircraft and a broad range of the corporate/business jet fleet. It is located approximately 29 miles south of Atlanta and 12 miles north of Griffin. The airport can be accessed from the north and south via US 19/41. Other highways in proximity include I-75, SR 3, and SR 20. The airport, situated on 140 acres, is owned and operated by Clayton County. The airport accommodates a variety of aviation related activities that include recreational flying, corporate/business jets, just-in-time shipping and police/law enforcement. The airport also provides a convenient means of transportation of NASCAR teams and spectators to the 125,000 (person) capacity Atlanta Motor Speedway (AMS) in Henry County.

According to the Georgia Aviation System Plan (GASP), GDOT projections for Tara Field indicate air travel demand through the year 2021 will grow slightly, from 13 percent in 2003 to 16 percent of the airport's expected annual operating capacity. The airport's excess capacity benefits other capacity-constrained general aviation airports in the Atlanta region which are either currently above or projected to surpass the GDOT and Federal Aviation Administration (FAA) demand/capacity ratio threshold of 60 percent. The State of Georgia aims to have a significant portion of its residential population within a 30-minute reach of its Level II airports.

Table 8-1 illustrates the expected 23 percent growth in annual aircraft operations, for both local and transient general aviation travel.

**Table 8-1:  
Annual Aircraft Operations**

Year	2003	Projected (2011)	Projected (2021)
# of Based Aircraft	143	160	178
Operations:	29,800	32,883	36,685
Local	11,707	12,918	14,412
Itinerant	18,093	19,965	22,273
Demand/Capacity Ratio	13%	15%	16%

Source: GDOT, Georgia Aviation System Plan, Airport Summary Report (2003)

Through Fiscal Year 2012, several airport improvement projects have been identified to enhance capacity for expanding operations while improving safety for aircraft takeoffs and landings. To comply with GASP minimum objectives for Level II airports, required improvements include:

- Extending the runway 500 feet
- Extending the taxiway 500 feet
- Widen runway by 25 feet
- Install Airport Weather Observation System (AWOS)/ASOS
- Provide 800 square feet of additional terminal/administrative space
- Provide limited/full service maintenance
- Provide rental cars



- In Phase 1 – 61 additional hangar spaces, 19 additional apron parking spaces and 140 additional auto parking spaces are needed.
- In Phase II – 5 additional hangar spaces, 5 additional apron parking spaces and 14 additional auto parking spaces are needed.
- In Phase III – 11 additional hangar spaces, 11 additional apron parking spaces and 27 additional auto parking spaces are needed.

The total cost of improvements was estimated at \$5,261,593 in 2003.

The proposed Lovejoy Realty Fixed Base Operations (FBO) development (DRI in Henry County) is adjacent and connected to Tara Field. The proposed development, located in southwestern Henry County on 96 acres, is a mixed-use project with 20,000 square feet of fixed based operations (FBO), 873,600 square feet of hanger space, 352 residential units that include town homes and condominiums, and 45,544 square feet of retail. Automobile access is proposed at three locations along Selfridge Road. The development proposes aircraft access to Tara Field.

In August 2007, the Lovejoy Realty FBO DRI was approved subject to GRTA approval of state and/or federal funds for providing the following land transportation services and access improvements:

- Allow for future connectivity (outside of any secured zone) to the South Site
- Roadway from the adjacent property
- Provide sidewalks adjacent to external roadway frontage
- Provide sidewalks adjacent to both sides of internal roadways
- Install a traffic signal, if warranted, at the intersection of US 19/41 and Speedway Boulevard/Revolutionary Drive:
- Pave Selfridge Road from Speedway Boulevard to Lower Woolsey Road

### 8.1.1 Findings

Federal, state, and local resources will continue to be necessary to complete the projects within the airport's Capital Improvement Plan through Fiscal Year 2012.

Funding from state and local sources will continue to be needed to support airside paving projects at the airport. Continued preventive maintenance and rehabilitation can keep the runways, taxiways, and apron areas well above critical Pavement Condition Index (PCI) levels. The GASP PCI goal is a score of 70. A 2001 Pavement Evaluation Report assessed the airport's area-weighted pavement conditions at a PCI of 99, indicating that preventative maintenance is necessary to avoid major, and more costly, rehabilitation.

The GASP standard of a 30-minute access time by vehicle to this airport is generally achievable for most residents of Clayton County and surrounding counties. If travel delays due to roadway congestion increase significantly along the primary approach from SR 3, SR 81 and SR 20 provide alternatives from the eastside, however Woolsey Road would provide the only access from the southwest.



### 8.1.2 Community Input

In addition to the general need for improved transportation connections to Clayton County's airport facilities, specific comments from the community include the following:

- Improve transit connections to the airport along SR 85, SR 138, and SR 314
- Transit connection from HJAIA to the Atlanta Motor Speedway
- Tara Field has huge potential as an economic engine (if the FAA lengthens the runway) for Clayton County and several corporations could benefit from a presence there

## 9.0 Natural Hazard Preparedness Assessment

One of the subtasks of the Clayton County CTP needs assessment is to consider the transportation system adequacy in the event of a natural disaster. The assessment for system adequacy has taken two different approaches. One approach has been used to highlight potential needs of specific areas in the County, should an evacuation of that area be required. The other approach has been to focus in on the most commonly occurring natural disaster, flooding, to review the ability to leave a flood-prone area in case of flooding.

### 9.1 Natural Hazard Preparedness Evaluation Approach

A high level assessment of potential needs, as they pertain to transportation system and natural hazards, has been undertaken. Only existing and available data collected for the CTP was used, and no new primary data was collected. In terms of the needs assessment evaluation, the natural hazard preparedness evaluation supports promotion of safety and security. The assessment undertaken is largely qualitative, supported by quantitative data, as indicated below.

To identify potential areas of concern for evacuation in the case of a natural disaster, the County has been divided into 15 subareas for evaluating future travel demand. Each subarea is comprised of a grouping of traffic analysis zones (TAZs). Using the subareas, socioeconomic, demographic and travel characteristics were reviewed to identify potential demand. Major transportation facilities were identified for potential capacity, should the subarea require evacuation in the case of a natural disaster. Data was then summarized for each subarea in a matrix.

One of the most common natural disasters is flooding. According to the Federal Emergency Management Agency (FEMA), floods have occurred in all 50 states. According to the Georgia Emergency Management Agency (GEMA), 90 percent of all disasters involve flooding. Locations in the County that are prone to flooding were identified, based on FEMA Q3 data. GIS was employed to map 100-year areas flood areas, these areas were reviewed within the context of the existing roadway system to identify potential areas of concern.

## 9.2 Findings

### 9.2.1 Evacuation Considerations

The matrix shown in Table 9-1 provides a relative comparison of each subarea and illustrates which subarea may face greater challenges in the event of an evacuation, based on travel and demographic characteristics. Each major field has been sorted from greatest to least and the top five in each field have been highlighted. By sorting and comparing across the different fields, some general observations can be gleaned. An additional table listing major roadways by zone, along with number of through lanes and estimated capacity is included in Appendix B.



**Table 9-1:**  
**Subarea Hazard Preparedness Evaluation Matrix**



Overall, the greatest number of daily trips in 2005 and 2030 are produced in the center of the County, in a swath extending from the County border on the west to US 23/SR 42/Moreland Avenue on the east and from SR 331 and I-285 on the north to SR 54 and SR 138 on the south. This area includes the cities of Riverdale, a portion of College Park, Morrow, a portion of Forest Park, Lake City, and Jonesboro. This area has the greatest population densities found within the County. Nearly every subarea within this swath has access to an interstate, except for subarea 9, which is situated south of SR 138 and north of SR 54. Only one of the top trip-producing subareas has daily congestion on more than five percent of its roadway system, subarea 6, which includes north Riverdale, west of I-75.

In the event of an evacuation for any of the subareas, those with the greatest concentrations of population or employment would likely face the greatest challenges for evacuation via private vehicles. Another consideration is evacuation of individuals for which no private vehicle is available. The greatest number of households without vehicles is found in subareas 7 and 6, in the area extending from SR 139 on the west to SR 54 on the east, SR 331 on the north and Upper Riverdale Road and I-75 on the south.

To fully evaluate evacuation needs for the County, a comprehensive hazard risk assessment should be undertaken. The risk assessment can be used to identify potential manmade and natural hazards and identify relative risks related of each. In that way, a more specific evacuation plan can be developed for each high risk area.

## 9.2.2 Flooding Considerations

Clayton County traverses two river basins, the Flint River Basin on the western half of the County and the Ocmulgee River Basin on the eastern half of the County. I-75 and US 19/41 serve as an approximate dividing line between the two basins. Camp Creek, Cater Creek, Beaver Dam Creek, Jester Creek, Swamp Creek, Hurricane Creek, and Shoal Creek flow into the Flint River. Flint River extends through most of the County north to south, exiting the County at the Fayette and Spalding County borders. Conley Creek, Upton Creek, Panther Creek, Reeves Creek, Rum Creek, Line Creek and Pates Creek are located on the eastern edge of the County and flow southeast into Henry County.

Related to flooding and transportation facilities, the greatest concern for the County is found in locations downstream from new development, where older culverts or bridges may not have adequate capacity to accommodate additional stormwater runoff generated by new developments' impervious surface. From a review of the Clayton County 100-year flood plain map, it appears the greatest risk for flooding, which could impact transportation facilities is along the Flint River, particularly within the County's panhandle.

Flooding on the local roadway network can also occur due to clogged storm drains and pipes. However, at the CTP level, data is not available to identify potential locations for such flooding. Overall, there is a need for continued ongoing maintenance and monitoring of the stormwater management system to prevent episodic flooding due to clogged storm drains and pipes.

## 10.0 Summary of Clayton County Major Issues and Needs

### 10.1 Mobility

Supporting mobility involves the provision of options, in the form of alternative modes and paths, which are safe and efficient for people and goods to reach both essential and desirable locations. In Clayton County, mobility enhancements involve new infrastructure, operations and strategies relieving major points of traffic congestion, separating traffic streams for people and freight, and improving the quality and levels of service for all modes of travel.

Among significant mobility needs and issues identified in the CTP, strategic mobility improvements are needed to address the extension of congested travel conditions along interstate highways during peak travel periods. Along the I-75, I-285 and I-675 corridors, such improvements may include managed lanes and an expansion of Advanced Traveler Information Systems such as changeable message signs (CMS).

In addition to interstates, there is a need to alleviate congestion along north-south arterials, particularly SR 85, Jonesboro Road south of I-75 through Main Street in Jonesboro, SR 54/Fayetteville Road, Fiedler Road, West Fayetteville Road, and the Tara Boulevard/US 19-41 corridor. Long term commitments to funding capacity enhancements and multimodal facility improvements along arterial corridors and at highway interchanges must be maintained.

With a limited range of options for east-west travel, particularly for cross-county mobility, there are critical needs for roadway capacity enhancements and multimodal facility improvements along thoroughfares such as SR 138, the SR 138 Spur, Flint River Road, McDonough Road, Valley Hill Road and Forest Parkway.

Along arterial roads, considerable attention should be provided to roadway and intersection improvements in areas of high retail/commercial activity, such as the Atlanta State Farmers Market, Southlake Mall, big-box retail centers, automobile dealership corridors, and hospitality districts.

While investments in suburban mobility improvements are customarily oriented toward external travel to/from metropolitan centers such as Atlanta, greater focus is needed for mobility improvements that meet the vastly growing projected need for internal trips, particularly home-based work trips and internal freight movements.

To stem the projected growth in single-occupant vehicle (SOV) travel, which hampers total person-throughput, improved and practical options for non-SOV and non-motorized travel are needed. Particular needs include the provision of ADA-accessible sidewalks and roadway crossings, bikeable roadway shoulders and sharrows, multi-use greenway trails and facilities for bus and rail transit passengers.

Screening criteria is needed to formally establish appropriate routes for over-the-road freight on County roads. Within this network, concerns regarding turning radii, roadway surface quality, lane widths, signage and traffic signal operations should be addressed. Access management strategies along key regional arterials such as Tara Boulevard/US 19-41 can better balance

competing needs for regional throughput and local service delivery. In addition to a countywide truck freight network, the accommodation of truck-only lanes on I-75 and I-285 can also increase the degree of separation for freight vehicles from mixed-flow passenger traffic.

Projected increases in combined traffic for passengers and freight along the Norfolk Southern rail corridor call for field studies of at-grade crossings to determine the suitability of separation or alternative improvements that reduce total delay.

## 10.2 Accessibility

An accessible transportation network promotes the ability of its users to depart from a point of origin and arrive conveniently and safely at a desired destination. In conjunction with safety, accessibility is one of the strongest determinants affecting the traveler's decision as to whether a particular trip will be taken.

To achieve accessibility, the path to a destination, supporting facilities along a journey, and the destination itself must be free of burdensome impediments to travel. Public investments can improve accessibility along paths of travel, at supporting facilities and at public venues, while public policies and regulations can guide private-sector accommodations for multimodal accessibility in development and redevelopment projects.

Major needs and issues related to accessibility identified through the CTP planning process include the Provision of paths and sidewalks that connect residents, employees and visitors to places of interest. Most commonly cited locations through community outreach included public schools, particularly elementary and middle schools in the growing CCPS system, transit stops, city centers, and local recreational facilities.

Challenges for both vehicular and pedestrian accessibility were cited along major roadways with residential subdivisions, such as SR 85, and near activity centers such as the Southern Regional Medical Center on Garden Walk Boulevard, or the Clayton County Performing Arts Center on Mount Zion Parkway. The strategic placement of traffic signals for cross-street and turning vehicular movements, and new and improved crosswalks with pedestrian-actuated signals, may help address these concerns. Proposed subdivision street layouts need to be oriented in ways that minimize walking distances to pedestrian destinations and enhance inter-community connectivity.

The existing C-TRAN bus network, inclusive of the demand-responsive paratransit service area, is not accessible for approximately 40 percent of the Clayton County residential population. Expansion of the paratransit service area to support persons with disabilities, particularly using Federal New Freedom funding, should be considered. Further, more than 85 percent of the County population would not reside with a reasonable walking distance of proposed commuter rail stations.

Municipal land use policies can guide the orientation of buildings, pathways and on-site amenities at proposed developments to better connect with the bicycle/pedestrian network and nearby transit services. In addition to policies supporting affordable residential land use and accessible sidewalks within walking distance of transit stops and stations, bicycle paths and

other facilities supporting bicycle use and bike-and-ride will enhance the abilities of residents requiring non-walking modes to reach transit services.

The need for accessible services extends beyond physical improvements to include the provision of effective traveler information. Strategic promotion and public outreach can improve the availability of information about the growing C-TRAN services, while ITS, signage improvements and other promotional activities can improve information regarding parking availability in municipal centers.

Strategic mobility improvements along a countywide over-the-road freight network will allow current and proposed industrial centers to better access interstate highways, HJAIA, and regional rail freight centers.

### 10.3 Connectivity

Connectivity improvements support mobility, accessibility and efficiency, through the provision of linkages to and between places of interest, and through the improvement of system users' capacities to transfer between modes of travel. A well-connected system can effectively minimize travel times and distances, reducing the need for inefficient travel using motorized modes and producing localized benefits to air and water quality.

Major connectivity issues and needs identified in the CTP include the need for capacity enhancement projects and alternative routes that address demand for improved east-west travel options across the County. Collaboration with neighboring counties is also desired to improve multimodal options for inter-county connectivity.

Intermodal passenger transfer centers are needed to support the integration of the C-TRAN and GRTA Xpress bus services, the future commuter rail service, and town-center parking. Transfer centers can provide amenities that support users of these modes as well as bicyclists and pedestrians. Opportunities for efficient transfers among particular C-TRAN and Xpress routes can be improved. "Superstop" transfer centers among C-TRAN routes can be integrated with proposed town center redevelopment plans, such as in Forest Park, Jonesboro, Morrow, and Riverdale.

At a time where newly developable land is dwindling in Clayton County, municipal land use, subdivision and zoning policies guiding infill development and redevelopment can help improve connectivity among compatible adjacent uses. These policies can be supported by transportation infrastructure improvements that adequately address access management and intermodal passenger transportation needs.

Greenways are needed to fill in gaps where inter-community and inter-city connectivity is currently hampered by an incomplete or highly-congested multimodal roadway network. Pedestrian accessibility needs to connect to C-TRAN stops must continue to be addressed, in particular for persons with disabilities. A bicycle suitability map specific to Clayton County is needed to illustrate the suitability of existing roadways for bicycling, supportive facilities (bicycle storage, restrooms) and the array of connections to recreational facilities and other points of interest.

A countywide freight network and supportive logistics facilities are needed to provide connectivity and swift and efficient transitions for goods, between industrial centers, rail freight facilities and HJIA cargo facilities.

## 10.4 Efficiency

Pertaining to transportation at the system user level, measures of efficiency involve a determination as to whether the expenditure of time, money, energy and resources is justifiable for the objective a completing a trip. Efficiency concerns extend to the countywide level when overall time savings and cost effectiveness factors are considered.

Major issues and needs concerning the efficiency of the transportation network identified in the CTP include the expansion of higher-capacity and more efficient public transit services in Clayton County. Given the interest in “bus rapid transit” services along corridors with limited right-of-way, the provision of “queue jumper” lanes at strategic locations along the Tara Boulevard and/or SR 85 corridors should be evaluated. Queue jumper lanes may offset the incremental costs of congested delay for single-occupant vehicles with the benefits of reducing overall person-delay, promoting transit use through swifter and more reliable arterial travel. MARTA is currently gaining experience with the construction of queue jumper lanes along the Memorial Drive corridor in DeKalb County.

Pedestrian and bicycle facility improvements in the vicinity of local schools (within at least ¼ mile) are needed, as the reduced need for pickups produce a benefit of improved service efficiencies for long-distance school bus routes.

More than half of all jobs in Clayton County are currently dependent on efficient freight movement, including manufacturing, construction and the wholesale and retail freight industries. With increasing congestion projected for most of the Atlanta region’s interstate highways, including I-75, I-285 and I-675, the provision of truck-only routes along interstate highways and ITS/Commercial Vehicle Operations technologies are needed, coincidental with the growing importance of just-in-time inventory strategies for efficient goods mobility and global competitiveness.

## 10.5 Safety

The presence of safety concerns within the transportation system poses often unforeseen risks to individual travelers, and can result in deleterious impacts affecting multiple travelers in matters extending beyond merely transportation. Life, liberties and property for system users are jeopardized as a routine consequence of the collective need for efficient travel. Safety improvements seek to minimize and eliminate, where possible, the risks and impacts within a multimodal network where interactions among people and across modes are inevitable. Safety improvements also help to support the systemwide movement of evacuating people in the event of natural disasters.

Major issues regarding needed safety improvements revealed through the CTP process include the need for a comprehensive hazard risk assessment. The assessment should lead to an evacuation plan that fully identifies high-risk areas (concentrated areas of population and employment, as well as areas with citizens, employees and visitors lacking access to personal

transport) and provides flexible approaches to relocate or evacuate people during manmade or natural hazard events.

Safety improvements should be directed toward the mitigation of rear-end vehicular collisions as well as incidents at mid-block locations. Pavement striping improvements will enhance safe navigation along roadways, while lighting and reflectivity improvements will help improve visibility and mitigate safety impacts during nighttime and dark conditions. The adequacy and appropriateness of accommodations for left-turning traffic, particularly at mid-block locations, should also be re-assessed on high-speed arterial and collector roads.

A combination of pedestrian-supportive infrastructure (mid-block crossings, refuge islands, pedestrian-actuated signals) and driver alert signage and signals are needed along arterial locations with high likelihood of mid-block crossing pedestrian activity. County roads which connect residences to recreational facilities and schools will continue to require signs alerting drivers of pedestrian activity as well as flashing signals during periods of peak pedestrian travel.

Bicycle safety awareness programs during school and summer activities are needed for adolescents and teenagers, which represent a significant portion of the individuals involved in bicycle-related collisions in Clayton County.

## 10.6 Preservation

Preservation is an integral factor in the provision of a sustainable transportation network. Relating to transportation, decisions regarding infrastructure and services respect the needs of both current and future system users. Decision making must also consider ways to move both people and goods in a manner while avoiding and minimizing impacts to the natural and built environments. Preservation concerns are critical in a county where developable land is as limited as ever before, set within a region where concerns related to air quality, water quality, and the availability of natural resources are paramount.

Chief issues related to system and community preservation identified in the CTP include the provision of alternatives to soil-cement repaving and adequate drainage facilities on Clayton County's roads. These roads are supporting not only an increasing number of vehicles but greater average vehicle axle weights, due to increases in freight and transit traffic and larger personal vehicles. Asset management strategies should be identified that reduce the life-cycle costs and frequencies of roadway maintenance and repair.

Impacting not only preservation but connectivity, the numerous bridge crossings over water features must continue to be monitored for conditions and sustained as the demand for travel across these bridges changes over time. The CR 299/West Lee's Mill Road over the Flint River Tributary was identified as being in serious condition and is prioritized for bridge capacity improvements. Life-cycle costing and financing measures for all bridge structures receiving serious, fair or satisfactory ratings from GDOT should be in place.

Improving the coordination and balance between land use and transportation decision making practices will ensure a long term mobility network that is suited to the diverse needs of its users. Development should be continuously oriented to support the needs of bicyclists, pedestrians, and transit riders, while minimizing trip lengths for other motorized vehicle users. Mutually,

transit services will be needed at a scale commensurate with ridership demand generated as a result of commitments to more transit-oriented development practices. As the County continues to experience new development and redevelopment, municipal governments should pursue opportunities to guide street layouts for conservation subdivision and traditional neighborhood developments, while policies should require adequate accommodations of right-of-way to support future multimodal corridor expansion.

The long term sustainability of the County's various heritage and preservation tourism areas will depend in part on the diverse means of access to these locations. Improvements to transit, pedestrian and bicycle modes will minimize future demand for additional parking and roadway accommodations that could pose impacts to aesthetic and functional values. As demonstrated by the Jesters Creek Trail project, greenway opportunities should be identified that integrate pedestrian and bicycle transportation needs with those for preservation of natural resources.

## 10.7 Community Input

Needs Priorities from Public and Stakeholders:

- Accessibility to local recreational amenities
- Additional public transit amenities
- Beautification/aesthetics
- Better land use and transportation system coordination
- Congestion relief on major roadways
- Dedicated truck only lanes on interstates
- Development density and commercial opportunities at Commuter Rail Stations
- Ensure recommendations are implementable
- Ensure the "complete street" concept of including all desirable mode improvements in a project is followed
- Expanded and improved use of Intelligent Transportation Systems (ITS)
- I-75/I-675 interchange redesign
- Improve transit (all forms including C-TRAN expansion and Commuter Rail)
- Improved and expanded public transit service
- Improved connectivity between vehicles, walking, biking, transit
- Improved sidewalks and crosswalks
- Interagency (federal, state, regional, and local) coordination
- Land use and transportation coordination
- Look at funding options to ensure maximization of available funding
- Mixed-use transit-oriented development
- New grade separated crossings
- New or improved bicycle facilities (on and off road)
- Policies to change behavior (public education of traveling impacts, living closer to employment centers, etc.)
- Right-of-way preservation for new construction or widening of roads
- Roadway connectivity
- Separation of local through traffic
- Speed control on roadways

#### 2035 High Priority Transportation System Needs:

- Better land use and transportation system coordination
- Speed control on roadways
- Congestion relief on major roadways
- Additional public transit amenities
- Expanded and improved use of Intelligent Transportation Systems (ITS)
- Improved sidewalks and crosswalks
- New or improved bicycle facilities (on and off road)
- Improved connectivity between vehicles, walking, biking, transit

### 10.8 Next Steps

Through the needs assessment phase, the evaluation perspective has been at a macro-level, looking at major travel patterns and demand for both intra-county and inter-county travel. Following this assessment of current and future needs, multimodal improvement strategies will be developed. Policies to address future needs, including coordination of land use and transportation planning, system management, and multimodal infrastructure, will be considered.

At the end of the planning process, the recommended improvement strategies will be prioritized, linked to potential funding sources, and submitted through the transportation planning process for approval, programming and implementation. The final plan documentation will include both a plan to guide long range improvements as well as financially constrained implementation program for the near term projects.

## Appendices

## [Appendix A](#) [Model Documentation](#)

Appendix B  
Major Roadways by Subarea  
(Number of Through Lanes and Estimated Capacity)