

Transportation Analysis

Galleria Parkway DRI #1327 Cobb County, Georgia

Prepared for:

Grove Street Partners, LLC

Prepared by:

Kimley-Horn and Associates, Inc.
Norcross, Georgia

©Kimley-Horn and Associates, Inc.
March 2007
019551000

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

TABLE OF CONTENTS

1.0	Project Description.....	1
1.1	Introduction	1
1.2	Site Plan Review.....	1
1.3	Site Access	1
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	4
3.3	Level of Service Standards.....	4
3.4	Study Network Determination	4
3.5	Existing Facilities.....	4
3.6	Proposed Transportation Improvements.....	5
4.0	Trip Generation.....	6
5.0	Trip Distribution and Assignment.....	6
6.0	Traffic Analysis	7
6.1	Existing Traffic.....	7
6.2	2010 “No-Build” Traffic	8
6.3	2010 “Build” Traffic	9
6.4	Additional Considerations	10
7.0	Identification of Programmed Projects.....	11
8.0	Ingress/Egress Analysis.....	12
9.0	Internal Circulation Analysis	12
10.0	Compliance with Comprehensive Plan Analysis	12
11.0	Non-Expedited Criteria	12
11.1	Quality, Character, Convenience, and Flexibility of Transportation Options	12
11.2	Vehicle Miles Traveled	12
11.3	Relationship Between Location of Proposed DRI and Regional Mobility	12
11.4	Relationship Between Proposed DRI and Existing or Planned Transit Facilities.....	12
11.5	Transportation Management Area Designation.....	13
11.6	Offsite Trip Reduction and Trip Reduction Techniques.....	13
11.7	Balance of Land Uses – Jobs/Housing Balance	13
11.8	Relationship Between Proposed DRI and Existing Development and Infrastructure	13
12.0	Area of Influence	13
12.1	Criteria	13
12.2	Study Area Determination and Characteristics.....	13
12.3	DRI Employment and Salary Figures	14
12.4	AOI Occupied Housing Figures	16
13.0	ARC’s Air Quality Benchmark.....	17

LIST OF TABLES

	<u>Page</u>
Table 1: Proposed Land Uses	1
Table 2: Galleria Parkway Mixed Use DRI, Gross Trip Generation.....	3
Table 3: Galleria Parkway Mixed Use DRI, Net Trip Generation	6
Table 4: Existing 2007 Intersection Levels of Service.....	7
Table 5: 2010 “No-Build” Intersection Levels of Service.....	8
Table 6: 2010 “Build” Intersection Levels of Service.....	9
Table 7: Additional Considerations Intersection Levels of Service	10
Table 8: Census Tract Information.....	14
Table 9: Number of Workers in DRI.....	14
Table 10: Employment, Salary, and Affordable Housing Payment by Occupation.....	15
Table 11: Number of Households in the DRI by Range of Monthly Income	15
Table 12: Selected Monthly Costs for All Occupied Housing Units in the AOI	16
Table 13: Comparison of Workers’ Monthly Household Incomes in the DRI and Monthly Costs of Housing Units in the AOI	16
Table 14: ARC VMT Reductions	17

LIST OF FIGURES

	<u>Following Page</u>
Figure 1: Site Location	1
Figure 2: Site Aerial	1
Figure 3: Site Plan	1
Figure 4: Project Trip Distribution	6
Figure 5: Project Trips, AM & PM Peak Conditions	6
Figure 6: Existing 2007 Conditions.....	7
Figure 7: 2010 “No-Build” Conditions.....	8
Figure 8: 2010 “Build” Conditions.....	9
Figure 9: Additional Considerations Conditions	10
Figure 10: Future and Programmed Projects	11
Figure 11: Area of Influence.....	14

EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts of a proposed 5.1-mixed-use development (Galleria Parkway Mixed Use) located west of Interstate 75 and south of Interstate 285 along Cobb Galleria Parkway near the Cobb Energy Performing Arts Center (CEPAC) in Cobb County, Georgia. This report is being prepared as part of a submittal requesting rezoning from OI (Office Institutional) to UVC (Urban Village Community). Because the mixed-use project will exceed 400,000 square feet, the proposed development is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) review. The Cobb County Future Land Use Plan identifies the area as Regional Activity Center.

The proposed development is expected to consist of approximately 35,000 square feet of retail space, 400,000 square feet of office space, 50 high rise condominium units, and a 250-key hotel. Additionally, this site will provide a total of 2,678 parking spaces (840 spaces for the GRTA BRT Station, and 100 spaces for CEPAC). The development is scheduled to be completed in one build-out phase by the year 2010.

The results of the detailed intersection analysis for the 2010 “No-Build” (includes background traffic growth) and 2010 “Build” conditions (2010 “No-Build” conditions plus the Galleria Parkway Mixed Use development) identified no improvements will be necessary in order to maintain the Level of Service standard (LOS D or E) within the study network. Roadway and intersection improvements were not necessary because all of the study intersections met the acceptable Level of Service standard for the AM and PM peak hours for the 2007 Existing, 2010 “No-Build”, and 2010 “Build” conditions.

The following intersection geometry and improvements are recommended at the project site driveways:

Cobb Galleria Parkway @ BB&T Bank Driveway / Proposed Driveway #1 (Full-movement Signalized)

- Install a westbound left-turn lane and a shared left-turn/through/right-turn lane exiting the site along Proposed Driveway #1. Additionally, the phasing at this signal should be side-street split-phase.
- Re-stripe the BB&T Driveway to allow through traffic to enter the proposed Galleria Parkway Mixed Use development.
- Install a protected/permitted left-turn signal phase for the southbound Cobb Galleria Parkway approach.

Cobb Galleria Parkway @ Proposed Driveway #2 (Right-in / Right-out)

- Install a westbound right-turn only lane exiting the site.

1.0 PROJECT DESCRIPTION

1.1 Introduction

This report presents the analysis of the anticipated traffic impacts of a proposed 5.1-mixed-use development (Galleria Parkway Mixed Use) located west of Interstate 75 and south of Interstate 285 along Cobb Galleria Parkway near the Cobb Energy Performing Arts Center (CEPAC) in Cobb County, Georgia. This report is being prepared as part of a submittal requesting rezoning from OI (Office Institutional) to UVC (Urban Village Community). Because the mixed-use project will exceed 400,000 square feet, the proposed development is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) review. The Cobb County Future Land Use Plan identifies the area as Regional Activity Center.

The proposed development is expected to consist of approximately 35,000 square feet of retail space, 400,000 square feet of office space, 50 high-rise condominium units, and a 250-key hotel. Additionally, this site will provide a total of 2,678 parking spaces (840 spaces for the GRTA BRT Station, and 100 spaces for CEPAC). The development is scheduled to be completed in one build-out phase by the year 2010.

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

Table 1 Proposed Land Uses	
Retail Space	35,000 SF
Office Space	400,000 SF
Residential Condominium Units	50 Units
Hotel	250 Keys (rooms)

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

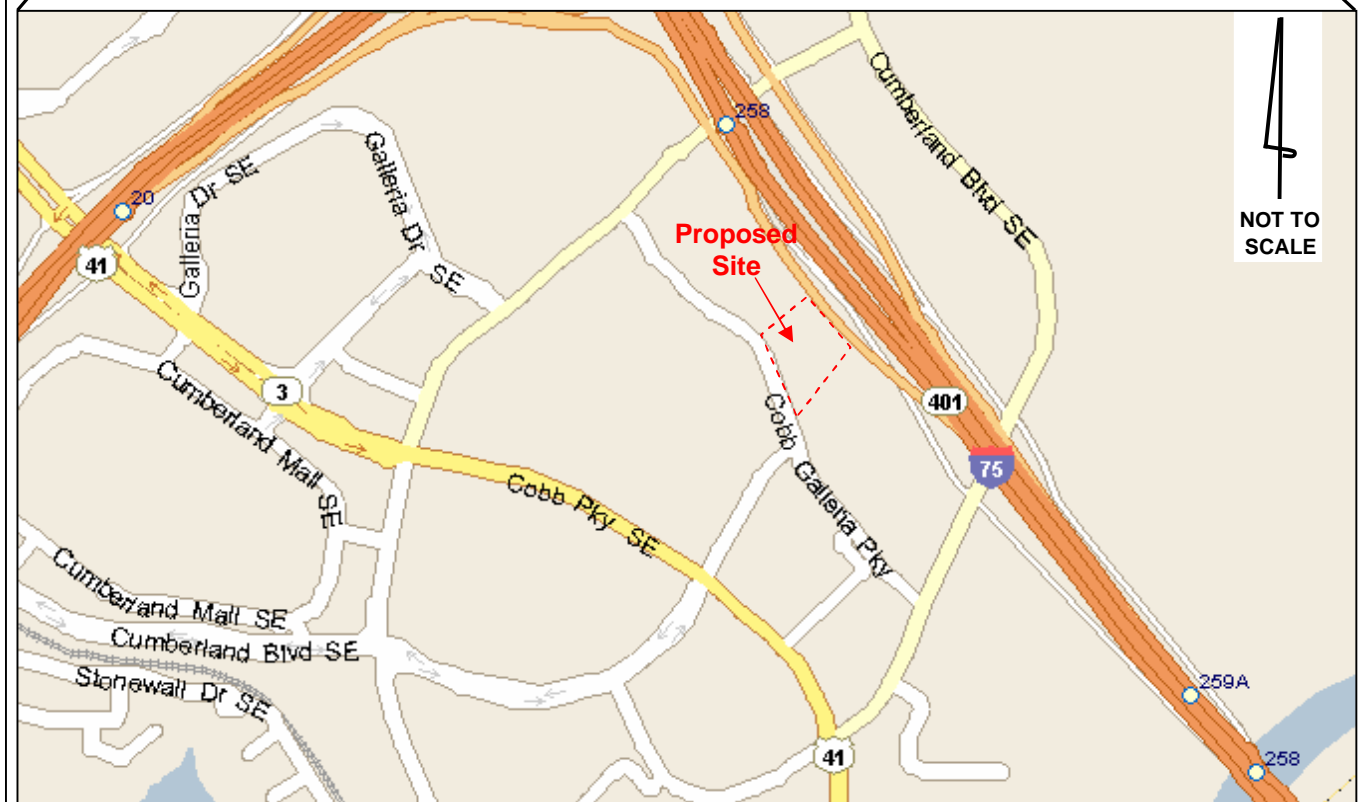
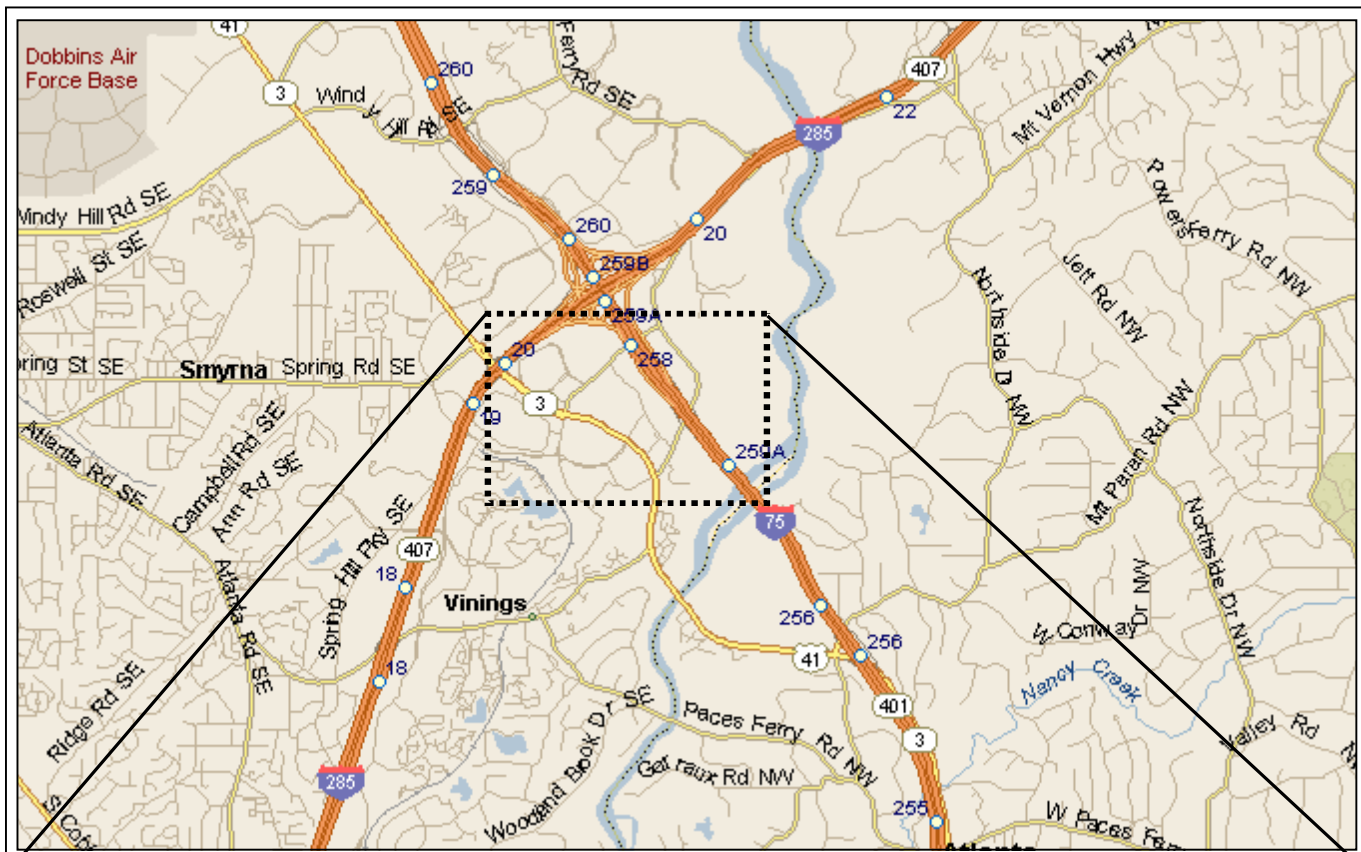
1.2 Site Plan Review

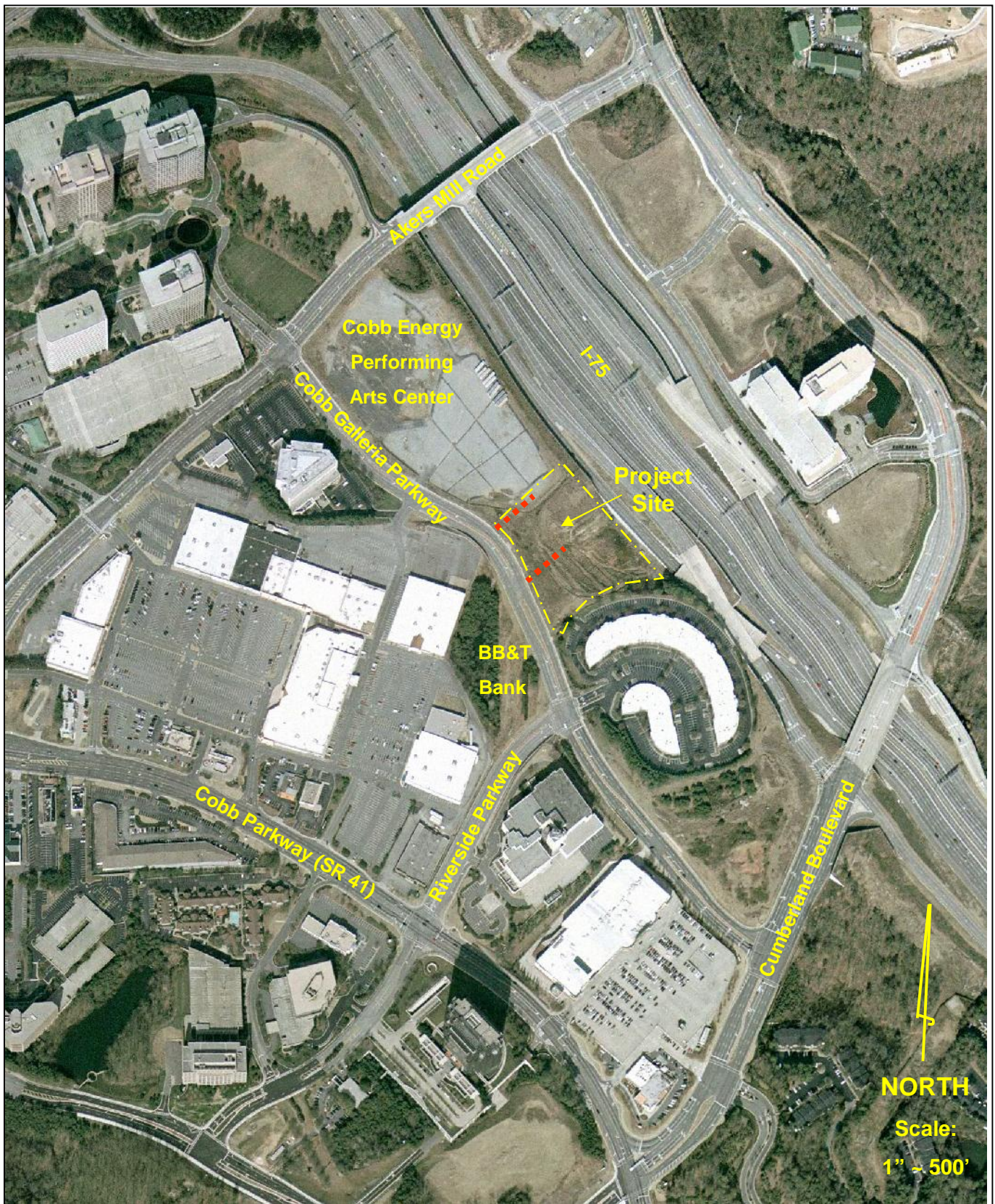
The development plan consists of four main buildings. The two buildings that border Cobb Galleria Parkway are proposed to be first floor retail uses, with residential condominiums above. The other two buildings on the site are a twenty two-story Hotel / Condominium Tower and a sixteen-story Office Tower. A “Grand Boulevard” passes through the site from north to south, between the Retail and the Hotel / Residential / Office areas. An “Entry Plaza” separates the two towers. The existing site is currently undeveloped.

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. Proposed Driveway #1 is the full-movement driveway located along Cobb Galleria Parkway at the signalized intersection of the BB&T Bank Driveway. It is proposed that Driveway #1 will form the forth leg of this intersection. Access will also be provided via the proposed right-in / right-out Driveway #2 located along Cobb Galleria Parkway approximately 225 feet north of the existing BB&T driveway. Additionally, an access road along the west side of the Performing Arts Center site (under construction by others) will provide a connection to Akers Mill Road. The Akers Mill Road driveway will provide left-in, right-in, right-out access.



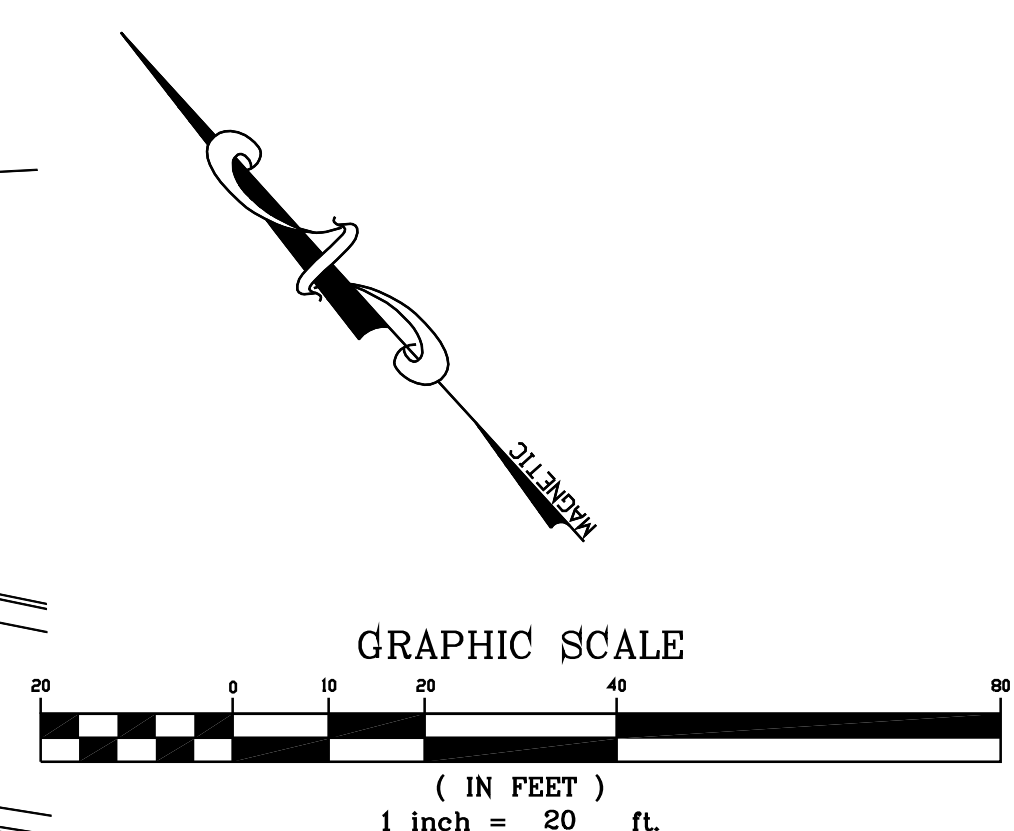


NOTES:

1. THE TOTAL SITE IS COMPOSED OF PARCEL 1 WHICH IS .65 ACRES AND PARCEL 2 WHICH IS 4.46 ACRES FOR A TOTAL OF 5.11 ACRES.
2. THERE IS NO EXISTING OR PROPOSED OPEN SPACE / DEDICATED PARK SPACE ON SITE.
3. NO BIKE LANES OR TRAILS ARE BEING PROPOSED.
4. ALL ADJACENT PARCELS ARE ZONED O AND (OFFICE & INSTITUTIONAL) UNLESS OTHERWISE NOTED.

OWNERS: COBB- MARIETTA
COLISEUM & EXHIBIT
HALL AUTHORITY
ZONING: O & I
USE: GROUP A-1

<u>SITE DATA</u>	
ZONING:	08s (Office/Institutional with 1984 Variations)
<u>OVERALL SITE AREA:</u>	5.11 ACRES
<u>TOTAL PARKING REQUIRED:</u>	1,934 SPACES
<u>TOTAL PARKING PROPOSED:</u>	2,807 SPACES
<u>OFFICE</u>	
PROPOSED LAND USE:	MIXED USE
TOTAL BUILDING SQUARE FOOTAGE:	400,000 SF
FLOOR AREA RATIO:	1.57
TOTAL NUMBER OF STORIES/LEVELS:	16 LEVELS
PARKING SPACES REQUIRED :	1,400 SPACES
TOTAL PARKING SPACES PROPOSED:	1,400 SPACES
EXISTING LAND USE:	OFFICE & INSTITUTIONAL
<u>CONDO</u>	
PROPOSED LAND USE:	MIXED USE
TOTAL BUILDING SQUARE FOOTAGE:	65,000 SF(50 UNITS)
FLOOR AREA RATIO:	.65
TOTAL NUMBER OF STORIES/LEVELS:	22 TOTAL LEVELS (CONDO & HOTEL)
PARKING SPACES REQUIRED :	92 SPACES
TOTAL PARKING SPACES PROPOSED:	100 SPACES
EXISTING LAND USE:	OFFICE & INSTITUTIONAL
<u>HOTEL</u>	
PROPOSED LAND USE:	MIXED USED
TOTAL BUILDING SQUARE FOOTAGE:	155,000 SF (250 KYS)
FLOOR AREA RATIO:	1.2
TOTAL NUMBER OF STORIES/LEVELS:	22 TOTAL LEVELS (CONDO & HOTEL)
PARKING SPACES REQUIRED:	284 SPACES
TOTAL PARKING SPACES PROPOSED:	284 SPACES
EXISTING LAND USE:	OFFICE & INSTITUTIONAL
<u>RETAIL</u>	
PROPOSED LAND USE:	MIXED USE
TOTAL BUILDING SQUARE FOOTAGE:	35,000 SF
FLOOR AREA RATIO:	0.25
TOTAL NUMBER OF STORIES/LEVELS:	1
PARKING SPACES REQUIRED :	158 SPACES
TOTAL PARKING SPACES PROPOSED:	158 SPACES
EXISTING LAND USE:	OFFICE & INSTITUTIONAL
<u>NOTES:</u>	
HOTEL: FLOOR AREA RATIO (FAR) AND RESIDENTIAL UNITS PER ACRE ARE BASED ON GROSS LAND AREA (GLA).	

[illegible]

1.4 Bicycle and Pedestrian Facilities

Pedestrian facilities currently exist along both sides of Cobb Galleria Parkway in the vicinity of the proposed mixed-use development. The proposed development proposes sidewalks within the site providing connections between the buildings and the existing crosswalk along Cobb Galleria Parkway. The proposed development will provide pedestrian access in accordance with Cobb County development requirements. Additionally, the programmed GDOT Project #0004473 is expected to turn Cobb Galleria Parkway into a multi-use / multi-modal corridor from Akers Mill Road to Cumberland Parkway. It will include a multi-use trail and an enhanced pedestrian environment.

1.5 Transit Facilities

Cobb Community Transit (CCT) Route 10A passes along Cumberland Parkway, approximately a quarter of a mile to the south of the site. Route 10A travels to Atlanta and towards the north to Windy Hill Road.

CCT Route 10B passes in front of the proposed development, traveling toward Atlanta and north to Delk Road.

CCT Route 50 passes in front of the site, traveling between the Cumberland Transfer Center and destinations to the north.

In addition to the existing CCT transit services, the proposed Cumberland Galleria BRT Station will be located adjacent to the site, constructed above I-75. There is a proposed pedestrian connection from the BRT Station to the east side of the site. The pedestrian connection would provide access to the 840 Galleria Park-n-ride parking spaces proposed on the proposed development site.

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 3.5% per year along all roadways were agreed upon in the GRTA Letter of Understanding.

No traffic from other developments will be included in the analysis, as agreed to in the GRTA Letter of Understanding.

2.2 Traffic Data Collection

Year 2007 peak hour turning movement counts were conducted at six intersections between 7:00-9:00 AM and 4:15-6:15 PM on November 21, 2006 and February 20th, 2007. The morning and afternoon peak hours varied between the seven intersections:

- Cobb Galleria Parkway @ Cumberland Boulevard (AM Peak 8:00-9:00, PM Peak 5:15-6:15)
- Cobb Galleria Parkway @ Akers Mill Road (AM Peak 8:00-9:00, PM Peak 5:15-6:15)
- Cobb Galleria Parkway @ Riverwood Parkway (AM Peak 8:00-9:00, PM Peak 4:15-5:15)
- Cobb Galleria Parkway @ BB&T Driveway (AM Peak 8:00-9:00, PM Peak 5:15-6:15)
- Cumberland Boulevard @ Interstate 75 Southbound Ramps (AM Peak 8:00-9:00, PM Peak 5:15-6:15)
- Cumberland Boulevard @ Interstate 75 Northbound Ramps (AM Peak 7:15-8:15, PM Peak 5:15-6:15)

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 individual movements as well as 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

The proposed development is expected to consist of approximately 35,000 square feet of retail space, 400,000 square feet of office space, 50 condominium units, and a 250-key hotel. Additionally, this site will provide a total of 2,678 parking spaces (840 spaces for the GRTA BRT Station, and 100 spaces for CEPAC). The development is scheduled to be completed in one build-out phase by the year 2010.

Traffic for the various land uses was calculated using trip generation equations and rates contained in the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Seventh Edition, 2003*. The Shopping Center average rate was used to calculate the retail use trip generation. Gross trips generated are displayed below in **Table 2**.

Table 2 Galleria Parkway Mixed Use DRI Gross Trip Generation							
Land Use	ITE Code	Daily Traffic		AM Peak Hour		PM Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
Build-Out (Year 2010)							
35,000 SF Retail	820	752	752	22	14	63	68
50 Units High-Rise Residential Condominium/Townhouse	232	206	206	8	35	20	12
400,000 SF General Office Building	710	1,939	1,939	501	68	90	437
250 Keys Hotel	310	932	932	77	50	78	70
Total		3,829	3,829	608	167	251	587

3.2 *Trip Distribution*

The directional distribution and assignment of new project trips was based on the project land use, a review of land use densities in the area, combined with engineering judgment and discussions with 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 Pre-Application meeting, and includes the following intersections:

- Cobb Galleria Parkway @ Cumberland Boulevard
- Cobb Galleria Parkway @ Riverwood Parkway
- Cobb Galleria Parkway @ BB&T Driveway / Proposed full-movement Driveway #1
- Cobb Galleria Parkway @ Akers Mill Road
- Cumberland Boulevard @ Interstate 75 Southbound Ramps
- Cumberland Boulevard @ Interstate 75 Northbound Ramps

Each of the above listed intersections was analyzed for the Existing 2007 Condition, the 2010 "No-Build" Condition, and the 2010 "Build" Condition. The 2010 "No-Build" condition represents the existing traffic volumes grown at 3.5% per year for three years. The 2010 "Build" condition adds the projected trips associated with the Galleria Parkway Mixed Use development to the 2010 "No-Build" condition.

Additionally, the proposed site driveway listed below was only analyzed for the 2010 "Build" Condition:

- Cobb Galleria Parkway @ Proposed right-in / right-out Driveway #2

This intersection was analyzed for the weekday AM and PM peak hour conditions.

3.5 *Existing Facilities*

Cobb Galleria Parkway is a four-lane divided roadway that extends from Cumberland Boulevard to Akers Mill Road. Cobb Galleria Parkway is classified as an urban local street by GDOT and as a major collector by Cobb County. The posted speed limit along Cobb Galleria Parkway is 35 MPH. A southbound left-turn lane currently exists along Cobb Galleria Parkway at the location of the Proposed Driveway #1.

Cumberland Boulevard is a four-lane divided roadway that extends from its intersection with Cobb Parkway south, under I-285, ultimately looping over I-75 and back north towards I-285. Cumberland Boulevard is classified as an urban collector street by GDOT and as an arterial by Cobb County. The posted speed limit along Cumberland Boulevard is 35 MPH.

Akers Mill Road is a four-lane divided roadway extending from Cumberland Boulevard, passing under I-75, ultimately intersecting again with Cumberland Boulevard. Cumberland Boulevard is classified as an urban minor arterial by GDOT and as an arterial by Cobb County. The posted speed limit along Akers Mill Road is 35 MPH.

Riverwood Parkway is a four-lane divided roadway extending from Cumberland Boulevard to Cobb Galleria Parkway. Cumberland Boulevard is classified as an urban local street by GDOT and as a major collector by Cobb County. The posted speed limit along Riverwood Parkway is 25 MPH.

Interstate 285 is an eight-lane divided roadway that is classified as an urban interstate principal arterial by GDOT. The posted speed limit along I-285 is 55 MPH. I-285 travels around the perimeter of Atlanta, intersecting with the major interstates (I-20, I-75, and I-85).

Interstate 75 is an eight-lane divided roadway that is classified as an urban interstate principal arterial by GDOT. The posted speed limit along I-75 is 55 MPH. I-75 has a north-south orientation and passes directly through downtown Atlanta.

The table below summarizes the existing facilities in the vicinity of the proposed Cobb Galleria Parkway development.

Roadway	Number of Lanes	Posted Speed Limit (MPH)	GDOT Functional Classification	Cobb County Functional Classification
Cobb Galleria Parkway	4-Lane Divided	35	Urban Local Street	Major Collector
Cumberland Boulevard	4-Lane Divided	35	Urban Collector Street	Arterial
Akers Mill Road	4-Lane Divided	35	Urban Minor Arterial	Arterial
Riverwood Parkway	4-Lane Divided	25	Urban Local Street	Major Collector
Interstate 285	8-Lane Divided	55	Urban Interstate Principal Arterial	n/a
Interstate 75	8-Lane Divided	55	Urban Interstate Principal Arterial	n/a

In this report, roadways that run approximately parallel to Interstate 75 are considered to have a north-south orientation, while roadways that run approximately parallel to Interstate 285 are considered to have an east-west orientation.

3.6 *Proposed Transportation Improvements*

Section 7.0 lists four proposed roadway projects, Bus Rapid Transit service, a proposed Cumberland Galleria Bus Rapid Transit station, and pedestrian/bicycle improvements in the area. None of these transportation projects were assumed in the 2010 “No-Build” or 2010 “Build” conditions analysis per GRTA’s guidelines.

4.0 TRIP GENERATION

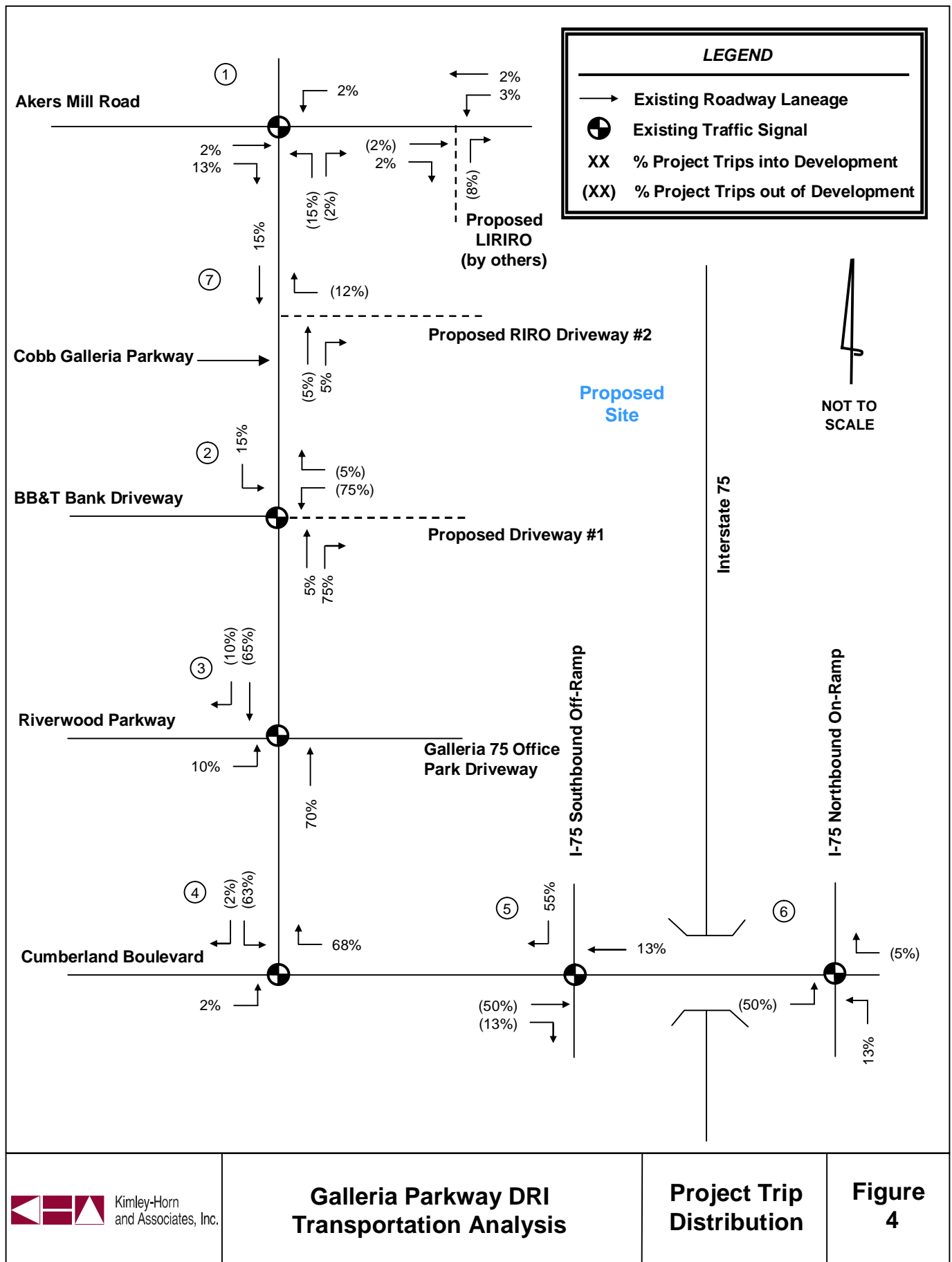
As stated earlier, trips associated with the proposed development were estimated using the trip generation equations and rates contained in the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Seventh Edition, 2003*.

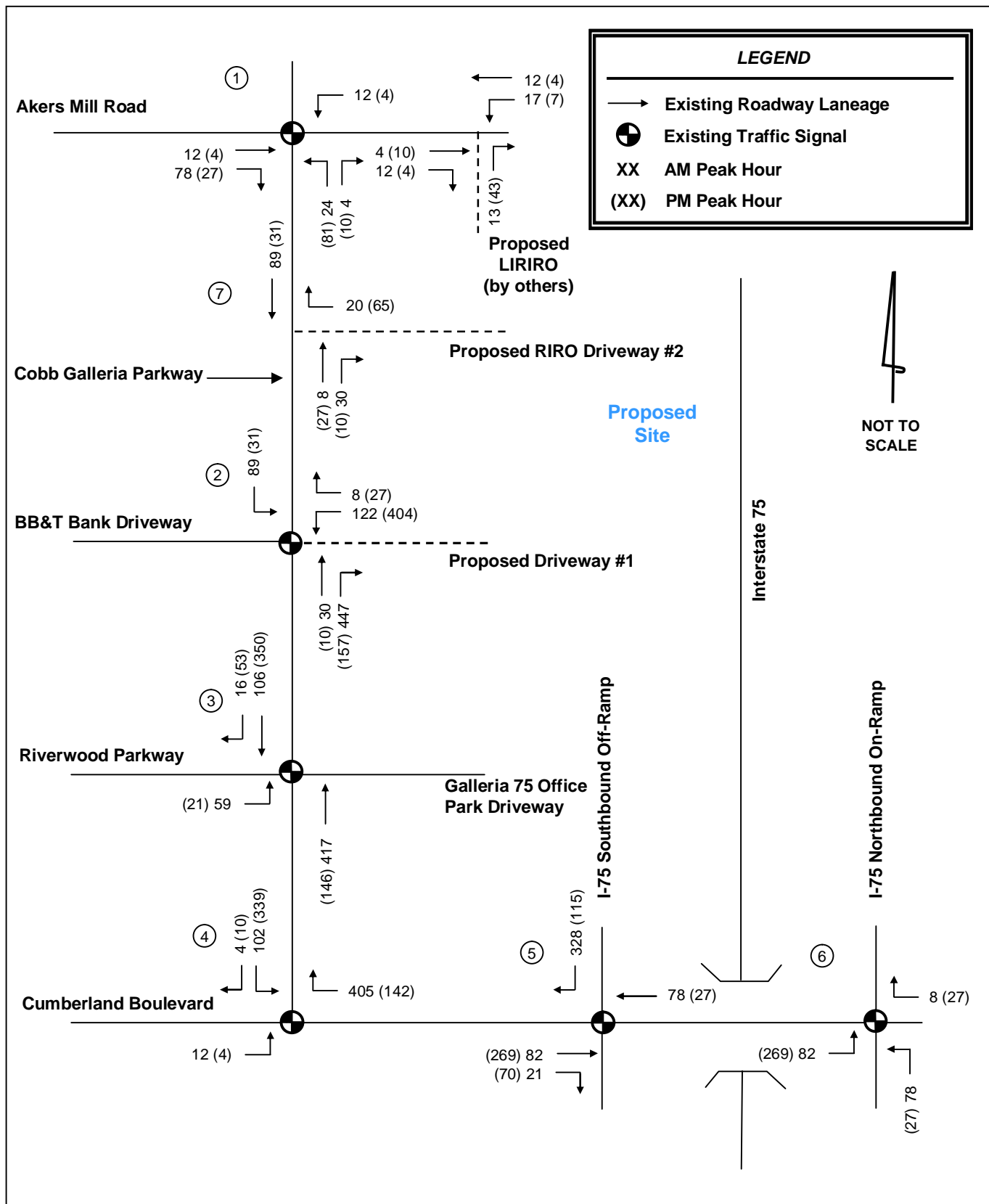
Additionally, alternate mode reductions of 2% were taken per discussions with GRTA during the pre-application meeting due to the proximity of transit service. The total trips generated and analyzed in the report are listed below in **Table 3**.

Table 3 Galleria Parkway Mixed Use DRI Net Trip Generation						
Land Use	Daily Traffic		AM Peak Hour		PM Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Build-Out (Year 2010)						
Gross Trips	3,829	3,829	608	167	251	587
<i>Mixed-Use Reductions</i>	-238	-238	--	--	-19	-19
<i>Alternate Mode Reduction (2%)</i>	-72	-72	-12	-4	-5	-12
<i>Pass-By Reductions (Retail Land Use only)</i>	-201	-201	--	--	-18	-18
New Trips	3,318	3,318	596	163	209	538

5.0 TRIP DISTRIBUTION AND ASSIGNMENT

New trips were distributed onto the roadway network using the percentages agreed to during the Pre-Application meeting. **Figure 4** displays the expected distribution percentages for both the residential and non-residential portions of 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 5**.





Kimley-Horn
and Associates, Inc.

Galleria Parkway DRI Transportation Analysis

Project
Trips

Figure
5

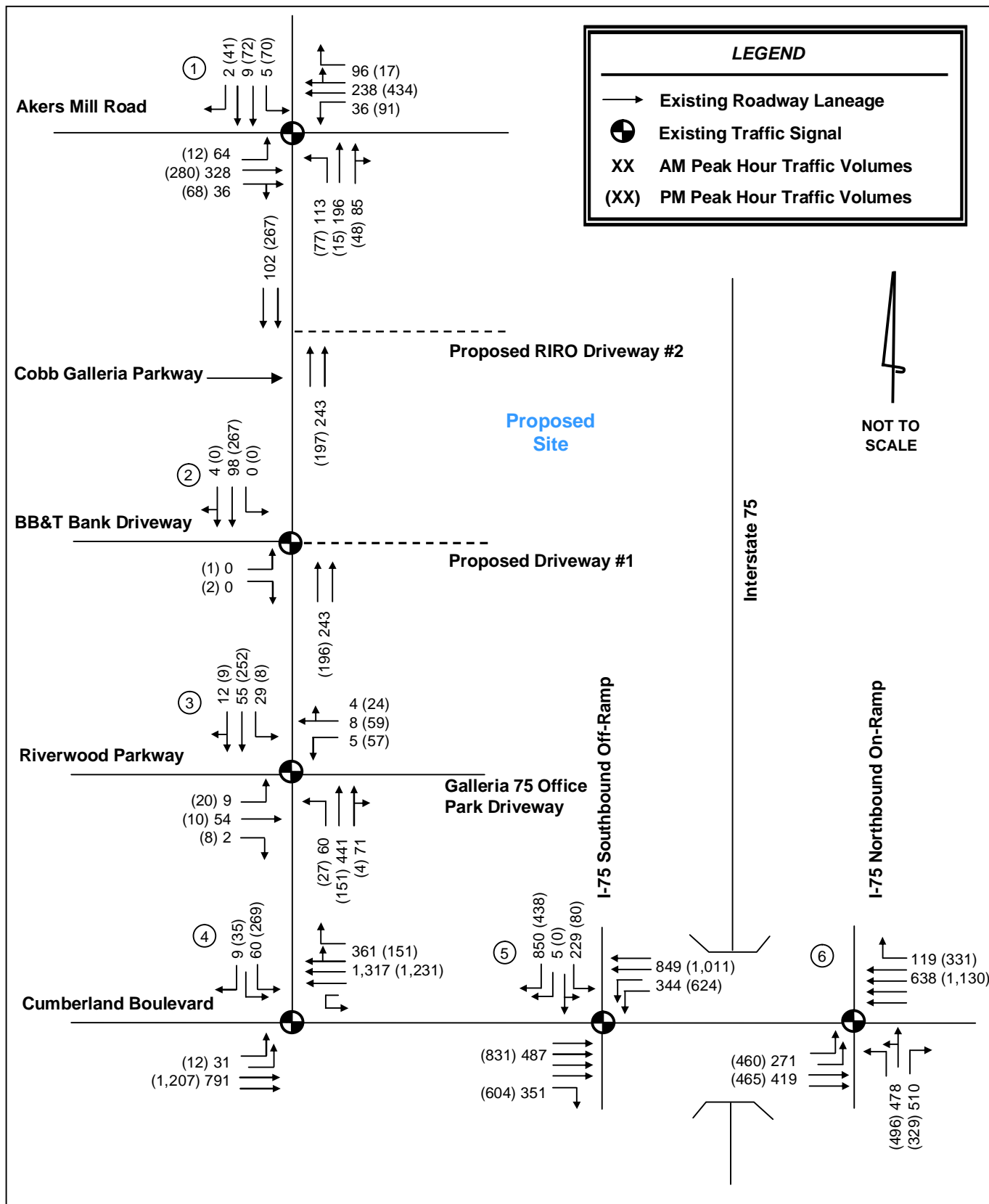
6.0 TRAFFIC ANALYSIS

6.1 Existing Traffic

The existing traffic volumes are shown in **Figure 6**. 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 Galleria Parkway Mixed Use DRI 2007 Existing Intersection Levels of Service (delay in seconds)				
Intersection		Control	AM Peak Hour	PM Peak Hour
1	Akers Mill Road @ Cobb Galleria Parkway	Signal	B (17.8)	C (21.7)
2	Cobb Galleria Parkway @ BB&T Bank Driveway	Signal	A (0.0)	A (1.5)
3	Cobb Galleria Parkway @ Riverwood Parkway	Signal	B (12.5)	B (15.2)
4	Cobb Galleria Parkway @ Cumberland Boulevard	Signal	A (9.4)	C (25.4)
5	Cumberland Boulevard @ I-75 Southbound Ramps	Signal	C (25.7)	C (25.3)
6	Cumberland Boulevard @ I-75 Northbound Ramps	Signal	B (15.9)	B (19.7)

As you can see in the table, none of the intersections currently operate below the acceptable Level of Service standard (LOS D) during the AM or PM peak hours.



Kimley-Horn
and Associates, Inc.

Galleria Parkway DRI Transportation Analysis

Existing 2007
Conditions

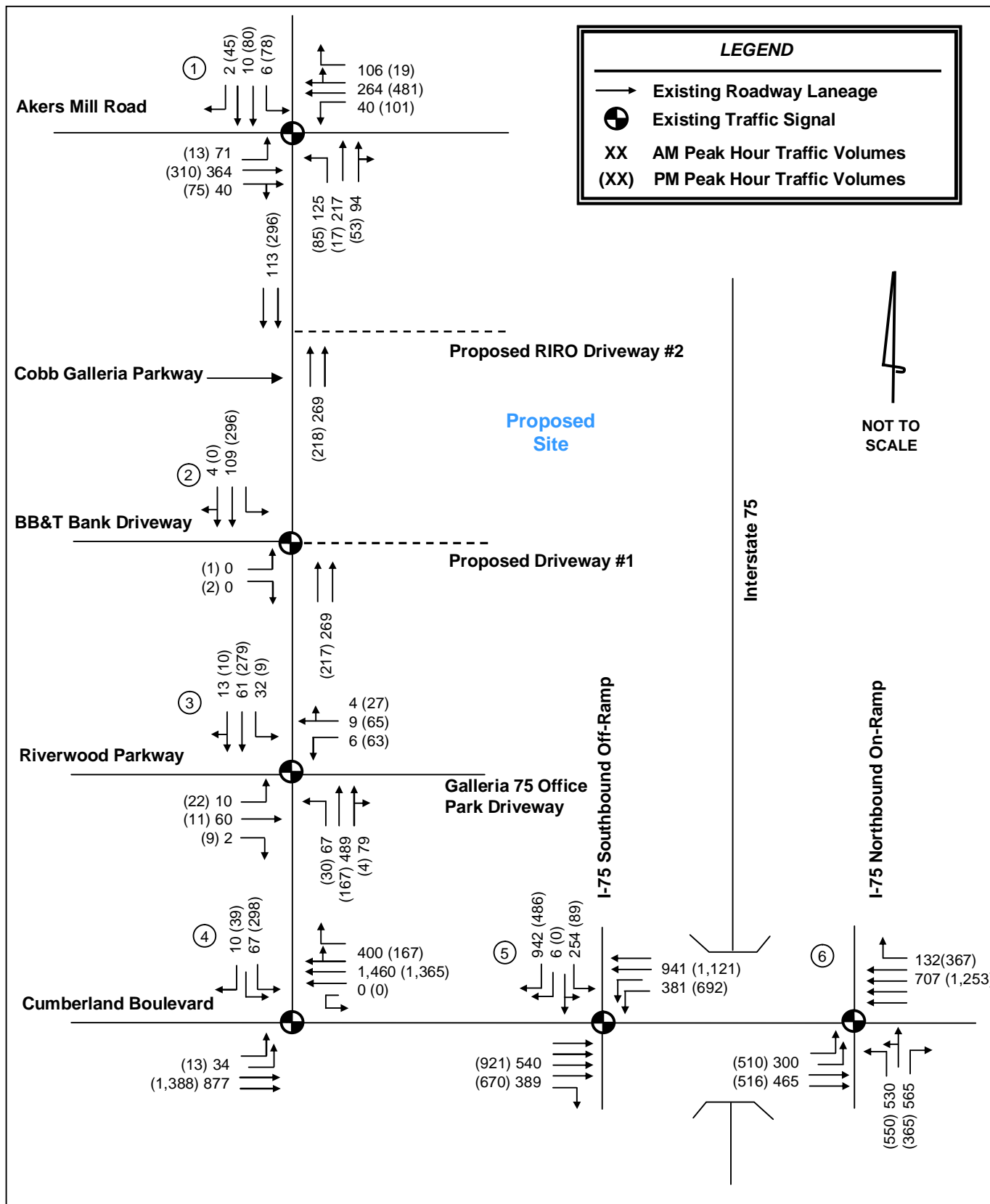
Figure
6

6.2 2010 No-Build Traffic

The existing traffic volumes were grown at 3.5% per year along all roadway links within the study network. The 2010 “No-Build” traffic 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 for the year 2010 “No-Build” conditions are shown in **Figure 7**.

Table 5 Galleria Parkway Mixed Use DRI 2010 “No-Build” Intersection Levels of Service (delay in seconds)					
Intersection		Control	LOS Standard	AM Peak Hour	PM Peak Hour
1	Akers Mill Road @ Cobb Galleria Parkway	Signal	D	C (22.5)	C (22.1)
2	Cobb Galleria Parkway @ BB&T Bank Driveway	Signal	D	A (0.0)	A (1.4)
3	Cobb Galleria Parkway @ Riverwood Parkway	Signal	D	B (12.8)	B (15.0)
4	Cobb Galleria Parkway @ Cumberland Boulevard	Signal	D	C (27.2)	C (28.8)
5	Cumberland Boulevard @ I-75 Southbound Ramps	Signal	D	C (32.3)	C (28.4)
6	Cumberland Boulevard @ I-75 Northbound Ramps	Signal	D	B (17.2)	C (20.5)

As seen in the table above, none of the intersections failed to meet the acceptable Level of Service standards for the year 2010 “No-Build” condition.



6.3 2010 “Build” Traffic

The traffic associated with the proposed development (Galleria Parkway Mixed Use DRI) was added to the 2010 “No-Build” volumes. These volumes were then input into the 2010 “No-Build” with Improvements roadway network and analyzed with Synchro 6.0. The results of the analyses are displayed in **Table 6**. The projected volumes for the year 2010 “Build” conditions are shown in **Figure 8**.

Table 6 Galleria Parkway Mixed Use DRI 2010 “Build” Intersection Levels of Service (delay in seconds)					
Intersection		Control	LOS Standard	AM Peak Hour	PM Peak Hour
1	Akers Mill Road @ Cobb Galleria Parkway	Signal	D	B (18.3)	B (18.2)
2	Cobb Galleria Parkway @ BB&T Bank Driveway / Proposed Driveway #1	Signal	D	B (10.5)	C (26.5)
3	Cobb Galleria Parkway @ Riverwood Parkway	Signal	D	B (13.9)	B (15.8)
4	Cobb Galleria Parkway @ Cumberland Boulevard	Signal	D	B (10.5)	C (31.5)
5	Cumberland Boulevard @ I-75 Southbound Ramps	Signal	D	D (45.6)	C (31.7)
6	Cumberland Boulevard @ I-75 Northbound Ramps	Signal	D	B (19.2)	C (22.0)
7	Cobb Galleria Parkway @ Proposed RIRO Driveway #2	Stop-controlled	D	A (9.2)	A (9.3)

As shown in **Table 6**, none of the intersections failed to meet the acceptable Level of Service standards for the year 2010 “Build” condition.

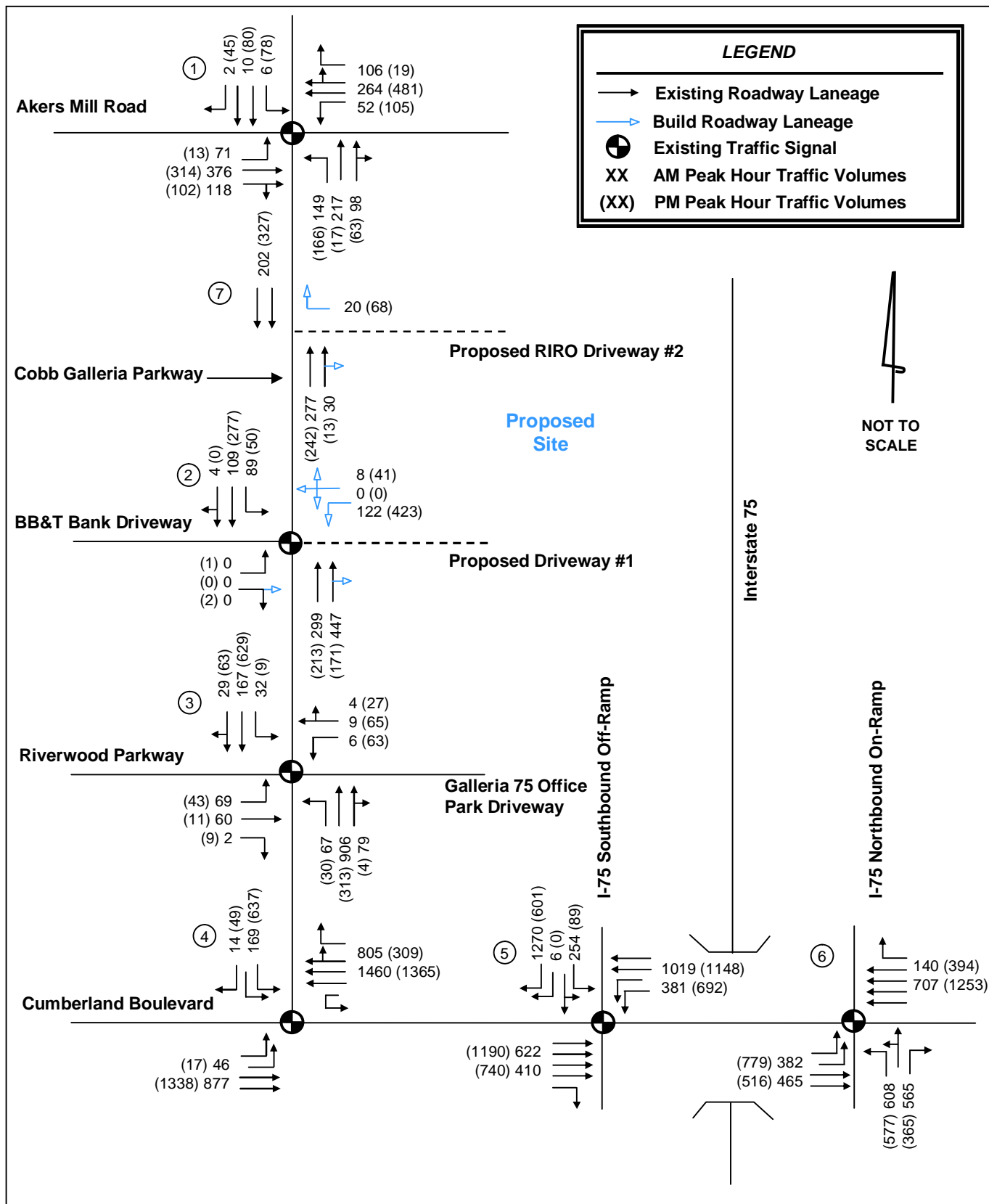
The following intersection geometry and improvements are recommended at the project site driveways:

Cobb Galleria Parkway @ BB&T Bank Driveway / Proposed Driveway #1 (Full-movement Signalized)

- Install a westbound left-turn lane and a shared left-turn/through/right-turn lane exiting the site along Proposed Driveway #1. Additionally, the phasing at this signal should be side-street split-phase.
- Re-stripe the BB&T Driveway to allow through traffic to enter the proposed Galleria Parkway Mixed Use development.
- Install a protected/permitted left-turn signal phase for the southbound Cobb Galleria Parkway approach.

Cobb Galleria Parkway @ Proposed Driveway #2 (Right-in / Right-out)

- Install a westbound right-turn only lane exiting the site.



Kimley-Horn
and Associates, Inc.

Galleria Parkway DRI Transportation Analysis

**Projected 2010
"Build"
Conditions**

**Figure
8**

The recommended driveway geometry for the proposed Driveway #1 is expected to provide adequate intersection operation. Typically, side street split-phase traffic signal operation is not recommended. The reason for recommending side-street split phase signal operation at this location is the existing BB&T Bank driveway volumes were collected and found to be very low. The traffic signal currently does not provide a green phase to the side street except for once or twice during the peak hour. With the proposed development, a split-phase traffic signal would provide the necessary green time for the proposed Driveway #1 westbound approach. The BB&T Bank driveway green phase would continue to only be called once or twice during the peak hour.

6.4 Additional Considerations

Based on engineering judgement, the traffic associated with the proposed 840 parking space Galleria Park-n-ride was added to the 2010 “No-Build” volumes (which included the proposed Galleria Parkway Mixed Use DRI). AM and PM peak hour traffic volumes for the park-n-ride lot was estimated as follows: It was estimated 75% of the parking spaces would be filled/emptied during the 7-9AM and 4-6PM periods. Assuming buses arrive/depart throughout the peak hours, and there are approximately 50 passengers per bus, we estimated 300 entering trips and 30 exiting trips during the AM peak hour. We also estimated 30 entering trips and 300 exiting trips during the PM peak hour.

We distributed the park-n-ride traffic to the two proposed site driveways and to the Akers Mill Road driveway of the Performing Arts Center project. We estimated the park-n-ride traffic would primarily originate from residential areas within close proximity of the site; i.e. to the west and east, and to the north along Cobb Parkway.

These volumes were then input into the 2010 “Build” with recommended driveway improvements and analyzed with Synchro 6.0. The results of the analyses are displayed in **Table 7**. The projected volumes for the Additional Considerations conditions are shown in **Figure 9**.

Table 7 Galleria Parkway Mixed Use DRI Additional Considerations Intersection Levels of Service (delay in seconds)					
	Intersection	Control	LOS Standard	AM Peak Hour	PM Peak Hour
2	Cobb Galleria Parkway @ BB&T Bank Driveway / Proposed Driveway #1	Signal	D	B (10.6)	C (28.3)
7	Cobb Galleria Parkway @ Proposed RIRO Driveway #2	Stop-controlled	D	A (9.5)	B (10.2)

As shown in **Table 7**, none of the intersections failed to meet the acceptable Level of Service standards for the Additional Considerations conditions.

LEGEND

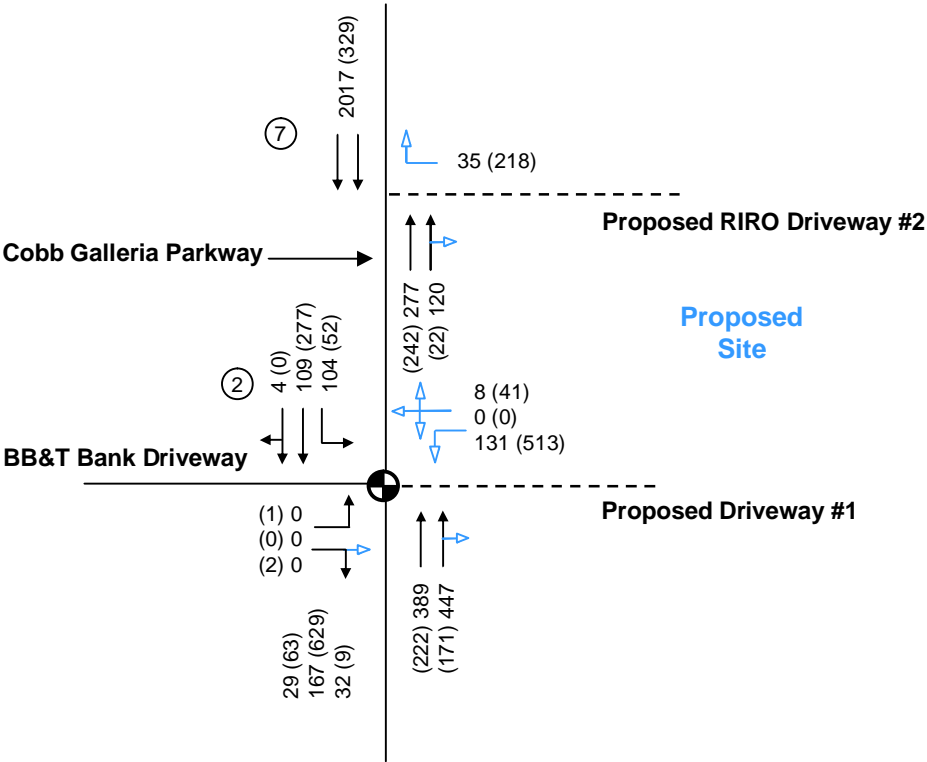
Existing Roadway Laneage

Build Roadway Laneage

Existing Traffic Signal

XX AM Peak Hour Traffic Volumes

(XX) PM Peak Hour Traffic Volumes



7.0 IDENTIFICATION OF PROGRAMMED PROJECTS

The *TIP*, *STIP*, *RTP*, *GDOT's Construction Work Program*, and *Cobb County SPLOST Program* were researched 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. **Figure 10** illustrates the programmed projects listed below.

1. AR-251A-D (Project is split-funded) GDOT #001048, #001049, #003532 & #0003511 ARC RTP, STIP, CWP	I-75 Bus Rapid Transit (BRT) from Akers Mill Road area to Town Center Mall Area Completion Date: 2011 Pages 1-4, 14-15, 26, 27
2. AR-909A GDOT # N/A ARC RTP,	Arterial Bus Rapid Transit – Phase II from City of Marietta to Cumberland Galleria Transfer Center. Completion Date: 2016 Pages 5, 16,
3. AR-909B GDOT # N/A ARC RTP,	Arterial Bus Rapid Transit – Phase II from Cumberland Galleria Transfer Center to Marta Arts Center Station. Completion Date: 2016 Pages 6, 17,
4. AR-H-001 GDOT # 714130 ARC RTP, STIP, CWP	I-75 North HOV Lanes from Akers Mill Road to Banberry Road in Cobb County. Completion Date: 2012 Pages 7, 18, 26, 28
5. AT-012 GDOT # 720125 ARC RTP,	Widen Northside Parkway from four to six lanes from Paces Mill Road to Mount Paran Road. Completion Date: 2015 Pages 8, 19,
6. CO-231 GDOT # 721152 ARC RTP, STIP,	Widen Cobb Parkway from four to six lanes from Paces Mill Road to Akers Mill Road. Completion Date: 2011 Pages 9, 20, 26,
7. CO-AR-286 GDOT # 0004473 ARC RTP, STIP, CWP	Cobb Galleria Parkway multi-use/multi-modal corridor improvements from Akers Mill Road to Cumberland Parkway. Completion Date: 2008 Pages 10, 21, 25, 29
8. CO-AR-291 GDOT # 0006289 ARC RTP, STIP, CWP	Akers Mill Road multi-use/multi-modal corridor improvements from Cobb Galleria Parkway to Cumberland Boulevard. Completion Date: 2008 Pages 11, 22, 25, 30
9. CO-AR-303 GDOT # 0007094 ARC RTP,	Galleria Park and Ride Lot. Completion Date: 2006 Pages 12, 23,
10. CO-AR-BP221 GDOT # 0006876 ARC RTP, STIP, CWP	Multi-use trail project along Spring Road, Cumberland Parkway, and Cobb Parkway. Completion Date: 2010 Pages 13, 24, 25, 31



Legend

RTP

Project Group

- Bicycle/Pedestrian
- Roadway
- Transit
- Interstates
- ◆ MARTA Rail Stations
- MARTA Rail Lines
- Chattahoochee River
- County Boundaries
- Streets
- Major Roads
- Ponds
- Lakes
- Rivers & Streams
- Cities
- State Boundary



NORTH

Not to Scale



8.0 INGRESS/EGRESS ANALYSIS

Access to the development is proposed at three locations. Proposed Driveway #1 is the full-movement driveway located along Cobb Galleria Parkway at the signalized intersection of the BB&T Bank Driveway. It is proposed that Driveway #1 will form the forth leg of this intersection. Access will also be provided via the proposed right-in / right-out Driveway #2 located along Cobb Galleria Parkway approximately 225 feet north of the existing BB&T driveway. Additionally, an access road along the west side of the Performing Arts Center site (under construction by others) will provide a connecting to Akers Mill Road. The Akers Mill Road driveway will provide left-in, right-in, right-out access.

9.0 INTERNAL CIRCULATION ANALYSIS

The Cobb Galleria Parkway development is mixed-use in nature, and is expected to reduce the PM peak hour trips by 4.53% and daily new vehicle trips by 6.22%. Please refer to the Appendix for the internal capture spreadsheet.

10.0 COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The Cobb County Future Land Use Plan identifies the area as Regional Activity Center.

11.0 NON-EXPEDITED CRITERIA

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

The site is accessible via vehicle, transit, walking or biking. The existing roadways and sidewalks provide transportation options to residents, employees, and visitors of the site.

11.2 *Vehicle Miles Traveled*

The following table displays the reduction in traffic generation expected due to mixed-use reductions, pass-by trips, and alternative mode reductions.

	Build-out Total
Daily Gross Trip Generation:	7,658
(-)Mixed-use reductions (internal capture)	-476
(-)Pass-by trips	-402
(-)Alternative modes	-144
Net Trips:	6,636

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

The proposed development is located within the Cumberland Community Improvement District. Additionally, the development is located within the Cumberland LCI study area. The proposed development has direct access to both to I-75 and I-285, allowing easy access to other parts of the Atlanta area.

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

Cobb Community Transit (CCT) Route 10A passes along Cumberland Parkway, approximately a quarter of a mile to the south of the site. Route 10A travels to Atlanta and towards the north to Windy Hill Road.

CCT Route 10B passes in front of the proposed development, traveling toward Atlanta and north to Delk Road.

CCT Route 50 passes in front of the site, traveling between the Cumberland Transfer Center and destinations to the north.

In addition to the existing CCT transit services, the proposed Cumberland Galleria BRT Station will be located adjacent to the site, constructed above I-75. There is a proposed pedestrian connection from the BRT Station to the east side of the site. The pedestrian connection would provide access to the 840 Galleria Park-n-ride parking spaces proposed on the proposed development site.

11.5 Transportation Management Area Designation

The proposed development is located within the Commuter Club Transportation Management Association.

11.6 Offsite Trip Reduction and Trip Reduction Techniques

In addition to the internal capture that will occur due to the mixed-use nature of the proposed development, the Cobb Galleria Parkway Mixed-Use DRI will provide direct pedestrian access to the proposed Cumberland Galleria BRT Station.

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

This section will describe the Area of Influence (AOI) demographics, AOI average wage levels, expected AOI housing costs, and the availability of housing within the AOI that would reasonably position employees within the proposed DRI.

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 proposed development. For this proposed development expansion, the non-expedited review criterion is as follows:

This section is included to satisfy the following GRTA Non-expedited review criteria:

7. 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 (Cobb Galleria Parkway at Riverwood Parkway). 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 Cobb County and Fulton County) can be seen in **Figure 11**. Information obtained from the census tracts can be seen in **Table 8**.

Table 8 Census Tract Information	
Total Households	75,324
Population in Households	165,005
Average household size	2.19
Total Workers	96,534
Workers per Household	1.28
Owner Occupied	45%
Rental Occupied	55%

As can be seen from the table above, the total population within the Area of Influence is 75,324, residing within 165,005 households (an average of 2.19 people per household). The AOI area totals 46,556 acres.

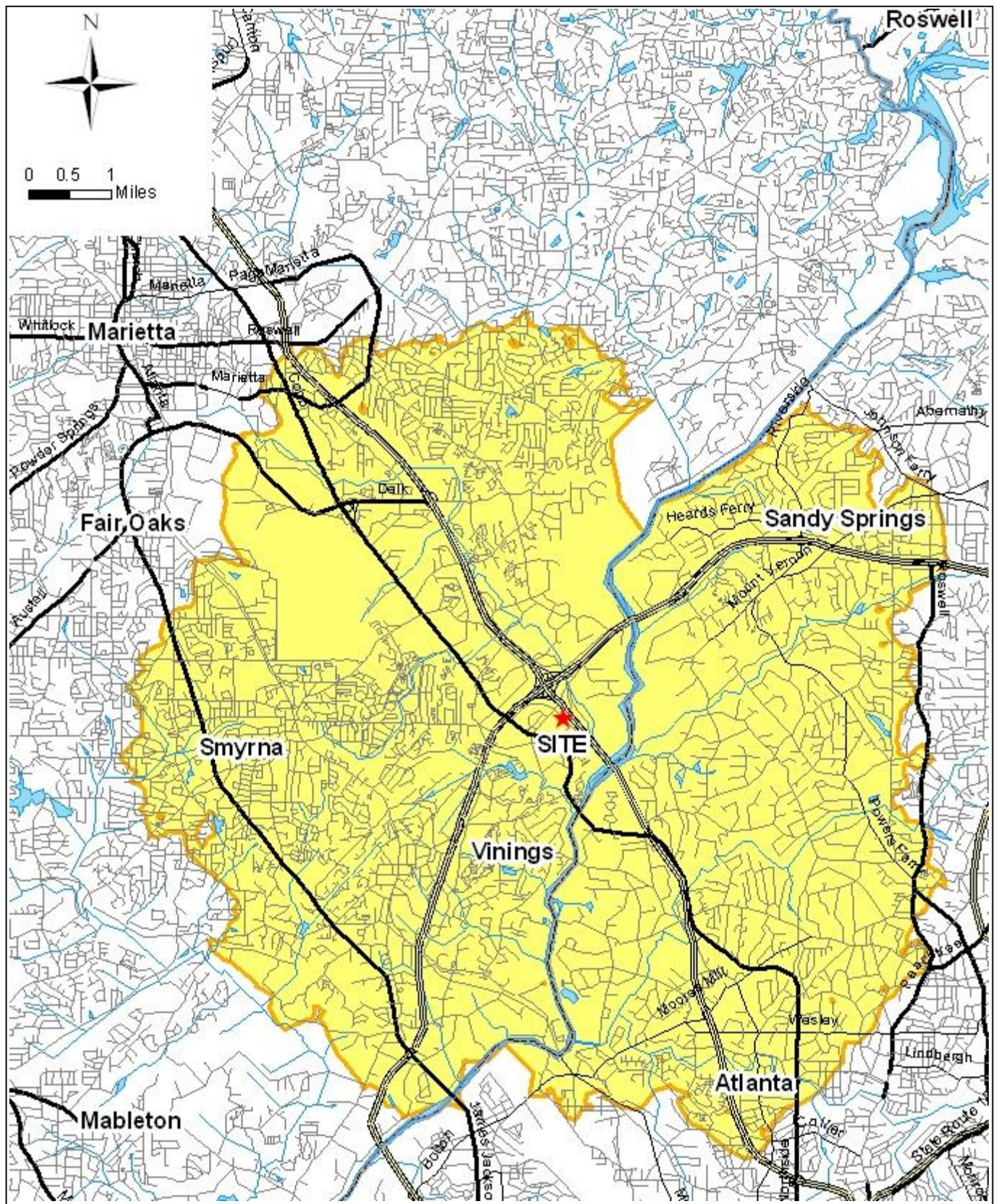
The total number of expected employees within the proposed Galleria Parkway Mixed-Use DRI was calculated to be **1,661 total employees**. This calculation was based on rates the following rates estimated from the AOI Guidebook, listed in **Table 9** below.

Table 9 Number of Workers in DRI			
Land Use Type	Size	Estimate: Workers per SF	Estimate: Total Workers
General Office	400,000 SF	1/300	1,333
Retail	35,000 SF	1/500	70
Hotel	Approx. 155,000SF	1/600	258
Total:			1,661

12.3 DRI Employment and Salary Figures

The DRI is expected to employ approximately 1,661 workers in the areas seen in **Table 10**. Each land use type was then broken into percentages of various expected jobs within the DRI. Table 10 displays the department positions, the numbers of employees in each occupation, the monthly employee and household salaries, and the respective affordable housing payments. The employee types listed were taken from the *AOI Guidebook for Non-Expedited Reviews*, Table 1.1.

Household salary was calculated based on the computed workers per household ratio of 1.28 multiplied by the salary in each bracket. It is assumed then that each household has 1.28 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*.



Kimley-Horn
and Associates, Inc.

Galleria Parkway DRI Transportation Analysis

Area of
Influence

Figure
11

Table 10 Employment, Salary, and Affordable Housing Payment by Occupation					
<i>Departments</i>	<i>Occupation</i>	<i>Employees</i>	<i>Monthly Employee Salary</i>	<i>Monthly Household Salary</i>	<i>Affordable Housing Payment</i>
General Office	Executive Manager	267	\$6,300	\$8,064	\$2,419
	Technical Occupation	400	\$4,000	\$5,120	\$1,536
	Office and Administrative support	267	\$2,300	\$2,944	\$883
	Computer Occupations	133	\$4,900	\$6,272	\$1,882
	Finance, insurance, real estate	133	\$4,200	\$5,376	\$1,613
	Construction	133	\$3,000	\$3,840	\$1,152
Retail	Manager/Sales Head	14	\$2,500	\$3,200	\$960
	Sales Staff/Clerk	56	\$1,700	\$2,176	\$653
Hotel Service	Service Manager	58	\$3,200	\$4,096	\$1,229
	Personal Service Establishment	200	\$2,200	\$2,816	\$845
Total Employees		1,661	-	-	-

Given the above calculated salaries, each household is eligible for a specific housing tier within the Area of Influence. **Table 11** below displays the number of households that fall into each tier based on the household salary. All employees of the proposed development are projected to afford a housing payment of \$600 or more per month.

Table 11 Number of Households in the DRI by Range of Monthly Income	
<i>Range of Monthly Income for Housing</i>	<i>Number of Households</i>
\$499 or less	0
\$500 to \$599	0
\$600 to \$699	56
\$700 to \$799	0
\$800 to \$899	467
\$900 to \$999	14
\$1,000 to \$1,249	191
\$1,250 to \$1,499	0
\$1,500 to \$1,999	666
\$2,000 or more	267
Total	1,661

12.4 AOI Occupied Housing Figures

An analysis of existing occupied housing was conducted based on 2000 Census data for owner- and renter-occupied housing. A GIS analysis identified approximately 34,000 owner-occupied units and 32,000 renter-occupied units in the AOI. **Table 12** below displays the housing units in comparable price tiers. 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 12 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	5,045	3,214	8,259
\$500 to \$599	1,142	4,464	5,606
\$600 to \$699	1,626	9,669	11,295
\$700 to \$799	2,106	9,000	11,106
\$800 to \$899	2,352	3,177	5,529
\$900 to \$999	1,903	3,177	5,080
\$1,000 to \$1,249	5,089	2,748	7,837
\$1,250 to \$1,499	2,760	807	3,567
\$1,500 to \$1,999	3,762	679	4,441
\$2,000 or more	8,246	339	8,585
Total	34,031	37,274	71,305

Using the households in the DRI per price tier information in Table 10 and the renter / owner distribution of occupied housing in the AOI in **Table 12** 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 13**.

Table 13 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	8,259	0	8,259
\$500 to \$599	5,606	0	5,606
\$600 to \$699	11,295	56	11,239
\$700 to \$799	11,106	0	11,106
\$800 to \$899	5,529	467	5,062
\$900 to \$999	5,080	14	5,066
\$1,000 to \$1,249	7,837	191	7,646
\$1,250 to \$1,499	3,567	0	3,567
\$1,500 to \$1,999	4,441	666	3,775
\$2,000 or more	8,585	267	8,318
Total	71,305	1,661	69,644

As can be seen from **Table 13**, 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 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 proposed development is expected to consist of approximately 35,000 square feet of retail space, 400,000 square feet of office space, 50 high rise condominium units, and a 250-key hotel. ARC has establish criteria that link reductions in vehicle miles traveled (VMT) to improvements in air quality. The following describes the various reductions this development will accrue.

For projects where retail or office is the dominant use: developments that have a floor area ratio greater than 0.8 will receive a 6% reduction.

A 4% reduction is applied because at least 10% of the gross area is residential. This reduction is based on the assumption that the hotel space is treated as residential land use.

Since the project is located within ¼ mile of a CCT bus stop, a 3% reduction is applied.

The development lies with the Commuter Club Transportation Management Association, earning an additional 3% reduction.

Since the development proposed sidewalks within the development, connecting the proposed buildings and connecting to the existing sidewalks along Cobb Galleria Parkway, a 5% reduction is applied.

The proposed development meets the ARC criteria for a total 21% VMT reduction. These reductions are displayed below in **Table 14**.

Table 14 ARC VMT Reductions	
<i>Mixed-Use Project where Industrial is the dominant use</i>	
FAR greater than 0.8	-6%
The primary land use is residential and at least 10% of the floor area is office	-4%
Development is located within ¼ mile of a CCT bus stop	-3%
Participation in a Transportation Management Association program	-3%
Bike/ped network in development that met one Density 'target' and connects to adjoining uses	-5%
Total Reductions	-21%