Atlanta to Athens:
Connectivity and Mobility Study

Summary of Existing Conditions

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1.0 Introduction

The Georgia Department of Transportation is conducting the Atlanta to Athens Connectivity and Mobility Study (A2A) to improve travel between these two important metro areas, to plan for needed transportation infrastructure for new and existing employment centers, educational facilities, and other activity centers within the study area, and to enhance safety for the traveling public. The Atlanta-Athens corridor connects two vibrant metro areas as well as many regional activity centers and important resources in between. GDOT embarked on this study to find ways to improve transportation for residents and businesses by strengthening connectivity between Atlanta and Athens. Evaluating and managing long term transportation needs will ensure safe, efficient travel for all users throughout the corridor for years to come. Travel along this important corridor can impact access to Hartsfield-Jackson Atlanta International Airport, travel time to sporting events in Athens, and connections to a wide variety of urban, suburban, and rural destinations.

The study area consists of portions of the following nine counties encompassing over 1,747 square miles. The east-west length of the study area is over 54 miles long while the north-south distance is over 22 miles.

- Barrow County
- Clark County
- DeKalb County
- Gwinnett County
- Jackson County
- Newton County
- Oconee County
- Rockdale County
- Walton County

A2A Study Area:

- 1.12 million total population
- 371,000 total jobs
- 9 partial counties
- 2 Metropolitan Planning Organizations (MPOs)
- 5 Community Improvement Districts (CIDs)
- 54 miles long and 22 miles wide

2.0 Background

As part of this effort, detailed information was collected about the study area to analyze the existing conditions. This analysis included all facets of conditions in the study area from demographics, to land use to travel conditions. This document summarizes the information presented in several technical memorandums prepared as part of this study. These technical memorandums are listed below.

- *Technical Memorandum #2 – Land Use Policy Analysis and Existing Conditions Land Use*
- *Technical Memorandum #3 – Development of the Travel Demand Model*
- *Technical Memorandum #4 – Summary of Existing Travel Conditions*
- *Technical Memorandum #5 – Crash History and Analysis*
- *Technical Memorandum #11 – Environmental Screening*

This document contains an Appendix which contains various tables and more detailed information from the technical information contained in the above Memorandums. In addition, an Existing Conditions Map Book also accompanies this document which combines the key 11 x 17 maps from the Technical Memorandums.

3.0 Significance of the A2A Study Area

The study area links Georgia's two most important centers of innovation, Metro Atlanta and the University of Georgia (UGA) area. These two areas share a strong bond linking major educational and research facilities, employment and recreational centers. In addition, both Metro Atlanta and UGA share a bond within the study area linking the same activities such as education, employment and recreational. Within the study area there are also major educational facilities besides UGA that attract students and employees from around the Region such as Gwinnett Technical College, Georgia Gwinnett College, and UGA Gwinnett Campus in Gwinnett County as well as Mercer University, DeKalb Technical College and Georgia Perimeter College – Central Campus in DeKalb County. There are also several major activity centers within the study area that attract employees and others from both inside and outside the study area such as the Mall of Georgia, Gwinnett Place, Stonecrest, Northlake, and Lawrenceville. There is a strong need to promote and enhance connectivity for all of these activities. Figure 3.1 in the A2A Existing Conditions Map Book displays the study area and identifies some of the major activity centers. Due to the size of the area, there is no one single governmental jurisdiction responsible for all transportation investments. As mentioned before, the study area encompasses two Metropolitan Planning Organizations (MPOs), Atlanta Regional Commission and Madison Athens-Clarke Oconee Regional Transportation Study (MACORTS), the Northeast Georgia Regional Commission (NEGRC), nine county governments, numerous city governments, five transit providers and various Community Improvement Districts (CIDs). As a result, this effort requires coordinated planning at the state-level with multiple jurisdictions, agencies and stakeholders.

The study area like the rest of Metro Atlanta and the State of Georgia has suffered economic decline as a result of the recent depression. New development and economic activities has slowed for several years. However in the past year, development activities have started to re-emerge as indicated by the construction of the Caterpillar Plant in Athens, Carter's Distribution Center, FedEx distribution Center, Baxter Medical Facility and PureTek. Most of the economic growth in the study area is focused on manufacturing and distribution activities which are usually located near major roadways or interstates. These activities highlight the importance of mobility, accessibility and connectivity within the study area. For this area to continue to experience economic development and growth, these travel issues will need to be addressed.

4.0 Existing Demographic Conditions

The preparation of socio-economic data for the study area was developed from various sources such as the Atlanta Regional Commission (ARC), Madison Athens-Clarke Oconee Regional Transportation Study (MACORTS), American Community Survey (ACS) and Census. Detailed development of the data by TAZ is documented in the *Technical Memorandum #3 – Development of the Travel Demand Model.* Table 4.1 lists the socio-economic data for the study

area by county. The data only includes the portion of the counties that is within the study area. ***There are almost 1.2 million people living in the study area with over 370,000 jobs.***

Table 4.1: 2010 Socio-economic Data by County for the Study Area

County	POP	HHs	Univ Enroll	Const Emp	Manf Emp	TCU* Emp	Whol Emp	Retail Emp	FIRE** Emp	Service Emp	Govt Emp	Total Emp
Barrow	65,670	23,873	0	829	1,598	557	903	3,815	575	5,363	914	14,567
Clarke	79,653	30,777	32,514	0	3,749	0	405	9,654	0	33,164	1,848	48,820
DeKalb	314,941	115,285	26,192	3,954	7,142	10,989	5,570	18,507	3,536	35,516	2,417	87,653
Gwinnett	536,364	185,936	14,684	8,673	11,646	9,459	13,050	48,264	9,098	71,700	4,449	176,354
Jackson	26,669	9,309	0	757	672	0	985	708	0	3,563	2,033	8,718
Oconee	12,556	4,464	0	0	154	0	154	1,487	0	1,456	170	3,420
Rockdale	31,908	11,911	4,793	1,390	2,916	1,837	1,176	4,220	523	6,277	1,266	19,611
Walton	57,304	20,478	0	1,589	727	304	228	3,497	425	3,836	884	11,502
Total	1,125,065	402,033	78,183	17,192	28,604	23,146	22,471	90,152	14,157	160,875	13,981	370,645

Source: ARC, MACORTS, Census
* Transportation, Communication and Utilities
**Finance, Insurance, Real estate

Figure 4.1 in the A2A Existing Conditions Map Book shows the population and employment density for the study area. The highest concentrations of population and employment are located along I-285 and I-85, SR 10 and in downtown Athens. Significant portions of DeKalb and Gwinnett Counties and the area surrounding Downtown Athens have the highest concentrations of population per acre. ***More than half of the study area has very low density with less than two people and/or four jobs per acre.***

The census data was reviewed to identify potential Environmental Justice communities. Figures 4.2 through 4.4 in the A2A Existing Conditions Map Book show the results of this analysis. ***In 2010, minority persons made up almost 60% of the study area population, slightly higher share than the statewide average of 56%***. Minority concentrations vary significantly throughout the corridor, with the largest communities found in DeKalb County and along I-85 in Gwinnett County. Particularly high concentrations of minority populations are located south of US 78 within DeKalb County, central Rockdale County and in the cities of Athens, Conyers, Monroe, and Lawrenceville. 16% of the population in the study area is considered low-income[1], which is also consistent with the statewide average. The proportion of low-income populations varies among the cities and counties, with the largest concentrations located in Athens-Clarke, followed by the areas near I-285/US 78 and I-20 in DeKalb County and areas east of I-85 in Gwinnett County. The cities of Conyers, Monroe, Winder, Jefferson, Arcade and Lawrenceville include areas with greater numbers of low-income persons than the state average. Over 5% of the population in the study area has zero-car households which is slightly less than the statewide average of 7%. Similar to the patterns of low-income populations, the largest concentrations of zero-car households are located in Athens-Clarke followed by the areas bordering I-285 and I-20 in DeKalb County and areas near I-85 in Gwinnett County. The cities of Monroe, Conyers, Winder, Lithonia and Clarkston include areas with greater number of zero-car households than the state average.

[1] Low Income are defined as those persons living below the census defined poverty level.

5.0 Existing Transportation Facilities and Travel Patterns

A variety of information was collected to assist with the analysis of travel patterns and conditions within the A2A study area. This information was used to develop a travel demand model which was also used to evaluate existing travel conditions within the study area. The detailed documentation on the development of the travel demand model can be found in Technical Memorandum #3 – Development of the Travel Demand Model. This section will provide an overview of the existing 2010 travel conditions and patterns within the study area based on the results of the travel demand model.

The A2A study area is served by a multimodal transportation system comprised of streets and highways (local, arterials, interstates, expressways, and managed lanes), bus transit (local and express), freight rail, bicycle, pedestrian, and trail facilities. More detailed information about these elements of the transportation system is provided in this section.

5.1 Highway Facilities

The transportation network in the A2A study area was reviewed from a number of perspectives, including the facility type of its streets and highways. Facility type is a term used to identify the operating characteristics of a facility in a highway system. Table 5.1 lists the number of miles and lane miles by road type. The miles reflect both directions of a facility, while lane miles reflect the number of lanes times the distance of the facility. Lane miles show the multi-lane capacity of the facilities. Not all local roads are included in the A2A modeled highway network. More than half of the roadway system in the study area consists of principal and minor arterials. The majority of the freeway/interstates and principal arterials are multi-lane facilities, while the majority of the minor arterials and collectors are two-lane facilities as shown by the difference between lane miles and miles. Figure 5.1 in the A2A Existing Conditions Map Book displays the roadway facilities in the modeled study area by facility type

Table 5.1: Roadway Miles and Lane Miles in Study Area

Facility	Miles*	Percent	Lane Miles	Percent
Freeways/Interstates	400	11.2%	979	20.1%
Ramps	60	1.7%	65	1.3%
Principal Arterials	509	14.2%	934	19.1%
Minor Arterials	1,498	41.8%	1,742	35.7%
Collectors & Local Roads	1,113	31.1%	1,158	23.7%
Total	3,580	100.0%	4,878	100.0%

Source: Atlanta to Athens Connectivity Model 2010
*Includes both directions

Table 5.2 lists the centerline roadway miles by the number of lanes in the study area. Centerline roadway miles represent the mileage of a facility regardless of the number of lanes or direction. ***Approximately three-fourths of the centerline roadway miles consist of 1-2 lane facilities while one-fifth of the facilities are four lanes. The higher designed facilities consisting of six or more lanes comprised only five percent of the total roadway system.***

Table 5.2: Centerline Roadway Miles by Number of Lanes in Study Area

Number of Lanes	Miles	Percent
1-2	1,345	72.6%
4	417	22.5%
6	57	3.1%
8 or more	34	1.8%
Total	1,853	100.0%

Source: Atlanta to Athens Connectivity Model 2010

The A2A highway system was mapped by facility type and area type. Figure 5.2 in the A2A Existing Conditions Map Book shows the facilities in the study area by the number of lanes. The interstates I-85, I-285 and I-20 located at the periphery of the study area, have the most number of lanes. Part of US 78 is a six-lane limited access facility running from I-285 to West Park Place where it continues as a four-lane arterial to SR 124. SR 316 is a four-lane limited access facility from I-85 to Lawrenceville and continues as a four-lane arterial to US 10 in Athens. US 78 and SR 316 are the only four-lane arterials within the study area that provide east-west access from one end of the study area to the other end. SR 124 provides an almost continuous four-lane facility providing for north south travel through the study area. The 2-lane arterials, SR 11 and US 129 also provides for north-south travel. In the portion of the study area within Gwinnett and DeKalb Counties, there are numerous multi-lane facilities. These facilities serve local travel within and through these areas and are not designed for inter-city travel.

Figure 5.3 in the A2A Existing Conditions Map Book shows the area type in the study area. Area type is based on both the population and employment density in and around the traffic analysis zones (TAZ). These densities are based on the aggregation of zones and are not the same as those in Figure 4.1 in the A2A Existing Conditions Map Book. These area types range from the highest density (central business district (CBD) area type to the lowest densities (rural area types). The area types have been given names, which are indicative of the densities they represent. These names are based strictly on the density (population and employment density) of the area and not the type of urban form of the area. The names of the area types (in order of the highest to the lowest density) are: 1 – CBD; 2- Urban Commercial; 3 – Urban Residential; 4 - Suburban Commercial; 5 – Suburban Residential; 6 – Exurban; 7 – Rural/Low Density. The ranges for the area type designations are based on the population and employment densities for the entire model area of over 23 counties. There are some areas in DeKalb County that are designated rural near I-285 due to low population density, the size of the surrounding zones, vacant land and the location of the Stone Mountain Park. The rest of the rural areas are located in Clark County and around the county boundaries. These classifications are used to summarize travel demand in later sections.

5.2 Transit Routes

There are five public providers of regular scheduled transit service in the study area in 2010.

- Athens Transit
- University of Georgia Transit
- Gwinnett County Transit (GCT)

- Metropolitan Atlanta Rapid Transit Authority (MARTA)
- Georgia Regional Transportation Authority (GRTA)

After 2010, a new private provider, Megabus initiated express service between Athens and midtown Atlanta with three daily routes. This service is inter-city service where the buses have reclining seats, free Wi-Fi and restrooms. The fares as of December 2012 currently range from $4.00 to $10.00 depending on time of booking and availability of seats and demand. This service is not included in our existing conditions analysis.

Table 5.3 lists the number of bus route and service miles in the study area. Bus route miles represent the route regularly traveled by bus vehicles which is available for the general public to carry passengers. The length of a route is the round trip distance traveled completely over the route and returning to the starting point to begin another circuit of the route. If a route is defined as one direction, then only the one-directional distance is the route length. Bus service miles are based on the number of vehicles which cover the routes which is a reflection of how often the bus runs. Figure 5.4 in the A2A Existing Conditions Map Book displays the transit bus routes in the study area. The service at either ends of the study area is designed to provide service to that area. Only the new Megabus service is designed to provide inter-city service.

Table 5.3: Transit Route and Service Miles in Study Area

Transit Service	Miles
Total bus route miles	954.6
Total bus service miles	30,438.3

Source: Atlanta to Athens Connectivity Model 2010

5.3 Travel Patterns

Several types of analyses were performed to understand the trips that travel within and through the entire corridor from Atlanta to Athens. These analyses include assessment of trip densities by location, select link analysis, district travel patterns, and trip lengths.

5.3.1 Trip Densities by Location

An analysis of the daily trips in the A2A study area was performed using the travel demand model developed for this study. Trips were stratified by purpose and by their origin and destination. A set of maps depicting the origins and destinations at six locations in the study area were prepared (see A2A Existing Conditions Map Book Figures 5.5 through 5.10). A review of the concentration of trips shows where there are accessibility needs within and through the study area. Each dot represents five trips on each of the Figures.

Figure 5.5 displays the home-based work (HBW) trips that begin and end within the study area by destination. The destination of the HBW trips are concentrated in and around the activity centers. The large concentration of dots shows that there is significant intra-study area HBW travel. Figure 5.6 displays the HBW trips that originated within the study area but are destined for locations outside the study area. The primary work destinations for the residents of the study area are in downtown Atlanta and Midtown, Lenox, Buckhead, Perimeter Mall, and along the I-85 corridor in Gwinnett County. This map shows that residents of the study area work in a variety of locations in the Atlanta region and are not limited to downtown and midtown Atlanta. Figure 5.7 displays the HBW trips originating outside the study area, destined for employment within the study area. The trips are not as concentrated in specific locations as in the

other two figures. The trips are more distributed along the boundary of the study area and Interstates with the exception of the concentration of HBW trips coming from the Gwinnett Place and east of Athens areas.

Figures 5.8 through 5.10 show the travel patterns for total daily person trips. Due to the larger number of daily person trips, each dot on these three maps represents 30 trips. Figure 5.8 displays total person trips that begin and end within the study area by destination. The concentration of the major trip destinations for person trips is similar to the patterns displayed by the HBW trips. The majority of the trip destinations are concentrated in and around the activity centers. However there are a large number of trip destinations to the rural areas of the study area. Figure 5.9 displays daily person trips for residents of the study area that are going to locations outside the study area. Again the results are similar to the HBW trips for this travel pattern. The locations of the destinations for person trips of the study area are concentrated along the major travel corridors such as the Downtown Connector, I-85, I-285 and GA 400. Figure 5.10 displays the daily person trips originating outside the study area while their destinations are within the study area. Similar to the travel patterns for HBW trips, the origin locations are distributed fairly evenly around the study area boundary. The largest concentration of origin locations is located to the east of Athens in Clark County.

5.3.2 Select Link Analysis

The purpose of a select link analysis is to identify where trips start and end that use a specific section of a roadway. This analysis provides information on the length of trips using the roadway by evaluating where the trips start and end. Select link analysis was performed for the corridors, SR 316, US 78, US 129 and SR 138. These corridors were selected for this analysis to evaluate whether they provide connectivity between Atlanta to Athens. A link on each facility was selected in the middle of the corridor and a traffic assignment was performed that summarized the origins and destinations of all of the trips that cross that link. The selected link is highlighted in yellow in the Figures 5.11 through 5.14 for each of the individual facilities. The trip ends were then mapped to provide an understanding of where the trips are coming and going that travel on the individual facilities.

Figure 5.11 shows the trip ends for trips on SR 316 east of Winder. First, the concentration of dots shows the high usage of the facility. The location of the concentration of trips at both ends of the study area shows that trips use SR 316 to traverse the entire corridor. Figure 5.12 shows the trip ends for trips on US 78 located east of Loganville. The concentration of the trips within the middle of the study area shows that US 78 is used for shorter trips and not for travel between Atlanta and Athens. Figure 5.13 shows the trip ends for trips on SR 138 between Conyers and Monroe. The concentration of trips in Walton and Rockdale counties show that this facility is also used more for intra-county travel and not for regional travel between Atlanta and Athens. Figure 5.14 shows the trip ends for trips on US 129 east of I-85. Stakeholder interviews indicated that US 129 to I-85 is an increasingly popular route for Athens to Atlanta travelers. However, the results from the traffic assignment did not show that this was a strong travel pattern. The concentration of trips show that US 129 is used more for intra-county travel between Hall, Jackson and Clark counties. The lack of travel between Atlanta and Athens in this corridor may be due to the nature of the travel demand model. The model assigns trips based on the shortest path. People may use this route between Atlanta and Athens due to specific incidents on other corridors, time of day considerations and/or their perception that this is a better alternative while the travel demand model will consider other options based on the shortest path.

5.3.3 Atlanta to Athens District Travel Patterns

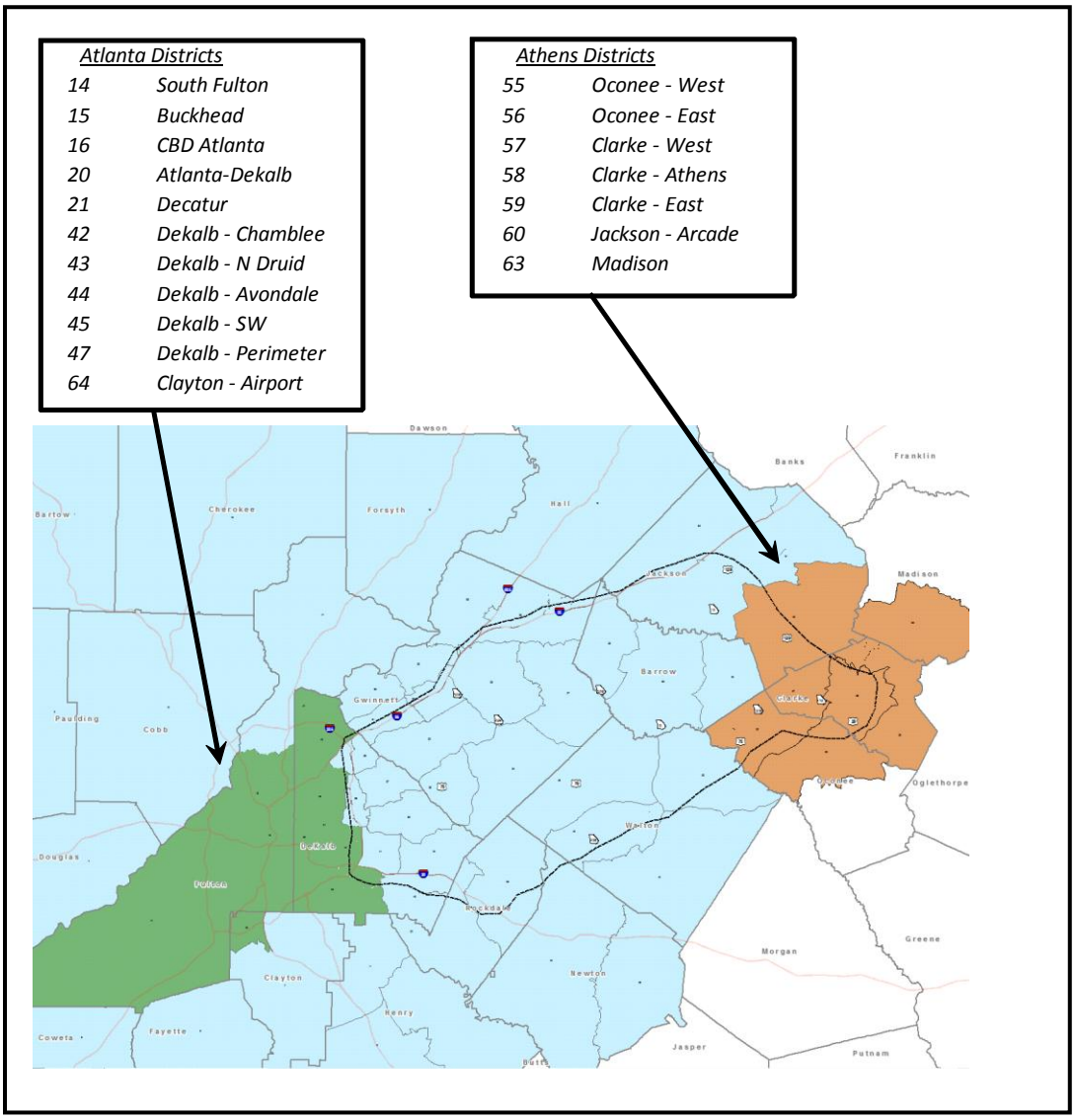
The study area was divided into two "districts", representing Atlanta and Athens, in order to analyze travel patterns between the two areas. A summary of the trips between selected areas in Atlanta and Athens by route is listed in Table 5.4. Figure 5.1 shows the locations of these districts. The selected areas in Atlanta consist of Downtown Atlanta, Midtown, Buckhead, Decatur, Emory, Perimeter Mall, Airport and Chamblee and South Fulton and Southwest DeKalb. The selected areas in Athens consist of Oconee County, Athens, Clarke County, Arcade and Madison County. ***Two-thirds of the trips traveling between these districts use SR 316, while eleven percent use SR 138. US 129 accounts for almost five percent and US 78 accounts for only two percent of the travel between these areas.***

Table 5.4: Daily Trips between Selected Areas in Atlanta and Athens

Facility	Sample Trips	Percent using Route
SR 316	1,515	66.8%
US 129	101	4.5%
US 78	45	2.0%
SR 138	251	11.1%
Other routes	356	15.7%
Total	2,268	100.0%

Source: Atlanta to Athens Connectivity Model 2010

Figure 5.1: Locations of Selected Areas in Atlanta and Athens



The American Community Survey (ACS) data for 2006-2008 was summarized to check results from the travel demand model for daily inter-city trips as shown in Table 5.4. The ACS travel flow data is only available at the county level. The major counties in the study area, Barrow, DeKalb, Gwinnett, Jackson, and Walton were summarized as one area. The remaining ARC area consists of the 20 County Region minus Barrow, DeKalb, Gwinnett, and Walton Counties. The summary of the trips between MACORTS and the Rest of the ARC Region is 2,819. This indicates that the number of trips for the selected locations in Table 5.5 is reasonable when compared to the ACS data.

Table 5.5: Daily Trips between Selected Areas from American Community Survey Data

Area	Study Area	Rest of ARC Region	MACORTS
Study Area	1,184,805	1,091	5,905
Rest of ARC Region	379,075	7,874	1,545
MACORTS	5,590	1,274	68,950

Source: American Community Survey Data 2006-2008

5.3.4 Analysis of Trip Lengths

The lengths of the trips that traverse each link were summarized from the TDM for 2010. The trip length distribution by link was divided into three categories listed below.

- Short – 0 to 15 miles
- Medium – 15.1 to 40 miles
- Long - Greater than 40

Then the percent of the trips by trip length by link was calculated and are shown in Figures 5.15 through 5.18 in the A2A Existing Conditions Map Book. Figure 5.15 shows the trip length distribution for short trips that are less than fifteen miles. The facilities with the highest percent of short trips, as indicated by the red and blue links are concentrated at both ends of the study area and in the Winder area. These trips are more local travel in nature. Figure 5.16 shows the facilities with trip lengths between 15 and 40 miles. Between 40% - 60% of the trips that use I-85, I-20, I-285, SR 316, SR 11, SR 29, US 129 and portions of US 78 are between 15 and 40 miles in length. Between 60%-80% of the trips that traverse some segments of US 78, most of which are in DeKalb County are between 15 and 40 miles in length. The facilities shown in blue in this figure are the facilities that provide more inter-county travel. Figure 5.17 shows the facilities which carry the trips that are more than 40 miles in length. Only a limited number of facilities are highlighted where 40%-80% percent of the trips using those facilities are greater than 40 miles. Most of the facilities highlighted are the higher-designed facilities such as I-85, I-20, and SR 316; however the arterials SR 138, US 129 and the portion of US 78 in Walton County are also highlighted. These are the facilities that provide inter-regional travel. Figure 5.18 shows the average weighted trip distance. ***This figure shows that I-85, I-20, SR 316, US 129, SR 138, SR 11 and portions of US 78 carry the trips that are longer in nature and provide more regional connectivity, while other portions of US 78 in DeKalb and Gwinnett Counties, SR 81, SR 53 and US 29 carry trips that provide inter-county connectivity***

6.0 Existing Transportation Conditions

In order to evaluate travel patterns and conditions, a travel demand model was developed for this study. Travel demand models are developed to simulate actual travel patterns and demand. The models consist of a complex set of mathematical equations that estimate travel demand, patterns and mode and graphical databases that replicate the "real world" transportation system (roads, intersections, transit bus routes and rail lines). Travel demand is generated using socioeconomic data such population, households and employment data. Documentation on the development of the travel demand model used for this effort is documented in the *Technical Memorandum #3 – Development of the Travel Demand Model*. The TDM for this effort is an extension of the ARC model that incorporates information from the MACORTS model as well.

6.1 Roadway Facilities

The information presented in this section is based on the results provided from the A2A travel demand model. Table 6.1 lists the daily 2010 vehicle miles travelled (VMT) by time of day by facility and area type. Almost one half of the daily travel occurs on the freeway and interstates within the study area during all time periods while the remaining travel occurs on the principal and minor arterials in approximately equal amounts. Slightly more VMT occurs in the mid-day period which covers 10 a.m. to 3 p.m. than in the evening period which covers only four hours, 3 p.m. to 7 p.m. Approximately 43 percent of the daily VMT occurs on links that are designated with the suburban-residential area type while 30 percent of the VMT occurs on facilities that are designated as rural. These rural facilities include portions of I-285 and US 78 in DeKalb County as pointed out in the previous section.

Table 6.1: Vehicle Miles Travelled (VMT) by Time of Day by Facility Type and Area Type

	Total VMT					Percent VMT by Time of Day				
Facility Type	**AM**	**MD**	**PM**	**NT**	**Total**	**AM**	**MD**	**PM**	**NT**	**Total**
Freeways & Interstates	3,137,000	3,771,100	3,438,700	2,947,500	13,294,300	44.2%	46.4%	42.7%	48.2%	45.2%
Ramps	104,100	120,300	113,700	93,700	431,800	1.5%	1.5%	1.4%	1.5%	1.5%
Principal Arterials	1,730,900	1,958,600	1,987,000	1,407,100	7,083,600	24.4%	24.1%	24.7%	23.0%	24.1%
Minor Arterials	1,701,400	1,832,300	2,001,700	1,343,600	6,879,000	24.0%	22.5%	24.9%	22.0%	23.4%
Collectors & Local Roads	424,000	443,700	513,800	317,000	1,698,500	6.0%	5.5%	6.4%	5.2%	5.8%
Total	7,097,400	8,126,000	8,054,900	6,108,900	29,387,200	100.0%	100.0%	100.0%	100.0%	100.0%
	Total VMT					**Percent VMT**				
Area Type	**AM**	**MD**	**PM**	**NT**	**Total**	**AM**	**MD**	**PM**	**NT**	**Total**
CBD	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Urban Commercial	30,900	34,800	34,700	25,500	125,900	0.4%	0.4%	0.4%	0.4%	0.4%
Urban Residential	610,700	709,500	669,400	542,100	2,531,700	8.6%	8.7%	8.3%	8.9%	8.6%
Suburban Commercial	766,500	882,100	852,000	662,000	3,162,600	10.8%	10.9%	10.6%	10.8%	10.8%
Suburban Residential	3,030,100	3,457,500	3,480,100	2,577,300	12,545,000	42.7%	42.5%	43.2%	42.2%	42.7%
Exurban	485,200	550,300	556,200	412,900	2,004,600	6.8%	6.8%	6.9%	6.8%	6.8%
Rural	2,174,000	2,491,800	2,462,500	1,889,100	9,017,400	30.6%	30.7%	30.6%	30.9%	30.7%
Total	7,097,400	8,126,000	8,054,900	6,108,900	29,387,200	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Atlanta to Athens Connectivity Model 2010

Table 6.2 shows the summary of daily VMT travelled by aggregate type of facility. The Interstates/HOV/freeway facilities carry almost 46% of the daily VMT while only accounting for about 10% of total roadway network. This shows the importance of these facilities in providing mobility in the study area. Multi-lane facilities carry almost 30% of the

daily VMT on approximately 20% of the roadway network. The two-lane facilities carry one-fourth of the daily VMT on over 70% of the roadway network.

Table 6.2: Summary of Vehicle Miles Travelled (VMT) by Center Line Miles

Type Facility	Total Center Line Miles	Percent of Total	Total Travel (VMT)	Percent of Total Travel
Interstate/HOV	130.3	7.4%	12,025,200	39.7%
Freeway	47.0	2.7%	1,785,900	5.9%
Multi-Lane	328.7	18.8%	8,605,200	28.4%
Two-Lane	1,246.6	71.1%	7,845,200	25.9%
Total	1,752.6	100.0%	30,261,500	100.0%

Source: Atlanta to Athens Connectivity Model 2010

Figure 5.19 in the A2A Existing Conditions Map Book show the total average daily volumes within the study area by volume ranges. Interstates I-285, I-20 and I-85 carry the largest number of vehicles daily. The major travel corridors between Athens and Atlanta in order of daily travel volumes are:

1. SR 316
2. US 78
3. I-20 to SR 138 to US 78
4. US 129 to I-85
5. US 29 to SR 316

SR 124, SR 11, SR 81, SR 20 and Jimmy Carter Blvd/Mountain Industrial Blvd/Hairston Rd corridors carry the higher volumes of north south travel with the study area. The facilities carrying the largest travel volumes are concentrated in the eastern and western portions of the study area.

Figure 5.20 in the A2A Existing Conditions Map Book shows the daily truck volumes. Truck travel patterns are similar to the total daily travel patterns. Truck travel is focused on the higher-designed facilities within the study area. The Interstates I-85, I20, and I-285 and SR 316 are the facilities that carry the highest number of trucks. Figure 5.21 in the A2A Existing Conditions Map Book shows the percent of truck trips by facility. The percent of average daily truck traffic on I-85 and I-20 is greater than 20 percent in 2010. The average daily percent of truck traffic on SR 316, SR 138, US 11 and portions of US 78 is between 10 to 20 percent. The rest of the facilities carry an average of less than 10 percent of truck traffic. Approximately five percent of the daily VMT within the study area is due to heavy duty trucks and five percent to medium duty trucks.

Table 6.3 summarizes the daily VMT on highway facilities above the level of service (LOS) C by facility and area type by time of day. LOS represents the level of service for operations on a roadway facility and is represented by grades

denoted by the letters A, B, C, D, E and F. Their meanings are similar to grades that teachers give children on their report cards with an "A" representing little or no congestion/delay and "F" representing extreme congestion or long delays. This measure is derived by dividing the theoretical facility capacity by the traffic volume. Qualitative descriptions of traffic flow associated with each LOS are provided below. These descriptions are based on definitions established in the Highway Capacity Manual (HCM) 2000.

- LOS A: Represents free flow conditions. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high.
- LOS B: In the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A.
- LOS C: In the range of stable flow, but it marks the beginning of the range of flow in which the operations of individual users become significantly affected by interactions with others in the traffic stream.
- LOS D: Represents high density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
- LOS E: Represents operating conditions at or near capacity level. Freedom to maneuver within the traffic stream is extremely difficult. Comfort and convenience levels are extremely poor, and driver frustration is generally high.
- LOS F: Describes forced or break-down flow. This condition exists when the amount of traffic approaching a point exceeds that which can traverse the point.

The majority of travel operating in severe conditions occurs during the peak time periods, while congested travel conditions can occur throughout the day. Table 6.3 summarizes the VMT operating above the LOS C by facility type and area type which represents travel occurring in congested conditions.

Table 6.3: VMT above LOS C by Facility Type and Area Type

	VMT on Highways above LOS C					Percent VMT
Facility Type	**AM**	**MD**	**PM**	**NT**	**Total**	**Total**
Freeways	1,687,400	1,951,000	2,171,000	0	5,809,400	75.0%
Ramps	13,800	9,800	21,100	0	44,700	1.3%
Principal Arterials	289,900	104,900	480,500	0	875,300	7.6%
Minor Arterials	186,000	74,000	281,400	0	541,400	12.2%
Collectors & Local Roads	34,100	11,000	61,100	0	106,200	4.0%
Total	2,211,200	2,150,700	3,015,100	0	7,377,000	100.0%
	VMT on Highways above LOS C					Percent VMT
Area Type	**AM**	**MD**	**PM**	**NT**	**Total**	**Total**
CBD	0	0	0	0	0	0.0%
Urban Commercial	12,200	8,400	15,200	0	35,800	0.0%
Urban Residential	341,900	333,100	391,400	0	1,066,400	0.5%
Suburban Commercial	346,400	428,300	475,700	0	1,250,400	4.4%
Suburban Residential	830,800	705,500	1,271,900	0	2,808,200	13.9%
Exurban	59,100	42,200	88,500	0	189,800	0.7%
Rural	620,800	633,200	772,400	0	2,026,400	80.5%
Total	2,211,200	2,150,700	3,015,100	0	7,377,000	100.0%

Source: Atlanta to Athens Connectivity Model 2010

Over three-fourths of the VMT traveling in congested conditions occurs on the freeways while two-thirds of this travel occurs in areas designated suburban residential and rural. One-fourth of the daily VMT occurs during congested conditions. More than half of the travel on the freeways during the peak periods and mid-day occurs during congested conditions while travel on the arterials operating under congested conditions is considerable less and occurs only during the peak periods. Congested travel is distributed throughout the study area but more travel, approximately 40 percent of the daily travel in urban residential and suburban commercial areas occurs under congested conditions.

Table 6.4: Percent of VMT above LOS C by Facility Type and Area Type

	Percent of VMT on Highways above LOS C				
Facility Type	**AM**	**MD**	**PM**	**NT**	**Total**
Freeways	53.8%	51.7%	63.1%	0.0%	43.7%
Ramps	13.3%	8.1%	18.6%	0.0%	10.4%
Principal Arterials	16.7%	5.4%	24.2%	0.0%	12.4%
Minor Arterials	10.9%	4.0%	14.1%	0.0%	7.9%
Collectors & Local Roads	8.0%	2.5%	11.9%	0.0%	6.3%
Total	31.2%	26.5%	37.4%	0.0%	25.1%
	Percent of VMT on Highways above LOS C				
Area Type	**AM**	**MD**	**PM**	**NT**	**Total**
CBD	NA	NA	NA	NA	NA
Urban Commercial	39.5%	24.1%	43.8%	0.0%	28.4%
Urban Residential	56.0%	46.9%	58.5%	0.0%	42.1%
Suburban Commercial	45.2%	48.6%	55.8%	0.0%	39.5%
Suburban Residential	27.4%	20.4%	36.5%	0.0%	22.4%
Exurban	12.2%	7.7%	15.9%	0.0%	9.5%
Rural	28.6%	25.4%	31.4%	0.0%	22.5%
Total	31.2%	26.5%	37.4%	0.0%	25.1%

Source: Atlanta to Athens Connectivity Model 2010

Figure 5.23 in the A2A Existing Conditions Map Book shows the daily LOS for the facilities in the study area. ***The facilities operating under congested conditions are primarily located in DeKalb and Gwinnett counties and within downtown Athens. All of the interstates, parts of SR 316, SR 124, SR 20, US 29, US 441, Rockbridge Rd and Hairston Rd are operating at congested conditions.***

Table 6.5 summarizes the vehicle hours of delay (VHD) by facility type and area type. VHD represent the hours of travel that occur where the travel times and speeds are not operating in free-flow conditions. While congested VMT represents the travel occurring under congested conditions, VHD represents the additional travel time incurred due to the congestion. Twelve percent of the daily vehicle hours travelled (VHT) within the study area occur under congested conditions. Approximately 70 percent of the VHD takes place during the peak periods. ***More than half of the VHD occurs on the freeways and interstates with almost twenty percent on principal arterials and seventeen percent on minor arterials. Almost 40 percent of the VHD occurs in area types designated as suburban residential while almost 30 percent is taking place in area types designated as rural.***

Table 6.5: Vehicle Hours of Delay (VHD) by Time of Day by Facility Type and Area Type

	Total VHD					Percent VHD
Facility Type	**AM**	**MD**	**PM**	**NT**	**Total**	**Total**
Freeways	19,200	15,600	25,200	8,400	68,400	59.3%
Ramps	500	300	500	200	1,500	1.3%
Principal Arterials	6,400	3,900	9,200	1,600	21,100	18.3%
Minor Arterials	5,600	3,800	8,000	1,400	18,800	16.3%
Collectors & Local Roads	1,600	1,100	2,400	400	5,500	4.8%
Total	33,300	24,700	45,300	12,000	115,300	100.0%
	Total Vehicle Hours of Delay (VHD)					Percent VHD
Area Type	**AM**	**MD**	**PM**	**NT**	**Total**	**Total**
CBD	0	0	0	0	0	0.0%
Urban Commercial	300	200	300	100	900	0.8%
Urban Residential	4,600	3,400	5,800	1,700	15,500	13.4%
Suburban Commercial	5,100	3,600	6,200	1,800	16,700	14.5%
Suburban Residential	12,600	9,100	18,600	4,400	44,700	38.8%
Exurban	1,300	1,000	1,700	400	4,400	3.8%
Rural	9,400	7,400	12,700	3,600	33,100	28.7%
Total	33,300	24,700	45,300	12,000	115,300	100.0%

Source: Atlanta to Athens Connectivity Model 2010

6.2 Transit Facilities

There are over 52,000 daily transit trips occurring in the study area with two-thirds of them on the MARTA system, fifteen percent on the Athens Transit System, fourteen percent on GCT and the five percent on the GRTA express bus system. Even though, many of the routes provide service outside the study area, boardings were only available for the entire route. The percent of daily trips by transit is less than two percent for the study area which is identical to the percent transit for the entire model area. A detailed listing by system and route of transit boardings can be found in the Appendix. There are over twenty Park and Ride lots in the study area with over 10,000 parking spaces. Figure 5.4 in the A2A Existing Conditions Map Book displays the transit routes and the locations of the Park and Ride Lots.

Bus passenger miles represent the number of passengers times the distance of the transit route. There are over 236,000 daily transit passenger miles with an average of 50 boardings per route mile according to the A2A 2010 model.

6.3 Summary of Transportation Condition Findings

The existing transportation conditions in the A2A study area are summarized below.

- Over 1.1 million people reside in the study area, almost 50% live in Gwinnett County, 28% in DeKalb County, 7% in Clarke County and 6% in Barrow and the rest is distributed among the other counties.

- There are over 370,000 jobs within the study area with almost half of them located in Gwinnett County.

- The highest concentrations of population and employment are located along I-285, I-85, SR 10 and in downtown Athens. More than half of the study area has very low density with less than two people and/or four jobs per acre.

- More than half of the roadway system in the study area consists of principal and minor arterials. The majority of the freeways/interstates and principal arterials are multi-lane facilities while the majority of the minor arterials and collectors are two-lane facilities.

- There are four public transit agencies providing 955 bus route miles and over 30,000 bus service miles with total average daily boardings of 52,400.

- Regional/cross-regional area work trips are concentrated in and around the activity centers. The primary work destinations for the residents of the study area are downtown Atlanta, Midtown, Buckhead, Perimeter Mall and along the I-85 corridor in Gwinnett County. The origins of workers coming to the study are distributed along the boundary of the study area with the exception of the concentration of trips coming from the north of Gwinnet Place area and east of Athens.

- I-85, I-20, SR 316, US 129, SR 138, SR 11 and portions of US 78 carry the trips that are longer in nature and provide regional connectivity while US 78, SR 81, SR 53 and US 29 provide inter-county connectivity.

- Almost one half of the daily travel occurs on the freeway and interstates within the study area during all time periods while the remaining travel occurs on the principal and minor arterials in approximately equal amounts.

- Interstates I-285, I-20 and I-85 carry the largest number of vehicles daily. The major east-west travel corridors between Atlanta and Athens in order of daily travel volumes are: SR 316, US 78, I-20 to SR 138 to US 78, US 129 to I-85, and US 29 to SR 316.

- Truck travel is focused on the higher-designed facilities. Approximately five percent of the daily VMT within the study area is due to heavy duty trucks and five percent to medium duty trucks.

- Twelve percent of the VHT and twenty-five percent of the VMT within the study area occur under congested conditions. The facilities operating under congested conditions are primarily located in DeKalb and Gwinnett counties and within downtown Athens. All of the interstates, parts of SR 316, SR 124, SR 20, US 29, US 441, Rockbridge Rd and Hairston Rd are operating at congested conditions.

- SR 124, SR 11, SR 81, SR 20 and Jimmy Carter Blvd/Mountain Industrial Blvd/Hairston Rd corridors carry the higher volumes of north-south travel with the study area. The facilities carrying the largest travel volumes are concentrated near the eastern and western ends of the study area.

7.0 Crash History and Analysis

A significant component of the Atlanta to Athens Connectivity and Mobility Study is an analysis of crash patterns and crash severity in order to better understand the comprehensive travel issues in this Study Area. The Study Area includes all or portions of the following nine (9) counties: Barrow, Clarke, DeKalb, Gwinnett, Jackson, Newton[2], Oconee, Rockdale, and Walton. This section presents an assessment of crash history within the Study Area from the three-year period 2007 through 2009. This time period was chosen as it is the most recent three-year period available with a complete data set.

7.1 Procedures and Methodology

The University of Alabama's Critical Analysis Reporting Environment (CARE) software was utilized to obtain crash data within the study area for years 2007 through 2009. Crash History was evaluated by road functional classification and by intersection. GDOT is in the process of developing a new accident database, Georgia Electronic Accident Report System (GEARS) which was not available for this effort. In addition, ARC is working on producing county accident profiles but the completion of this effort has also been delayed pending the availability of the GEARS data. The following sections describe the crash data obtained, analysis methods, and a summary of the results of the data analysis.

7.2 Crashes by Functional Class

The Study Team applied the CARE Crosstab Analysis tool to calculate the number of crashes by crash type and functional classification within the three-year analysis period. The crash type is assigned based on the most severe injury type in each crash. The crash types include:

- Fatal: In which one or more fatality resulted from the crash incident;
- Non-Fatal Injury: In which injuries resulted from the crash incident, but no fatalities resulted; and
- Property Damage Only (PDO): In which only property was damaged in the incident, and no fatalities or injuries were reported.

Table 7.1 provides a summary of the total number of crashes by functional classification (as defined by the Georgia Department of Transportation [GDOT]), along with their percentages of the total number of crashes. These totals are obtained from the county-wide totals for each crash type in each of the counties within the project study area. ***Almost thirty percent of fatal crashes occurred on Urban Minor Arterials which is double the amount statewide. The highest percentage of crashes with injuries occurred on the urbanized facilities while Urban Minor Arterials had the highest number of all types of crashes which is similar to the pattern found statewide.***

[2] Newton County crash data was not included in the study area crash rates because the portion of the study area road network in Newton County is insignificant.

Table 7.1. Summary of Crash Types by GDOT Functional Classification (2007-2009)

Functional Classification	Study Area				Georgia			
	Fatal Crashes (Percent of Crash Types)	Injury Crashes (Percent of Crash Types)	PDO* Crashes (Percent of Crash Types)	Total Crashes (Percent of Crash Types)	Fatal Crashes (Percent of Crash Types)	Injury Crashes (Percent of Crash Types)	PDO* Crashes (Percent of Crash Types)	Total Crashes (Percent of Crash Types)
Rural								
Rural Interstate	9 (1.9%)	166 (0.4%)	554 (0.4%)	729 (0.4%)	221 (6.0%)	4,800 (2.2%)	11,220 (1.8%)	16,241 (1.9%)
Rural Principal Arterial	11 (2.3%)	217 (0.5%)	634 (0.4%)	862 (0.5%)	299 (8.2%)	80,044 (3.7%)	15,918 (2.6%)	24,261 (2.9%)
Rural Minor Arterial	20 (4.1%)	575 (1.3%)	1,376 (1.0%)	1,971 (1.0%)	406 (11.1%)	11,182 (5.2%)	21,630 (3.5%)	33,218 (4.0%)
Rural Major Collector	31 (6.4%)	778 (1.7%)	1,558 (1.1%)	2,367 (1.3%)	505 (13.8%)	11,673 (5.4%)	20,486 (3.3%)	32,664 (3.9%)
Rural Minor Collector	12 (2.5%)	238 (0.5%)	488 (0.3%)	738 (0.4%)	122 (3.3%)	2,888 (1.3%)	5,112 (0.8%)	8,122 (1.0%)
Rural Local	11 (2.3%)	450 (1.0%)	935 (0.7%)	1,396 (0.7%)	332 (9.1%)	9,991 (4.7%)	19,393 (3.1%)	29,716 (3.5%)

Functional Classification	Study Area				Georgia			
	Fatal Crashes (Percent of Crash Types)	Injury Crashes (Percent of Crash Types)	PDO* Crashes (Percent of Crash Types)	Total Crashes (Percent of Crash Types)	Fatal Crashes (Percent of Crash Types)	Injury Crashes (Percent of Crash Types)	PDO* Crashes (Percent of Crash Types)	Total Crashes (Percent of Crash Types)
Urban								
Urban Interstate	56 (11.5%)	7,144 (15.7%)	23,093 (16.2%)	30,293 (16.0%)	271 (7.4%)	23,262 (10.8%)	75,227 (12.1%)	98,760 (11.8%)
Urban Freeway or Expressway	17 (3.5%)	1,123 (2.5%)	3,632 (2.5%)	4,772 (2.5%)	35 (1.0%)	2,964 (1.4%)	9,901 (1.6%)	12,900 (1.5%)
Urban Principal Arterial	67 (13.8%)	8,344 (18.4%)	27,187 (19.0%)	35,598 (18.8%)	444 (12.2%)	45,111 (21.0%)	139,103 (22.4%)	184,658 (22.0%)
Urban Minor Arterial	139 (28.6%)	13,960 (30.7%)	42,038 (29.4%)	56,137 (29.7%)	515 (14.1%)	50,357 (23.5%)	151,361 (24.4%)	202,233 (24.1%)
Urban Collector	33 (6.8%)	4,305 (9.5%)	13,119 (9.2%)	17,457 (9.2%)	150 (4.1%)	14,296 (6.7%)	44,898 (7.2%)	59,344 (7.1%)
Urban Local	80 (16.0%)	8,160 (17.9%)	28,356 (19.8%)	36,596 (19.4%)	354 (9.7%)	29,966 (14.0%)	107,038 (17.2%)	137,358 (16.4%)
Total	486 (100.0%)	45,460 (100%)	142,970 (100%)	188,916 (100%)	3,654 (100%)	214,534 (100%)	621,287 (100%)	839,475 (100%)

*PDO: Property Damage Only
Source: CARE, Study Team

7.3 Crash Rates

Crash rates are useful tools because they can be compared to average crash rates along similar corridors. Crash rates are calculated using the number of crashes along the particular roadway segment, the number of years in the analysis period, and the average daily traffic (ADT) along the roadway segment. The following formula is used to calculate crash rates:

$$\text{Crash Rate} = \frac{(\text{Number of Crashes}) \times (10^8)}{(\text{ADT}) \times (\text{Number of Years}) \times (365) \times (\text{Length in miles})}$$

Table 7.2 identifies the crash rates within the Study Area for each functional classification, including the overall crash rate, the injury crash rate, and the fatal crash rate. These rates are then compared to the Georgia statewide average crash rates for each functional classification. Crash rates are expressed as crashes per 100 million vehicle miles travelled (100MVM).

Figures 7.1 through 7.3 graphically display the comparison of the Study Area crash rates for injury crashes, fatal crashes, and total crashes to statewide averages by functional classification for the years 2007 through 2009. In the Study Area, with the exception of Urban Freeway or Expressway, every functional classification has an average crash rate over the three year period that is higher than the statewide average crash rate for the same period. ***The functional classifications with the highest average crash rates over the statewide average rates are Rural Local, Rural Minor Collector, Rural major Collector, and Urban Local. For injury crashes, all functional classifications except Rural Interstate and Urban Freeway or Expressway are over the statewide average rates for the three year period. The functional classifications with the highest injury crash rates over the statewide average rates are Rural Local and Rural Minor Collector. For fatal crashes, all functional classifications had average crash rates over the statewide average crash rates, with the exception of Urban Interstate, Urban Principal Arterial, Urban Collector, and Urban Local. The functional classifications with the highest fatal crash rates over the statewide average rates are Rural Local, Rural Minor Collector, and Urban Freeway or Expressway.***

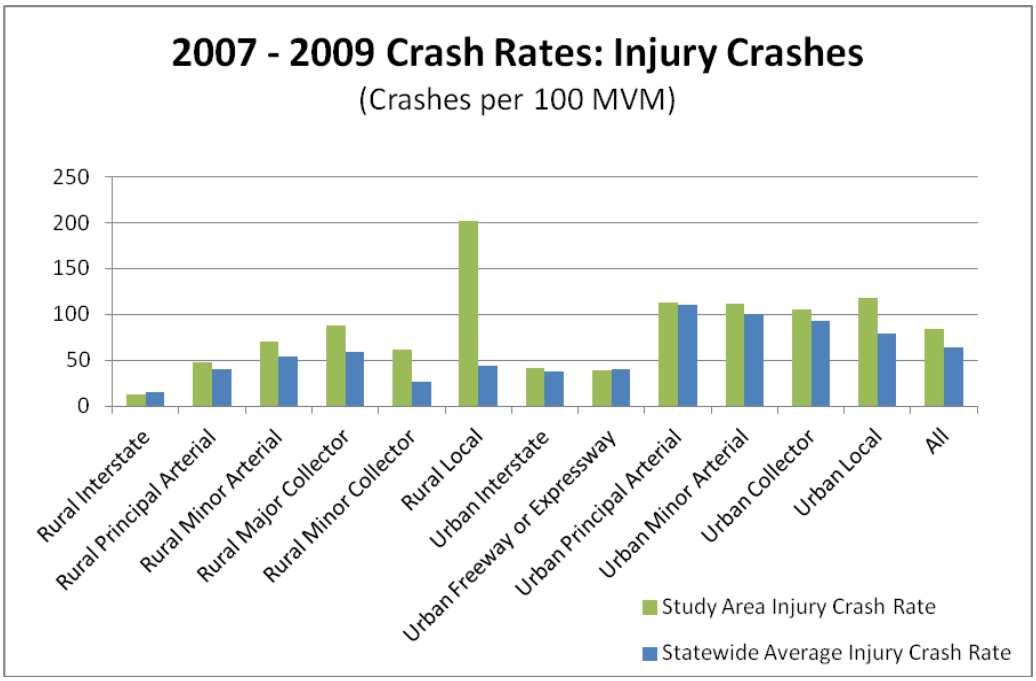
Roadway segments with a crash rate higher than the statewide average for the respective functional classification are shown in 7.4 in the A2A Existing Conditions Map Book. A total of 6,297 segments were evaluated within the study area, each of which is approximately one-half mile in length. Of these 6,297 segments, 3,605 have crash rates above the statewide average for the respective functional classification, or 57 percent, for the years 2007 through 2009. 1,179 segments (18.7 percent) have crash rates that are over the statewide average by 50 percent to 99 percent. 1,813 segments (28.8 percent) have crash rates 100 percent or more above the statewide average. These segments are shown in Figure 7.5 in the A2A Existing Conditions Map Book, and are listed individually in Appendix A.

Table 7.2. Summary of Crash Rates (Crashes per 100MVM) by Functional Classification 2007-2009)

	Study Area			Georgia		
	Crash Rate	Injury Crash Rate	Fatal Crash Rate	Crash Rate	Injury Crash Rate	Fatal Crash Rate
Rural Interstate	55.0	12.3	0.8	52.2	15.4	0.7
Rural Principal Arterial	181.7	47.8	2.0	120.9	40.2	1.5
Rural Minor Arterial	**244.4**	69.8	2.1	160.3	53.8	2.0
Rural Major Collector	**285.8**	87.4	2.8	164.8	59.2	2.5
Rural Minor Collector	**191.9**	60.9	2.5	74.3	26.4	1.1
Rural Local	**616.0**	**201.7**	5.0	128.6	43.3	1.4
Urban Interstate	177.9	42.0	0.3	161.9	38.2	0.4
Urban Freeway or Expressway	162.7	39.0	0.9	174.6	40.3	0.5
Urban Principal Arterial	484.9	113.2	0.9	452.4	110.5	1.1
Urban Minor Arterial	448.2	111.7	1.1	404.1	100.6	1.0
Urban Collector	**429.1**	105.2	0.9	382.1	92.3	1.0
Urban Local	**530.6**	118.0	1.2	342.1	78.6	1.4
All	351.0	84.4	0.9	248.2	63.7	1.1

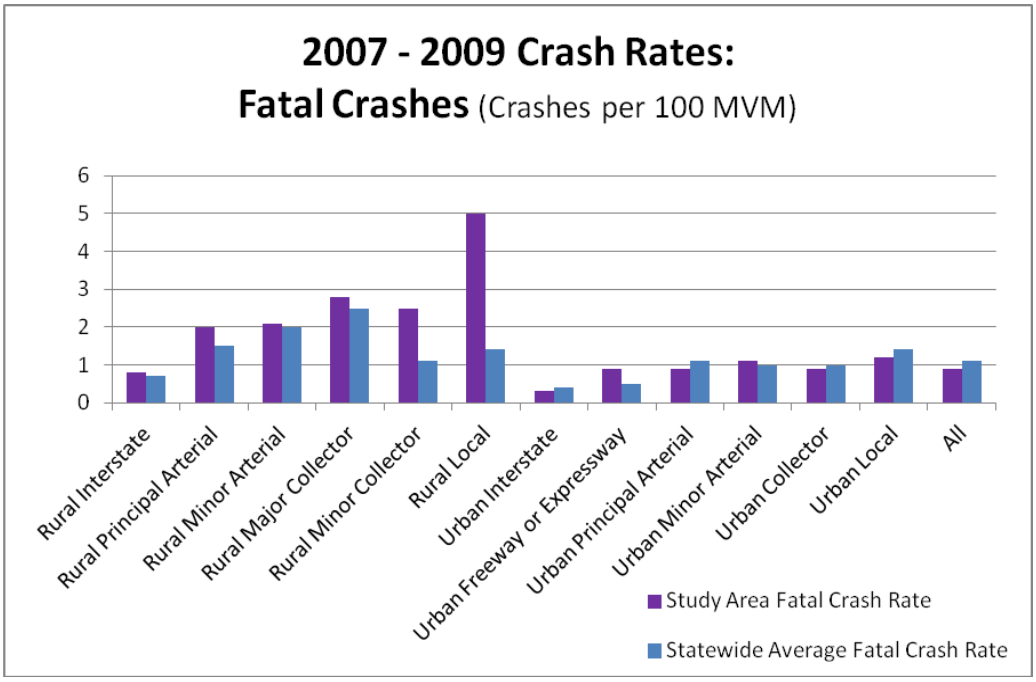
Source: CARE, Study Team

Figure 7.1. Crash Rates for Injury Crashes (2007-2009)



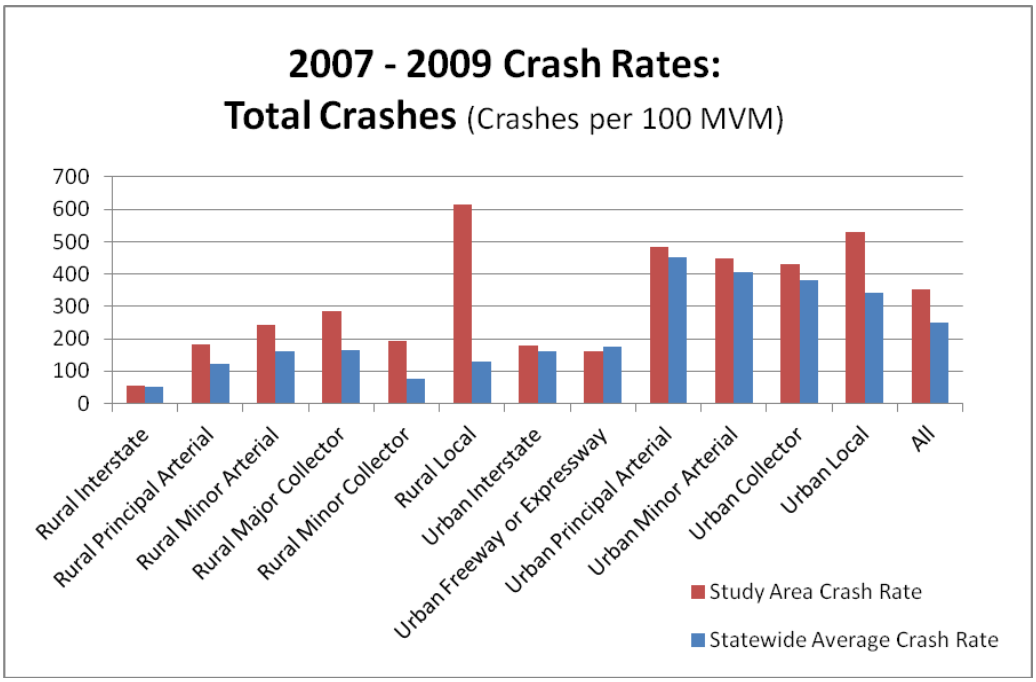
Source: CARE

Figure 7.2. Crash Rates for Fatal Crashes (2007-2009)



Source: CARE

Figure 7.3. Crash Rates for All Crashes (2007-2009)



Source: CARE

7.4 High Crash Intersections within Study Area

An analysis of the top 20 high crash intersections in the Study Area was conducted for the years 2007 through 2009. These top 20 "hotspot" intersections were identified based on their severity index. The severity index indicates how severe crashes are at a particular location by assigning weighted scores that account for the various injuries that occur in crashes at the given location. The severity index does not depend on the number of people that were injured within each crash, as this is mostly a function of the number of passengers in the vehicles involved. Rather, it accounts for the most severe injury type in each crash. A weighting factor is applied to the number of each crash type to produce a metric that is "equivalent C injuries" (complaint-only injuries) for all crashes at a given location, thus normalizing the total fatal or injury crashes to a single unit. This normalized metric is then divided by the total number of crashes. Because the number of property damage only (PDO) crashes is usually proportionally high, the resultant number is then multiplied by 10 to get the severity index. Thus, the final unit obtained for severity index is the equivalent C injury crashes times 10. This index will always be between zero (exclusively PDO crashes) and 50 (exclusively fatal crashes). The higher the number, the more likely the location is to produce fatalities, while if it is zero, it indicates that it is likely to have only PDO crashes.[3]

The CARE software calculates this severity index for each location. The weighting factors that are used are:

[3] CARE 9 Individualized Training, Problems and Exercises Including Roadway Characteristics – State of Alabama, November 2, 2009.

- "F" Crashes (Fatality): 10
- "A" Crashes (Visible Injury/Carried from the Scene): 6
- "B" Crashes (Bruises/Abrasion/Swelling): 4
- "C" Crashes (Complaint Only - Minor/Pain/Fainting): 2

CARE calculates the severity index using the following formula:

$$\text{Severity Index} = \frac{(10 \times F) + (6 \times A) + (4 \times B) + (2 \times C)}{N} \times 10$$

Where F = Number of fatality crashes,

A = Number of A crashes,

B = Number of B crashes,

C = Number of C crashes,

N = Total number of crashes

Table 7.6 summarizes the locations of the top 20 high crash intersections in the Study Area between 2007 and 2009, based on the severity index calculated for each intersection. It also lists the crash types at each intersection and the severity index. ***The top 20 high crash intersections occurred in seven (7) of the nine (9) counties within the study area. Barrow County contained two (2), Clarke County contained two (2), DeKalb County contained four (4), Gwinnett County contained seven (7), Oconee County contained one (1), Rockdale County contained two (2), and Walton County contained two (2) of the top 20 high crash intersections. All top 20 high crash intersections are located on State Routes. The State Route with the highest number of high crash intersections is SR 20, with a total of five (5) locations in two counties (Gwinnett and Rockdale).***

Figure 7.7 in the A2A Existing Conditions Map Book illustrates the locations of the top 20 high crash intersections in the study area. The letters listed in the column "Hotspot" in the table below correspond to their locations shown in the figure.

Table 7.3: Top 20 High Crash Intersections in Study Area (2007-2009)

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
A	Walton SR 10 at Walton CR 453	7.09	SR 10 at YOUTH MONROE RD	Walton	2	8	13	23	21.74
B	Walton SR 81 at Walton CS 51913	10.28	LAWRENCVILLE RD at BAY CREEK RD	Walton	1	13	13	27	18.52
C	Gwinnett SR 324 at Gwinnett CR 202	7.13	AUBURN RD at FENCE RD	Gwinnett	0	18	13	31	17.42
D	DeKalb CR 5193 at DeKalb CR 6163	3.20	REDAN RD at TO LANI FARM RD	DeKalb	1	10	9	20	17.00
E	Gwinnett SR 316 at Gwinnett CR 238	15.20	SR 316 at DROWNING CK RD	Gwinnett	0	17	12	29	16.55
F	Clarke US 441 at Clarke CR 104	9.71	COMMERCE RD at OLD COMMERCE RD	Clarke	0	10	10	20	16.00
G	Gwinnett SR 20 at Gwinnett CR 898	11.86	SR 20 at AZALEA DR	Gwinnett	0	21	24	45	15.56
H	Gwinnett SR 20 at Gwinnett CR 2014	24.65	LOGANVILLE HWY at HOKE OKELLY MILL RD	Gwinnett	0	13	17	30	15.33
I	Barrow SR 211 at Barrow CR 327	16.88	GA HWY 211 at ROCKWELL CH RD	Barrow	0	16	19	35	14.86

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
J	DeKalb US 278 at DeKalb CR 615	7.74	COVINGTON HWY at HILLVALE RD	DeKalb	0	11	12	23	14.78
K	Oconee US 129/441 at Oconee CR 324	15.10	MACON HWY at WHITE OAK DR	Oconee	0	14	15	29	14.48
L	Clarke SR 10 at Clarke CR 1089	9.29	OAK ST at INGLEWOOD AVE	Clarke	0	12	11	23	13.91
M	DeKalb CR 680 at DeKalb CR 6342	0.15	MARBUT RD at STONE MTN LITHONIA RD	DeKalb	0	18	13	31	13.55
N	Rockdale SR 20 at Rockdale CR 125	9.11	SIGMAN RD at E VIEW RD	Rockdale	1	30	33	64	13.44
O	DeKalb CR 2312 at DeKalb CR 5154	0.00	COLUMBIA WOODS DR at COLUMBIA DR	DeKalb	0	10	13	23	13.04
P	Gwinnett SR 20 at Gwinnett CR 8321	25.56	LOGANVILLE HWY at BRAND RD	Gwinnett	0	20	25	45	12.44
Q	Gwinnett US 29 at Gwinnett CR 9515	8.32	LAWRENCEVILLE HWY at FORK CREEK PKWY	Gwinnett	0	15	19	34	12.35
R	Rockdale SR 20 at Rockdale CR 98	3.73	GA HWY 20 at HIGHTOWER TRL	Rockdale	0	13	21	34	12.35
S	Gwinnett CR 1305 at Gwinnett CR 3095	0.73	JIMMY CARTER BLVD at EVEREST TRL	Gwinnett	0	8	15	23	12.17

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
T	Barrow SR 8 at Barrow SR 211	16.42	UNIVERSITY PKWY WB at BETHLEHEM ST	Barrow	0	7	13	20	12.00

*PDO: Property Damage Only

Source: CARE, Study Team

7.5 High Crash Intersections – By County

The top ten high crash intersections were also identified in each of the counties within the study area for the years 2007 through 2009. Table A-3 in the Appendix lists the locations of these intersections by county, as well as the types of crashes that occurred at each intersection and the severity index. These top 10 high crash intersections by county are displayed in Figure 7-7 in the A2A Existing Conditions Map Book. In Table A-3, intersections that are shown in gray are located within the study area. The letter and number listed in the column "Hotspot" correspond to their locations shown in the Figure 7-7.

Truck crashes in the study area were also examined. The Study Team defined a truck as a vehicle reported as following vehicles.

- Truck Tractor (Bobtail)
- Tractor/Trailer, 05-Tractor w/Twin Trailers
- Logging Truck
- Logging Tractor/Trailer
- Single Unit Truck
- Panel Truck
- Truck Towing House Trailer

Crashes involving a truck as the causal vehicle or the second vehicle (or both) were counted over the three year study period at each crash location. The frequencies were then mapped**.** Figure 7.8 in the A2A Existing Conditions Map Book shows the frequency of truck crashes by their locations. ***The locations of the high truck crash areas frequently occur on the highest crash intersections by county when located on freeways and arterials such SR 316 in Barrow County, US 78 in Walton County, US 129 in Gwinnett County and Covington Highway in DeKalb County when compared to Figure 7.7 in the A2A Existing Conditions Map Book. This indicates that the high truck crashes on these facilities contribute to their overall high crash rate.***

The Table 7.4 below shows the total number of crashes that were caused by trucks in the study area, compared to those caused by trucks statewide. ***The percent of crashes caused by trucks in the study area is below the statewide average of crashes caused by trucks.***

Table 7.4: Summary of Crashes Caused by Trucks (2007-2009)

	Study Area	Statewide
Total Truck Causal Vehicle Crashes	6,687	136,607
Total Crashes Reported	201,758	3,232,630
Percent of Total	3.31%	4.23%

Source: CARE, Study Team

7.6 Pedestrian Crashes

Crashes within the Study Area were also evaluated for the presence of pedestrians. ***Less than one percent of crashes in the Study Area in the years 2007 through 2009 involved one or more pedestrians***. Statewide, pedestrian involvement in crashes was also less than one percent. Table 7.5 shows the number of crashes involving pedestrians, both within the Study Area and Statewide while Figure 7.9 shows the locations of the pedestrian crashes in the A2A Existing Conditions Map Book. ***The majority of the pedestrian crashes involving one person are located in the more developed areas near the study area boundaries such as the western portions of DeKalb County, north Gwinnett County near Gwinnett Place area and downtown Athens. There are a concentration of pedestrian accidents involving two or more pedestrians occurred on US 78 near the intersection of SR 124 while the rest of the crashes involving two persons are scatter around the study area.***

Table 7.5: Summary of Pedestrian Crash Frequency (2007-2009)

	Study Area		Georgia	
Number of Pedestrians Involved in Crash	Frequency	Percentage	Frequency	Percentage
0	200,316	99.3	3,208,968	99.3
1	1,388	0.7	22,771	0.7
2	48	0.0	757	0
3	3	0.0	87	0
4	3	0.0	32	0
5	-	-	10	0
6	-	-	3	0
7	-	-	-	-
8	-	-	1	0
9	-	-	1	0
10	-	-	0	0

Source: CARE, Study Team

7.7 Key Crash Analysis Findings

The key findings from the analysis of the crash data is listed below.

- Almost thirty percent of fatal crashes occurred on Urban Minor Arterials which is double the amount statewide. The highest percentage of crashes with injuries occurred on the urbanized facilities while Urban Minor Arterials had the highest number of all types of crashes which is similar to the pattern found statewide.
- Although the highest number of crashes occur on the urbanized facilities within the study area, the highest crash rates per 100M VMT occur on the lower designed rural facilities such as Minor Arterials, Major and Minor Collectors and Local with the exception of Urban Collectors and Local facilities.
- For injury crashes, practically all of the functional classifications except Rural Interstate and Urban Freeway or Expressway are over the statewide average rates for the three year period. The functional classifications with the highest injury crash rates over the statewide average rates are Rural Local and Rural Minor Collector.
- For fatal crashes, all functional classifications had average crash rates over the statewide average crash rates, with the exception of most of the urban facilities. The functional classifications with the highest fatal crash rates over the statewide average rates are Rural Local, Rural Minor Collector, and Urban Freeway or Expressway.
- The top 20 high crash intersections occurred in seven (7) of the nine (9) counties within the study area. Barrow County contained two (2), Clarke County contained two (2), DeKalb County contained four (4), Gwinnett County contained seven (7), Oconee County contained one (1), Rockdale County contained two (2), and Walton County contained two (2) of the top 20 high crash intersections.
- All top 20 high crash intersections are located on State Routes.
- The State Route with the highest number of high crash intersections is SR 20, with a total of five (5) locations in two counties (Gwinnett and Rockdale).
- The locations of the high truck crash areas frequently occur on the highest crash intersections by county when located on freeways and arterials such SR 316 in Barrow County, US 78 in Walton County, US 129 in Gwinnett County and Covington Highway in DeKalb County. This indicates that the high truck crashes on these facilities contribute to their overall high crash rate.
- The majority of the pedestrian crashes involving one person are located in the more developed areas near the study area boundaries such as the western portions of DeKalb County, north Gwinnett County near Gwinnett Place area and downtown Athens. There are a concentration of pedestrian accidents involving two or more pedestrians occurred on US 78 near the intersection of SR 124 while the rest of the crashes involving two persons are scatter around the study area.

8.0 Existing Environmental Conditions

This section presents an assessment of the environmental conditions for the Atlanta to Athens Connectivity and Mobility Study. The study area comprises portions of nine counties between Athens and Atlanta: Barrow, Clarke, DeKalb, Gwinnett, Jackson, Newton, Oconee, Rockdale, and Walton. The purpose of the collection and evaluation of potential environmental impacts is to identify sensitive areas that would be significantly impacted by potential transportation projects within the Study Area. The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. The following sections will provide an overview of environmental resources within the Atlanta to Athens Connectivity and Mobility Study area.

In order to identify constraints that influence the consideration of potential improvements within the project study area, existing databases of environmental information have been collected. These databases include information pertaining to various environmental resources, including wetlands and waters of the U.S., historic and cultural resources, cemeteries, archaeological resources, and public parkland and wildlife management areas. Data have been collected from:

- Atlanta Regional Commission (ARC)
- Environmental Protection Agency (EPA)
- Federal Emergency Management Agency (FEMA)
- Georgia Department of Community Affairs (DCA)
- Georgia Department of Education
- Georgia Department of Health Services
- Georgia Department of Natural Resources (DNR)
- Natural Resources Conservation Service
- Northeast Georgia Regional Commission
- Research and Innovative Technology Administration
- United States Census Bureau
- United States Fish and Wildlife Services
- United States Geological Survey (USGS)
- Local Governments within the project's Study Area

This document strives to present a summary of the most current inventory of environmental conditions within the project study area based upon readily available information. This information will be used later in this study in the development of alternative improvement scenarios as a screening measure. Existing environmental conditions will need to be considered when developing proposed transportation improvements.

8.1 Summary of A2A Environmental Conditions

For all of the environmental resources that were examined, the following list describes how many acres or units lie within the study area.

- Wetlands and Water Bodies: Approximately 2,650 acres of lakes and ponds; 27,030 acres of wetlands; and 2,207 miles of rivers, streams, and creeks are within study area.
- Floodplains: Approximately 67,177 acres are within study area.
- Historic Sites and Properties: Approximately 45 historic districts and/or corridors and 251 historic sites are within study area.
- Public Lands: Approximately 4,725 acres are within study area.
- Churches and Cemeteries: Approximately 151 cemeteries and 384 churches are within study area.
- Archaeology: No public data are available.
- Schools: Approximately 43 private schools, 103 public schools, three public vocation technical schools, two public two-year colleges, one public university, and one private four year college are within the study area.
- Hazardous Sites: Approximately 1,523 potentially hazardous sites are within study area.
- Threatened and Endangered Species: Four (4) endangered species located are within study area.

Detailed descriptions of the data analysis for each of these resources can be found in the Appendix.

Figures 8.1 through 8.9 in the A2A Existing Conditions Map Book illustrate the above information.

9.0 Existing Land Use and Development Conditions

The following section focuses on the existing land use conditions within the study corridor. This section presents a current snapshot of development patterns as they exist today. This section includes:

- A composite existing land use map for all jurisdictions in the study area;
- Discussion of major activity centers and industrial areas within the study area; and
- A discussion of existing land uses adjacent to major travel corridors.

Key findings from this analysis are presented in this section. A companion report to this analysis has already been developed, which focuses on land use policy in the study area. This document entitled *'Technical Memorandum 2: Land Use Policy Analysis'* contains a review of regional land use plans, Comprehensive Plans, and Livable Centers Initiative (LCI) studies. This document was consulted for this analysis.

9.1 Composite Existing Land Use

To assess existing land uses within the study corridor a composite land use map was created. This map uses a simplified palette of eight land use categories, which was applied across all jurisdictions in the study area. The most recent Atlanta Regional Commission (ARC) LandPro existing land use data was used for DeKalb, Gwinnett, Rockdale, Walton, and Barrow Counties. Existing land use data for Jackson, Oconee, and Athens-Clarke Counties and their municipalities was obtained from the Northeast Georgia Regional Commission (NEGRC).

The ARC's LandPro's 24 individual land use categories were consolidated into the eight common classifications. The eight existing land use categories used by Jackson and Oconee Counties were reassigned to fit within the eight common designations. Athens-Clarke County employs the very detailed Land Based Classification Standards (LBCS) for land use mapping. The LBCS classifies land based upon its activity, function, structure, site characteristics, and ownership. The structure metric was used for conversion, as it was the most conducive classification category to convert easily to the eight common categories. This process involved collapsing 125 individual classifications into the common eight categories.

The composite existing land use map is presented in Figure 9.1 in the A2A Existing Conditions Map Book. The map illustrates that there is no clear suburban edge in the corridor between Atlanta and Athens. Single-family Residential land uses can be found throughout the study corridor. There is a high-degree of leap frog residential development resulting in a disconnected patchwork pattern. While many of the land use policies of study area jurisdictions advocate rural preservation and compact development, the existing development pattern suggests a lack of inter-jurisdictional coordinated land use policies to achieve this pattern.

The map illustrates that significant portions of the study corridor are currently Agriculture/Forest/ Undeveloped land uses, particularly in the middle of the corridor in Barrow, Jackson, and Walton Counties. While there is a high potential for 'induced' development in these areas, it would likely not occur without improvements to the transportation network. This is an important consideration moving forward to ensure future development is not induced in areas designated for rural preservation.

Commercial land uses throughout the study area are prominent along major transportation corridors – particularly along US 78, SR 124, US 29 and SR 316. These land uses are largely in the form of highway commercial strip development. These commercial corridors present unique transportation planning issues because they have the dual role of serving regional through-trips and trips accessing local businesses. These 'conflicted' corridors must balance high-speed mobility with providing a high-degree of local access. Many of these corridors will require special access management techniques to maintain high-levels of vehicular mobility.

Park/Recreation/Conservation (PRC) land uses include sensitive environmental lands, such as wetlands and floodplains. They also include recreational facilities, such as golf courses. National, state, county, and local parks are also included in this category. The largest PRC land uses in the study area include Stone Mountain Park and Davidson–Arabia Mountain Nature Preserve in DeKalb County; Harbins Park, Yellow River Park, Little Mulberry Park and Tribble Mill Park in Gwinnett County; Black Shoals Park in Rockdale County; and Ft. Yargo State Park in Barrow County.

Public-Institutional (PI) land uses include educational facilities, medical facilities, religious institutions, and government offices. Major notable PI uses include the University of Georgia, Georgia Gwinnett College, Mercer University, DeKalb Tech, and the Gwinnett Medical Center in Lawrenceville. Sizeable PI land uses include many large high-schools and churches in the study area.

Multi-Family Residential land uses are located primarily in the heavily urbanized areas of DeKalb, Gwinnett, and Athens-Clarke Counties. These consist of townhome, apartment, and condominium developments. They are found largely along major transportation routes including US 78, US 29, US 278, I-285 and I-20.

Transportation/Communication/Utility (TCU) land uses consist of communication tower sites, public utility infrastructure, and airports within the study area. Prominent land uses include Briscoe Field Airport in Lawrenceville and Northeast Georgia Regional Airport in Barrow County.

While the majority of the study area features a suburban residential character, significant portions of the study area contain large industrial areas. The presence of major trucking routes, including I-85, I-285, I-20, and SR 316, have resulted in significant distribution and warehousing development. Figure 9.1 in the A2A Existing Conditions Map Book illustrate the study area's numerous industrial areas. These include Panola Road, Lithonia, and Stone

Mountain industrial areas, among others. Major concentrations of industrial land uses are also found adjacent to I-20 East, I-85 and SR 316. Given the significant number of freight-generating distribution centers in the study area, planning for truck traffic should be an important component of this study.

9.2 Major Activity Centers

Major activity centers within the study area are illustrated in Figure 9.2 in the A2A Existing Conditions Map Book. These locations have been identified to assess the travel patterns and conditions associated with major destinations in the corridor. Figure 9.2 depicts activity centers in two categories. These categories include general activity centers, which include historic downtowns, major commercial areas and major industrial areas. The map also identifies major educational facilities, which also serve as regional trip attractors.

Several regional mall areas have been identified as activity centers within the study area. These include Gwinnett Place Mall, Mall of Georgia, Mall at Stonecrest, and Northlake Mall. These regional mall areas feature significant retail space within the malls themselves, but also through ancillary strip commercial and big-box retailers who co-locate adjacent to these anchor uses. Significant office development is located in proximity to some of these locations, particularly mid-rise offices within the Northlake Mall and Gwinnett Place Mall areas. Major office development has yet to occur within the Mall at Stonecrest or Mall of Georgia areas, although this type of development is anticipated and planned for in these locations. All of the mall areas currently feature significant multi-family residential and hotel development.

In addition to regional malls, two other concentrations of commercial land uses, Evermore CID and Snellville, have also been identified as activity centers. The boundaries of the Evermore CID extend along US 78 from Snellville to Stone Mountain. This is a major commercial corridor in southern Gwinnett County. Snellville is a growing town center with major commercial strip and big-box development evident along the cities' major crossroads of US 78 and SR 124.

Major industrial areas identified as activity centers include Mountain Industrial, Lithonia and Gwinnett Village CID. The Mountain Industrial area, focused on Mountain Industrial Boulevard and Stone Mountain Highway in DeKalb County contains significant warehousing and distribution land uses. The city of Lithonia includes a small historic town center and residential area that is surrounded by major industrial land uses that include multiple rock quarries and a large warehousing district found along Lithonia Industrial Boulevard. The Gwinnett Village CID area is largely industrial and is centered on Jimmy Carter Boulevard and I-85. This area also includes significant commercial, office, and residential land uses.

A large number of activity centers in the corridor are centered on historic small town centers and surrounding residential areas. These include Conyers, Clarkston, Stone Mountain, Lilburn, Lawrenceville, Dacula, Loganville, Walnut Grove, Monroe, Auburn, Winder, Statham, Hoschton, and Jefferson. These small town centers often contain concentrations of commercial and public-institutional land uses surrounded by residential uses. Conyers

and Lawrenceville, in addition to featuring historic town centers and residential areas, represent major attractions due to the sizable commercial and industrial areas that surround their cores.

Many of these historic town centers lie on major transportation routes within the study area. This is an important consideration, ensuring that transportation improvements do not negatively impact these town centers through increased traffic or other direct impacts. Context-sensitive improvements are warranted in these areas.

Figure 8.7 in the A2A Existing Conditions Map Book also includes major educational facilities within the study area. These activity centers are comprised of institutions of higher education with sizable student bodies. They include state universities, private universities, community colleges, and technical schools. They serve as regional destinations, attracting students and staff from long distances. In light of this, maintaining access and improving travel times to these locations is an important consideration for the study corridor. Major education facilities include:

- University of Georgia;
- University of Georgia's – Gwinnett Campus;
- Mercer University – Atlanta Campus;
- DeKalb Tech;
- Georgia-Perimeter College – Central;
- Gwinnett Tech;
- Georgia Gwinnett College; and
- Athens Technical College.'

9.3 Industrial Areas

Industrial land uses are major freight generators and employers in the study corridor and as a result will require special planning attention. Industrial land uses are mapped in Figure 9.3 in the A2A Existing Conditions Map Book**.** This map specifically identifies quarries from other industrial land uses. There are several major quarries located within the study area. Many are located near the city of Lithonia adjacent to Rock Chapel Road. Quarries are also located in proximity to Beaver Ruin Road and Woodmere Court in Gwinnett County. Large quarries are also located on Parks Mill Road in Barrow County and on New Salem Church Road in Jackson County. In addition, a small quarry is located in Rockdale County, adjacent to SR 20. These sites are considered 'heavy' industrial land uses and present potential conflict to neighboring land uses such as heavy truck traffic, noise, vibration, and airborne particulates.

The majority of the industrial land uses in the study area are 'light' industrial and consist primarily of warehousing and distribution centers. These types of uses result in limited impacts to surrounding land uses if adequately

buffered and site-planned. However, the added demand placed on the transportation network by additional truck traffic should be taken under consideration when planning adjacent land uses.

The locations of industrial land uses are found primarily adjacent to major transportation routes within the study area. Large clusters of these uses can be found in multiple locations in DeKalb County, adjacent to I-20, I-85, and US 29. These areas include the Panola Road, Lithonia Industrial, Mountain Industrial, and Montreal Industrial areas. In Rockdale County concentrations can be found adjacent to Rockdale Industrial Boulevard/Old Covington Highway and SR 138. Within Gwinnett County concentrations of industrial land uses can be found along I-85 in the Gwinnett Village area and areas adjacent to Satellite Boulevard and Horizon Drive. In Barrow County a cluster of industrial land uses can be found along US 29.

Clusters of industrial uses are found in Jackson County in areas adjacent to I-85 and Braselton Highway and I-85 and US 129. Concentrations can be found throughout Athens-Clarke County, although they are primarily found adjacent to the Athens Perimeter Highway. Within Walton County industrial land uses can be found in areas adjacent to US 78. There are limited industrial land uses found within Oconee County and none found in Newton County within the study boundary.

In addition to identifying existing industrial land uses, Figure 9.3 also identifies major industrial developments that have recently been completed or have been officially announced and are expected to become operational within the next couple years. These sites include the planned Caterpillar plant, the new Carter's distribution center, the FedEx distribution center in Norcross, and the Baxter Medical facility adjacent to I-20. These sites represent locations in which major land use and transportation changes are anticipated within the short-term. These sites have the potential to become excellent case study areas within this study as they warrant special attention and involve land use and transportation considerations.

The new Caterpillar manufacturing plant is planned for a site on the border of Athens and Bogart, on the southeastern corner of the US 78 and SR 8 intersection. The plant will be large, totaling one-million square-feet of manufacturing space. The facility will build small tractors and excavators. The plant is estimated to employ 1,400 workers at full build-out by 2020.

A new Carter's distribution facility was recently opened in June of 2012. The facility is located in Braselton on Braselton Parkway in close proximity to SR 53 to I-85. The facility is expected to employ a total of 600 workers by 2015.

The recently announced Baxter Inc. medical facility is expected to employ 1,500 workers at full build-out. This development will consist of a bio-pharmaceutical manufacturing facility and will be located in the Stanton Springs mixed-use development. The facility will manufacture plasma-based therapies that treat chronic and life-

threatening diseases. This site is located at US 278 and I-20 within a development that borders Newton, Walton and Morgan Counties.

FedEx Ground, as part of a national expansion plan, has announced it will open a new distribution center in Norcross in the fall of 2012. The 215,000 square-foot facility is located on Atlantic Boulevard near Jimmy Carter Boulevard and I-85. The facility is expected to employ an initial workforce of 240 full-time employees and 75 independent contractors. Proximity to interstates and other distribution centers and the strong local labor pool were reasons cited for locating the new facility in Norcross.

9.4 Primary Travel Corridors

A major component of this study will focus on improving mobility along primary travel corridors. These corridors have been identified through an evaluation process relying on traffic data and other considerations. It was important that the goals of this effort listed below, were linked to the identification of the major travel corridors.

- Strengthen connections and mobility between key activity centers, educational centers, job centers, and freight/ logistics centers, etc.
- Improve safety for all system users
- Promote economic development by strengthening the relationships between transportation and land use plans and policies
- Coordination with Local Governments/ Agencies/Stakeholders and the Public

A map of the primary travel corridors is provided in Figure 9.4 of the A2A Existing Conditions Map Book. The purpose of identifying these corridors is to utilize this network to develop and evaluate alternative investment strategies. The land use character will play an important role in informing what type of transportation investments are warranted along these corridors.

Table 9.1 below lists the primary travel corridors, the jurisdictions they travel through and the primary existing land uses adjacent to these roadways. The table indicates a wide variety of land use conditions are present along these corridors. The character of these corridors varies considerably and can alternate from scenic rural highways through undeveloped areas to intense commercial highways through suburbanized areas.

The table also indicates the large number of jurisdictions that are traversed by these major corridors. This will play an important role when crafting land use toolkits and guidelines at later stages of this study. Care will be taken to ensure guidelines are general enough to be easily applied across multiple jurisdictions, but specific enough to ensure consistent development along corridors.

Table 9.1: Primary Travel Corridors - Existing Land Uses

Primary Travel Corridors	Jurisdictions	Primary Land Uses
East-West Corridors		
Athens to Jefferson (US 129)	Athens-Clarke County, Jackson County, Arcade, and Jefferson.	Agriculture/Forest/Undeveloped, Single-Family Residential
Clarkston to Athens (US 78)	Clarkston, DeKalb County, Gwinnett County, Snellville, Loganville, Walton County, Between, Monroe, Oconee County, Athens-Clarke County	Commercial, Park/Recreation/Conservation, Agriculture/Forest/Undeveloped, Single-Family Residential
Lawrenceville to Athens (SR 316)	Gwinnett County, Lawrenceville, Dacula, Barrow, Bethlehem, Statham, Oconee County.	Industrial, Commercial, Single-Family Residential, Agriculture/Forest/Undeveloped
Atlanta to Monroe (I-20-SR 138)	Conyers, Rockdale County, Walton County, Walnut Grove, Monroe	Commercial, Industrial, Single-Family Residential, Agriculture/Forest/Undeveloped, Park/Recreation/Conservation
Atlanta to Conyers (US 278-Old Covington Hwy-Sigman Rd)	DeKalb County, Lithonia, Rockdale County, Conyers	Industrial, Commercial, High-Density Residential, Single-Family Residential
Northlake to Winder (US 29)	DeKalb County, Lilburn, Gwinnett County, Lawrenceville, Dacula, Auburn, Carl, Barrow County, Winder	Commercial, Industrial, Agriculture/Forest/Undeveloped, Single-Family Residential, Public-Institutional, Multi-Family Residential Park/Recreation/Conservation
North-South Corridors		
Conyers to Jefferson (SR 20-SR 81-SR 11)	Conyers, Rockdale County, Walton County, Loganville, Barrow County, Winder, Jackson County, Jefferson	Commercial, Single-Family Residential, Agriculture/Forest/Undeveloped, Park/Recreation/Conservation
Monroe-Hoschton (SR 11-SR 53)	Monroe, Walton County, Barrow County, Bethlehem, Winder, Jackson County, Hoschton	Agriculture/Forest/Undeveloped, Single-Family Residential, Commercial, Public-Institutional, Park/Recreation/Conservation
Walnut Grove to Mall of Georgia (US 81-SR 20)	Walnut Grove, Walton County, Loganville, Gwinnett County, Grayson, Lawrenceville.	Single-Family Residential, Agriculture/Forest/Undeveloped, Commercial, Industrial
Stonecrest to Lawrenceville (SR 124)	Lithonia , DeKalb County, Gwinnett County, Snellville, Lawrenceville	Single-Family Residential, Agriculture/Forest/Undeveloped, Park/Recreation/Conservation, Commercial, Industrial
US 278 to I-85 (Hairston Rd-Jimmy Carter Blvd)	DeKalb County	Industrial, Single-Family Residential, High-Density Residential, Commercial,

9.5 Key Land Use and Development Findings

This section presents key findings from the existing land use analysis. These findings represent important issues for consideration moving forward through the study process. Land use conditions will play an important role is assessing the appropriateness of proposed transportation investments in later phases of this study. The key land use findings are listed below

- There is a leap-frog residential development pattern within the study area and no clear suburban edge. Given this pattern it is likely to assume that transportation improvements serving undeveloped portions of the study area has the potential to 'induce' development in these areas. This is an important consideration for maintaining areas designated for rural or scenic preservation.
- Numerous commercial corridors particularly US 78, SR124, US 29 and SR 316 are heavily-lined with strip retail development and serve as major regional thoroughfares. Proposed transportation improvements to these corridors should ensure adequate access to local businesses as well as promote through trips.
- Given the significant number of freight generators in the study area, planning for truck traffic will be an important component of this study. Maintaining access and mobility to these sites should be a priority.
- There are several large industrial planned developments that represent ideal locations for focused case-study areas to assess their transportation needs and land use implications.
- The study area contains many major activity centers. These include major educational facilities, commercial centers, town centers and industrial districts. Maintaining access and improving travel times to these locations will be an important consideration of this study.
- Numerous town centers are located adjacent to major transportation corridors. As a result, there is the potential for proposed transportation improvements to negatively impact town center areas.

This section describes the key findings and conclusions from the review of land use plans and LCIs within the study area. These findings represent important considerations to identify and assess potential transportation improvements that support and complement the local land use and development strategies. Integration of land use policies with transportation investments is critical to maximize the use of alternate modes.

A total of 23 LCIs along major corridors, town centers and other activity centers have been conducted in the study area since 2001. The majority of the LCIs are located in the more developed counties of DeKalb and Gwinnett. In the rural counties, the LCIs are focused in the county seats with a defined downtown core and economic development potential. Preserving the historic small town character, while promoting appropriate growth has been a reoccurring theme for many of the town centers. All of the LCIs recommend land use and development strategies to encourage a diversity of medium to high-density, mixed income neighborhoods at the

level appropriate for each study area. In addition, many of the LCIs identify access management strategies as potential tools to assist with the improvement of traffic flow. Many of the LCIs located near existing MARTA rail line or proposed transit initiatives recommend TODs to create a high-density, mixed-use development that offers all the elements of a complete live/work/play environment.

A total of 23 Local Comprehensive Plans were reviewed on their land use elements. Table 9.2 summarizes which Local Comprehensive Plans support seven key land use policies by jurisdiction. Twelve of the plans include policies that promote rural preservation. All of the Counties' except for DeKalb County, existing plans and a couple of the municipalities in the middle of the study area include policies that promote rural preservation. Only two of the plans, Newton County and Athens-Clarke County include policies that promote limiting strip development along major corridors. Half of the plans include polices that promote the redevelopment of the historic cores or downtowns in the form of mixed-use development. Only the plans for the municipalities include this policy. Approximately half of the plans include policies that promote mixed-use redevelopment along major corridors. Access management strategies were identified as potential tools for managing traffic flow. The plans for the more developed counties of DeKalb and Gwinnett Counties and some of the larger municipalities such as the Snellville, Lawrenceville, Lilburn and Conyers include policies that promote this type of redevelopment along major corridors although none of them include policies to limit strip development along major corridors. Eight of the plans include policies that promote compact node development at major intersections. Practically all of these plans are for the smaller municipalities in the middle of the study area with the exception of DeKalb County and City of Snellville. Five of the plans include policies that promote employing Overlay Districts to achieve the desired development in a specified area. Most of these five plans are for the more developed areas, such as DeKalb and Gwinnett Counties and the larger municipalities such as Snellville and Lilburn. Only three of the plans include policies that promote Transit Oriented Development (TOD). This policy in included the plans for the more developed counties of DeKalb, Gwinnett and Rockdale where there is existing transit service.

Table 9.2: Atlanta to Athens Land Use Policy Matrix

Jurisdiction	Promotes Rural Preservation	Limits Strip Development along Major Corridors	Redevelop Historic Cores in Form of Mixed-Use	Promotes Mix-use redevelopment along Major Corridors	Promote Compact Node Development At Major Intersections	Employs Overlay Districts to achieve Desired Development	Promotes TOD in appropriate locations
DeKalb County				✓	✓	✓	✓
City of Pine Lake				✓			
City of Stone Mountain			✓				
City of Lithonia			✓				
City of Clarkston			✓				
Gwinnett County	✓			✓		✓	✓
City of Snellville			✓	✓	✓	✓	
City of Lawrenceville			✓	✓			
City of Lilburn			✓	✓		✓	
City of Dacula					✓		
City of Grayson			✓	✓			
Rockdale County	✓						✓
City of Conyers	✓		✓	✓			

Jurisdiction	Promotes Rural Preservation	Limits Strip Development along Major Corridors	Redevelop Historic Cores in Form of Mixed-Use	Promotes Mix-use redevelopment along Major Corridors	Promote Compact Node Development At Major Intersections	Employs Overlay Districts to achieve Desired Development	Promotes TOD in appropriate locations
Newton County	✓	✓					
Walton County	✓				✓		
Barrow County	✓				✓		
Oconee County	✓						
Athens-Clarke County	✓	✓	✓				
Jackson County	✓					✓	
City of Arcade	✓		✓	✓	✓		
City of Hoschton	✓		✓	✓			
City of Jefferson			✓	✓	✓		
City of Braselton	✓		✓		✓		

10.0 Summary of Existing Conditions

The collection and analysis of the existing conditions in the A2A study area provides valuable information about the current demographics, travel conditions and patterns, crash data, environmental considerations and existing land use patterns and policies. All of this information will be used to assist with the analysis of future conditions.

The evaluation of the existing transportation system has established a benchmark for the examination of future travel and transportation system operating characteristics. It provides a frame of reference for determining the level of improvement or degradation that would be associated with future conditions and potential improvement scenarios. The evaluation of land use issues and the strengths and weakness of the existing plans and policies and linkages to the transportation system have been identified. This evaluation of the existing land use and transportation linkages provides the basic framework for the overall understanding of existing conditions within the study area and the environment within which improvements to both land use and the transportation system must take place.

APPENDICES

A-1 – Transit Routes

A-2 – Park and Ride Lots

A-3 – Transit Boardings

A-4 – Crash Data

A-5 – Environmental Considerations

A-6 – Existing Land Use and Development Policies

A-7 – Review of Regional Plans

A-8 – Review of Local Comprehensive Plans

A-9 – Summary of Local Comprehensive Plans

A-10 – Review of LCI Plans

A-1: Transit Providers

Table A-1 lists the transit routes by service provider by service type. The UGA routes are not included for this analysis since the focus of the UGA routes is to provide mobility within the UGA campus for the students, facility and staff. Most of the transit routes provide local bus service and are located in the counties that are more developed, Clark, DeKalb, Gwinnett and Rockdale Counties. There is no transit service in the middle of the study area. Only GCT and GRTA provide express bus service to either Midtown or Downtown Atlanta. There is one small segment of the MARTA heavy rail line between Indian Creek and Kensington stations. For this analysis, the heavy rail has not been included. The results for the MARTA heavy rail will be included in future alternative analyses if the scenarios provide new service connecting to the rail system.

Table A-1: Transit Routes in Study Area by Provider

Athens Transit System

Route	Name	Local	Express
1	North Ave	x	
2	East Athens	x	
3	East Athens/North Side	x	
5	Beechwood/Baxter	x	
6	Broad/Atlanta Hwy	x	
7	Prince Avenue	x	
8	Barber/Chase	x	
9	Macon Hwy/Five Points	x	
12	Riverbend	x	
14	East Campus/S. Milledge	x	
20	Georgia Square Mall	x	
21	West Athens/Ultimate Dr	x	
22	East Athens/Highland Park Dr	x	
24	Athens Tech	x	
25	Lexington Rd/Gaines School	x	
26	College Station/Barnett Shoals	x	
27	Barnett Shoals/Cedar Shoals	x	
28	College Station/Campus Express		x

MARTA Routes

Route	Name	Local	Express
75	Tucker	x	
86	Fairington Rd	x	
111	Snapfinger Woods/Stonecrest	x	
115	Covington Highway	x	
116	Redan Rd/Stonecrest	x	
117	Rockbridge/Panola Rd	x	
119	Kensington/Hairston Rd	x	
120	E. Ponce De Leon/Tucker	x	
121	Stone Mountain	x	
124	Pleasantdale Rd	x	
125	Clarkston/Northlake	x	
126	Chamblee/Northlake	x	
186	Rainbow Drive	x	

Gwinnett County Routes

Route	Name	Local	Express
10	Discover Mills to Doraville	x	
20	Buford Hwy to Indian Trail	x	
30	Lilburn to Gwinnett Place	x	
35	Technology Park	x	
40	Lawrenceville	x	
101	I-985 P/R		x
102	Indian Grail		x
103	Discover Mills		x

Georgia Regional Transportation Authority Routes

Route	Name	Local	Express
410	Discover Mills to Lindbergh		x
411	Mall of Ga to Downtown Atlanta		x
412	Discover Mills to Midtown Atlanta		x
420	West Conyers to Downtown Atlanta		x
421	West Conyers to Midtown Atlanta		x
422	Panola Rd to Downtown Atlanta		x
423	E. Conyers/Panola to Downtown Atlanta		x
424	Stone Mtn to Downtown Atlanta		x
425	E. Conyers to Downtown Atlanta		x
428	Panola to Perimeter Center		x

Source: Athens Transit, GCT, MARTA and GRTA

A-2: Park and Ride Lots

Table A-2 lists the park and ride lots with the number of spaces. Again the UGA routes are not included. There are over twenty lots which vary in size from very small with 28 spaces at SR 124 and SR 211 in Barrow County to over 2,300 spaces at the MARTA Rail Indian Creek parking lot in DeKalb County.

Table A-2: Park and Ride Lots in Study Area

Park and Ride Lot	Number of Spaces	County
MARTA Rail Station at Kensington: 3350 Kensington Road, Decatur	1,532	DeKalb
MARTA Rail Station at Indian Creek: 3901 Durham Park Road, Stone Mountain	2,401	DeKalb
GRTA: I-85 and Hamilton Mill Road	900	Gwinnett
MARTA service: Stone Mountain 4th Street	150	DeKalb
Hewatt Road East of US 78 - Near Snellville	40	Gwinnett
Lawrenceville-area at SR 316 and Cedars Road	NA	Gwinnett
Near Evans Mill Rd	332	DeKalb
GCT: The Mall of Georgia: located at 3333 Buford Drive, Buford	2,078	Gwinnett
GCT: I-85 & Indian Trail Road	506	Gwinnett
I-985 & SR 20	718	Gwinnett
GCT/GRTA: Discovery Mills - I-85	554	Gwinnett
Xpress at 911 Chambers Drive, Conyers	419	Rockdale
Xpress at Panola Road Lot: 5290 Panola Road, Lithonia	644	DeKalb
Xpress at Eastmont Shopping Center: 1475 East Park Place, Stone Mountain	400	Gwinnett
GCT: Snellville Baptist Church, 2400 Main Street, E., Snellville	178	Gwinnett
Xpress at Church in the Now: 1877 Iris Drive SE, Conyers	415	Rockdale
Georgia Square Mall	NA	Clarke
Bi-Lo North Ave	NA	Clarke
Super Wal-Mart at Lexington Rd	NA	Clarke
I-20 West & West Avenue Exit 80 - Conyers (Iris Dr)	58	Rockdale
SR 124 & SR 211	28	Barrow
Total	11,353	

Source: Athens Transit, GCT, MARTA and GRTA

A-3: Transit Boardings

Table A-3 lists the 2010 daily transit boardings by provider, again excluding UGA campus routes.

Table A-3: Average 2010 Daily Transit Boardings by Service Provider

Athens Transit System

Route	Name	Observed Daily Boardings
1	North Ave	272
2	East Athens	186
3	East Athens/North Side	146
5	Beechwood/Baxter	516
6	Broad/Atlanta Hwy	345
7	Prince Avenue	321
8	Barber/Chase	261
9	Macon Hwy/Five Points	512
12	Riverbend	1845
14	East Campus/S. Milledge	1108
20	Georgia Square Mall	552
21	West Athens/Ultimate Dr	158
22	East Athens/Highland Park Dr	184
24	Athens Tech	194
25	Lexington Rd/Gaines School	587
26	College Station/Barnett Shoals	393
27	Barnett Shoals/Cedar Shoals	352
28	College Station/Campus Express	94
	Subtotal	8,026

MARTA Routes

Route	Name	Observed Daily Boardings
75	Tucker	1,802
86	Fairington Rd	2,754
111	Snapfinger Woods/Stonecrest	1,412
115	Covington Highway	3,851

Route	Name	Observed Daily Boardings
116	Redan Rd/Stonecrest	2,805
117	Rockbridge/Panola Rd	1,557
119	Kensington/Hairston Rd	1,281
120	E. Ponce De Leon/Tucker	3,974
121	Stone Mountain	5,356
124	Pleasantdale Rd	2,339
125	Clarkston/Northlake	3,272
126	Chamblee/Northlake	1,029
186	Rainbow Drive	3,163
	Subtotal	34,595

Gwinnett County Routes

Route	Name	Observed Daily Boardings
10	Discover Mills to Doraville	2,845
20	Buford Hwy to Indian Trail	486
30	Lilburn to Gwinnett Place	639
35	Technology Park	420
40	Lawrenceville	659
101	I-985 P/R	703
102	Indian Trail	277
103	Discover Mills	1,286
	Subtotal	7,315

Georgia Regional Transportation Authority Routes

Route	Name	Observed Daily Boardings
410	Discover Mills to Lindbergh	214
411	Mall of Ga to Downtown Atlanta	202
412	Discover Mills to Midtown Atlanta	542
420	West Conyers to Downtown Atlanta	310
421	West Conyers to Midtown Atlanta	180
422	Panola Rd to Downtown Atlanta	305

Route	Name	Observed Daily Boardings
423	E. Conyers/Panola to Downtown Atlanta	289
424	Stone Mtn to Downtown Atlanta	285
425	E. Conyers to Downtown Atlanta	420
428	Panola to Perimeter Center	136
	Subtotal	2,467
	Grand Total	52,403

Source: Athens Transit, GCT, MARTA and GRTA

A-4 Crash Analysis

Table A-4: Top 10 High Crash Intersections by County (2007-2009)

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
B01	Barrow SR 211 at Barrow CR 327	16.88	GA HWY 211 at ROCKWELL CH RD	Barrow	0	16	19	35	14.86
B02	Barrow SR 8 at Barrow SR 211	16.42	UNIVERSITY PKWY WB at BETHLEHEM ST	Barrow	0	7	13	20	12.00
B03	Barrow SR 11 at Barrow CR 416	2.27	CHRISTMAS AVE at CARL BETHLEHEM RD	Barrow	0	14	21	35	11.43
B04	Barrow SR 316 at Barrow CR 93	2.17	UNIVERSITY PKWY EB at PATRICK MILL RD	Barrow	1	17	41	59	10.51
B05	Barrow SR 316 at Barrow CR 74	0.77	BARROW SR 316 at BARROW CR 74	Barrow	0	17	37	54	9.26
B06	Barrow SR 8 at Barrow SR 53	13.48	UNIVERSITY PKWY WB at HOG MTN RD	Barrow	0	6	20	26	7.69
B07	Barrow SR 81 at Barrow SR 316	2.61	CHARLES FLOYD RD at UNIVERSITY PKWY WB	Barrow	1	35	94	130	7.38
B08	Barrow SR 316 at Barrow CR 416	3.91	UNIVERSITY PKWY WB at CARL BETHLEHEM RD	Barrow	0	13	34	47	7.23

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
B09	Barrow SR 11 at Barrow SR 316	2.97	BROAD ST at UNIVERSITY PKWY WB	Barrow	0	25	64	89	7.19
B10	Barrow SR 8 at Barrow CS 67111	8.73	MAY ST at CENTER ST	Barrow	0	6	16	22	5.45
C01	Clarke SR 15 at Clarke CR 104	9.71	COMMERCE RD at OLD COMMERCE RD	Clarke	0	10	10	20	16.00
C02	Clarke SR 10 at Clarke CR 1089	9.29	OAK ST at INGLEWOOD AVE	Clarke	0	12	11	23	13.91
C03	Clarke SR 10 at Clarke CR 1028	7.74	W BROAD ST at CHURCH ST	Clarke	0	10	15	25	12.00
C04	Clarke SR 10 at Clarke CR 166	12.64	SMOKE RISE CT at WHIT DAVIS RD	Clarke	1	23	41	65	11.38
C05	Clarke SR 10 at Clarke CR 93	12.22	LEXINGTON RD at COOPER RD	Clarke	0	11	18	29	11.03
C06	Clarke SR 15AL at Clarke CR 471	6.29	JEFFERSON RD at WHITEHEAD RD	Clarke	0	8	12	20	11.00
C07	Clarke CR 896 at Clarke CR 1244	1.87	BAXTER ST at S LUMPKIN ST	Clarke	0	9	19	28	10.71

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
C08	Clarke SR 10 at Clarke CR 386	1.65	ATLANTA HWY at TRADE ST	Clarke	0	9	17	26	10.00
C09	Clarke SR 10 at Clarke CR 1037	7.42	W BROAD ST at CHASE ST	Clarke	0	18	34	52	9.62
C10	Clarke CR 600 at Clarke CR 1245	0.64	NORTH ST at M L K JR PKWY	Clarke	0	12	18	30	9.33
D01	DeKalb SR 212 at DeKalb CR 599	2.51	BROWNS MILL RD at EVANS MILL RD	DeKalb	3	24	15	42	25.24
D02	DeKalb CR 5193 at DeKalb CR 6163	3.20	REDAN RD at TO LANI FARM RD	DeKalb	1	10	9	20	17.00
D03	DeKalb SR 12 at DeKalb CR 615	7.74	COVINGTON HWY at HILLVALE RD	DeKalb	0	11	12	23	14.78
D04	DeKalb SR 42 at DeKalb CR 5149	2.99	MORELAND AVE at BAILEY ST	DeKalb	0	12	19	31	14.19
D05	DeKalb CR 367 at DeKalb CR 7940	0.00	THOMAS TER at GLENWOOD RD	DeKalb	0	10	10	20	14.00
D06	DeKalb CR 680 at DeKalb CR 6342	0.15	MARBUT RD at STONE MTN LITHONIA RD	DeKalb	0	18	13	31	13.55

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
D07	DeKalb SR 10 at DeKalb CS 200911	2.88	PARK PLACE at EAST LAKE DR	DeKalb	0	9	12	21	13.33
D08	DeKalb CR 2312 at DeKalb CR 5154	0.00	COLUMBIA WOODS DR at COLUMBIA DR	DeKalb	0	10	13	23	13.04
D09	DeKalb SR 8 at DeKalb CR 1273	2.24	SCOTT BLVD at E PARKWOOD RD	DeKalb	0	9	11	20	13.00
D10	DeKalb SR 212 at DeKalb CR 593	0.60	BROWNS MILL RD at SALEM RD	DeKalb	0	10	12	22	12.73
G01	Gwinnett SR 324 at Gwinnett CR 202	7.13	AUBURN RD at FENCE RD	Gwinnett	0	18	13	31	17.42
G02	Gwinnett SR 316 at Gwinnett CR 238	15.20	SR 316 at DROWNING CK RD	Gwinnett	0	17	12	29	16.55
G03	Gwinnett SR 20 at Gwinnett CR 898	11.86	SR 20 at AZALEA DR	Gwinnett	0	21	24	45	15.56
G04	Gwinnett SR 20 at Gwinnett CR 2014	24.65	LOGANVILLE HWY at HOKE OKELLY MILL RD	Gwinnett	0	13	17	30	15.33
G05	Gwinnett CR 1954 at Gwinnett CR 9073	0.41	GWINNETT CR 1954 at PEACHTREE CORNERS E	Gwinnett	0	13	19	32	13.13

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
G06	Gwinnett SR 20 at Gwinnett CR 8321	25.56	LOGANVILLE HWY at BRAND RD	Gwinnett	0	20	25	45	12.44
G07	Gwinnett SR 8 at Gwinnett CR 9515	8.32	LAWRENCEVILLE HWY at FORK CREEK PKWY	Gwinnett	0	15	19	34	12.35
G08	Gwinnett CR 1305 at Gwinnett CR 3095	0.73	JIMMY CARTER BLVD at EVEREST TRL	Gwinnett	0	8	15	23	12.17
G09	Gwinnett SR 8 at Gwinnett CR 514	7.33	DECATUR L"VILLE HWY at JAMES RD	Gwinnett	0	12	18	30	12.00
G10	Gwinnett CR 2735 at Gwinnett CR 2737	0.30	MARKET ST at GWINNETT PLACE DR	Gwinnett	0	12	15	27	11.85
J01	Jackson SR 15 at Jackson SR 326	14.49	JACKSON SR 15 at JACKSON SR 326	Jackson	0	12	13	25	16.00
J02	Jackson SR 15AL at Jackson SR 330	2.40	SR 15AL at SR 330	Jackson	0	9	11	20	14.00
J03	Jackson SR 15 at Jackson SR 334	12.03	SR 15 at JACKSON SR 334	Jackson	0	14	24	38	11.05
J04	Jackson SR 11 at Jackson CS 93611	7.24	LEE ST at OLD PENDERGRASS RD	Jackson	1	13	28	42	10.48

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
J05	Jackson SR 15AL at Jackson SR 82	12.93	ATHENS ST at LEE ST	Jackson	0	8	19	27	9.63
J06	Jackson SR 15 at Jackson SR 98	12.80	SR 15 at N ELM ST	Jackson	0	24	50	74	9.46
J07	Jackson SR 53 at Jackson CR 433	2.05	SR 53 at NEW CUT RD	Jackson	0	9	16	25	8.80
J08	Jackson SR 11 at Jackson CR 213	11.47	LEE ST at JOHN B BROOKS	Jackson	0	6	15	21	7.62
J09	Jackson SR 11 at Jackson SR 11CO	5.75	SR 11 at NB	Jackson	1	12	40	53	7.17
J10	Jackson SR 15 at Jackson SR 335	6.87	MAIN ST at IVY CREEK DR	Jackson	0	5	15	20	6.00
O01	Oconee SR 15 at Oconee CR 324	15.10	MACON HWY at WHITE OAK DR	Oconee	0	14	15	29	14.48
O02	Oconee SR 8 at Oconee CR 55	5.72	UNIVERSITY PKWY EB at JIMMY DANIEL RD	Oconee	1	7	27	35	8.00
O03	Oconee SR 53 at Oconee CR 261	6.95	HOG MOUNTAIN RD at HODGES MILL RD	Oconee	0	4	19	23	6.96

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
O04	Oconee SR 8 at Oconee SR 1143	6.80	Oconee SR 8 at OCONEE CONN	Oconee	0	18	55	73	5.75
O05	Oconee SR 15 at Oconee CR 274	13.55	MACON HWY at HOG MOUNTAIN RD	Oconee	0	5	18	23	5.22
O06	Oconee SR 15 at Oconee SR 53	11.86	MAIN ST at EXPERIMENT STATION RD	Oconee	0	10	41	51	4.71
O07	Oconee SR 1143 at Oconee CR 344	0.75	OCONEE SR 1143 at OCONEE CR 344	Oconee	0	10	41	51	4.31
O08	Oconee SR 15 at Oconee SR 24	12.98	SR 15 at SR 24	Oconee	0	9	63	72	2.50
O09	Oconee CR 34 at Oconee CR 344	0.00	DOWDY RD at OCONEE CR 344	Oconee	0	5	36	41	2.44
O10	Oconee SR 992 at Oconee CR 263	2.78	OCONEE SR 992 at MARS HILL RD	Oconee	0	3	26	29	2.07
R01	Rockdale CR 60 at Rockdale CR 438	0.60	FLAT SHOALS RD at SMYRNA RD	Rockdale	0	11	11	22	14.55
R02	Rockdale SR 20 at Rockdale CR 125	9.11	SIGMAN RD at E VIEW RD	Rockdale	1	30	33	64	13.44

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
R03	Rockdale SR 20 at Rockdale CR 98	3.73	GA HWY 20 at HIGHTOWER TRL	Rockdale	0	13	21	34	12.35
R04	Rockdale SR 162 at Rockdale CR 486	0.97	SALEM RD at GOLFVIEW DR	Rockdale	0	6	15	21	10.48
R05	Rockdale SR 138 at Rockdale CR 125	12.32	GA HWY 138 at E VIEW RD	Rockdale	0	9	16	25	10.40
R06	Rockdale SR 20 at Rockdale CR 291	15.60	MCDONOUGH HWY at SUGAR CREEK DR	Rockdale	0	9	16	25	10.40
R07	Rockdale CR 164 at Rockdale CR 668	0.60	OLD COVINGTON HWY at DOGWOOD DR	Rockdale	1	5	18	24	10.00
R08	Rockdale SR 138 at Rockdale CR 564	7.23	STOCKBRIDGE HWY at OLD MILL DR	Rockdale	0	8	19	27	8.89
R09	Rockdale SR 20 at Rockdale CR 29	15.90	MCDONOUGH HWY at CHRISTIAN CIR	Rockdale	0	11	25	36	8.89
R10	Rockdale SR 20 at Rockdale CR 27	17.44	MCDONOUGH HWY at KINNETT RD	Rockdale	0	11	17	28	8.57
W01	Walton SR 10 at Walton CR 453	7.09	SR 10 at YOUTH MONROE RD	Walton	2	8	13	23	21.74

Hotspot	Intersection	Milepost	Description	County	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes	Severity Index
W02	Walton SR 81 at Walton CS 51913	10.28	LAWRENCVILLE RD at BAY CREEK RD	Walton	1	13	13	27	18.52
W03	Walton SR 10 at Walton CR 88	2.63	WALNUT GROVE ROAD at TOM BREWER RD	Walton	0	11	15	26	9.23
W04	Walton SR 81 at Walton CR 29	14.98	SR 81 at OZORA CHURCH RD	Walton	0	9	20	29	8.97
W05	Walton SR 10 at Walton SR 20	0.51	US 78 at MAIN ST	Walton	0	21	41	62	8.39
W06	Walton SR 10 at Walton SR 83	14.23	HWY 78 at JAMES HUFF RD	Walton	0	7	27	34	7.65
W07	Walton SR 10 at Walton SR 81	1.38	US 78 at LEE BYRD RD	Walton	0	33	86	119	6.55
W08	Walton SR 20 at Walton CS 61613	1.12	MAIN ST at CLAUD BREWER RD	Walton	0	11	32	43	5.58
W09	Walton SR 20 at Walton CS 54713	1.37	CONYERS RD at HUNTINGTON DR	Walton	0	7	22	29	5.52
W10	Walton SR 81 at Walton CR 42	12.26	SR 81 at BAY CREEK CH RD	Walton	0	6	16	22	5.45

Gray cells = Locations are within project study area

Source: CARE, Study Team

A-5 Environmental Conditions

Potential Wetlands and Water Bodies

Executive Order 11990 entitled "Protection of Wetlands", dated May 24, 1977, required federal agencies to take action to avoid adversely impacting wetlands wherever possible, to minimize wetlands destruction and to preserve the values of wetlands, and to prescribe procedures to implement the policies and procedures of this Executive Order. With this in mind, the project study area was evaluated to determine the locations of potential wetlands and water bodies, which are shown in Figure 8.1 in the A2A Existing Conditions Map Book. Approximately 27,031 acres of wetlands are included in the study area.

Floodplains

Executive Order 11988 entitled "Floodplain Management" dated May 24, 1977, requires federal agencies to evaluate the potential effects of actions it may take in a floodplain to (1) avoid adversely impacting floodplains; (2) ensure that its planning programs and budget requests reflect consideration of flood hazards and floodplain management, including the restoration and preservation of such land areas as natural undeveloped floodplains; and (3) prescribe procedures to implement the policies and procedures of this Executive Order.

A review of the Federal Emergency Management Agency (FEMA) Digital Flood Insurance Rate Maps (DFIRM) shows the locations of floodplains within the project study area. Figure 8.2 in the A2A Existing Conditions Map Book presents these floodplains that have been identified, and Table A-5 summarizes the areas of each that are within the study area.

Table A-5: Floodplains within Project Study Area

Zone	Zone Type	Description	Acres
A	Zone A	An area inundated by 100 year flooding, for which no base flood elevations have been identified	40,118
AE	Zone AE	An area inundated by 100 year flooding, for which base flood elevations have been determined	20,607
ANI	Area not Included	An area that is located within a community or county that is not mapped on any published Flood Insurance Rate Map (FIRM)	3,533
IN	Area in Special Flood Hazard Area (SFHA)	An area inundated by 100 year flooding for which base flood elevations or velocity may have been determined. No distinctions are made between the different flood hazard zones that may be included within the SFHA	3,413
X500	Zone X (500-year)	An area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from 100-year flooding	3,039

Source: Federal Emergency Management Agency, Project Study Team

Section 4(f) Resources

Section 4(f) of the U.S. code was established to preserve certain cultural and historic resources as activities are conducted in the U.S. highway program. These resources include public lands and parks, recreation lands, wildlife and waterfowl refuges, and historic sites. It states that programs and projects that adversely affect these resources should not be approved unless:

1) There is no feasible and prudent alternative to the use of such land, and
2) Such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use.[4]

In the Atlanta to Athens study area, an evaluation of Section 4(f) resources was conducted so that avoidance measures could be taken wherever possible. Figures 8.3 through 8.7 in the A2A Existing Conditions Map Book show the identified Section 4(f) resources, including parks and recreation areas, historical sites, cultural sites, and schools.

[4] Federal Highway Administration, Office of Planning, Environment and Realty, Environmental Review Toolkit, Section 4(f) Policy Paper

Historic Sites and Properties

The locations of historical sites and properties were identified to determine if any are located within the project study area. These locations were obtained from the Atlanta Regional Commission, Northeast Georgia Regional Commission and National Register of Historic Places. There are a number of these sites and properties within this area; Figure 8.3 in the A2A Existing Conditions Map Book displays their locations. Approximately 45 historic districts and approximately 251 historic sites were located or identified.

Public Lands

The locations of public lands, including parks, recreation areas, conservation lands, and wildlife management areas were obtained from the Georgia Department of Natural Resources. A total of 152 parks and recreation areas were identified within the study area. Parks and recreation areas are shown in Figure 8.4 of the A2A Existing Conditions Map Book. There are no wildlife management areas located within the study area. Approximately 4,721 acres of conservation lands were identified in the study area, which are shown in Figure 8.5 in the A2A Existing Conditions Map Book.

Table A-6: Public Lands within Project Study Area

County	Name	Owner		Size
Barrow	Barrow Hold	Land Trust and other Private Lands	Athens Land Trust	32
Barrow	Fort Yargo State Park	Georgia Department of Natural Resources	Georgia Department of Natural Resources	1820
Barrow	Greenspace Program Acquisition	Local Governments	Barrow County	10
Barrow	Greenspace Program Acquisition	Local Governments	Barrow County	3
Barrow	Greenspace Program Acquisition	Local Governments	Barrow County	4
Barrow	Mulberry	Land Trust and other Private Lands	Oconee River Land Trust	66
Barrow	Treadwell Estate	Georgia Land Conservation Program	City of Statham	27
Clarke	Abbey West	Land Trust and other Private Lands	Oconee River Land Trust	3

County	Name	Owner		Size
Clarke	Bear Creek	Land Trust and other Private Lands	Oconee River Land Trust	10
Clarke	Bowden Park	Land Trust and other Private Lands	Athens Land Trust	18
Clarke	Five Acre Woods	Land Trust and other Private Lands	Athens Land Trust	5
Clarke	Greenspace Program Acquisition	Local Governments	Clarke County	2
Clarke	Greenspace Program Acquisition	Local Governments	Clarke County	5
Clarke	Hardin Property	Other State Lands	Board of Regents	71
Clarke	Horseshoebend - Ecology Research Area	Other State Lands	Board of Regents	61
Clarke	Kenney Ridge	Land Trust and other Private Lands	Athens Land Trust	39
Clarke	Middle Oconee River	Georgia Land Conservation Program	Athens Clarke County	16
Clarke	Nature Walk	Land Trust and other Private Lands	Oconee River Land Trust	52
Clarke	North Oconee River Greenway	Georgia Department of Natural Resources	Georgia Department of Natural Resources	9
Clarke	Oconee Forest Park	Other State Lands	Board of Regents	105
Clarke	Odum	Land Trust and other Private Lands	Oconee River Land Trust	16
Clarke	Sandy Creek Nature Center	Local Governments	Athens-Clarke County	70
Clarke	State Botanical Gardens of Georgia	Other State Lands	Board of Regents	165
DeKalb	Greenspace Program Acquisition	Local Governments	DeKalb County	6
DeKalb	Greenspace Program Acquisition	Local Governments	DeKalb County	3
DeKalb	Greenspace Program Acquisition	Local Governments	DeKalb County	4
DeKalb	Greenspace Program Acquisition	Local Governments	DeKalb County	1
DeKalb	Greenspace Program Acquisition	Local Governments	DeKalb County	0.4

County	Name	Owner		Size
DeKalb	Greenspace Program Acquisition	Local Governments	DeKalb County	2
DeKalb	Greenspace Program Acquisition	Local Governments	DeKalb County	69
DeKalb	Mount Arabia Park	Local Governments	DeKalb County Parks	33
DeKalb	Panola Mountain Conservation Park	Georgia Department of Natural Resources	Georgia Department of Natural Resources	138
Gwinnett	Big Haynes	Department of Defense/Corps of Engineers	Corps of Engineers	45
Gwinnett	Greenspace Program Acquisition	Local Governments	Gwinnett County	7
Gwinnett	Greenspace Program Acquisition	Local Governments	Gwinnett County	12
Gwinnett	Greenspace Program Acquisition	Local Governments	Gwinnett County	4
Gwinnett	Greenspace Program Acquisition	Local Governments	Gwinnett County	14
Gwinnett	Greenspace Program Acquisition	Local Governments	Gwinnett County	5
Gwinnett	Greenspace Program Acquisition	Local Governments	Gwinnett County	29
Gwinnett	Greenspace Program Acquisition	Local Governments	Gwinnett County	61
Gwinnett	Greenspace Program Acquisition	Local Governments	Gwinnett County	352
Gwinnett	Ivy Creek	Department of Defense/Corps of Engineers	Corps of Engineers	25
Gwinnett	Little Mulberry River Park	Local Governments	Gwinnett County Parks and Recreation Department	525
Gwinnett	Mill Creek Nature Center	Land Trust and other Private Lands	Georgia Wildlife Federation	77
Gwinnett	Singleton	Department of Defense/Corps of Engineers	Corps of Engineers	12

County	Name	Owner		Size
Gwinnett	Conservation Easement	Land Trust and other Private Lands	Southeast Land Preservation Trust	36
Gwinnett	Conservation Easement	Land Trust and other Private Lands	Gwinnett Open Land Trust	9
Jackson	Cook	Land Trust and other Private Lands	Oconee River Land Trust	42
Jackson	Greenspace Program Acquisition	Local Governments	Jackson County	17
Jackson	Gumlog-Rivermist	Land Trust and other Private Lands	Oconee River Land Trust	104
Jackson	Jeffco	Land Trust and other Private Lands	Oconee River Land Trust	177
Oconee	Dove Creek	Land Trust and other Private Lands	Oconee River Land Trust	45
Rockdale	Bald Rock	Department of Defense/Corps of Engineers	Corps of Engineers	20
Rockdale	Greenspace Program Acquisition	Local Governments	Rockdale County	143
Rockdale	Greenspace Program Acquisition	Local Governments	Rockdale County	11
Rockdale	I-20	Department of Defense/Corps of Engineers	Corps of Engineers	19
Rockdale	Winfield	Department of Defense/Corps of Engineers	Corps of Engineers	46
Walton	Greenspace Program Acquisition	Local Governments	Walton County	4
Walton	Greenspace Program Acquisition	Local Governments	Walton County	15

Source: Georgia Department of Natural Resources, Project Study Team

Churches and Cemeteries

Churches and cemeteries were also located so that potential impacts can be avoided in the future. These features are shown in Figure 8.6 in the A2A Existing Conditions Map Book. A total of 384 churches were identified in the study area, and a total of 151 cemeteries were identified in the study area.

Archaeology

The University of Georgia maintains a database, the Archaeological Site Files, for known archaeological sites. For the purpose of reducing the threat of vandalism to archaeological resources, there is no public GIS data available at this time that can be used to identify specific archaeological sites within the study area.

Schools

School locations are shown in Figure 8.7 in the A2A Existing Conditions Map Book. There are 43 private schools, 103 public schools, three public vocation technical schools, two public two-year colleges, one public university, and one private four year college in the study area.

Hazardous Sites

The presence of hazardous waste sites is maintained by the Environmental Protection Agency (EPA). This data is stored in the Resource Conservation Recovery Act Information (RCRAInfo) database. The RCRAInfo is a national program management and inventory system about hazardous waste handlers. The EPA defines hazardous waste as liquid, solid, contained gas, or sludge wastes that contain properties that are dangerous or potentially harmful to human health or the environment. After a review of this database, a total of 1,523 hazardous sites were identified in the study area. Examples of these hazardous sites include:

- Automotive Dealerships;
- Construction, Lawn and Tractor Supply Stores;
- Dry Cleaners;
- Gas Stations;
- Laboratories;
- Paint, Parts, and Body Shops; and
- Transportation / Fleet Facilities.

These sites are displayed in Figure 8.8 in the A2A Existing Conditions Map Book.

Threatened and Endangered Species

As part of this environmental screening, the study area was evaluated for potential impacts to threatened and endangered plant and animal species, in accordance with 50 CFR 402.12, Section 7(c) of the Endangered Species Act of 1973. Based on information provided by the U.S. Fish and Wildlife Service (USFWS), each county within the study area was evaluated for potential occurrences of species.

The counties within the project study area were also evaluated for the occurrence of listed species in Critical Habitat designated by Congress in 17 CFR 35.1532. Critical Habitat has not been designated for any species in the study area. Table A-7 provides an overview of endangered species that are present in each county that is located in the project study area.

Table A-7: Endangered Species Located in Project Study Area

County	Species	Type	Type
Barrow	Black Spored quillwort	Endangered	Ferns and Allies
	Little Amphianthus	Threatened	Flowering Plants
Clarke	Black Spored quillwort	Endangered	Ferns and Allies
	Gray Bat	Endangered	Mammals
DeKalb	Black Spored quillwort	Endangered	Ferns and Allies
	Little Amphianthus	Threatened	Flowering Plants
	Michaux's Sumac	Endangered	Flowering Plants
Gwinnett	Black Spored quillwort	Endangered	Ferns and Allies
	Little Amphianthus	Threatened	Flowering Plants
Jackson	Black Spored quillwort	Endangered	Ferns and Allies
Newton	Black Spored quillwort	Endangered	Ferns and Allies
	Little Amphianthus	Threatened	Flowering Plants
	Michaux's Sumac	Endangered	Flowering Plants
Oconee	Black Spored quillwort	Endangered	Ferns and Allies
Rockdale	Black Spored quillwort	Endangered	Ferns and Allies
	Little Amphianthus	Threatened	Flowering Plants
	Michaux's Sumac	Endangered	Flowering Plants
Walton	Black Spored quillwort	Endangered	Ferns and Allies
	Little Amphianthus	Threatened	Flowering Plants
	Michaux's Sumac	Endangered	Flowering Plants

Source: U.S. Fish and Wildlife Service

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A-6: Existing Land Use and Development Policies

Potential transportation improvements identified within the Atlanta to Athens: Connectivity and Mobility Study will be evaluated in a variety of ways. A major criterion will be consistency with local and regional land use plans to ensure transportation improvements meet the larger development goals of the community and region. In an effort to identify these land use goals and policies in the study area, reviews of land use plans and the Atlanta Regional Commission's (ARC) Livable Centers Initiatives (LCIs) were conducted.

The purpose of this Section is to summarize this review and serve as a guide for ensuring consistency with local and regional land use plans. This document represents the first of a series of reports focusing on land use considerations in the study area. Following reports will focus on existing and future land uses and land use recommendations.

The regional land use plans developed by the Atlanta Regional Commission (ARC) and the Northeast Georgia Regional Commission (NEGRC) were reviewed**.** The Comprehensive Plans for the nine counties that comprise the study area were also reviewed. Four of these plans were Joint Comprehensive Plans and include the cities and towns within the county's boundaries. The most recent Comprehensive Plans available were collected from the Georgia Department of Community Affair's website or local jurisdiction's websites. While Comprehensive Plans address many separate elements, the focus of the review was specifically on the land use elements, maps and policies. The following county plans were consulted for this analysis:

- *DeKalb County Comprehensive Plan 2005-2035 (2010)*
- *Gwinnett County 2030 Unified Plan(2008)*
- *Rockdale County 2020 Comprehensive Land Use Plan(2003)*
- *Newton County Comprehensive Plan(2008)*
- *Joint City-County Comprehensive Plan 2006-2026 for Walton County and the cities of Between, Good Hope, Jersey, Loganville, Monroe, Social Circle, and Walnut Grove (2007)*
- *Barrow County Comprehensive Plan, Joint Comprehensive Plan for Barrow County and the municipalities of Auburn, Bethlehem, Carl, Statham & Winder(2008)*
- *Joint Comprehensive Plan 2030 for Oconee County and the Cities of Bishop, Bogart, North High Shoals, and Watkinsville, Georgia (2008)*
- *Jackson County, Georgia Comprehensive Plan(2010)*
- *Athens-Clarke County and the City of Winterville Comprehensive Plan (2008)*

For counties who did not engage in joint comprehensive planning the Comprehensive Plans for each individual city or town in the study area was also reviewed. This includes the cities and towns in DeKalb, Gwinnett, Jackson, and Rockdale Counties. Only unincorporated portions of Newton County are located in the study area, so no additional jurisdictions required review for that county. The city and town plans reviewed include:

- *Clarkston Comprehensive Plan 2025 (2006)*
- *City of Lithonia, Georgia 2010-2026 Comprehensive Plan (2010)*
- *City of Pine Lake's Comprehensive Plan (2006)*
- *City of Stone Mountain Comprehensive Plan,2006-2026 (2006)*
- *City of Snellville 2030 Comprehensive Plan (2009)*
- *City of Lawrenceville Comprehensive Plan 2030 (2008)*
- *City of Lilburn 2030 Comprehensive Plan (2030)*
- *City of Grayson Comprehensive Plan (2009)*
- *City of Dacula 2030 Comprehensive Plan (2008)*
- *City of Conyers, Partial Update of the Comprehensive Plan(2008)*
- *City of Hoschton, Comprehensive Development Plan 2010-2030 (2010)*
- *City of Jefferson, 2008-2028 Comprehensive Plan (2008)*
- *Town of Braselton: 2030 Comprehensive Plan (2010)*
- *City of Arcade 2008-2028 Comprehensive Plan (2009)*

LCI studies are small-area planning studies, administered by the ARC, that allow local jurisdictions to create sustainable, livable communities through strategies that link transportation improvements with targeted land use changes. These are reviewed in Section A-10**.** The goals of LCIs are to promote compact, mixed-use communities that encourage the use of alternative modes of transportation, such as pedestrian, bicycle, and transit travel. The 22 most recent LCIs within the study area were collected from the ARC's website and include:

- *Northlake (2002)*
- *Tucker (2005)*
- *Clarkston (2005)*
- *Stone Mountain Village (2004)*
- *Kensington Station (2003)*
- *Wesley Chapel (2011)*
- *Lithonia (2003)*
- *Stonecrest Activity Center (2012)*
- *Jimmy Carter Boulevard Corridor (2007)*
- *Indian Trail – Lilburn Road (2007)*
- *Lilburn Town Center (2002)*
- *Highway 29 Boulevard (2011)*
- *Norcross Activity Center (2008)*
- *Gwinnett Place (2012)*

- *Hwy 78 Corridor (2005)*
- *Snellville (2003)*
- *Park Place (2007)*
- *Lawrenceville (2005)*
- *Conyers Town Center (2001)*
- *Central Conyers Activity Center (2009)*
- *Loganville (2010)*
- *Monroe (2008)*
- *Winder (2010)*

A-7: Review of Regional Plans

The following section presents the plans of the ARC and NEGRC that provide guidance for future development in their respective regions. Key findings from this analysis have been included.

A-7.1 Plan 2040 Unified Growth Policy Map

As a component of *Plan 2040*, the ARC developed the Unified Growth Policy Map (UGPM) based upon local plans and ARC policies and forecasts to serve as a blueprint for development in the region. The UGPM is shown in Figure 9.5 in the A2A Existing Conditions Map Book. As shown, the portions of the A2A study area within the ARC – and subject to the UGPM - include those within Gwinnett, Walton, Barrow, Rockdale and Newton Counties.

The UGPM establishes Areas and Places in the region. Areas describe predominant land use patterns throughout the region, while Places reflect concentrated uses that have generally defined boundaries and provide greater detail within Areas. In addition, the Regional Development Guide (RDG) was authored to provide guidelines and implementation priorities for Areas and Places of the UGPM. The Areas and Places found in the study area include the following:

- Maturing Neighborhood
- Established Suburbs
- Developing Suburbs
- Rural Areas
- Regional Centers
- Regional Town Centers and Town Centers
- Station Areas
- Industrial and Logistics Areas

The majority of the study area is classified as Mature Neighborhood, Established Suburbs, or Developing Suburbs. A more detailed description of these Areas and Places and where these classifications occur in the study area are described below.

- **Maturing Neighborhoods** – These areas are found primarily in the DeKalb County portion of the study area and are characterized by older neighborhoods that include both single-family and multi-family residential development. These areas are experiencing redevelopment and infill pressures. Much of the infrastructure is built out in these areas with limited ability to expand. Arterial streets are often congested in these areas as they serve as a regional route for commuters. Developing and maintaining a pedestrian network of sidewalks and trails is important in these areas as many people are aging in place in these neighborhoods.

- **Established Suburbs** – These areas are characterized with older suburban development with limited infill development potential. As a result, redevelopment will likely occur over the next 30 years – particularly in commercial corridors. The preservation of existing single-family neighborhoods in these areas is encouraged. A majority of the A2A study area within Gwinnett County is classified as this area type.
- **Developing Suburbs** – These are suburban areas where a conventional pattern is present, but with potential to develop in a more sustainable manner. Some transportation improvements may be needed within these developing suburbs, but care should be taken not to spur unwanted growth. Limiting existing infrastructure in these areas will constrain the amount of additional growth that is possible. These areas within the A2A study area are found in Gwinnett, Barrow, and Rockdale Counties.
- **Rural Areas** - The eastern portions of the study area in Barrow, Walton, and portions of Rockdale and Gwinnett Counties are predominately classified as Rural Areas. These areas are desired to remain rural in character and it is recommended to allow no development or only low intensity development in these locations. There is an identified need to maintain existing transportation infrastructure in these areas, but caution is advocated in expanding infrastructure capacity in these areas as it may spur unwanted growth.
- **Regional Centers** - Three areas are designated as Regional Centers in the study area; these include the area adjacent to the interchange of SR 316 and I-85, Northlake Mall area, and the Stone Mountain industrial area. Regional Centers have more than 10,000 jobs in approximately four square miles. These major employment centers are desired to be connected to high capacity transit service. Since these areas are heavily focused on employment they frequently feature a jobs-housing imbalance. Adding housing options to these areas are desired.
- **Regional Town Centers and Town Centers** - These areas are found in several locations in the study area – including Conyers, Loganville, Lawrenceville, Monroe, and Winder. These areas have policies in place to promote additional density or infill development and are intended to become mixed-use centers with employment, retail, residential, and cultural amenities. It is recommended that these areas should be well connected to the regional transportation network.
- **Station Areas** - These areas represent a ½ mile to 1 mile buffer around existing and planned high capacity transit stations. Transit supportive development in these areas is desired and high-density residential developments in these areas are encouraged. Station Areas in the study area are located along I-20 East in Rockdale and southern DeKalb Counties, along I-85 in Gwinnett County, and in Lawrenceville, Winder, Dacula, Northlake Mall, and Lilburn.
- **Industrial/Logistics Areas –** There are two of these Industrial/Logistics Areas identified within the study area; these include the SR 316 area adjacent to Lawrenceville and the area adjacent to I-85.

These areas represent major intermodal freight facilities and major logistics centers of the region. These areas are intended to be preserved as economic engines and well connected to the regional transportation network. Freight traffic is an important concern in these areas.

Northeast Georgia Plan 2035 – Regional Agenda

The NEGRC has recently adopted a long-range plan entitled the *Northeast Georgia Plan 2035*. The plan includes a Regional Development Map which presents the desired development patterns for the region. The region is classified into four categories: Developed, Developing, Rural, and Conservation. This map is provided in Figure 9.6 in the A2A Existing Conditions Map Book.

Within the study area Developed areas are shown within and adjacent to the municipalities of Monroe, Loganville, Athens, Winder, Auburn, Carl, Stratham, Arcade, Braselton, Bethlehem, and Jefferson. Large portions of Walton County and Oconee County are shown as Developing. Rural areas are shown throughout unincorporated portions of Jackson, Barrow, Athens-Clarke, and Walton Counties. Conservation areas are shown primarily along rivers and as lands within the Southeast Ecological Framework.

A-8 – Review of Local Comprehensive Plans

This section provides detailed summaries for each jurisdiction's plan and is organized by county. This analysis presents land use implications to be considered moving forward through the study process. A matrix provided at the end of this section presents major policies by jurisdiction for easy comparison purposes. The subsequent section highlights the land use and development strategies recommended in the comprehensive plans within the study area.

A-8.1 - DeKalb County

DeKalb County is located in the westernmost portion of the study area and is the most highly developed and urbanized county in the study area. Due to its urban character, targeted redevelopment is a major focus of their plan. Their plan identifies numerous land use issues, including a high percentage of unattractive development along major roadways and older strip commercial centers that are in decline or underutilized. Excessive surface parking, a lack of mixed-use centers, and neighborhoods lacking a sense of place or identity are other identified issues.

DeKalb's plan identifies recent land use opportunities, including the completion of several small area studies that encourage mixed-use development, pedestrian connectivity, Transit-Oriented Development (TOD) and the establishment of Pedestrian Community Districts (PCD) to address the growing need for mixed-use developments. The ability for declining and underutilized strip commercial centers to accommodate redevelopment without intruding into established residential neighborhoods is another identified opportunity in the county.

The plan establishes a general vision for the future of DeKalb County. This vision includes less sprawl development and the redevelopment of declining neighborhoods. It also includes an improved transportation system with less congestion and increased use of alternative modes of travel.

Within Comprehensive Plans, the Future Development Map or Future Land Use Plan is often considered to be the most important land use policy guide. DeKalb's plan establishes a Future Development Map for the county that is based on an activity center concept (Figure 9.7 in the A2A Existing Conditions Map Book). A series of mixed-use activity centers are planned throughout the county along major transportation corridors. They vary in scale from larger Regional Centers, medium-scaled Town Centers, to smaller Neighborhood Centers. Major activity centers in the study area include the Mall at Stonecrest Area, Panola Road, Wesley Chapel, Memorial Drive and the Northlake Mall area.

The map establishes Commercial Redevelopment Corridors on Covington Highway and Memorial Drive. These corridors are targeted for the redevelopment of aging commercial land uses with mixed-use

development. The map shows the majority of the county as being appropriate for continued single-family residential development. There are large industrial areas planned throughout the county as well, these include the Lithonia Industrial Area, Panola Road Industrial Area, and Stone Mountain Industrial Areas.

The plan establishes a set of land use strategies for the county to employ to achieve their policies. These strategies include encouraging development within and near principle transportation corridors and activity centers and encouraging TOD in appropriate locations. Other strategies include ensuring heavy vehicle access does not intrude on residential areas and locating developments in areas with direct access to existing infrastructure.

A-8.1.2 – City of Pine Lake

The City of Pine Lake is a small city located in central DeKalb County along Rockbridge Road. The city's comprehensive plan identifies a vision for the city, which includes promoting desirable development patterns through encouraging smart growth and context-sensitive street design. Another component includes increasing connectivity through encouraging multi-modal transportation (e.g. regional bike/pedestrian and transit facilities). The City's Future Development Map can be found in Figure 9.8 in the A2A Existing Conditions Map Book.

The City intends for the land uses within the city to remain largely unchanged over the planning period. The single-family residential areas are intended to remain residential. The commercial areas along Rockbridge Road are intended to remain commercial. The areas the city intends to annex, several parcels south and east of the city, are intended to become a mixture of residential and mixed-use development.

The City identifies implementation strategies and associated policies to achieve their development goals within their plan. One major goal is to create a downtown area, which the city currently lacks. This is intended for the commercial area along Rockbridge Road. The goal is to develop an attractive, mixed-use, pedestrian-friendly place where residents can gather for shopping, dining, socializing and entertainment. The City has created a Downtown Development Authority to oversee this and intends to work with the Georgia Department of Community Affairs Office of Downtown Development to make their vision a reality.

A-8.1.3 – City of Stone Mountain

The Comprehensive Plan for Stone Mountain establishes a future vision for the city. This vision includes a commitment to protecting and promoting historic character of the city. It also includes an increased mix of retail, housing, and professional uses to promote a live/work/play environment in the city.

The plan includes a Future Development Map (Figure 9.9 in the A2A Existing Conditions Map Book) that establishes appropriate character areas for the city. The downtown area is designated as a Town Center area. The vision for the area includes a burgeoning mix of higher-density residential, retail, and office

professional activities. This includes housing densities up to 12 units per acre. Areas adjacent to Main Street/East Ponce de Leon Ave are designated as Commercial Redevelopment Areas. These areas are declining and need redevelopment to be vital in the future. Appropriate land uses for these areas include commercial/professional uses with second story residential uses. The plan also includes a Future Land Use Map. This map identifies a combination of mixed-use and commercial development around the historic downtown area.

The plan identifies numerous land use issues within the city. These issues include many city neighborhoods in need of revitalization and a number of vacant properties scattered throughout the city that could be used for infill development. Another issue involves churches and other non-commercial uses located in storefronts downtown promoting the perception that Main Street is in a state of decline. Other issues include a lack of mixed-use development downtown and opposition from some residents for new development, innovative development and higher-density development.

The plan also identifies land use goals to be pursued. These include supporting the revitalization of city neighborhoods, and infill development on vacant properties scattered throughout the city. Another goal is promoting a mix of uses in the city, including offices and lofts over retail. Other goals include educating residents to the merits of new and innovative development.

A-8.1.4 – City of Lithonia

The Comprehensive Plan for Lithonia identifies a community vision for the city. This vision is for Lithonia to maintain its unique and small town character, while improving the visual aesthetic quality of its downtown. The vision includes striving for diversification and balanced growth with a focus on development that preserves existing amenities and historical resources.

Lithonia's plan discusses the Livable Centers Initiative (LCI) study of Lithonia and the key concepts that were carried over into the Comprehensive Plan. These include developing various housing options in downtown that are compatible with the existing character of Lithonia that house families and empty nesters. Encouraging architectural preservation and design elements that are compatible with the existing historic character is another key concept carried over. Creating a sense of place or focal point in downtown that serves as a gathering place for the community was also an important concept stemming from the LCI study.

The plan includes a Future Development Map (Figure 9.10 in the A2A Existing Conditions Map Book) which identifies character areas within the city. The map shows a Mixed-Use Town Center, surrounded by Downtown Mixed-Use and Adaptive Re-Use Mixed-use character areas. The plan calls for a mixed-use town center in the heart of downtown in an area that contains Lithonia Plaza. Lithonia Plaza currently

houses the Wayfield Foods grocery store and several retail stores. A portion of the structure is owned by the city. The redevelopment of this center is desired by the city to serve as a catalyst for additional development downtown.

To implement their plans for downtown the City identifies a series of implementation strategies. These include phased demolition of Lithonia Plaza and conducting a feasibility study of live/work townhome developments downtown. Another strategy includes extending the development of new retail and mixed-use projects along the Main Street corridor.

The plan also identifies numerous the issues and opportunities in the city. Major issues include limited housing options for downtown living. Other issues include the need to enhance the character and quality of development along Main Street and the need to redevelop Lithonia Plaza to support mixed-use development. Opportunities include implementing recommendations of LCI study to improve housing options for downtown living through the redevelopment of Lithonia Plaza. Another identified opportunity includes implementing design standards to improve the quality and appearance of buildings along Main Street.

A-8.1.5 – City of Clarkston

The City of Clarkston is located in central DeKalb County on the western border of the study area. The City engaged in a Livable Centers Initiative (LCI) study, which was completed in 2004. Due to the extensive public involvement involved and the inclusion of the entire city in the study area, the recommendations, plans and projects identified in the study comprise a major foundation of their Comprehensive Plan.

The vision for Clarkston is a "Village Center" with a central public open space and a mix of land uses and development types. A live-work-play environment is desired that is secure and pedestrian-friendly. Attractive tree-lined sidewalks and bike paths are also desired to link the community.

The city's plan discusses the importance of the transportation and land use interaction within the city. Since the city is largely developed, redevelopment will be a primary issue in the city going forward. The city desires to focus redevelopment in areas well served by public transit. The city also identifies the parking lots of institutions (churches, college and technical school) as underutilized and presenting opportunities for the sharing of parking by different land uses that have different peak periods.

The plan includes a Character Area Map to guide future development (Figure 9.11 in the A2A Existing Conditions Map Book). The map shows additional mixed-use development and office development is desired around the historic core of the city, located on E. Ponce de Leon Avenue. This area identified as the Central Business District is desired to feature residential units over commercial and retail uses.

To help achieve the city's vision the plan sets forth land use policies to be followed by the City. These include enhancing connectivity within and among Clarkston's communities through sidewalks, bike paths, and multi-use trails. Other policies include improving the function, efficiency, and aesthetic appeal of arterial roadways within the city. Promoting mixed-use, mixed residential, live-work lofts, and urban residential land uses also represents a major city policy. To implement these policies the City recommends exploring zoning incentives, direct grants and loans, tax abatements and deferrals, bond financing, land write-downs and infrastructure support to facilitate desired development.

A-8.2 - Gwinnett County

The Gwinnett County 2030 Unified Plan is a combined planning effort that includes their Comprehensive Plan, Consolidated Plan, and Comprehensive Transportation Plan. This review focuses on the Comprehensive Plan, specifically Part 3 which focuses on future development policies.

Gwinnett County is a highly developed and suburbanized county. The Future Development Map (Figure 9.12 in the A2A Existing Conditions Map Book) calls for a large portion of the county to remain in the current suburban single-family residential pattern. Major travel corridors are the exception. They are desired to transform from existing strip commercial, industrial, and residential uses to a combination of various mixed-use character areas. These major corridors include SR 316 (University Parkway), SR 20, SR 8(Lawrenceville Hwy), US 78, SR 124, and the I-85 corridor.

SR 316 (University Parkway) runs east-west across the county from I-85 to the Barrow County line. The western portion of the corridor contains significant industrial and commercial development. It also includes major activity centers including Briscoe Field Airport, Gwinnett Medical Center, and Gwinnett Technical College. The Future Development Map calls for Preferred Office in the area adjacent to SR 316 and I-85. This area is encouraged for office professional and mixed-use development. The middle portion of the corridor in the vicinity of Lawrenceville is designated as an R &D (Research and Development) Corridor. This land use category is encouraged for office professional, light industry, mixed-use, and institutional development.

SR 20 runs north-south from the Walton County line in Loganville to I-85. SR 20 is heavily developed throughout county and is primarily lined with single-family subdivisions. A cluster of commercial and industrial land uses can be found in the vicinity of Lawrenceville. The Future Development Map for the SR 20 corridor is primarily comprised of Emerging Suburban Areas. There is a cluster of Regional Mixed-Use adjacent to the area near the interchange of SR 20 and I-85. This area is deemed appropriate for mixed-use, office professional, ultra high-density residential and high-density residential development. The areas adjacent to the City of Grayson are designated as a Mixed-Use Corridor. These Mixed-Use Corridors are

encouraged to feature mixed-use, office professional, ultra high-density residential and high-density residential land uses.

SR 8 (Lawrenceville Hwy) runs southwest to northeast across the county from the DeKalb County line to Barrow County line. The SR 8 corridor is heavily developed suburban corridor consisting a mixture of commercial and single-family subdivision development. The Future Development Map primarily designates the SR 8 corridor as a Mixed-Use Corridor.

US 78 runs east-west from the DeKalb County line to the Walton County line. This is a heavily developed suburban corridor lined with commercial development and single-family residential subdivisions. The corridor is primarily designated as a Mixed-Use Corridor appropriate for future mixed-use, office, professional, and high-density residential. The commercial area adjacent to the DeKalb County border in the vicinity of E. Park Place is designated as a Community Mixed-Use area, in which a neighborhood scale of mixed-use and townhome development is preferred.

SR 124 runs north-south from the DeKalb County to the Barrow County line. The SR 124 is a heavily developed corridor lined with single-family subdivisions and strip commercial development. The Future Development Map for the corridor calls for a limited Mixed-Use Corridor designation in the area immediately south of the Lawrenceville city limits.

The I-85 corridor is shown to be appropriate for high-density residential, regional-scaled mixed-use and large-scale office development. This corridor is intended to feature the County's most intense concentration of development. These areas are intended for high-rise and mid-rise office and residential development and to serve as principal TOD locations.

In addition to the Future Development Map, the plan also identifies numerous land use policies the County should pursue to achieve their land use goals. These include implementing a Transfer of Development Rights (TDR) program for the less developed eastern part of the county and promoting SR 316 as a research and development belt. Other policies include fostering redevelopment and increasing density, specifically in the I-85 corridor. Expanding the current transit system and creating Transit-Oriented Development (TOD) at appropriate sites, through proactive zoning are also major policies in the plan. Improving walkability in existing activity centers is another need identified in the plan.

Gwinnett County has a series of overlay zoning districts along major corridors and around major activity centers. Within the study area these include the Mall of Georgia, Civic Center, Grayson/Georgia Highway 20, Centerville/Georgia Highway 124, US Highway 78, and GA Hwy 124/324/Hamilton Mill. The purpose of these overlay districts is to achieve and maintain a unified and pleasing aesthetic/visual quality in landscaping, architecture, and signage; and to promote alternative modes within the districts through the

provision of pedestrian and local public transit. This overlay district was first applied to the Mall of Georgia area and was popular with developers and residents. As a result of its success the overlay district has since been applied to numerous other areas in the county. The regulations focus on lighting, landscaping, building materials, site design and setbacks.

A-8.2.1 – City of Snellville

The City of Snellville is located in southeastern Gwinnett County and is centered on the major crossroads of US 78 and SR 124. The city has developed in an auto-centric manner with strip commercial lining major highways and the city center featuring a strip-mall core. The city seeks to transform its center into a mixed-use pedestrian-friendly area. The recent construction of the Town Hall anchors the City's Town Center plan. The city has been pro-active in implementing a Town Center Overlay Zoning District to guide this development over the coming decades.

Snellville's plan employs two major policy tools to guide future growth. These include a Future Development Map and a Future Land Use Plan. The Future Development Map (Figure 9.13 in the A2A Existing Conditions Map Book) includes broad character areas at the neighborhood or local community level. The map establishes 13 unique character areas and two key development areas. These are based mainly on neighborhood or development characteristics. Each character area includes a description, vision for the future, implementation strategies and community objectives. The vision for the major travel corridors through Snellville include a move away from strip commercial and a transition to a mixed-use nodal development pattern centered on major intersections.

The Future Land Use Plan is more specific, being at the parcel level and shows desired land uses for each parcel in the city. The plan shows a mixture of mixed-use, commercial, public-institutional, and office development along the major corridors of US 78 and SR 124. The remainder of the city is intended to remain primarily single-family residential.

The plan identifies numerous land use issues, opportunities, and implementation strategies. Major issues include aging commercial strip centers and limited undeveloped land. Major opportunities include the development of the new Town Center and the redevelopment of aging shopping centers. Strategies include the continued implementation of the Town Center development and the continued adoption/strengthening of architectural standards and site design requirements.

Major land use policies identified in the plan include retaining and conserving the residential character of the city and utilizing buffers between residential and non-residential development. Other policies include encouraging mixed-use development and creating walkable, safe, and attractive neighborhoods.

A-8.2.2 – City of Lawrenceville

The City of Lawrenceville is located in central Gwinnett County. Major transportation facilities that traverse Lawrenceville include SR 316/University Parkway, SR 20/Buford Drive/Grayson Highway, SR 120/Duluth Highway/Pike Street, US 29/SR 8/Lawrenceville Highway, and SR 124/Scenic Highway. With the County's recent explosive growth, Lawrenceville has evolved from a local market town to a small urban center surrounded by ever-spreading suburban residential and strip commercial developments. The city wishes to return to a "full life cycle community" where residents can go from childhood to college to adulthood to retirement.

The City has introduced a Future Development Map (Figure 9.14 in the A2A Existing Conditions Map Book) to be used in conjunction with the current Future Land Use Map and Official Zoning Map to assist with planning decisions. The Future Development Map includes broad character areas at the neighborhood or local community level. The map establishes 11 unique character areas and one transportation corridor designation. These are based mainly on neighborhood or development characteristics. Each character area includes a description, vision for the future, implementation strategies and community objectives. The core of the map is the Downtown Master Plan character area, which emphasizes infill and a mix of uses in creating a destination for the city and region.

The plan identifies numerous land use issues and opportunities, as well as policies. Major issues include the lack of a "sense of place," the unattractive nature of corridor development, redevelopment of older neighborhoods, and decreasing amounts of vacant land on which to sustain growth. Major opportunities include increasing areas where higher density can be encouraged, the installation of overlay districts/form-based zoning to guide redevelopment, and the provision of gateways into Lawrenceville.

Major policies include encouraging office and retail to locate in designated areas that are well served by public infrastructure, encouraging the reuse and revitalization of industrial facilities, seeking centralized locations for municipal buildings and facilities, the continued implementation of the Downtown Master Plan, and the utilization of open space and other buffers to minimize adverse impacts of noise and vibration generated by vehicular traffic. Other policies include the promotion of underutilized, outdated, obsolete or vacant land uses for redevelopment.

A-8.2.3 – City of Lilburn

The City of Lilburn is located in western Gwinnett County and is traversed by US 29/SR 8/Lawrenceville Highway. Lawrenceville Highway/US 29 is the primary retail and commercial area for the city as well as a major part of its transportation network. As such, the City has implemented the Lawrenceville Highway/US 29 Overlay District. The Comprehensive Plan also includes a Town Center Overlay District

that is intended to maintain the area's history, physical development, and architectural integrity as inspiration for future development, particularly infill development, so that the town center can serve as the economic and social center of the community.

The City has introduced a Future Development Map (Figure 9.15 in the A2A Existing Conditions Map Book) that illustrates the direction and composition of the City's vision statement. The map includes broad character areas at the neighborhood or local community level. The map establishes seven character areas, including two overlay areas. The Lawrenceville Highway/US 29 Overlay area is currently characterized by a wide range of commercial buildings, including strip development, surface parking, limited on-site landscaping, multiple curb cuts, incomplete sidewalk networks and a general lack of consistency in appearance. The Overlay District applies to the entire length of the roadway and any lot within 450 feet from its center line, through the City of Lilburn. The overlay district is intended to establish a safe and appealing pedestrian environment in order to attract and reward investment in the area while establishing a sense of place. It calls for access management policies and a series of design standards for setback, signage and appearance.

The plan identifies numerous land use issues and opportunities, as well as policies. Major opportunities include downtown Lilburn, which is creating its own identity through a new Downtown Development Authority, the adoption of several revitalization ordinances consistent with the Town Center Plan that should provide flexibility in zoning, and a small number of infill residential developments and mixed-use proposals, primarily for the downtown area. Major policies include the continued enforcement of overlay districts and the land use plan without allowing rezonings contrary to its intentions.

A-8.2.4 – City of Dacula

The City of Dacula is located in eastern Gwinnett County and is traversed by US 29/SR 8/Winder Highway and US 29/SR 316/University Parkway. The City has a Future Development Map (Figure 9.16 in the A2A Existing Conditions Map Book) that illustrates the vision for the city. The map establishes seven character areas. Of these, Suburban Residential comprises most of the land area the city. Along the major east-west corridors, Community Activity Center and Mixed-use character areas comprise the majority of the land area. Community Activity Centers are relatively large nodes at major intersections that serve as major destinations for the city residents. They feature a mix of uses, with the highest intensity uses closest to the major roadways.

The plan identifies numerous land use issues and opportunities, as well as policies. The city's location is an opportunity, because it is located where several regional transportation facilities come together, and the addition of the Sugarloaf Extension will increase accessibility to and from the city, which will support more

intensive development options. Other opportunities include developing more stringent zoning and development regulations, mixed-use development in high income areas for the generation of tax revenue, and improved design and signage standards Issues include Dacula's lack of a local identity and an existing aesthetic environment that needs improving, the threat of older developed areas suffering economic decline, narrow downtown streets, and segregated land uses. Other issues involve the depleting reserve of developable land, which could slow the rate of growth or significantly increase densities. To this end, neighborhood-scale mixed-use and commercial centers are proposed along Harbins Road south of SR 316 between the Alcovy Road and Ace McMillan Road intersections and along Dacula Road between Fence Road and Hurricane Shoals Road. Together, these two community centers are expected to reduce the number of local north/south trips through the city and permit Dacula's downtown to develop as the cultural and educational center for the city.

Employment-related land use policies include the protection of potential future employment and activity center areas from prematurely developing as lower density housing uses. This would create barriers to future non-residential development and limit connectivity between residential areas and jobs. Policies related to Commercial Activity Centers include establishing centers to the north and south of the city, emphasizing the development of smaller, pedestrian-oriented streets, shops and parking in the downtown core area of the city and encouraging developers to establish a grid system of streets and/or internal interconnected driveways in these centers. Additional city policies address creating a "sense of place," through city signage at major gateways, enhancing scenic corridors into the city, and establishing specific design standards for public gateway investments including sidewalks, lighting and street furnishings.

A-8.2.5 – City of Grayson

The City of Grayson is a small city (17.8 square miles) located in southeastern Gwinnett County. Until recently, the city had not been subject to the growth pressures occurring in the rest of the county. As a result, most development activity is relatively recent and primarily residential.

The city includes a Future Development Map (Figure 9.17 in the A2A Existing Conditions Map Book) in their plan that identifies a Town Center (Uptown Grayson) located at the historic core of the city at the intersection of SR 20 and Grayson Parkway. The plan also identifies a Commercial Corridor along SR 20, the major thoroughfare through the city. The remainder of the city is primarily desired to consist of single-family residential development in the future.

The plan specifically recommends using the Future Development Map and Future Land Use Plan as guides to decision-making. Other policies include ensuring development in Uptown Grayson includes mixed-uses developed at a pedestrian-scale and promoting the re-use of single-family homes abutting SR 20 as office

and light commercial uses or preferably redeveloped as new structures. The city recently implemented a Downtown Development Authority in 2008 and this is viewed as a powerful implementation tool to achieve their vision for Uptown Grayson.

A-8.3 - Rockdale County

Rockdale County's Comprehensive Plan identifies land use goals and needs. A major goal includes striving for a more compact development pattern that conserves vacant land and greenspace. In recent decades the county has exhibited significant leap-frog development, unbounded commercial strip development along major corridors, and large-expanses of low-density single-purpose development. The county seeks to break from this pattern and channel development into three specific mixed-use areas. These areas include the Salem Road corridor, Mall at Stonecrest area, and Parker Road/Flat Shoals Road area, as can be seen in Figure 9.18 in the A2A Existing Conditions Map Book.

The plan calls attention to the need for coordinated planning between transportation improvements and future land use planning. Transportation improvements should be directed away from environmentally sensitive areas and towards areas where community services can be provided more economically. Higher-density housing is encouraged near commercial centers, transit lines, and parks to encourage walking, bicycle use, and transit ridership. The need to encourage transit and Transit-Oriented Development (TOD) is also identified.

The vast majority of northern Rockdale County within the study area is planned for future single-family residential development. There is however a significant Park/ Recreation/ Conservation land use, the Big Haynes Creek Recreation Area, located in the northeastern corner of the county. Isolated neighborhood commercial centers are also planned for crossroads throughout northern Rockdale County within the study area.

A-8-3.1 – City of Conyers

The City of Conyers is located in central Rockdale County. The city uses its Comprehensive Plan and Zoning Map to manage its land uses, but looks to increase its reliance upon a revised Future Land Use Map. The Partial Update of the City's Comprehensive Plan (2008) assesses the community's progress towards its objectives. Land use objectives include heritage preservation, environmental protection and open space preservation, and encouraging infill development.

Strategies for heritage preservation include an overlay district with design standards, the city's Historic Preservation Ordinance, and streetscape revitalization downtown. Environmental strategies include the

expansion of the local greenspace program and implementing conservation subdivision concepts, as well as two zoning overlay districts along the river and for the groundwater recharge area. Infill development strategies include a design review mechanism and the Olde Town Overlay District.

The plan identifies numerous land use issues, opportunities, and policies. Major issues include high volumes of vacant and underutilized land within the city, three undeveloped activity centers from a previous LCI, and a vague and outdated Future Land Use Map (Figure 9.19 in the A2A Existing Conditions Map Book). Opportunities include the promotion of infill development, the implementation of the 2001 LCI study, and updating the Future Land Use Map. Major infill policies include encouraging development and redevelopment of sites close to the urban core. Other policies include using the Future Land Use Map to guide land-use decision making and continued coordination with Rockdale County to ensure the implementation of the LCI plan for those activity centers not within City limits.

A-8.4 - Newton County

A very small portion of the northwest corner of Newton County is included in the study area. According to the County's Future Land Use Map the majority of this area is planned as appropriate for single-family residential development, although at very low densities. This area is located in the special Gum Creek planning area in which rural preservation and conservation are desired. The future vision for this area includes a destination for equestrian activities including trails and farms. A small portion of the SR 138 corridor is planned for commercial land uses, in the form of rural crossroads commercial development.

Major land use issues identified in Newton County's plan include rampant suburban sprawl, as evident in leap-frog residential development and strip commercial development along major corridors. The plan calls for the preservation of rural areas, particularly in the unincorporated portions of the county, perhaps through the implementation of a TDR program. Conservation subdivisions are also promoted to preserve a portion of open space within residential developments. To avoid excessive strip commercial development the implementation of corridor overlay districts that require quality development and a strict adherence to the Future Development Map (Figure 9.20 in the A2A Existing Conditions Map Book) that limits strip development have been suggested.

A-8.5 - Walton County

Walton County is transitioning from an agricultural to an urbanizing county and has recently experienced a significant amount of sprawl development. The Joint City-County Comprehensive Plan 2006-2026 for Walton County, which includes the Cities of Between, Good Hope, Jersey, Loganville, Monroe, Social

Circle, and Walnut Grove, sets forth policies to alleviate this. The plan outlines a vision that preserves open space, habitat, and tree canopy by concentrating development in and around developed areas.

The plan establishes guiding principles for the county, which include protecting and conserving natural resources, coordinating infrastructure expansion with land use, land use compatibility, and encouraging innovative development techniques. These innovative techniques include master planned developments and conservation subdivisions that will increase the amount of open space within new development, promote a compatible mixture of uses, and protect environmentally sensitive areas. In addition, intensive development will be encouraged within nodes at major intersections and inter-parcel connectivity requirements will decrease vehicle trips on the road network. The plan also calls for the study of a TDR program to preserve sensitive and scenic areas.

The plan establishes a Future Development Map (Figure 9.21 in the A2A Existing Conditions Map Book), which divides the county into six major categories, Rural Residential, Suburban, Neighborhood Residential, Village Center, Employment Center, and Highway Corridor. The plan includes, for each character area category, appropriate land uses, compatible zoning categories, planning objectives and implementation strategies. The plan calls for Highway Corridor designation along major corridors in the county, including US 78, SR 138, and SR 11. Appropriate land uses in these areas include commercial, office, industrial, and mixed-use development. It is recommended that developments should provide internal, interconnected driveways to mitigate adverse access management impacts along major roadways.

A-8.6 - Barrow County

Barrow County has experienced rapid suburbanization in the last decade and is transitioning from a rural to a suburban county. The Barrow County Comprehensive Plan is a joint plan that includes the jurisdictions of Auburn, Bethlehem, Carl, Statham, and Winder. The plan includes a Future Development Map (Figure 9.22 in the A2A Existing Conditions Map Book) that divides the county into character areas. For each character area includes a description of appropriate development patterns, primary land uses, and implementation strategies.

There are numerous land use issues identified within the plan. These include conflicts between suburban residential development and neighboring agricultural lands uses. To remedy this, the plan suggests maintaining up to date ordinances that provide adequate buffers between agriculture and residential uses. Another issue identified was sprawling suburban residential development and the need to conserve agricultural land. The plan encourages conservation subdivisions to protect greenspace and natural resources to avoid this.

The plan identifies a desire to promote industrial land uses within the SR 316 corridor. There is an identified need to conserve land in this corridor for industrial land uses and protect it from rampant single-family residential development. The rapid transition of other corridors from rural to suburban is also an issue. To remedy this, the plan encourages creating scenic byway designations for SR 211 in east Barrow County, SR 53 north of Winder, SR 82 east of Winder, and SR 330. The plan also recommends encouraging mixed-use nodes along major corridors.

The plan also establishes a set of land use policies to guide the County's development decisions. Major policies include providing adequate buffers between agriculture and residential land uses and encouraging mixed-use development nodes at the major intersections of major corridors. Another policy involves preserving the rural character of the county and providing the opportunity for agricultural and forestry activities to remain a vital part of the community.

A-8.7 - Oconee County

Oconee County is part of the Athens-Clarke County Metropolitan Statistical Area. Within the study area the county is highly developed in areas adjacent to the Athens Clarke-County border. The western portion of the county remains largely undeveloped, however. Oconee County's Comprehensive Plan is a joint plan and includes the cities of Bishop, Bogart, North High Shoals and Watkinsville. Bogart is the only city within the study area, located adjacent to the border with Athens-Clarke County.

The plan establishes a vision for the county in which rural, suburban and small town lifestyles are preserved. The County wishes to maintain an identity based upon high-tech economic opportunities, an excellent educational system, agriculture and open space. The county recognizes the need to plan for the preservation of natural resources, historic resources, a balanced tax base and appropriate infrastructure.

The plan recognizes the desirability of the county for future development due to its location between the growing Atlanta and Athens metropolitan regions. The county has experienced a remarkable growth rate in recent decades and this is expected to continue with the population expected to double between 2000 and 2030. To accommodate this growth appropriately, a growth management system that considers infrastructure and service-provision is desired for the county.

The plan identifies major guiding principles and policies for the county. These include creating land use patterns that promote connectivity and mobility and designing with the environment. They also include protecting rural character, agricultural heritage and maintaining a sense of place. A major tool identified to achieve rural preservation is the adherence to the county's Future Development Map (Figure 9.23 in the A2A Existing Conditions Map Book). This map acts a guide directing new growth to where it is appropriate and identifies areas that should remain agriculture. There are no identified Agricultural Preservation areas

within the study area. These are located primarily in southern Oconee County. There are areas designated as Rural Places in areas bordering Walton County, however. These areas are deemed appropriate for active farming and scattered single-family housing on very large lots (>5 acres). Mini-farm estates are also permitted in these areas.

The vision for the City of Bogart is to maintain its charming and colorful small town character while including big city services. There is a need identified to preserve its historic heritage and land development pattern while encouraging business growth.

There are two major transportation corridors within the Oconee County study area. These include SR 316 and US 78. The SR 316 corridor is planned as a Regional Center, in which large-scale commercial, office, retail, entertainment, multi-family and single-family residential development is appropriate. The US 78 corridor is planned as a Community Village Center, in which shopping centers and medium-scaled commercial are appropriate.

A-8.8 - Athens-Clarke County

The Comprehensive Plan for Athens-Clarke County is a joint plan and includes the City of Winterville. The plan includes guiding principles, objectives, strategies, and policies. The guiding principle relating to land use is "to enact land use policies that avoid urban sprawl." Guiding strategies and policies to achieve this include creating incentives for agricultural areas on the periphery of the urban area to remain as agriculture by using techniques such as TDRs, conservation easements and open space subdivisions. Other policies include promoting increases in residential densities in areas that meet community design standards, environmental constraints and available infrastructure capacities. Encouraging redevelopment and in-fill, over the development of undeveloped property on the periphery of the urban area is also recommended.

The plan includes a Future Development Map (Figure 9.24 in the A2A Existing Conditions Map Book) designed to serve as a blueprint for future development in the county. The plan calls for mixed-use and commercial development along major corridors in the county, including SR 10 and US 29 (Athens Perimeter). A buffer of rural/agricultural land uses are shown along the northern edge of the county, along the Jackson County border. For each category included on the Future Development Map there are corresponding implementation measures to achieve the desired land uses.

Another component of the plan includes issue identification and recommended policy corrections. In the land use component there were several identified issues. One major issue is the lack of mixed-use and neo-traditional development in the county, even though this is encouraged in the zoning and development regulations. To investigate the County will review their codes to ensure the requirements for these types of desired developments are not too onerous for developers. Another issue identified is the emphasis of

building codes on land use and not appearance or context. The County will work to explore the desirability of using form based codes within development regulations to address this. An additional issue identified was the lack of walkability in many parts of the county. The County will continue to develop the sidewalk network emphasizing connectivity and accessibility and encourage commercial centers to be organized into "blocks" that promote walking.

A-8.9 - Jackson County

Jackson County is the northern most county in the study area. The county is largely rural, but has witnessed growth pressures from three directions; the Atlanta region, the Athens-Clarke County region, and the Gainesville-Hall County urbanization. The county is now considered a "suburban frontier" with a significant number of residential subdivisions planned and in various states of development. The recent economic recession has left the county with a large surplus of platted, but vacant lots in partially-built subdivisions. This will have a long-lasting effect, hampering future growth until this inventory is developed and can be absorbed into the market.

The Jackson County Comprehensive Plan establishes a vision for the county that maintains its rural character and agricultural ties. The plan identifies sprawling and scattered residential subdivisions as a major issue confronting the county. The goal of the County is to ensure contiguous, sequential growth in and around the county's municipalities and along major corridors. In an effort to place stronger controls on sprawl, the plan outlines areas where future subdivisions are permitted and prohibited. The county's Character Area Map (Figure 9.25 in the A2A Existing Conditions Map Book) identifies Urban, Suburban, Rural, Agriculture, and Conservation Areas. Residential subdivisions are not permitted in Rural, Agriculture, or Conservation Areas. They are only permitted in areas adjacent to municipalities and along major corridors.

Each of the broad categories included on the Character Area Map is given specific development policies appropriate for each area. Specific development policies are also provided for each category provided on the county's Future Land Use Map.

The plan discusses a TDR program as a possible technique to direct growth in the county. A program like this would establish 'sending' and 'receiving' areas for growth. While presented as a potential solution, the plan concedes that a TDR program has numerous complications. The technical complexity and lack of program experience in Georgia make it unlikely this will be implemented in Jackson County in the near or mid-term.

The plan identifies SR 334 in Jackson County as a scenic highway worthy of preservation for its rural character. To preserve this corridor the plan calls for the County to develop a Scenic Corridor Overlay

District, within its Short-Term Work Program, and apply it to the corridor. SR 334 is located slightly east of the study area, but such an overlay district could be used as a tool to preserve other scenic areas within the study area.

The plan identifies the SR 124 and SR 53 corridors as having overlay districts in place to ensure quality development and help control strip commercial development. These overlays regulate the character and physical design of development, including building materials, lot standards, access management, signage lighting and parking.

A-8.9.1 – City of Arcade

The Comprehensive Plan for Arcade includes a future vision for the city. The vision is a safe and quiet town in which new development is family-oriented and compliments the rural setting. New development is desired to provide employment opportunities, services, recreation, parks and shopping.

The plan includes a Future Policies Map (Figure 9.26 in the A2A Existing Conditions Map Book), indicating appropriate character areas within the city. US 129 (Jefferson Bypass) is the main transportation corridor through Arcade. The city plans a new Town Center along US 129 adjacent to the intersection with Terry Farm Road. The city also plans an Activity Center along US 129 in the area adjacent to the intersection with US 129 Business Route. This area includes the old city center on Athens Street. Mixed-use land uses are desired for this area including a mix of retail, service commercial, professional office, residential and park space.

The plan includes top issues and opportunities for the city to address. Top land use concerns include the declining and unattractive city center along Athens Highway and ensuring planned unit developments are attractive, pedestrian-friendly, contain mixed housing types, and include public facilities to serve the entire city. Other concerns include ensuring a mix of housing sizes, types, and price-points in the future to maintain a variety of housing within the city.

The city's plan also identifies a variety of land use policies set forth to change their development patterns. These include avoiding leapfrog development across undeveloped areas and developing a recognizable transition from the urban to rural areas of the community. These policies also include developing commercial nodes of varying sizes at major intersections of arterial roadways. To implement these policies the city identifies various zoning ordinances and planning tools to adopt encouraging cluster development, infill development, mixed-use development and street standards for pedestrians, bicycles, and on-street parking.

A-8.9.2 – City of Hoschton

The City of Hoschton is located just south of I-85 in Jackson County. Hoschton's Comprehensive Plan presents a vision for the city that includes the preservation of its rural heritage through focused development practices, the enhancement of multimodal connectivity among neighborhoods and activity centers, and the cultivation of a strong local economy through the encouragement of compatible business development in appropriate areas.

The City has introduced a Future Development Map (Figure 9.27 in the A2A Existing Conditions Map Book), to work in accordance with local zoning, which includes broad character areas. The map establishes nine unique character areas. These character areas permit a mix of land uses in the city center in an effort to create a vital, vibrant destination.

The plan identifies numerous land use issues and opportunities, as well as policies. A major issue identified is the lack of protections for farmland, during a prolonged period of agricultural land loss to other uses. Major land use opportunities include updating the Zoning Map and the potential to utilize form-based zoning, TADs, CIDs, and other measures to attract business. Identified policies include minimizing environmental impacts from development, promoting mixed-use development, and supporting infill development.

A-8.9.3 – City of Jefferson

The City of Jefferson is located just south of I-85 in Jackson County. SR 129 and Jett Roberts Road connect the city to the Interstate and act as gateways to downtown. The city's Comprehensive Plan sets forth a vision of the city in which the downtown core is revitalized and serves as a destination in the city and county.

The plan contains a Future Development Map (Figure 9.28 in the A2A Existing Conditions Map Book) that features 15 unique character areas. Industrial Areas are identified surrounding I-85 through the city, providing a buffer between the Interstate and the residential areas to the south. In this character area, existing industrial areas are desired to be retrofitted into planned industrial parks, which would include a mix of land uses to serve area employees. Gateway Corridors are identified within the map. These areas are desired to exhibit proper signage and landscaping, manage access for safe traffic flow, and contain retrofitted strip development that places parking to the rear of buildings where possible.

The plan identifies numerous land use issues and opportunities, as well as policies. Major issues include a lack of preserved open space in the city. Opportunities include encouraging developers to incorporate greenspace, parks, and other public spaces into their developments and setting aside or purchasing land

for use as parks or open space. Major policies include promoting walkable development patterns, reducing the adverse impacts of existing automobile-oriented development, and encouraging a mix of businesses at commercial developments, as well as utilizing new zoning and planning techniques to achieve the city's land use goals.

A-8.9.4 – Town of Braselton

The southern portion of the Town of Braselton spans three counties within the study area; these include Gwinnett, Barrow, and Jackson Counties. The city is adjacent to I-85 along the northern edge of the study area. This city includes the Chateau Elan Winery and Resort and an industrial corridor along SR 124 between Old Winder Hwy (SR 211) and SR 53. The majority of Braselton in the study area is found in Jackson County. The Jackson County portion includes the historic crossroads of Braselton at the intersection of SR 124 and SR 53.

The Future Development Map (Figure 9.29 in the A2A Existing Conditions Map Book) for Braselton divides the community into eight unique character areas. The plan calls for the continuation of the Chateau Elan area as residential and to preserve its greenspace. It also calls for gateway commercial/mixed-use at the interchange of SR 211 and I-85 and additional industrial development along SR 124.

The plan also indicates a desire for mixed-use development in the historic downtown area along SR 53. Within the last decade the town has located key civic uses (Town Hall, Police Department, Public Library, Planning Department) within walking distance of the downtown to encourage a pedestrian-friendly center. Upcoming improvements, including new streetscapes and the realignment of the SR 124/53 intersection are planned to enhance the area and encourage continued economic investment. Desired land uses in this area include a mix of institutional, retail, and office land uses with upper-story residential in a historic architectural style. A central park area, townhomes, and low-rise offices are also desired for the greater downtown area.

To achieve this development the Town has identified the strategy of implementing a mixed-use center overlay district or similar regulatory mechanism. To ensure the desired industrial expansion along SR 124 does not result in negative impacts to surrounding areas the Town foresees creating and enforcing appropriate transitions between core warehousing areas and adjacent, smaller-scaled office parks, residential areas and green buffers.

The Town has identified major land use issues, opportunities, and policies to be addressed. Issues include commercial centers exhibiting sprawl characteristics and overlay districts on SR 211 and 53 needing revisions to ensure appropriate buffers are in place and more pedestrian amenities are provided. Identified land use opportunities include the potential of the historic downtown to transform into a mixed-use activity

center and the town's shift to more compact development types. Policies presented in the plan include establishing land use controls to create commercial nodes at key intersections and guiding growth strategically into activity centers and downtown to preserve the scenic and pastoral areas of the town from development.

A-9 Summary of Local Comprehensive Plans

A total of 23 Local Comprehensive Plans were reviewed on their land use elements. Twelve of the plans include policies that promote rural preservation. All of the Counties' except for DeKalb County, existing plans and a couple of the municipalities in the middle of the study area include policies that promote rural preservation. Only two of the plans, Newton County and Athens-Clarke County include policies that promote limiting strip development along major corridors. Half of the plans include polices that promote the redevelopment of the historic cores or downtowns in the form of mixed-use development. Only the plans for the municipalities include this policy. Approximately half of the plans include policies that promote mixed-use redevelopment along major corridors. The plans for the more developed counties of DeKalb and Gwinnett Counties and some of the larger municipalities such as the Snellville, Lawrenceville, Lilburn and Conyers include policies that promote this type of redevelopment along major corridors although none of them include policies to limit strip development along major corridors. Eight of the plans include policies that promote compact node development at major intersections. Practically all of these plans are for the smaller municipalities in the middle of the study area with the exception of DeKalb County and City of Snellville. Five of the plans include policies that promote employing Overlay Districts to achieve the desired development in a specified area. Most of these five plans are for the more developed areas, such as DeKalb and Gwinnett Counties and the larger municipalities such as Snellville and Lilburn. Only three of the plans include policies that promote Transit Oriented Development (TOD). This policy in included the plans for the more developed counties of DeKalb, Gwinnett and Rockdale where there is existing transit service.

A-10 Review of LCI Plans

The LCI program seeks to help communities plan for and design places that are healthier all around – providing a robust jobs environment, safe and efficient transportation routes, and land uses that promote the diverse needs of a well-balanced place. The recommendations from the LCIs improve pedestrian access, mixed-use developments, eliminating sprawl patterns and increased residential densities where appropriate. This section provides detailed summaries for the relevant LCIs and is organized by county.

A-10.1 – DeKalb County

A-10.1.1 – Northlake LCI (2002)

The Northlake LCI Study Area lies northeast of Atlanta in unincorporated DeKalb County, along the edge of Interstate-285 near its interchange with LaVista Road. The study area covers approximately 1,000 acres of primarily commercial and industrial uses. DeKalb County's existing zoning ordinance has strictly separated these uses and effectively shaped the activity center at the cost of accessibility and pedestrian-friendliness. To this end, private automobiles are the primary means of transportation for the majority of the population. Because the study area is a commercial center without a formal public function, a goal of the study is to create a sense of place and to provide a means to influence the development decision-making process.

The LCI's land use recommendations include the adoption of mixed-use land use and mixed-density development categories to complement the standard categories already in the DeKalb Land Use Plan, while encouraging mixed-use and mixed-density development. A Mixed-use Commercial category allows for vertical or horizontal mixture of retail commercial and residential uses on a single parcel. This could take the form of residential above or next door to small-to-medium sized retail stores. A Mixed-use Office category provides space for vertical or horizontal mixture of office, single-family, multi-family, and retail commercial uses; specific ratios of uses should be determined by prevailing market conditions. A Mixed-density Residential category provides space for the mixture of single- and multi-family residential units on a single parcel.

A-10.1.2 – Tucker LCI (2005)

The Tucker LCI area, also known as the Downtown Tucker Core, is located in northeastern DeKalb County, approximately 17.5 miles from downtown Atlanta. Tucker is not an incorporated city, but the downtown core has a historic and geographic position as the recognizable town center of a community of 35,000 residents. The LCI focuses on the revitalization of the downtown area, which is characterized by auto-oriented uses such as sprawling subdivision housing and strip retail centers.

The Master Plan calls for the creation of a series of neighborhood squares along 1st Avenue to foster a sense of place and enhance the economic value of the area. The plan illustrates neighborhood shopping areas and mixed-use commercial uses in order to strengthen the opportunity for future small-scale, community-serving retail, as well as to provide space for new, higher-quality commercial tenants. The plan also proposes diversified housing types including rental and/or leased residential spaces in order to attract a greater diversity of residences. In order to implement the Master Plan, the LCI recommends the rezoning of the entire area as a Pedestrian Community District and adding a zoning overlay to prescribe uses and heights. Pedestrian Community District's govern urban design elements, pedestrian connectivity, parking controls, yards, open space design, and building orientation. The application of this district in conjunction

with the Downtown Tucker Overlay District to control the uses and the maximum heights would provide the County with a zoning mechanism for implementing this LCI plan.

A-10.1.3 – Clarkston LCI (2005)

The City of Clarkston is centrally located in DeKalb County approximately ten miles northeast of Atlanta and five miles east of Decatur and five miles west of Stone Mountain. Surrounding the study area are:

- Numerous multifamily housing units along E. Ponce de Leon Avenue to the west,
- Interstate 285 and unincorporated Scottdale with a mix of industrial uses and some single family housing to the east; and
- Perimeter College and DeKalb Technical College with a concentrated level of multifamily housing to the south along N. Indian Creek Drive.

The vision for Clarkston is a "village center," a destination where residents and visitors could live, work and play in a secure, attractive environment. To this end, the LCI recommends a Town Center mixed-use development initiative that would promote the gradual redevelopment of the approximately eight square blocks of existing retail shops, offices and auto-related services bordered generally by E. Ponce de Leon Avenue, N. Indian Creek Drive and Montreal Road. Additionally, the plan also calls for the beautification of East Ponce de Leon-Church Street Corridor with extensive streetscape and landscape improvements to define a strong visual entry into Clarkston. In order to implement the vision for Clarkston, the LCI recommends that the City pursue the creation of a mixed-use “Overlay District” encompassing the proposed “Town Center District” of Clarkston, as well as a program of combined zoning-based controls and incentives that will encourage desirable residential redevelopment of major potential development sites within the city.

A-10.1.4 – Stone Mountain Village LCI (2004)

The Stone Mountain Village LCI is located in northeastern DeKalb County just west of the Stone Mountain Park. The LCI area contains the main commercial districts of the City of Stone Mountain, including the historic “Main Street” district as well as City Hall and other institutional uses. A concentration of residential neighborhoods surrounds the Main Street commercial core, including Shermantown, a historic African American community. Challenges addressed in the study include the significant traffic congestion, the opportunities and demands for new development in Stone Mountain Village, and the need to add and upgrade community facilities.

The historic character of the area offers a great opportunity for both economic and residential development. The Village Vision Plan provides land use changes and four anchor projects to serve as catalysts for preserving and enhancing the historic village. These anchor projects include improvements to the Historic

Main Street, redevelopment of the Stone Mountain Park Edge Live/Work District, creation of the Village Green Institutional District, which would include a new City Hall and redevelopment of the Shermantown Square District. In order to encourage private development of the mixed-use nodes and greater diversity of housing options outlined in this plan, a number of land use changes are required. The key land use changes proposed include the conversion of existing multi-family rental housing to condominiums, development of mixed-use districts, and designations of additional "park/recreation/conservation" spaces and an office/professional district. The LCI also recommends that the zoning changes should not be initiated by the City but should be accomplished through the City's work with developers and property owners wishing to rezone property for development and redevelopment purposes.

A-10.1.5 – Kensington Station LCI (2003)

The Kensington Station LCI study area is comprised of the Kensington MARTA Station and its surrounding area in central DeKalb County. The study area also includes a large DeKalb County governmental core, the I-285/Memorial Drive interchange, numerous multi-family apartments, office parks and surrounding single-family neighborhoods.

The LCI Concept Plan encourages increased density in the heart of the study area surrounding the Kensington MARTA Station, and reduced densities of development moving to towards the periphery and the surrounding single-family residential areas. Preservation of the single-family residential areas while designing a more pedestrian-friendly and transit-oriented environment is an important theme of the plan. The area immediately surrounding the MARTA station is targeted as a Transit-Oriented Development (TOD) to take advantage of the station to create a high-density live/work/play environment. The plan also envisions a consolidated "Government Center," the development of a regional employment center at the Roberts site, and the redevelopment of uses along Memorial Drive and Covington Highway with mixed-uses to create a 24-hour community. In order to implement the plan, a new zoning district or site-specific zoning overlay is recommended to allow for higher densities and mixed-use developments, as well as providing guidelines for building setbacks and reducing parking requirements.

A-10.1.6 – Wesley Chapel LCI (2011)

The Wesley Chapel LCI study area is located in south central DeKalb County and includes the commercial centers surrounding the I-20/Wesley Chapel Road interchange and adjacent neighborhoods along the Wesley Chapel corridor. The Wesley Chapel area was once a thriving area of commercial and residential development but has experienced a significant amount of disinvestment over the past 20 years. As such, economic development is the major motivation for this LCI.

The LCI Master Plan identifies three key catalyst redevelopment projects that include the Town Green, Institutional Campus and a TOD around a future multimodal transit station. The plan recommends four

redevelopment project areas these include the Covington Highway/Wesley Chapel Road Neighborhood Commercial Node, the Wesley Chapel Road/Snapfinger Woods Drive Commercial Redevelopment Area, the Wesley Chapel/I-20 Mixed-Use Redevelopment Area, and the Wesley Chapel/I-20 Commercial Redevelopment Area. If built as envisioned in the plan, the study area could accommodate over 2.2 million square feet of new commercial development, 1.2 million square feet of mixed-use development, almost 700,000 square feet of institutional uses, and 1.6 million square feet of office.

The LCI recommends that the recently adopted Wesley Chapel Overlay District be amended to encourage higher-quality development and prohibit uses that are inappropriate with the urban character envisioned for the area. The LCI also recommends creating new design guidelines specific to the Wesley Chapel area and developing specific provisions for transitioning 'Greyfields' to 'Greenfields'.

A-10.1.7 – Master Plan for Lithonia (2003)

The Lithonia LCI study area is located just north of I-20 East in the southeastern section of DeKalb County. Lithonia has a "historic small town" character, which the LCI aims to maintain and enhance. Challenges and opportunities for the redevelopment of Lithonia include an underutilized Main Street retail core, an overconcentration of public housing, lack of connectivity to/from I-20, and surrounding single-family residential neighborhoods that also contribute to the historic character of the city.

The LCI study includes a Framework Plan that identifies key development projects for new/rehabilitated housing, mixed-use/commercial/civic development and public infrastructure improvements. A Downtown Target Area is proposed to reinvigorate the downtown area by redeveloping the eastern wing of the Lithonia Plaza and incorporating structured parking for high-density residential uses. Retail uses are focused on Main Street and incorporate façade improvements and pedestrian-friendly enhancements. Amendments to the local zoning ordinance and Comprehensive Plan are recommended with the addition of a downtown mixed-use district that permits upper-level lofts and other mixed-use development patterns; a distinction between light and heavy industrial uses; an adaptive re-use district to cover the emerging and changing nature of south Main and Stone Mount Street; and a Traditional Neighborhood Development (TND) single-family district to support smaller-lot in-town subdivisions.

A-10.1.8 – Stonecrest Activity Center LCI (2012)

The Stonecrest Activity Center LCI has been recently awarded to DeKalb County and will focus on creating strategies to improve the long-term economic viability of the Stonecrest region. Since it is being developed currently there is no plan to review at this time.

A-10.2 – Gwinnett County

A-10.2.1 – Jimmy Carter Boulevard Corridor Study (2007)

The study area for the Jimmy Carter Corridor Boulevard Corridor Study includes a 2.4-mile segment of Jimmy Carter Boulevard accessing I-85 and is located in Gwinnett County. Key study area needs include increased traffic congestion, aging or lack of infrastructure, end of life-cycle shopping centers, declining property values, ethnic diversity, and security issues for the business and residential communities in the corridor. Based on the community-defined vision of the area, the LCI recommends potential development along the corridor and within three activity nodes, addressed strategies for rehabilitating "end of lifecycle" retail centers, and identified methods to enhance overall connectivity and mobility.

The resulting Community Consensus Framework Plan focuses on redevelopment opportunities at the intersections at Singleton Road, Buford Highway, and I-85 Interchange. The Singleton Road node is proposed as a new International-themed Village that takes into account its location and underutilization. The Buford Highway node is proposed as a "village" concept with a mix of residential and residential over commercial and freestanding retail. The I-85 Interchange node is envisioned as the gateway to the Gwinnett Village Community Improvement District (CID) with numerous planning and engineering studies to improve the vehicular traffic flow and enhance the pedestrian environment. Additionally, two catalyst projects at the OFS site and Carter Oak Plaza have been proposed to include a cultural center, substantial retail and intensive mixed of uses to promote walkability, economic base and a sense of place. The 2005 Gwinnett County Area Plan Policy Map identifies the Jimmy Carter Boulevard Corridor as a major activity center in which allows for more intense, high-rise development. Further, the LCI's redevelopment plans are in line with the recommendations from the County's Revitalization Task Force.

A-10.2.2 – Indian Trail-Lilburn Road LCI (2007)

The Indian Trail-Lilburn Road LCI is located in southwest Gwinnett County and is wholly contained within the Gwinnett Village CID boundary. The study corridor is 3.6-mile long extending from Beaver Ruin Road in Norcross to Lawrenceville Highway in Lilburn. The corridor faces aging infrastructure, as it was one of the earlier commercial, retail corridors within developing Gwinnett County. Major goals of the study are to identify opportunities for mixed-use development and enhance the pedestrian environment to encourage alternative transportation in the corridor. Challenges to redevelopment include the large number of property owners and general resistance in suburban areas to higher-density development.

The Framework Plan that supports the goals of the LCI recommends the development and redevelopment of areas within the corridor at a higher density that would create a more walkable area and better support the use of transit in the area. Specific plan elements in clued the Interstate Gateway - a new transit-oriented mixed-use near I-85; Learning Village - a neighborhood center to accompany Greater Atlanta Christian

School; Hillcrest Neighborhood Center – redevelopment of neighborhood-scale village centers; and Quarryside Neighborhood – development of a major recreational amenity at the quarry to encourage new mixed-use development. The LCI recommends the application of the Mixed-Use Overlay to the corridor to allow for higher residential densities, less restrictive building height requirements, and other design standards that would encourage the types of developments in the plan. Further, the LCI's redevelopment plans are in line with the recommendations from the County's Revitalization Task Force.

A-10.2.3 –Lilburn Town Center Plan (2002)

The Lilburn Town Center is located in the southwestern corner of Gwinnett County and includes two focus areas: the North Focus Area and the South Focus Area. The North Focus Area is a highway commercial node located at U.S. 29/Lawrenceville Highway and Killian Hill Road. The South Focus Area includes the historic downtown center of Lilburn. The goal of the Town Center Plan is to identify public and private opportunities to revitalize the Town Center area while preserving the small-town character.

The Town Center's land use and development recommendations are concentrated around the two focus areas within which there are three districts: Old Town District, Main at Church Street District, and the Shopping Center District. The key recommendations of the Old Town District include the increased number and variety of uses while maintain its historic character. The Main at Church Street District is proposed with redevelopment of neighborhood commercial node and traditional neighborhood housing. Improvements of the Shopping Center District include the redevelopment and aesthetic enhancements of the US 29/Killian Hill shopping area.

A-10.2.4 – Highway 29 Boulevard of Opportunity Study (2011)

The Highway 29 Boulevard of Opportunity study area is a four mile corridor between Rockbridge Road and Ronald Reagan Parkway through the City of Lilburn in Gwinnett County. The Highway 29 study area boundary has been combined with the Lilburn Town Center LCI to comprehensively address transportation and land use issues that affect this area. The corridor is typical of most suburban commercial thoroughfares in its use and subsequent activity with most uses generating traffic during the AM and PM peak periods as well as the lunch-time rush for the restaurants and fast food establishments. Currently, mobility and connectivity are strained with the only truly viable opportunity being single vehicle automobile traffic along the highway.

The study promotes mixed-use development along the corridor, which combines various components of housing, office, and retail, to revitalize the area and offer options to the residents and businesses alike. The study recommendations are provided in the four focus areas for redevelopment with mix of uses and variety of housing types identified along the corridor: West, Town Center, Central, and East. The LCI recommends a focus on the initial land use implementation on the Town Center Focus area to work in conjunction with

concurrent City of Lilburn efforts and create a 'Live/Work/Play' hub. Regulatory recommendations include creating a mixed-use zoning category and refining the Highway 29 Overlay District to reflect reduced building setbacks, Priority Storefronts, rear parking and other design standards to achieve a united visual quality in landscaping, architecture and signage, and to promote alternative transportation.

A-10.2.5 – Norcross Activity Center Study (2008)

The Norcross Activity Center is located in the southwestern corner of Gwinnett County and is partly within the city limits of Norcross and unincorporated county. The study area is in close proximity to the intersection of Interstates 85 and 285 as well as the Doraville MARTA station. The activity center and the immediate surrounding areas are notable because there have been three previous LCIs – Downtown Norcross (2001), Jimmy Carter Boulevard (2006) and Indian Trail (2006) conducted to address redevelopment. Similar to other areas around the periphery of the metro area, the study area is characterized by strip commercial centers in various stages of aging; outparcel office development, and older cul-de-sac neighborhoods isolated from the surrounding corridors.

The land use plan recommends various levels of mixed-uses in the study area from high-density mixed-use nodes at the interchanges to the lower-density mixed-use corridor redevelopment along Buford Highway and the single-family residential neighborhoods in between. Additionally, three mixed-use development nodes have been identified for additional analysis based on community input – Brook Hollow/Jimmy Carter, Brook Hollow/Indian Trail and Buchanan School. In terms of implementation, the LCI recommends the adoption of Gwinnett County Mixed-Use Overlay for both interchange focus nodes and adaptation of higher-density mixed-use zoning categories for Brook Hollow and Beaver Ruin Corridors (similar to Buford Highway). The LCI also recommends the creation of Tax Allocation Districts (TADs) for redevelopment nodes around I-85 interchanges at Jimmy Carter and Indian Trail as well as for the area surrounding and including the Buchanan School site.

A-10.2.6 – Gwinnett LCI 10-Year Update (2012)

The Gwinnett LCI area is located in the heart of Gwinnett County and includes the generalized commercial activity centers surrounding I-85 North Corridor and a portion of the SR 316 Research and Development Corridor. The LCI's 10-Year Update builds on the recommendations of the initial study in 2001 for a thriving regional commercial center and focuses on the redevelopment area surrounding Gwinnett place mall. The LCI supports Gwinnett County's Unified Plan by promoting regional mixed-use and a variety of mixed housing types through much of the study area. However, it is recommended that those areas designated as regional mixed-use be more constrained than currently drawn in order to properly promote alternative modes of transportation and the development of a tight more urbanize activity center that can later serve as a catalyst for future growth.

A Concept Master Plan has been developed for the Gwinnett Place Focus Area which considers the following themes: a grand public space; a place for all ages; mixture of uses; an international village; a safe and walkable area; and incentive zoning. A key component of the Master Plan is the creation of a central community gathering area in the Gwinnett Place area. Furthermore, the Master Plan presents two options for the redevelopment of Gwinnett Place Mall based on private-sector based economic analysis. Option A consists of the mall structure intact but a complete redesign of the mall façade and the addition of other supportive uses around it, including office buildings, a hotel, and residential towers. Option B is a more radical approach by taking off the roof and running a grid of local streets through the mall's center to create a true urbanized core much in the fashion of Atlantic Station in downtown Atlanta.

A-10.2.7 – Highway 78 Corridor Study (2005)

The Highway 78 Corridor lies in the southern portion of Gwinnett County along a 2.4 mile segment of the US Hwy 78 Corridor just east of the Snellville city limits. As a key east-west route between Athens and Atlanta, the highway carries more than 50,000 vehicular trips per day and experiences significant delays and congestion during the peak travel periods. A key goal of the LCI is to develop and promote coordinated transportation and community character improvements along the corridor. To this end, the land use strategies outlined in the LCI are based on several guiding principles that include the preservation of existing single-family neighborhoods, integration of new development into the existing commercial areas and a creation of a robust multi-modal transportation network.

As part of the Framework Plan, the LCI recommends redevelopment plans for three distinct mixed-use nodes of varying character along Hwy 78. Killian Hill Road mode has been identified as a retail mixed-use development anchored by the existing Kroger and Publix shopping centers. Parkwood Road node is proposed as a 'neighborhood-scale' mixed-use development that includes medium-density housing. McGee Road node is recommended as another mixed-use commercial development with a large office component. Lastly, it is important to recognize that the redevelopment plans of the LCI are generally consistent with Gwinnett County's plans for Mixed-Use Overlay District and the recommendations by the County's Revitalization Task Force.

The 5-Year Update in 2010 noted while many of the transportation recommendations have been implemented, the decline in economy has stalled the mixed-use developments at the key nodes. In order to strengthen identity, the Hwy 78 CID changed its name to the Evermore CID. The recommendations from the 2005 study are based on the strategic location of the corridor and that fact that it is a major transportation thoroughfare. Instead, the 5-Year Update recommends a re-focus on creating a destination with a sense of community and place that is attractive to new residents and businesses.

A-10.2.8 – Snellville Town Center (2003)

The goal of this study is to determine appropriate land uses and urban design options to create a mixed-use town center environment that not only supports, but also encourages alternative forms of transportation. Future growth and infill development will be directed in such a manner to combat current and future transportation issues experienced in the Highway 78 corridor, including heavy pass through and commuting traffic.

The Town Center Development Plan establishes Clower Street as a new "main Street" and creates a new central community plaza with a new City Hall and other institutional uses. Three phases for private mixed-use development are proposed near the two main nodes along Clower Street - at Wisteria Drive and Oak Road. Amendments to the Town Center Overlay Districts are recommended to further encourage sustainable and pedestrian friendly environment. These recommendations include developing sub-districts of the overlay zoning district that could be applied to different street types within the district as a whole. To this end, the sub-districts could be used to could focus higher density "downtown" development in one area, while fostering supplementary development in adjacent areas. Other recommendations include implementing Transfer of Development Rights (TDR) as a mechanism to encourage redevelopment in the district and including bonuses to developers who work with adjacent parcels to share parking and access.

The 5-Year Update in 2009 indicates the completion of the City Hall, Senior Center and Public Safety buildings as part of the City Center Campus along with a number of other transportation improvements... These developments have acted as a catalyst for other Town Center developments such as One Wisteria place and Town Centre Professional Park. Furthermore, the City has plans to adopt two additional overlays to build on the initial success.

A-10.2.9 – Park Place Activity Center Study (2007)

The Park Place Activity Center is centered around the intersection of Highway 78 and Rockbridge Road and generally located in the southwest portion of Gwinnett County bordering DeKalb County. Peak hour traffic congestion, lack of community identity, and economic decline are major challenges of the study area addressed in the study. At the same time, the presence of stable residential neighborhood and Stone Mountain Park are important assets to spur redevelopment of many well-placed tracts of vacant lands and aging commercial centers.

The study recommends changes to the Gwinnett County's Future Land Use Map to promote more opportunities for mixed-use development. Four catalyst sites have been identified in the Conceptual Plan as areas ripe for mixed-use development and to serve as gateways to the study area: Stone Mountain Park Olympic Tennis Venue; eastern end of Stone Mountain Festival Shopping Center; and Mountain East Shopping Center Eastmont Shopping Center. Changes to the Zoning Ordinance are needed to implement

mixed-use development on the proposed catalyst sites. Further, a new Park Place Overlay District should be created in order to accomplish these recommendations.

A-10.2.10 – Lawrenceville Downtown Master Plan (2005)

The City of Lawrenceville is the county seat of Gwinnett County. Its Downtown is the area around the intersections of Perry, Crogan, Clayton and Pike Streets. The heavy traffic loads on the highways that run through historic Lawrenceville discourages the pedestrians necessary to support an economically viable Downtown (retail and dining) environment. The goal of the study is to identify strategies to create an enhanced Downtown by bringing new quality development to town while preserving its historic character. To this end, the Master Plan for the study area has been organized into a series of character areas around the Courthouse Square. These character areas form the basis for a new Downtown Zoning Code that was adopted during the LCI study process.

Land use recommendations include a mix of uses within close proximity, ranging from single-family, multi-family, office to commercial and civic (institutional). The highest intensity uses are proposed near the Courthouse Square, with the medium density and lower-intensity uses occurring at the edge of the study area. The implementation plan focuses on the Courthouse Square and proposes physical alterations, marketing efforts and tenant services that are critical to revitalization success. The plan recommends new in town living opportunities such as significant multistory residential project on one of the central blocks adjacent to the courthouse. The plan also recommends the introduction of anchors to encourage enhances retail leasing at the Square.

A-10.3 – Rockdale County

A-10.3.1 – Conyers Town Center (2001)

The City of Conyers is the county seat of Rockdale County. This LCI targeted four activity centers for development or redevelopment within the city. For every activity center, the LCI addresses methods to encouraging mixed-use development; provide a conceptual development plan; provide for efficient patterns of land use; and promote connectivity between activity centers and other parts of the Conyers community. The Activity Centers are as follows:

- Activity Center #1 is Downtown Conyers (also known as Olde Town). This area is envisioned as a compact retail core with multi-story, mixed-use buildings surrounded by offices, services and governmental and residential land uses. Virtually all residents within this area would be within a five to ten minute walking distance of the downtown area.

- Activity Center #2 - Pinedale/Forest Villas, located in northern Conyers is a residential neighborhood with approximately 40 percent vacant land. This area is anticipated to retain its residential character, but most of the new developments are recommended to follow guidelines for traditional neighborhoods with higher densities.
- Activity Center #3 – Milstead Avenue/Sigman Road contains the widest diversity of land uses ranging from medical uses, the Historic Milstead Community to single-family homes and limited commercial uses. The development concept for this Activity Center builds upon the presence of medical facilities and proposed residential development. The entire southern portion of the area is dedicated to the hospital, medical offices and personal care facilities.
- Activity Center #4 – East view/Signman Road is the most sparsely developed of the City's four Activity Centers. The dominant land uses are multiple-family residences, an assisted living facility and two churches. Conceptual planning for Activity Center #4 envisions the development of traditional neighborhoods, incorporating neighborhood convenience commercial establishments and recreational amenities.

The 5-Year LCI Update indicated that the City updated its zoning ordinance and map to incorporate the LCI Overlay District to implement the policies and goals of the 2020 Comprehensive Land Use Plan as related to the activity centers. Several new businesses and other uses have opened in Olde Town over the past few years, and renovation of the city's historic depot was completed in 2005.

A-10.3.2 – Central Conyers Activity Center LCI (2009)

The Central Conyers Activity Center is the area south of Olde Town Conyers located adjacent to I-20 between West Avenue and the Georgia Highway 138 interchanges. The LCI is intended to encourage new activity and development within the study area and provide a plan for connections between the study area and Olde Town Conyers. The Development Concept Plan for the Central Conyers Activity Center shows redevelopment in three general areas: the West Avenue Corridor, the "Central Park" area between Bryant Street and Oakland Avenue and the Old Covington Highway Corridor.

To implement the redevelopment projects recommended in the plan, two new future land use categories are recommended: Mixed Residential Infill and Transit Oriented Development (TOD). A TOD land use designation would allow for the development of a high-intensity mixed-use node in this specifically targeted area. Residential density in excess of sixteen units per acre should be allowed under this designation in addition to multi-story mixed-use buildings with decked parking. The Mixed Residential Infill designation would allow for a mix of residential uses within the same parcel. The LCI recommends a range of four to eight units per acre should be permitted under this new future land use designation. Further, modifications of the City's zoning code are recommended to apply Mixed-use Village Overlay District (MxVOD) is to the

entire study area. The site development, architectural and connectivity requirements of this overlay designation are consistent with the vision for the study area.

A-10.4 – Walton County

A-10.4.1 – Loganville Town Center (2010)

The LCI study area is located in the City of Loganville in Walton County, approximately 30 miles east of Atlanta, along US 78. About five percent of the study area is located in Gwinnett County. The current image of the study area is dominated by strip commercial uses along two major arterials, US 78 and SR 81. Loganville's small town character is only reflected in the Main Street area and adjacent neighborhoods. As such, the LCI builds on the existing character by recommending renovation and reuse of existing buildings on Main Street and additional active uses such as restaurants and destination business such as antiques, furniture, and specialty retail. Downtown Loganville Concept Plan illustrates an enhanced and expanded downtown activity center with multiple functions, from civic uses on the City Hall block, to parks and mixed commercial and residential uses on adjacent blocks. Winder Road/Lawrenceville Highway area, which is largely undeveloped, is recommended as a Traditional Neighborhood with a small commercial area and several open spaces.

The LCI's land use recommendations focus on creating and implementing a "Mixed-Use" classification in many areas. Recommended zoning changes include utilizing more form-based zoning regulations. The LCI recommends revisions to the zoning code to create a new overlay district for the LCI study area that allows for sub-areas intended to reflect the transition from more urban to less urban; by-right mixed-use development; increased residential permission in terms of type and lot size; restrictions on commercial uses in currently non-commercial areas; and sign standards.

A-10.4.2 – Monroe Town Center (2008)

The City of Monroe is the county seat of Walton County along US 78. The Monroe Town Center LCI is intended to promote growth while preserving its historic small town character along Broad Street and in nearby neighborhoods by facilitating appropriate development and redevelopment around it. The Downtown Concept Plan illustrates an option for infill development and intended to show how development could occur in a way that preserves the historic core of downtown buildings, takes advantage of small block size, and preserves street connectivity. Mills of Monroe Concept Plan takes advantage of the large parcel size and historic significance and envisions this area as a mixed-use traditional neighborhood development which includes single-family houses, townhouses, live/work units, offices, and commercial. The North Gateway Concept Plan creates a welcoming entrance to Monroe for drivers coming to town from US 78, at the study area's northern edge. The plan shows an option for the private redevelopment of existing

properties into a mixed-use center focused around the intersections of Perry and Tyler Streets with North Broad Street.

The LCI recommends the creation of a mixed-use, form-based district for the portions of the study area identified for long-term redevelopment and generally designated as Neighborhood General and Mixed-Use Center on the Framework Plan. At a minimum, the code should include the following: allow for sub-areas intended to reflect the transition from more urban to less urban; by-right mixed-use development; increased residential permission in terms of type and lot size; restrictions on commercial uses in currently non-commercial areas; and sign standards.

A-10.5 – Barrow County

A-10.5.1 – City of Winder LCI (2010)

The City of Winder is the county seat of Barrow County and is located 40 miles northeast of Atlanta and 20 miles west of Athens. The LCI study area encompasses 610 acres within the city limits and includes the downtown area, adjacent historic neighborhoods, the May Street corridor, and Holly Hill Mall. The railroad forms the dividing line in Winder between the compact, traditional town fabric and the more automobile-oriented areas. The importance of preserving traditional land use and development patterns and promoting compatible redevelopment were the guiding principles used during the study process.

Relevant land use recommendations include the redevelopment of eastern downtown with a series of civic and private buildings that will help define a new public park and the mixed-use redevelopment of the Holly Mill Mall site and May Street corridor east of Horton Street. Other recommendations include the rehabilitation of the old mill building on East Athens Street and the old Courthouse to a mix of residential and commercial lofts or a use deemed appropriate by the community, potentially as a civic building. In terms of regulatory changes, the LCI recommends amending the Winder Code of Ordinances to allow residential uses downtown and improving sign regulations.

A-10.6 – Summary of LCIs

Twenty-three LCIs have been conducted in the study area since the start of the ARC program. The majority of the LCIs were conducted in the more developed counties of DeKalb and Gwinnett where they focused on major corridors, town centers and other activity centers. A major theme of these LCIs was the recommendation of mixed-uses and increased densification at the appropriate scale around key appropriate areas. In the more rural areas, the LCIs focused on the county seats with the recommendation of preservation of the historic small town character while promoting the appropriate growth.

This section describes the key findings and conclusions from the review of land use plans and LCIs within the study area. These findings represent important considerations to identify and assess potential transportation improvements that support and complement the local land use and development strategies. Integration of land use policies with transportation investments is critical to maximize the use of alternate modes.

- The ARC and NEGRC have developed regional plans for the study area. These plans should be consulted to ensure proposed transportation improvements are consistent with land use initiatives and do not encourage development in areas designated to remain rural or undeveloped (conservation areas).
- The ARC has identified numerous areas in their plan (Regional Centers, Town Centers, Regional Town Centers, and Station Communities) that are planned as mixed-use pedestrian-friendly centers. These areas should be considered for transit, bicycle, and pedestrian improvements to promote this character and encourage multi-modal travel.
- Rural preservation and the need to protect rural areas from scattered suburban development is a major theme within many plans. However, the existing leap-frog development pattern in the study area suggests a lack of strong land use controls and/or political will to achieve rural preservation. The review of Comprehensive Plans confirms the lack of strong land use controls currently in place. Many plans suggest implementing a Transfer of Development Rights (TDR) program to have the regulatory tools to achieve this development pattern. Other plans recommend steadfast adherence to a Future Development Map or Future Land Use Map, although there are no legal mechanisms requiring adherence to these maps. In light of the weak regulatory framework, transportation improvements that may promote scattered suburban development should be recognized as such and their benefits should be weighed against their potential to result in unwanted induced development in rural areas.
- The majority of cities and towns in the study corridor envision redevelopment in their historic cores in the form of mixed-use, pedestrian-friendly development. Transportation improvements in these areas should be consistent with this vision and exhibit context-sensitive roadway design. Pedestrian, bicycle, and transit improvements should be pursued in these areas to help support a sustainable development pattern of compact activity centers.
- The most highly developed counties in the study area (DeKalb, Gwinnett, Athens-Clarke County) envision significant amounts of mixed-use redevelopment along their major transportation corridors. These corridors should be targeted for multi-modal transportation improvements including pedestrian, bicycle, and transit investments to work in concert with land use goals.
- Most plans in the study area advocate a move away from sprawl development to development in focused compact nodes at major intersections. These nodes represent ideal locations for transit

improvements, providing the framework for a network of walkable centers connected and strengthened through transit service.

- Many plans in the study area identify the need for the redevelopment of aging commercial centers and infill residential development. Redevelopment can be encouraged and promoted through major transportation improvements. Considerations should be made to promote transportation investments in areas deemed as redevelopment areas to work in conjunction with land use plans and assist in catalyzing new development.
- A total of 23 LCIs along major corridors, town centers and other activity centers have been conducted by Cities, Counties, CIDs, and Development Authorities in the study area since 2001. The majority of the LCIs are located in the more developed counties of DeKalb and Gwinnett. In the other rural counties, the LCIs are focused in the county seats with a defined downtown core and economic development potential. Preserving the historic small town character, while promoting appropriate growth has been a reoccurring theme for many of the town centers.
- All the LCIs include a conceptual master plan that illustrates mixed-uses with various densities including focus areas or catalyst sites to concentrate higher-density, compact uses. Land use recommendations focus on increasing the mixed-use classification in the downtown core and ensuring appropriate transition to the surrounding neighborhoods.
- Many of the LCIs recommend TODs to create a high-density, mixed-use development that offers all the elements of a complete live/work/play environment. These LCIs are located near existing MARTA lines or proposed transit initiatives in the region and include Kensington Station, Wesley Chapel, Lilburn, Gwinnett, Park Place and Conyers.
- All the LCIs recommend land use and development strategies to encourage a diversity of medium to high-density, mixed income neighborhoods at the level appropriate for each study area. Specifically, revisions to the City or County's Comprehensive Land Use Plans and changes to the Zoning Ordinance are recommended to implement various levels of mixed-use development. Further, many of the LCIs recommend the formation of new or revisions to the existing Overlay District to better capture the master plans' vision.
- 5-Year Updates for six of the earlier LCIs have been completed for Clarkston, Gwinnett (10-Year Update), Highway 78, Snellville, Lilburn and Conyers. Many of the regulatory recommendations related to land use plan and zoning updates have been implemented. Old Towne Conyers, Snellville and Lawrenceville have been successful in revitalizing the downtown and attracting new development. The lack of funding and the decline in the economic conditions are the biggest barriers to implementing master plans.