# **TABLE OF CONTENTS**

1.0	Project Description	1
1.1	Introduction	1
1.2	Site Plan Review	1
1.3	Site Access	2
1.4	Bicycle and Pedestrian Facilities	2
1.5	Transit Facilities	2
2.0	Traffic Analyses Methodology and Assumptions	2
2.1	Growth Rate	2
2.2	Traffic Data Collection	2
2.3	Detailed Intersection Analysis	3
3.0	Study Network	3
3.1	Gross Trip Generation	3
3.2	Trip Distribution	3
3.3	Level of Service Standards	4
3.4	Study Network Determination	4
3.5	Existing Facilities	4
4.0	Trip Generation	5
5.0	Trip Distribution and Assignment	5
6.0	Traffic Analysis	6
6.1	Existing Traffic	6
6.2	2010 No-Build Traffic	7
6.3	2010 Build Traffic	8
7.0	Identification of Programmed Projects	9
8.0	Ingress/Egress Analysis	9
9.0	Internal Circulation Analysis	9
10.0	Compliance with Comprehensive Plan Analysis	10
11.0	Non-Expedited Criteria	10
11.1	Quality, Character, Convenience, and Flexibility of Transportation Options	10
11.2	Vehicle Miles Traveled	10
11.3	Relationship Between Location of Proposed DRI and Regional Mobility	10
11.4	Relationship Between Proposed DRI and Existing or Planned Transit Facilities	10
11.5	Transportation Management Area Designation	10
11.6	Offsite Trip Reduction and Trip Reduction Techniques	10
11.7	Balance of Land Uses – Jobs/Housing Balance	10
11.8	Relationship Between Proposed DRI and Existing Development and Infrastructure	
12.0	Area of Influence	11
12.1	Criteria	11
12.2	Study Area Determination and Characteristics	
12.3	DRI Employment and Salary Figures	
12.4	AOI Occupied Housing Figures	
13.0	ARC's Air Quality Benchmark	15

# LIST OF TABLES

#### Page

Table 1:	Proposed Land Uses	1
Table 2:	River Village DRI, Gross Trip Generation	3
Table 3:	River Village DRI, Net Trip Generation	5
Table 4:	Existing 2008 Intersection Levels of Service	6
Table 5:	2010 No-Build Intersection Levels of Service	7
Table 6:	2010 No-Build Intersection Levels of Service IMPROVED	8
Table 7:	2010 Build Intersection Levels of Service	8
Table 8:	Employment, Salary, and Affordable Housing Payment by Occupation	12
Table 9:	Number of Households in the DRI by Range of Monthly Income	13
Table 10:	Selected Monthly Costs for All Occupied Housing Units in the AOI	13
Table 11:	Comparison of Workers' Monthly Household Incomes and Monthly Costs of Housing Units	14
Table 12:	ARC VMT Reductions	15

# LIST OF FIGURES

#### Following Page

Figure 1:	Site Location
Figure 2:	Aerial Photograph
Figure 3:	Site Plan
Figure 4:	Residential Trip Distribution
Figure 5:	Non-Residential Trip Distribution
Figure 6:	Project Trips
Figure 7:	Existing 2008 Conditions
Figure 7: Figure 8:	Existing 2008 Conditions
Figure 7: Figure 8: Figure 9:	Existing 2008 Conditions



## **EXECUTIVE SUMMARY**

This report presents the analysis of the anticipated traffic impacts of a proposed 59-acre mixed-use development (River Village) in DeKalb County, Georgia. This report is being prepared as part of a submittal requesting rezoning from R-100 (Single Family Residential) to a combination of RM-150 (Multiple Family Residential), O-I (Office-Institution), and C-1 (Local Commercial). Because the proposed development will exceed 400,000 square feet, it is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review.

The proposed development is expected to consist of 65 senior independent living units, 329 assisted living beds, and 71,500 square feet of retail space. The development is scheduled to be completed in phases with full buildout by the year 2010.

It should be noted that the site was a portion of a previous DRI review, titled River Village DRI #762. The previous DRI was reviewed by ARC and GRTA, with ARC's final report published on September 21, 2005, and GRTA's Notice of Decision dated September 26, 2005. ARC found the previous DRI "In the best interest of the Region, and therefore, of the State." A copy of GRTA's previous Notice of Decision is included in the appendix. The previous DRI was a 109-acre mixed-use development, consisting of the following densities:

- 133 single-family residences,
- 149 townhomes, 260 apartments,
- 100,000 square feet of retail space,
- 37,000 square feet of office space.

A portion of the previous DRI property is not included in this proposed development. The new DRI represents approximately 56% of the previous DRI gross daily project trips (11,378 vpd).

Capacity analyses were performed for the Existing 2007 Conditions, Projected 2010 No-Build Conditions, and Projected 2010 Build Conditions at five (5) intersections. This study network consists of:

- 1. Stephenson Road at S. Deshon Road
- 2. Stephenson Road at Asbury Road
- 3. SR 124 (Rock Chapel Road) at Stephenson Road
- 4. SR 124 (Rock Chapel Road) at Asbury Road/Hightower Trail
- 5. SR 124 (Rock Chapel Road) at Rockbridge Road

Each of the above listed intersections was analyzed for the Existing 2008 Conditions, the 2010 No-Build Conditions, and the 2010 Build Conditions. The Projected 2010 No-Build Conditions represent the existing traffic volumes grown at 4% per year for two years along all roadway links, plus project trips from Swift Creek DRI #1336. The Projected 2010 Build Conditions adds the project trips associated with the River Village development to the Projected 2010 No-Build Conditions. Per GRTA's Letter of Understanding, improvements were recommended at intersections until the Level of Service was elevated to an appropriate level. The summary of the recommended improvements are listed below:

# 2010 No-Build recommended improvements (includes background growth and the project traffic from one nearby DRI; and excludes the River Village DRI development):

SR 124 (Rock Chapel Road) @ Asbury Drive/Hightower Trail/Driveway #1 (Intersection #4)

- Provide an eastbound left-turn lane.
- Install a traffic signal, when warranted.

2010 Build recommended improvements (2010 No-Build Conditions plus the traffic associated with the River Village DRI development):

SR 124 (Rock Chapel Road) @ Asbury Drive/Hightower Trail/Driveway #1 (Intersection #4)

- Provide a northbound exclusive right-turn lane along SR 124 (Rock Chapel Road) into the development.
- Provide three westbound egress lanes exiting the development (one left-turn lane, one through lane, and one right-turn lane).

SR 124 (Rock Chapel Road) @ Right-In/Right-Out Driveway #2 (Intersection #6)

- Provide a northbound exclusive right-turn lane along SR 124 (Rock Chapel Road) into the development.
- Provide one egress lane exiting the development (a right-turn lane).

## **1.0 PROJECT DESCRIPTION**

#### 1.1 Introduction

This report presents the analysis of the anticipated traffic impacts of a proposed 59-acre mixed-use development (River Village) in DeKalb County, Georgia. This report is being prepared as part of a submittal requesting rezoning from R-100 (Single Family Residential) to a combination of RM-150 (Multiple Family Residential), O-I (Office-Institution), and C-1 (Local Commercial). Because the proposed development will exceed 400,000 square feet, it is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review.

The proposed development is expected to consist of 65 senior independent living units, 329 assisted living beds, and 71,500 square feet of retail space. The development is scheduled to be completed in phases with full buildout by the year 2010.

Table 1 Proposed Land Uses		
Senior Independent Living Units	65 dwelling units	
Assisted Living Beds	329 beds	
Retail (Shopping Center)	71,500 square feet	

A summary of the proposed land-uses and densities can be found below in Table 1.

Figure 1 and Figure 2 provide a location map and an aerial photograph of the site.

It should be noted that the site was a portion of a previous DRI review, titled River Village DRI #762. The previous DRI was reviewed by ARC and GRTA, with ARC's final report published on September 21, 2005, and GRTA's Notice of Decision dated September 26, 2005. ARC found the previous DRI "In the best interest of the Region, and therefore, of the State." A copy of GRTA's previous Notice of Decision is included in the appendix. The previous DRI was a 109-acre mixed-use development, consisting of the following densities:

- 133 single-family residences,
- 149 townhomes, 260 apartments,
- 100,000 square feet of retail space,
- 37,000 square feet of office space.

A portion of the previous DRI property is not included in this proposed development. The new DRI represents approximately 56% of the previous DRI gross daily project trips (11,378 vpd).

#### *1.2 Site Plan Review*

The proposed site, located along the east side of SR 124 (Rock Chapel Road), is currently undeveloped. The proposed retail is located along the site frontage and accessed via Hightower Trail (Driveway #1) or the proposed right-in right-out driveway (Driveway #2). The senior independent living units are proposed in the southern half of the development and accessed through a gated, internal driveway. The assisted living units are proposed in the northern half of the development. Access to this part of the development is provided by an internal driveway from Hightower Trail and from the existing driveway serving the Stronghold Christian Church.

**Figure 3** is a small-scale copy of the site plan. A full-size site plan consistent with GRTA's Site Plan Guidelines is also being submitted as part of the Review Package.







#### 1.3 Site Access

Access to the development is proposed at three locations. The existing Hightower Trail, aligned with Asbury Drive across the street, is proposed as the main full-movement driveway (Driveway #1) along SR 124 (SR 124 (Rock Chapel Road)). A right-in/right-out driveway (Driveway #2) is proposed along SR 124 (Rock Chapel Road)approximately 1,170 feet south of the SR 124 (Rock Chapel Road)/ Asbury Drive intersection. A third proposed site access is a connection to the existing Stronghold Christian Church driveway along the north property line. Georgia Department of Transportation is the permitting agency for all driveways along SR 124 (Rock Chapel Road)(SR 124). A fourth access is proposed to the adjacent property to the east in order to provide vehicular access for the otherwise land locked property. Pedestrian access will be provided at all site driveways.

#### 1.4 Bicycle and Pedestrian Facilities

Sidewalks are proposed along all internal roadways.

#### 1.5 Transit Facilities

Local or regional transit does not currently serve the area of the proposed development.

## 2.0 TRAFFIC ANALYSES METHODOLOGY AND ASSUMPTIONS

#### 2.1 Growth Rate

Background traffic is defined as expected traffic on the roadway network in future year(s) absent the construction and opening of the proposed project. Historical traffic count data from the Georgia DOT was reviewed for the area surrounding the proposed development, and growth rates of 4.0% per year along all roadways were agreed upon during the methodology meeting with GRTA staff. In addition to the 4% per year growth rate, the project trips from the Swift Creek DRI #1336 development was added to the projected No-Build and Build conditions. The Swift Creek DRI expected buildout year is 2011.

#### 2.2 Traffic Data Collection

Vehicle turning movement counts were performed from 7:00 AM until 9:00 AM and 4:00 PM until 6:00 PM at five intersections within the study network. The morning and afternoon peak hours varied between the five intersections and are listed below:

- 1. Stephenson Road at S. Deshon Road
  - 7:00 8:00 AM Peak Hour, 5:00 6:00 PM Peak Hour
- 2. Stephenson Road at Asbury Road
  - 7:00 8:00 AM Peak Hour, 5:00 6:00 PM Peak Hour
- 3. SR 124 (Rock Chapel Road) at Stephenson Road
  - 7:00 8:00 AM Peak Hour, 4:45 5:45 PM Peak Hour
- 4. SR 124 (Rock Chapel Road) at Asbury Road/Hightower Trail
  - 7:00 8:00 AM Peak Hour, 4:45 5:45 PM Peak Hour
- 5. SR 124 (Rock Chapel Road) at Rockbridge Road
  - 7:00 8:00 AM Peak Hour, 5:00 6:00 PM Peak Hour

All raw count data is included in the Appendix.

#### 2.3 Detailed Intersection Analysis

Level-of-service (LOS) is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists perceptions within a traffic stream. The Highway Capacity Manual defines six levels of service, LOS A through LOS F, with A being the best and F being the worst. Level of service analyses were conducted at all intersections within the study network using Synchro Professional, Version 6.0.

Levels of service for signalized intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a low Level of service, while the intersection as a whole may operate acceptably.

Levels of service for unsignalized intersections, with stop control on the minor street only, are reported for the side street approaches. Low Levels of service for side street approaches are not uncommon, as vehicles may experience delay in turning onto a major roadway.

## **3.0 Study Network**

#### 3.1 Gross Trip Generation

As stated earlier, the proposed development will consist of approximately 65 senior independent living units, approximately 329 assisted living beds, and approximately 71,500 square feet of retail space.

Traffic for these land uses was calculated using equations contained in the *Institute of Transportation Engineers'* (*ITE*) *Trip Generation Manual, Seventh Edition, 2003*. Average rates were used only when equations were not provided. Per GRTA's Letter of Understanding, the trip generation rate for the senior independent living units was calculated based on two ITE trip generation land use codes. Eighty percent of the units were analyzed as senior adult housing detached (ITE Code 251) while the remaining twenty percent of the units were analyzed as traditional townhomes (ITE Code 230). Gross trips generated are displayed below in **Table 2**.

Table 2 River Village DRI Gross Trip Generation							
		Daily	Traffic	AM Pea	ak Hour	PM Pea	ak Hour
Land Use	ITE Code	Enter	Exit	Enter	Exit	Enter	Exit
	Build-Out (Year 2010)						
65 Senior Independent Living Units	230 251	424	424	8	18	26	16
329 Assisted Living Beds	254	553	553	30	16	32	40
71,500 SF Retail	820	5,461	5,461	78	50	241	261
Total		6,483	6,483	116	84	299	317

#### 3.2 Trip Distribution

The directional distribution and assignment of new project trips was based on the project land uses, a review of land use densities in the area, combined with engineering judgment and discussions with GRTA staff at the Pre-Application meeting.

#### 3.3 Level of Service Standards

For the purposes of this traffic analysis, a level of service standard of D was assumed for all intersections and segments within the study network. If, however, an intersection or segment currently operates at LOS E or LOS F during an existing peak period, the LOS standard for that peak period becomes LOS E, consistent with GRTA's Letter of Understanding.

#### 3.4 Study Network Determination

A general study area was determined using the 7% rule. This rule recommends that all intersections and segments be analyzed which are impacted to the extent that the traffic from the proposed site is 7% or more of the Service Volume of the facility (at a previously established LOS standard) be considered for analysis. This general study area was refined during the methodology meeting, and includes the following intersections:

- SR 124 (Rock Chapel Road) @ Rockbridge Road (signalized)
- o SR 124 (Rock Chapel Road) @ Asbury Road/Hightower Trail (unsignalized)
- o SR 124 (Rock Chapel Road) @ Stephenson Road (signalized)
- Stephenson Road @ Asbury Road (unsignalized)
- Stephenson Road @ S. Deshon Road (signalized)

Each of the above listed intersections was analyzed for the Existing 2008 Condition, the 2010 No-build Condition, and the 2010 Build Condition. The 2010 No-build condition represents the existing traffic volumes grown at 4.0% per year for two years plus project trips from the Swift Creek DRI #1336. The 2010 Build condition adds the project trips associated with the River Village DRI development to the 2010 No-Build condition. (NOTE: The additional proposed site access point listed below was only analyzed for the 2010 Build Condition):

• SR 124 (Rock Chapel Road) @ Driveway #2 (right-in/right-out)

This intersection was analyzed for the AM and PM peak periods.

#### 3.5 Existing Facilities

Roads in the study network were inventoried to obtain geometric characteristics, posted speed limits, and the GDOT Functional Classifications.

Roadway	Number of Lanes	Posted Speed Limit (MPH)	GDOT Functional Classification	Dekalb County Functional Classification
SR 124 (Rock Chapel Road)	4	45	Urban Principal Arterial	Urban Principal Arterial
Rockbridge Road	2	35	Urban Minor Arterial	Urban Minor Arterial
Asbury Drive	2	25	Urban Local Street	N/A
Stephenson Road	2	45	Urban Collector Street	Collector
S. Deshon Road	2	45	Urban Collector Street	Collector

For the purposes of this traffic study, the following roads were considered to have a north-south orientation: SR 124 (Rock Chapel Road) and S. Deshon Road. Stephenson Road and Rockbridge Road were considered to have an east-west orientation. Asbury Drive was considered to have an east-west orientation at the intersection of SR 124 (Rock Chapel Road) and a north-south orientation at the intersection of Stephenson Road.

## 4.0 TRIP GENERATION

As stated earlier, trips associated with the proposed development were estimated using the ITE *Trip Generation Manual*, Seventh Edition (2003), using equations in where available.

Mixed-use and pass-by reductions were taken according to the *ITE Trip Generation Handbook, 2004*. The ITE pass-by reduction calculation of thirty-nine percent of project trips was less than ten percent of the adjacent street volume, therefore the GRTA ten percent limit was not applied. The total trips generated and analyzed in the report are listed below in **Table 3**.

Table 3 River Village DRI Net Trip Generation						
	Daily	Traffic	AM Pea	k Hour	PM Pea	k Hour
Land Use	Enter	Exit	Enter	Exit	Enter	Exit
Build-Out (Year 2010)						
Gross Trips	6,438	6,438	116	84	299	317
Internal Capture Reductions	-694	-694	-	-	-40	-40
Pass-by Reductions	-2,193	-2,193	-	-	-99	-99
New Trips	3,551	3,551	116	48	160	178

## 5.0 TRIP DISTRIBUTION AND ASSIGNMENT

New trips were distributed onto the roadway network using the percentages agreed to during the methodology meeting. **Figure 4 and Figure 5** display the expected percentages for the development throughout the roadway network. These percentages were applied to the new trips generated by the development (see Table 3, above), and the volumes were assigned to the roadway network. The expected peak hour turning movements generated by the proposed development are shown in **Figure 6**.







## 6.0 TRAFFIC ANALYSIS

#### 6.1 Existing Traffic

The existing 2008 traffic volumes and laneage are shown in **Figure 7**. These volumes were input in Synchro 6.0 and an Existing Conditions analysis was performed. The results are displayed below in **Table 4**.

	Table 4 River Village DRI Existing 2008 Intersection Levels of Service (delay in seconds)				
	Intersection	Control	AM Peak Hour	PM Peak Hour	
1	Stephenson Road at S. Deshon Road	Signal	B (16.0)	B (14.7)	
2	Stephenson Road at Asbury Drive	SB Stop Controlled	B (13.1)	B (11.3)	
3	SR 124 (Rock Chapel Road) at Stephenson Road	Signal	C (21.7)	C (22.5)	
4	SR 124 (Rock Chapel Road) at Asbury Drive / Hightower Trail	EB / WB Stop Controlled	EB: F* WB: n/a	EB: F* WB: E (40.3)	
5	SR 124 (Rock Chapel Road) at Rockbridge Road	Signal	B (14.5)	C (23.1)	

Note: \* Long delays expected for side-street traffic.

As you can see in the table, one intersection currently operates below the acceptable Level of Service standard (LOS D). The Level of Service standard for this intersection will be LOS E for the purpose of this study, in accordance to the Letter of Understanding issued by GRTA.



## 6.2 2010 No-Build Traffic

The existing traffic volumes were grown at 4.0% per year along all roadway links within the study network. In addition to the background growth rate, project traffic from the Swift Creek DRI #1336 was included in the 2010 No-Build volumes. These volumes were input in Synchro 6.0, and analyses of the projected No-build conditions were performed. The results are displayed below in **Table 5.** The projected volumes, laneage, and recommended intersection control for the year 2010 No-Build condition are illustrated in **Figure 8**.

	Table 5 River Village DRI No Build 2010 Intersection Levels of Service (delay in seconds)					
	Intersection	Control	AM Peak Hour	PM Peak Hour		
1	Stephenson Road at S. Deshon Road	Signal	B (17.5)	B (17.8)		
2	Stephenson Road at Asbury Drive	SB Stop Controlled	B (14.7)	B (12.6)		
3	SR 124 (Rock Chapel Road)at Stephenson Road	Signal	C (24.9)	C (28.8)		
4	SR 124 (Rock Chapel Road)at Asbury Drive / Hightower Trail	EB / WB Stop Controlled	EB: F* WB: n/a	EB: F* WB: F (54.1)		
5	SR 124 (Rock Chapel Road) at Rockbridge Road	Signal	B (17.4)	C (30.7)		

Note: \* Long delays expected for side-street traffic.

As shown in **Table 5**, one intersection currently operates below the acceptable Level of Service standard (LOS E) for that intersection. Per GRTA's Letter of Understanding, improvements were recommended at the intersection until the Level of Service was elevated to the GRTA standard. It is recommended that an eastbound left-turn lane and a traffic signal be installed at the intersection. It should be noted the existing AM peak volumes meet the MUTCD Peak Hour Signal Warrant. It should also be noted that GDOT recommends minimum 2-lane approaches at signalized intersections. The intersection improvements are listed below. The 2010 No-Build with Improvement intersection Level of Service are displayed in **Table 6**.

SR 124 (Rock Chapel Road) @ Asbury Drive/Hightower Trail/Driveway #1 (Intersection #4)

- Install a traffic signal when warranted.
- Install an eastbound left-turn lane along Asbury Drive.





	Table 6 River Village DRI No-Build 2010 Intersection Levels of Service IMPROVED (delay in seconds)					
	Intersection Control AM Peak Hour PM Peak Hour					
4	SR 124 (Rock Chapel Road) at Asbury Drive	Signal	A (7.7)	A (8.8)		

## 6.3 2010 Build Traffic

The traffic associated with the proposed development (River Village) was added to the 2010 No-build volumes. These volumes were input into Synchro 6.0 and analyses of the projected 2010 Build conditions were performed. The results of the analyses are displayed below in **Table 7**. The projected volumes, laneage, and recommended intersection control for the year 2010 Build condition are illustrated in **Figure 9**.

	Table 7 River Village DRI Build 2010 Intersection Levels of Service (delay in seconds)					
	Intersection	Control	AM Peak Hour	PM Peak Hour		
1	Stephenson Road at S. Deshon Road	Signal	B (17.9)	B (18.5)		
2	Stephenson Road at Asbury Drive	SB Stop Controlled	C (15.2)	B (13.3)		
3	SR 124 (Rock Chapel Road) at Stephenson Road	Signal	C (29.8)	C (30.3)		
4	SR 124 (Rock Chapel Road) at Asbury Drive / Hightower Trail (Driveway #1)	Signal	B (12.2)	B (17.1)		
5	SR 124 (Rock Chapel Road) at Rockbridge Road	Signal	B (18.4)	D (35.2)		
6	SR 124 (Rock Chapel Road) at Proposed RIRO Driveway #2	WB Stop Controlled	C (15.5)	C (15.5)		

Note: \* Long delays expected for side-street traffic.

As shown in **Table 7**, all of the intersections meet the acceptable Level of Service standard. As such, the only improvements that were recommended were for the project driveways. The driveway improvements are discussed below in more detail.





SR 124 (Rock Chapel Road) @ Asbury Drive/Hightower Trail/Driveway #1 (Intersection #4)

- Provide a northbound exclusive right-turn lane along SR 124 (Rock Chapel Road) into the development.
- Provide three westbound egress lanes exiting the development (one left-turn lane, one through lane, and one right-turn lane).

SR 124 (Rock Chapel Road) @ Right-In/Right-Out Driveway #2 (Intersection #6)

- Provide a northbound exclusive right-turn lane along SR 124 (Rock Chapel Road) into the development.
- Provide one egress lane exiting the development (a right-turn lane).

#### 7.0 IDENTIFICATION OF PROGRAMMED PROJECTS

The *TIP*, *STIP*, *RTP*, and *GDOT's Construction Work Program* were searched for currently programmed transportation projects within the vicinity of the proposed development. Several projects are programmed for the area surrounding the study network. Information on the projects is included in the Appendix.

Project #	Build Out Year	Project Description
DK-270A; GDOT #753230	2011	Lithonia Industrial Boulevard Extension Phase I;
		extend Lithonia Industrial Blvd. for 1 mile from South
		Stone Mountain Rd. to Rogers Lake Rd.
DK-270C; GDOT #0001791	2007	Lithonia Industrial Boulevard Extension Phase II;
		extend Lithonia Industrial Blvd. for 1.2 miles from
		Rogers Lake Road to Rock Chapel Rd./SR 124
DK-342B	2020	Rockbridge Road Intersection Improvements;
		improvements from SR 124 to South Stone Mountain
		Rd. and may include new traffic signals, additional
		turn lanes, and pedestrian safety improvements

#### 8.0 INGRESS/EGRESS ANALYSIS

Vehicular access to the development is proposed at three locations. The existing Hightower Trail, aligned with Asbury Drive across the street, is proposed as the main full-movement driveway (Driveway #1) along SR 124 (Rock Chapel Road). A right-in/right-out driveway (Driveway #2) is proposed along SR 124 (Rock Chapel Road) approximately 1,170 feet south of the SR 124 (Rock Chapel Road) / Asbury Drive intersection. A third proposed site access is a connection to the existing Stronghold Christian Church driveway along the north property line.

#### 9.0 INTERNAL CIRCULATION ANALYSIS

The proposed development will generate trips between the residential and retail uses of the development. Using the *ITE Trip Generation Handbook, 2004* as a reference, 10.99% of the gross daily trips would be internal, 12.99% of the PM trips would be internal.

## **10.0** COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The Dekalb County Existing Land Use Map designates this area as LDR (Low-density Residential) and Parks, Recreation, and Open Space. The Dekalb County Future Land Use Plan Map identifies this area as suburban.

## **11.0 NON-EXPEDITED CRITERIA**

#### 11.1 Quality, Character, Convenience, and Flexibility of Transportation Options

There are currently no transit opportunities in the vicinity of the proposed development. The development will be primarily served by vehicular access.

#### 11.2 Vehicle Miles Traveled

The following table displays the reduction in traffic generation due to internal capture and pass-by trips.

	Build-out Total
Daily Gross Trip Generation:	6,438
(-)Mixed-use reductions (internal capture)	-964
(-)Pass-by trips	-2,193
(-)Alternative modes	-0
Net Trips:	3,551

#### 11.3 Relationship Between Location of Proposed DRI and Regional Mobility

The proposed development is not located within an urban core, activity center, or town center; it is not within walking distance to a rail station or transit facility; and it is not part of an infill initiative. The development is located along SR 124 (Rock Chapel Road) a four-lane divided highway, which provides access to I-20 to the south.

#### 11.4 Relationship Between Proposed DRI and Existing or Planned Transit Facilities

The proposed development is not located near any existing or planned transit facilities or bus stops.

#### 11.5 Transportation Management Area Designation

The proposed development is not located within an established TMA.

#### 11.6 Offsite Trip Reduction and Trip Reduction Techniques

The proposed development will generate trips between the residential and retail uses of the development. Using the *ITE Trip Generation Handbook, 2004* as a reference, 10.99% of the gross daily trips would be internal, 12.99% of the PM trips would be internal.

Pass-by reductions were taken according to the *ITE Trip Generation Handbook, 2004* and GRTA guidelines for the retail portion of the development. The GRTA's 10% limit test was not applied for the weekday PM peak hour since the total pass-by trips were expected to be less than 10% of the adjacent street traffic.

#### 11.7 Balance of Land Uses – Jobs/Housing Balance

Please refer to the Area of Influence Analysis, located in Section 12.0 of the report.

#### 11.8 Relationship Between Proposed DRI and Existing Development and Infrastructure

The development is located in an area where the existing infrastructure is expected to be adequate to serve the needs of the development upon build-out (2010).

#### **12.0** AREA OF INFLUENCE

The proposed development, River Village, is expected to consist of 65 senior living units, 574,000 SF of assisted living, and 71,500 SF of retail space. Due to the nature of the development, it will be classified as "predominantly employment" for purposes of the AOI, since the assisted living portion of the development, although residential in nature, produces more jobs than it provides workers. The following section will describe the Area of Influence demographics, DRI average wage levels, expected AOI housing costs, and the opportunity for workers who are employed in the DRI to find housing within the AOI.

#### 12.1 Criteria

As part of the non-expedited review process for a DRI, an Area of Influence Analysis must be performed to determine the impact of the proposed development on the balance of housing and jobs within the immediate area surrounding the development. For this proposed development classified as "predominantly employment," the non-expedited review criterion is as follows:

The proposed DRI:

(b) Is located in an Area of Influence where the proposed DRI is reasonably anticipated to contribute to the balancing of land uses within the Area of Influence such that twenty-five percent (25%) of the persons that are reasonably anticipated to be employed in the proposed DRI have the opportunity to live within the Area of Influence;

#### 12.2 Study Area Determination and Characteristics

The Area of Influence is comprised of the area within six road-miles of the proposed development. To determine the AOI, *TransCAD* was used to measure six road miles from the nearest intersection to the project (Rock Chapel Road at Asbury Drive). The population and housing statistics for the AOI were determined by taking the area outlined in *TransCAD*, creating a boundary in GIS format, and overlaying the boundary with a GIS layer containing census tract information. The Area of Influence (located within DeKalb, Gwinnett and Rockdale counties) can be seen in **Figure 10**.

The total population within the Area of Influence is 116,440, residing within 40,056 households (an average of 2.91 people per household). There are approximately 58,026 workers in the AOI for an average of 1.45 workers per household. The AOI area over the three counties totals 40,122 acres.

#### 12.3 DRI Employment and Salary Figures

The DRI is expected to employ approximately 183 workers in the following land uses: Assisted Living and Retail. The numbers of workers for the assisted living land uses are based on projections made by the developer based on the nature of the land use. The numbers of workers for the shopping center land uses are based on assumptions provided in the *Area of Influence (AOI) Guidebook for Non-Expedited Reviews, April 2003*. For the assisted living land use, 4 employees per floor with 5 floors in each of the 2 tall buildings on-site would have medical staff assisting seniors which would result in a total of 40 employees. For the retail land use, 1 employee per 500 SF results in 143 retail employees.



For the assisted living land use, employees are assumed to work in the following occupations: Registered Nurses, and Personal and Home Care Aides

The specialty retail land use includes retail managers and retail salespersons.

Using the departmental and occupational guidelines provided by the client, along with the U.S. Department of Labor's *May 2006 Metropolitan Area Occupational Employment and Wage Estimates Atlanta-Sandy Springs-Marietta, GA*, salaries were approximated for each occupation. The following occupational codes were used for the above jobs:

- 41-1011 Managers of Retail Sales
- 41-2031 Retail Salespersons
- 29-1111 Registered Nurses
- 39-9021 Personal and Home Care Aides

Household salary was calculated based on the computed workers per household ratio of 1.45 multiplied by the salary in each bracket. It is assumed then that each household has 1.45 workers who contribute to the monthly household salary. The affordable housing payment is calculated as 30% of the monthly household salary, as based on GRTA's *Area of Influence (AOI) Guidebook for Non-Expedited Reviews*. **Table 8** displays the department positions, the numbers of employees in each occupation, the monthly employee and household salaries, and the respective affordable housing payments.

Table 8   Employment, Salary, and Affordable Housing Payment by Occupation					
Land Use	Occupation	Employees	Monthly Employee Salary	Monthly Household Salary	Affordable Housing Payment
Assisted Living	Registered Nurses	32	\$4,696	\$6,809	\$2,043
	Personal and Home Care Aides	8	\$1,666	\$2,415	\$725
Specialty	Managers of Retail Sales	14	\$2,937	\$4,258	\$1,277
Retail	Retail Salespersons	129	\$1,932	\$2,801	\$840
	Total Employees 183				-

Given the above calculated salaries, each household is eligible for a specific housing tier within the Area of Influence. Table 9 below displays the number of households that fall into each tier based on the household salary.

Table 9 Number of Households in the DRI by Range of Monthly Income		
Range of Monthly Income for Housing	Number of Households	
\$499 or less		
\$500 to \$599		
\$600 to \$699		
\$700 to \$799	8	
\$800 to \$899	129	
\$900 to \$999		
\$1,000 to \$1,249		
\$1,250 to \$1,499	14	
\$1,500 to \$1,999		
\$2,000 or more	32	
Total	183	

## 12.4 AOI Occupied Housing Figures

An analysis of existing occupied housing was conducted based on 2000 Census data for owner- and renteroccupied housing. A GIS analysis identified approximately 39,000 owner-occupied units and 11,000 renteroccupied units in the AOI. **Table 10** below displays the housing units in comparable price tiers as are shown in **Table 9**. Owner-occupied housing includes housing with and without a mortgage. Renter-occupied housing includes all rental units with the exception of those with no cash rent.

Table 10   Selected Monthly Costs for All Occupied Housing Units in the AOI			
Monthly Dollar Range	Owner-Occupied Housing Units in the AOI	Renter-Occupied Housing Units in the AOI	Total Occupied Housing Units in the AOI
\$499 or less	7,628	1,327	8,955
\$500 to \$599	1,080	1,600	2,680
\$600 to \$699	4,716	3,425	8,141
\$700 to \$799	2,279	2,300	4,579
\$800 to \$899	3,797	1,213	5,010
\$900 to \$999	3,736	496	4,232
\$1,000 to \$1,249	7,174	412	7,586
\$1,250 to \$1,499	3,624	78	3,702
\$1,500 to \$1,999	3,093	51	3,144
\$2,000 or more	1,699	0	1,699
Total	38,826	10,902	49,728

Using the households in the DRI per price tier information in **Table 9** and the renter / owner distribution of occupied housing in the AOI in **Table 10** above, a comparison was done to analyze the available housing by price range within the AOI against the number of households per price tier expected within the proposed DRI. This comparison is shown below in **Table 11**.

Table 11   Comparison of Workers' Monthly Household Incomes in the DRI   and Monthly Costs of Housing Units in the AOI			
Monthly Dollar Range	Total Occupied Housing Units in the AOI	Number of DRI Households with One or More Workers Working in the DRI	Difference in Number of Housing Units in AOI and Number of Households with Workers in DRI
\$499 or less	8,955	0	8,955
\$500 to \$599	2,680	0	2,680
\$600 to \$699	8,141	0	8,141
\$700 to \$799	4,579	8	4,571
\$800 to \$899	5,010	129	4,881
\$900 to \$999	4,232	0	4,232
\$1,000 to \$1,249	7,586	0	7,586
\$1,250 to \$1,499	3,702	14	3,688
\$1,500 to \$1,999	3,144	0	3,144
\$2,000 or more	1,699	32	1,667
Total	49,728	183	49,545

As can be seen from **Table 11**, adequate housing opportunities exist for all wage-earning levels in the DRI for both owner and renter properties. Additionally, because the salaries of the employees are concentrated at the upper and middle limits of the price tiers, considerable extra housing is available in lower price tiers if a household desires to choose a more conservative price range. Given this information, over 25% of the employees of the DRI have an opportunity to reside within the Area of Influence.

## **13.0 ARC'S AIR QUALITY BENCHMARK**

The development is a primarily residential, mixed-use development. The assisted living facility is approximately 574,000 SF of residential area. Assuming that each senior independent living unit would average 1,200 square feet, the total residential square footage of the proposed development would equal 652,000 square feet. The 71,500 square feet of retail space is approximately 10% of the total development. The total development floor area is expected to be approximately 723,500 square feet. This meets ARC's VMT credit 2C, for a 4% reduction in vehicle miles traveled. The development proposes a network of sidewalks within the site, which meets the ARC bicycle and pedestrian criteria 6D for a 4% reduction. The total reduction for the proposed development is 8%. These reductions are displayed below in **Table 12**.

Table 12 ARC VMT Reductions		
Mixed-Use where Residential is the dominant use		
10% of gross floor area is retail	-4%	
Pedestrian networks (sidewalks) in development that meet Density 'target'	-4%	
Total Reductions	8%	