

*Transportation Analysis*

**Buckhead Avenues**  
**DRI# 1269**  
**City of Atlanta, Georgia**

*Prepared for:*  
Ben Carter Properties, LLC

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January 2007  
019405004

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## EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts of a proposed approximate 12-acre mixed-use development (Buckhead Avenues) located within the City of Atlanta in Fulton County, Georgia. This report is being prepared as part of a submittal requesting a Special Use Permit (SUP) with the City of Atlanta for the hotel use. 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) and Atlanta Regional Commission (ARC) review.

The proposed development is expected to consist of 1,012 residential units, 550 hotel rooms, 32,200 SF of office space, and 474,198 SF of retail. The development is scheduled to be completed in a single phase, by the year 2010. The current zoning is C-3 (Commercial) with a SPI-9 Overlay. The DRI trigger for the proposed Buckhead Avenues development is the filing of the Special Use Permit (SUP) with the City of Atlanta for the hotel use.

The results of the detailed intersection analysis for the 2010 “No-Build” Conditions (background traffic growth not including the traffic associated with the proposed development) and 2010 “Build” Conditions (background traffic growth plus the traffic associated with the proposed Buckhead Avenues development) identified improvements that will be necessary in order to maintain the Level-of-Service standard (LOS D) within the study network. These improvements are listed below:

*2010 “No-Build” Conditions Improvements (includes background traffic growth but does not include the proposed Buckhead Avenues DRI project traffic):*

### Peachtree Road @ Pharr Road (Intersection #2)

- Provide an exclusive northbound left-turn lane along Peachtree Road, with protected + permissive phasing.
- Provide an exclusive southbound left-turn lane along Peachtree Road, with protected + permissive phasing.

### Peachtree Road @ West Paces Ferry Road/Roswell Road (Intersection #4)

- Relocate the mast-arm supporting the signal heads for the southbound Peachtree Road approach to enable reduced all red time and increase signal efficiency.

### Peachtree Road @ Grandview Avenue (Intersection #7)

- Prohibit northbound left-turn movements along Grandview Avenue onto Peachtree Road.

### East Paces Ferry Road @ Bolling Way (Southbound) (Intersection #13)

- Install a traffic signal, if warranted, and coordinate with the existing signal at Peachtree Road and West Paces Ferry Road/Roswell Road (located approximately 400' to the west).

### Pharr Road @ North Fulton Drive (Intersection #17)

- Install a traffic signal, if warranted.

*2010 “Build” Conditions Improvements (adds the proposed Buckhead Avenues DRI project traffic to the 2010 “No-Build” Conditions):*

Peachtree Road @ Buckhead Avenue (Intersection #3)

- Provide an exclusive westbound left-turn lane along Buckhead Avenue.

Peachtree Road @ Bolling Way/Sardis Way (Intersection #5)

- Re-stripe existing on-street parking to provide an exclusive northbound right-turn lane along Bolling Way.

Roswell Road @ Sardis Way (Intersection #8)

- No additional improvements.

West Paces Ferry Road @ East Andrews Drive (Intersection #10)

- Optimize signal timings.

East Paces Ferry Road @ Bolling Way (Northbound) (Intersection # 12)

- Prohibit northbound left-turn movements along Bolling Way

Buckhead Avenue @ Bolling Way / Driveway A3 (Intersection #15)

- No additional improvements.

Buckhead Avenue @ North Fulton Drive (Intersection #16)

- Install a signal, if warranted, with pedestrian actuation.

Pharr Road @ Driveway A1 / Driveway H2 (Intersection #19)

- No additional improvements.



## 1.0 PROJECT DESCRIPTION

### 1.1 Introduction

This report presents the analysis of the anticipated traffic impacts of a proposed approximate 12-acre mixed-use development (Buckhead Avenues) located within the City of Atlanta in Fulton County, Georgia. This report is being prepared as part of a submittal requesting a Special Use Permit (SUP) with the City of Atlanta for the hotel use. 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) and Atlanta Regional Commission (ARC) review.

The proposed development is expected to consist of 1,012 residential dwelling units, 287 hotel rooms, 32,200 SF of office space, and 474,198 SF of retail. The development is scheduled to be completed in a single phase, by the year 2010. The current zoning is C-3 (Commercial) with a SPI-9 Overlay. The DRI trigger for the proposed Buckhead Avenues development is the filing of the Special Use Permit (SUP) with the City of Atlanta for the hotel use.

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

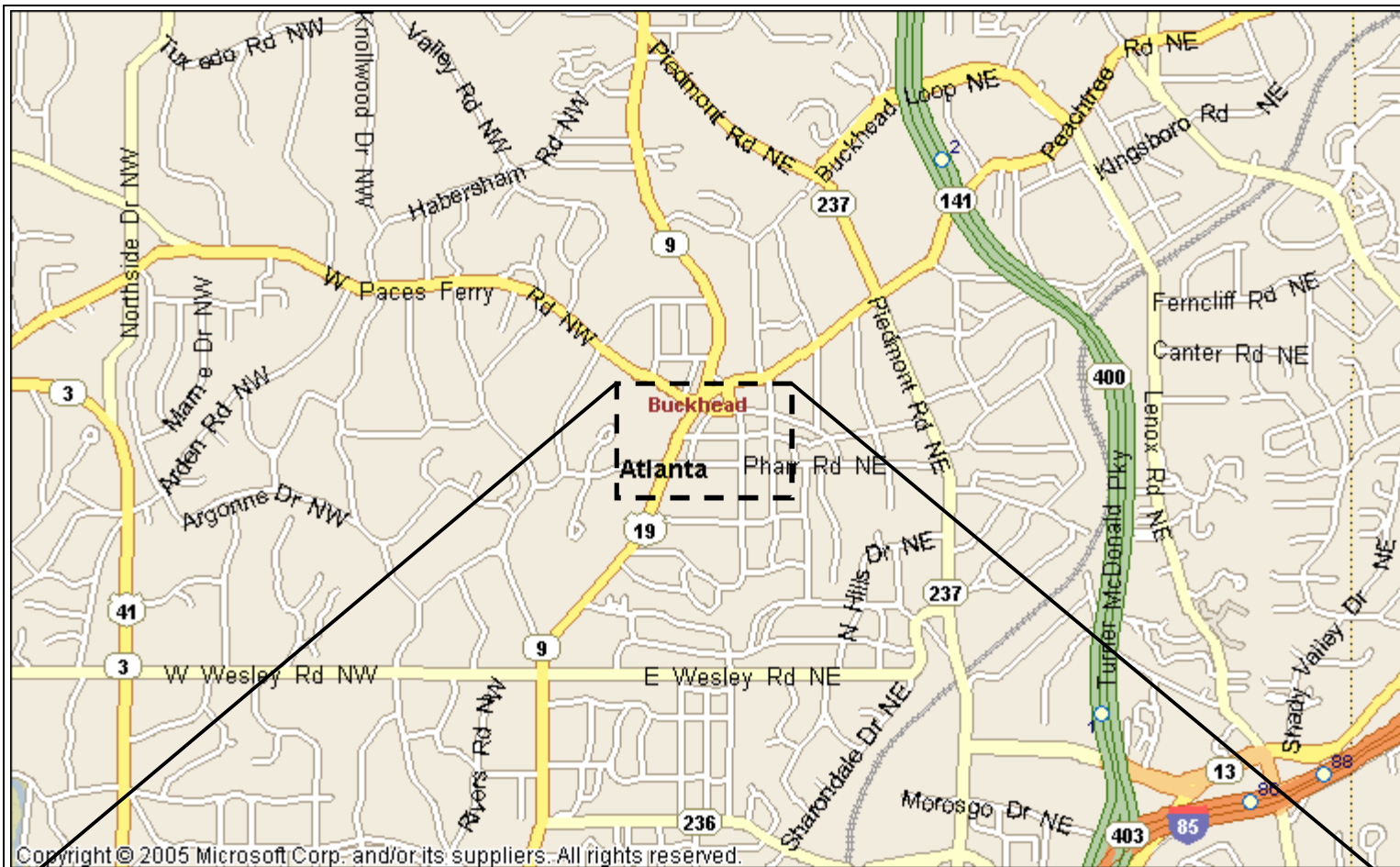
<b>Table 1</b> <b>Buckhead Avenues</b> <b>Proposed Land Uses</b>	
Residential Dwelling Units	1,012 Units
Hotel	287 Rooms
Office	32,200 SF
Retail	474,198 SF

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

### 1.2 Site Plan Review

The development plan is included in one phase and is to be completed by the year 2010. The development is generally located to the east and south of Peachtree Road, to the west of Grandview Avenue, and to the north of Pharr Road (with the exception of Parcel H) in the City of Atlanta and Fulton County, Georgia. The development will occur on eight parcels of land. **Table 2** lists each parcel, the proposed uses contained on each, and the surrounding roadways and uses. For more detail, refer to the included site plan.

**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.



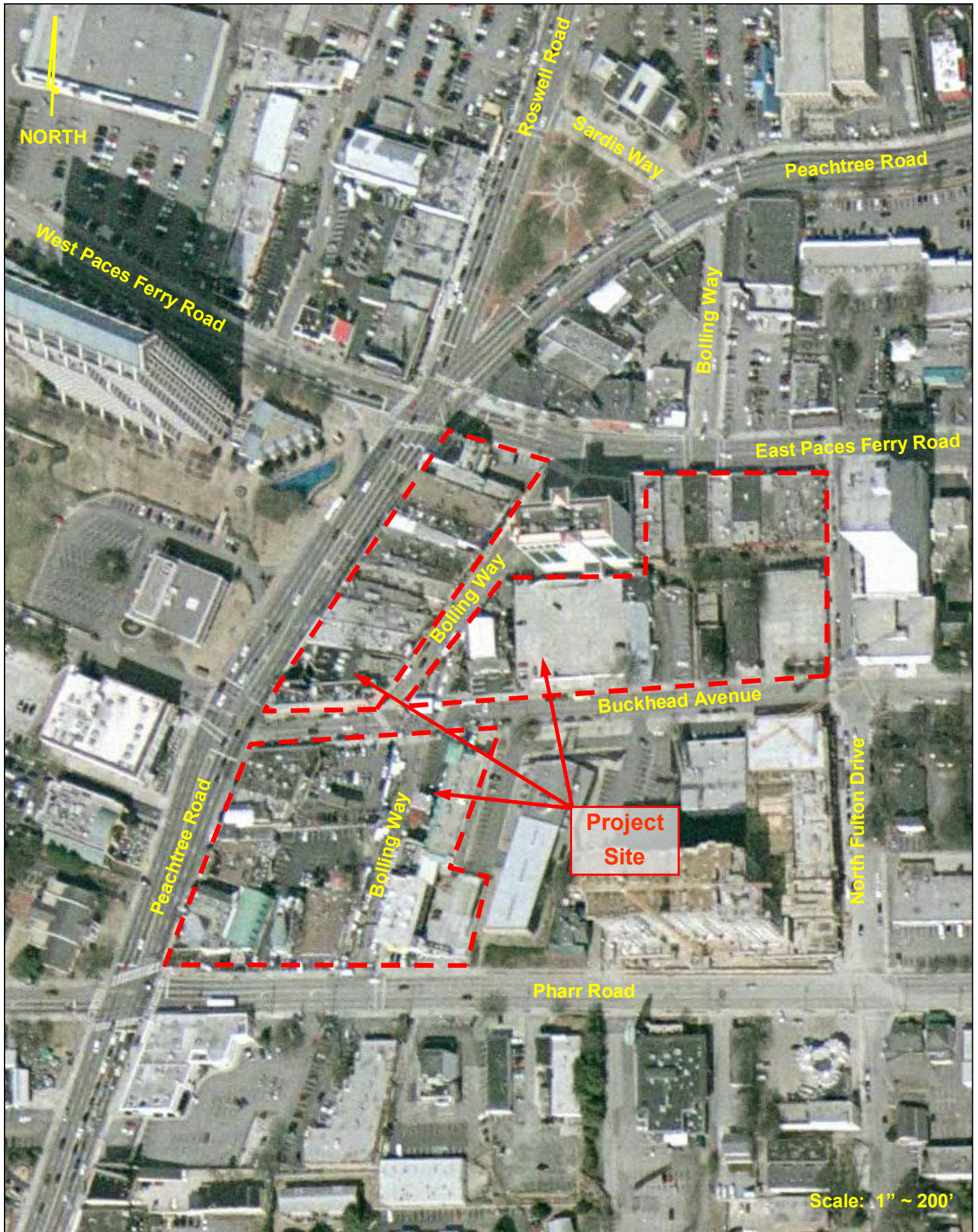
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## Buckhead Avenues DRI Transportation Analysis

Site Location

Figure  
1





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**Buckhead Avenues DRI  
Transportation Analysis**

**Aerial Photograph**

**Figure  
2**

**Table 2**  
**Buckhead Avenues**  
**Proposed Land Uses by Parcel**

Parcel	Residential (DU)	Hotel (Rooms)	Office (SF)	Retail (SF)	Surrounding Roadways / Uses (North, South, East, West)
A	60	187		179,136	Buckhead Avenue, Pharr Road, Fulton County Library, Peachtree Road
B	32	100		52,800	East Paces Ferry Road, Buckhead Avenue, Bolling Way, Peachtree Road
C	300		32,200	100,400	East Paces Ferry Road, Buckhead Avenue, North Fulton Drive, Bolling Way
D-1				43,500	Buckhead Avenue, Pharr Road, Grandview Avenue, North Fulton Drive
D-2	250			16,350	
E				10,500	Buckhead Avenue, existing development, North Fulton Drive, Fulton County Library
F	370			34,617	Peachtree Road, East Paces Ferry Road, Bolling Way, existing development
H				36,895	Pharr Road, existing development, existing development, Peachtree Road

### 1.3 Site Access

The eight parcels comprising the development are separated by numerous public roadways including Pharr Road, Buckhead Avenue, East Paces Ferry Road, Bolling Way, and North Fulton Drive. Consequently, each parcel has its own driveway(s). The design of Parcel A necessitates that Bolling Way between Buckhead Avenue and Pharr Road be abandoned as a public road. The intersections of the abandoned Bolling Way at Pharr Road and Buckhead Avenue will become two of the three site driveways for Parcel A. An additional right-in/right-out driveway is proposed along Peachtree Road to provide access primarily to the hotel. Parcel B has one deck entry along the south end of Bolling Way adjacent to Buckhead Avenue. Parcel C has three site driveways: one driveway along the east side of Bolling Way, one driveway along the south side of East Paces Ferry Road, and one driveway along the west side of North Fulton Drive. Parcels D, E, and F all have one driveway each: Parcel D's driveway is located along the east side of North Fulton Drive; Parcel E's driveway is located along the south side of Buckhead Avenue; and Parcel F's driveway is located along the North side of East Paces Ferry Road. Finally, Parcel H has two site driveways; the first site driveway is located along the east side of Peachtree Road, and the second driveway is located along the south side of Pharr Road (across the street from Parcel A's south most driveway).



## 1.4 *Bicycle and Pedestrian Facilities*

The Buckhead Avenues development is being constructed in accordance with the Buckhead Village Streetscape plan which includes the widening of sidewalks, the addition of on-street parking, various intersection improvements, and other pedestrian-friendly features. All new sidewalks will connect with currently existing sidewalks where possible, and pedestrian upgrades such as cross-walks and pedestrian push-buttons will be installed where necessary.

## 1.5 *Transit Facilities*

The proposed development is located along two MARTA bus routes: Route 23 – Lenox / Arts Center (5-10-minute headways) and Route 38 – Chastain Park (60-minute headways). Route 23 intersects the Lenox MARTA Station, the Buckhead MARTA Station, and the Arts Center Station while Route 38 intersects the Lindbergh MARTA Station. See the attached route maps for detailed route descriptions. Bicycle and pedestrian facilities are currently in place along the roads throughout the Buckhead Village, and future streetscape facilities will further enhance the pedestrian and cyclist experience. Given the transit, bicycle, and pedestrian opportunities available in the vicinity of the project, a mode reduction of 5% is proposed for both residential and non-residential uses.

# 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 3.0% per year along all roadways were agreed upon during the methodology and pre-application meetings with GRTA and ARC staff. Additionally, the 2010 “No-Build” Conditions include projected trips generated by the following developments:

- DRI Number 1068: The Roxy (Roswell Road @ W. Paces Ferry Road)
- Terminus (Peachtree Road @ Piedmont Road)
- Gallery (Peachtree Road @ Rumson Road)

## 2.2 *Traffic Data Collection*

2006 weekday peak hour turning movement counts were conducted at 11 signalized intersections and 6 unsignalized intersections from 7:00-9:00 AM and 4:00-6:30 PM during the week and from 12:00-2:00 PM on Saturday. The weekday morning, weekday afternoon, and Saturday midday peak hours varied between the following 17 intersections:

1. Peachtree Road at Peachtree Avenue	(7:45-8:45 AM, 5:00-6:00 PM, 12:45-1:45 PM)
2. Peachtree Road at Pharr Road	(8:00-9:00 AM, 5:00-6:00 PM, 12:00-1:00 PM)
3. Peachtree Road at Buckhead Avenue	(8:00-9:00 AM, 5:00-6:00 PM, 12:00-1:00 PM)
4. Peachtree Road at West Paces Ferry/Roswell Road	(8:00-9:00 AM, 4:30-5:30 PM, 1:00-2:00 PM)
5. Peachtree Road at Bolling Way/Sardis Way	(8:00-9:00 AM, 5:00-6:00 PM, 12:45-1:45 PM)
6. Peachtree Road at Mathieson Drive	(8:00-9:00 AM, 5:15-6:15 PM, 1:00-2:00 PM)
7. Peachtree Road at Grandview Avenue	(8:00-9:00 AM, 5:15-6:15 PM, 1:00-2:00 PM)
8. Roswell Road at Sardis Way	(8:00-9:00 AM, 4:15-5:15 PM, 12:45-1:45 PM)
9. Roswell Road at East Andrews Drive	(8:00-9:00 AM, 4:45-5:45 PM, 12:30-1:30 PM)

10. West Paces Ferry Road at East Andrews Drive	(8:00-9:00 AM, 5:00-6:00 PM, 1:00-2:00 PM)
11. West Paces Ferry Road at Paces Ferry Place	(8:00-9:00 AM, 5:00-6:00 PM, 1:00-2:00 PM)
12. East Paces Ferry Road at Bolling Way (Northbound)	(8:00-9:00 AM, 5:00-6:00 PM, 12:15-1:15 PM)
13. East Paces Ferry Road at Bolling Way (Southbound)	(8:00-9:00 AM, 5:00-6:00 PM, 12:15-1:15 PM)
14. East Paces Ferry Road at Grandview Avenue	(8:00-9:00 AM, 4:45-5:45 PM, 12:30-1:30 PM)
15. Buckhead Avenue at Bolling Way	(7:45-8:45 AM, 4:45-5:45 PM, 12:30-1:30 PM)
16. Buckhead Avenue at North Fulton Drive	(Counts projected based on adjacent data)
17. Pharr Road at North Fulton Drive	(8:00-9:00 AM, 5:00-6:00 PM, 1:00-2:00 PM)
18. Pharr Road at Grandview Avenue	(8:00-9:00 AM, 5:00-6:00 PM, 12:00-1:00 PM)

Counts were projected for the intersection of Buckhead Avenue at North Fulton Drive using turning movement counts at adjacent intersections. The 17 counts listed above were taken during two times of the year, May and November. As a result of volume discrepancies that resulted between intersections, engineering judgment was used to balance volumes between intersections where appropriate for the existing conditions scenario.

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

As stated earlier, the proposed development is expected to consist of 1,012 condominium units, 287 hotel rooms, 32,200 SF of office space, and 474,198 SF of retail. The development is scheduled to be completed in a single phase, by the year 2010.

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. Gross trips generated are displayed below in **Table 3**.

**Table 3**  
**Buckhead Avenues**  
**Gross Trip Generation**  
**Build-Out Year 2010**

Land Use	ITE Code	Weekday Traffic		AM Peak Hour		PM Peak Hour		SAT Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
1,012 Dwelling Units	230	2,295	2,295	56	273	269	132	181	155
287 Hotel Rooms	310	1,098	1,098	92	59	90	79	113	89
32,200 SF Office	710	278	278	67	9	20	95	8	7
474,198 SF Retail	820	9,339	9,339	243	155	840	909	1,238	1,142
<b>Total</b>		<b>13,010</b>	<b>13,010</b>	<b>458</b>	<b>496</b>	<b>1,219</b>	<b>1,215</b>	<b>1,540</b>	<b>1,393</b>

### 3.2 Trip Distribution

The directional distribution and assignment of new project trips was based on results obtained from engineering judgment and discussions with GRTA staff at the methodology 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:

1. Peachtree Road at Peachtree Avenue
2. Peachtree Road at Pharr Road
3. Peachtree Road at Buckhead Avenue
4. Peachtree Road at West Paces Ferry/Roswell Road
5. Peachtree Road at Bolling Way/Sardis Way
6. Peachtree Road at Mathieson Drive
7. Peachtree Road at Grandview Avenue
8. Roswell Road at Sardis Way
9. Roswell Road at East Andrews Drive
10. West Paces Ferry Road at East Andrews Drive
11. West Paces Ferry Road at Paces Ferry Place
12. East Paces Ferry Road at Bolling Way (Northbound)

13. East Paces Ferry Road at Bolling Way (Southbound)
14. East Paces Ferry Road at Grandview Avenue
15. Buckhead Avenue at Bolling Way
16. Buckhead Avenue at North Fulton Drive
17. Pharr Road at North Fulton Drive
18. Pharr Road at Grandview Avenue

Each of the above listed intersections was analyzed for the Existing 2006 Condition, the 2010 “No-Build” Conditions, and the 2010 “Build” Conditions. The 2008 “No-Build” Conditions represent the existing traffic volumes grown at 3.0% per year for 4 years in addition to trips from the following developments:

- DRI Number 1068: The Roxy - Proposed (Roswell Road @ W. Paces Ferry Road)
- Terminus – Under Construction (Peachtree Road @ Piedmont Road)
- Gallery – Under Consturction (Peachtree Road @ Rumson Road)

The 2010 “Build” Conditions adds the projected trips associated with the proposed Buckhead Avenues development to the 2010 “No-Build” Conditions. All intersections were analyzed for the Weekday AM, Weekday PM, and Saturday peak periods.

### 3.5 Existing Facilities

The following section provides a written description of the study area facilities, followed by **Table 4** displaying the functional classification of study-area facilities.

#### Peachtree Road

- Peachtree Road is an Urban Principal Arterial with three lanes in each direction (northeast to southwest in the vicinity of the project). Peachtree Road begins when Peachtree Street transitions into it north of Midtown and extends to the Brookhaven area where it turns into Peachtree Industrial Boulevard.

#### Roswell Road

- Roswell Road is an Urban Minor Arterial of four lanes than is oriented north-south. Roswell Road begins at the intersection of Peachtree Road and East Paces Ferry Road (adjacent to the project) and extends north of I-285 into Roswell.

#### West Paces Ferry Road

- West Paces Ferry Road is a four-lane Urban Minor Arterial that runs east to west. West Paces Ferry Road begins at Peachtree Road on the east and connects to and extends beyond I-75 on the west.

#### East Paces Ferry Road

- East Paces Ferry Road is a four-lane Urban Collector Street which runs east to west. East Paces Ferry Road begins at Peachtree Road on the west and continues to Piedmont Road on the east.

#### Pharr Road

- Pharr Road is a five-lane Urban Collector Street which runs east to west (three westbound, two eastbound) in the vicinity of the project. Pharr Road connects Peachtree Road on the west with Piedmont Road on the east.



### Buckhead Avenue

- Buckhead Avenue is the primary thoroughfare through the proposed development. It is a two-lane Urban Local Street that extends from Peachtree Road on the west to East Paces Ferry Road on the east.

### Peachtree Avenue

- Peachtree Avenue is a two-lane Urban Local Street to the south of the proposed project that runs from Peachtree Road on the west to Lookout Place on the east.

### Bolling Way

- Bolling Way is a two- to three-lane Urban Local Street that is completely contained within the project study network. The first segment extends from Peachtree Road (at Sardis Way) to East Paces Ferry Road. The second portion of the roadway begins to the west of the terminus of the first portion along East Paces Ferry Road and extends through Buckhead Avenue to Pharr Road. The southern segment between Buckhead Avenue and Pharr Road will be abandoned as part of the proposed development.

### North Fulton Drive

- North Fulton Drive is a two-lane Urban Local Street that begins in the project study network at East Paces Ferry Road and extends south of the project to Delmont Drive.

### Grandview Avenue

- Grandview Avenue is a two-lane Urban Local Street that begins at Peachtree Road within the study network and extends south to Delmont Drive.

### Mathieson Drive

- Mathieson Drive is a two-lane Urban Local Street that begins at Peachtree Road and extends north where it terminates prior to Piedmont Road.

### Sardis Way

- Sardis Way is a three-lane Urban Local Street that connects Roswell Road on the north with Peachtree Road on the south. Sardis Way also intersects Peachtree Road at Bolling Way.

### East Andrews Drive

- East Andrews Drive is a three-lane Urban Local Street that runs primarily east to west (two lanes eastbound, one lane westbound) and connects West Paces Ferry Road on the west with Roswell Road on the east.

### Paces Ferry Place

- Paces Ferry Place is two-lane Urban Local Street that runs north-south and connects West Paces Ferry Road on the south with East Andrews Drive on the north.

**Table 4**  
**Buckhead Avenues**  
**Study Area Roadways Classifications**

Roadway	Number of Lanes	GDOT Functional Classification
Peachtree Road (SR 141)	6	Urban Principal Arterial
Peachtree Road (SR 9 / US 19)	6	Urban Principal Arterial
Roswell Road (SR 9 / US 19)	4	Urban Minor Arterial
West Paces Ferry Road	4	Urban Minor Arterial
East Paces Ferry Road	4	Urban Collector Street
Pharr Road	5	Urban Collector Street
Buckhead Avenue	2	Urban Local Street
Peachtree Avenue	2	Urban Local Street
Bolling Way	2	Urban Local Street
North Fulton Drive	2	Urban Local Street
Grandview Avenue	2	Urban Local Street
Mathieson Drive	2	Urban Local Street
Sardis Way	3	Urban Local Street
East Andrews Drive	3	Urban Local Street
Paces Ferry Place	2	Urban Local Street

## 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 where available.

Mixed-use and pass-by reductions were taken according to the *ITE Trip Generation Handbook, 2003* and GRTA guidelines. Internal capture was taken within each parcel, where possible. Parcels A, B, C, D, and F had a mix of uses and therefore qualified for mixed use reductions. Because many parcels in this development are near to others, it is possible that more internal capture will result (without the use of a vehicle); however, the more conservative approach was utilized in this situation. Pass-by reductions were limited to 10% of the adjacent street traffic (along Peachtree Road) for the daily, PM Peak, and Saturday Peak periods. Due to its location along two MARTA bus routes and the increased walkability of the Buckhead Village following construction, a 5% mode reduction was also assumed. The total trips generated and analyzed in the report are listed below in **Table 5**.

**Table 5**  
**Buckhead Avenues**  
**Net Trip Generation**  
**Build-Out Year 2010**

Land Use	Daily Traffic		AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
<b>Gross Trips</b>	<b>13,010</b>	<b>13,010</b>	<b>458</b>	<b>496</b>	<b>1,219</b>	<b>1,215</b>	<b>1,540</b>	<b>1,393</b>
<i>Internal Capture Reductions</i>	-2,355	-2,355	-	-	-244	-244	-226	-226
<i>Mode Reductions</i>	-533	-533	-23	-25	-49	-49	-66	-58
<i>Pass-by Reductions</i>	-1,800	-1,800	-	-	-180	-180	-175	-175
<b>New Trips</b>	<b>8,322</b>	<b>8,322</b>	<b>435</b>	<b>471</b>	<b>746</b>	<b>742</b>	<b>1,073</b>	<b>934</b>

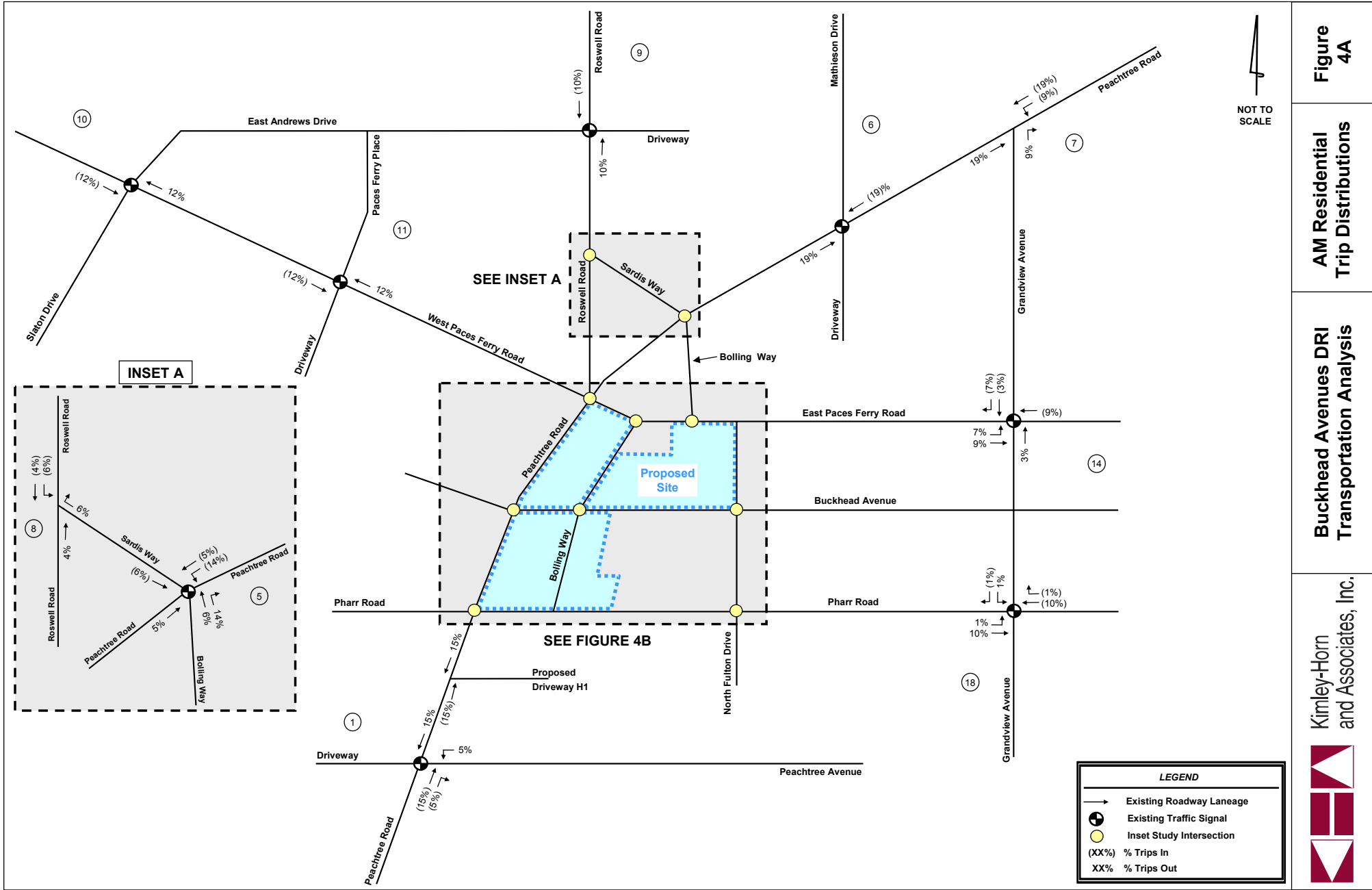
## 5.0 TRIP DISTRIBUTION AND ASSIGNMENT

New trips were distributed onto the roadway network using percentages agreed to during the methodology meeting. Because the development consists of multiple parcels surrounded by public roadways, it was necessary to distribute trips by use to each parcel. Residential trip distributions were calculated as a weighted average of the residential/condo distribution and the hotel distribution based on the total trips produced by each use by time period. Likewise, the Non-Residential trip distributions were calculated as a weighted average of the office and retail distributions based on the total trips produced by each use by time period. Given the structure of the aggregate calculations, residential and non-residential distribution figures were created for the AM peak, PM peak, and Saturday midday periods. **Figures 4A and 4B, 5A and 5B, 6A and 6B** display the residential distributions for the AM peak, PM peak, and Saturday midday periods, respectively. (All figures labeled with “B” are insets of the entire project study network that focus on the project site and adjacent roadways). **Figures 7A and 7B, 8A and 8B, 9A and 9B** display the non-residential distributions for the AM peak, PM peak, and Saturday midday periods, respectively. These percentages were applied to the new trips generated by the development (see Table 5, above), and the volumes were assigned to the roadway network. The expected peak hour turning movements generated by the proposed development are shown in **Figures 10A and 10B**.

## 6.0 TRAFFIC ANALYSIS

### 6.1 Existing 2006 Traffic

The existing 2006 traffic volumes are shown in **Figure 11A and 11B**. These volumes were input in Synchro 6.0 and an Existing Conditions analysis was performed for the weekday AM and PM peak hours as well as the Saturday midday peak hour. The results are displayed below in **Table 6**. Levels-of-Service (LOS) and delay in seconds are reported for the overall intersection when signalized, while levels-of-service are reported for the minor street approach only for unsignalized intersections.



**Figure 4A**

**AM Residential Trip Distributions**

**Buckhead Avenues DRI Transportation Analysis**



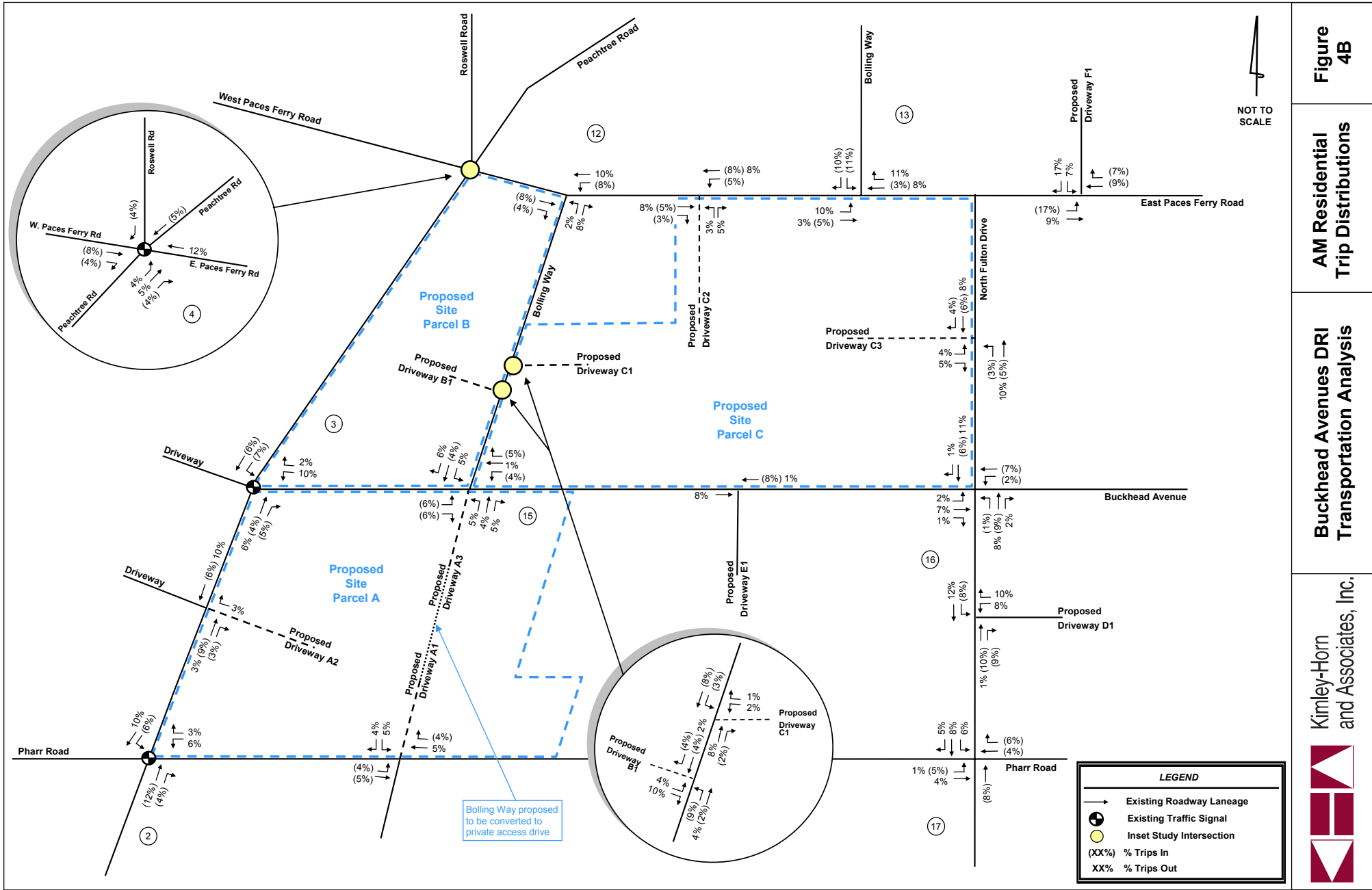


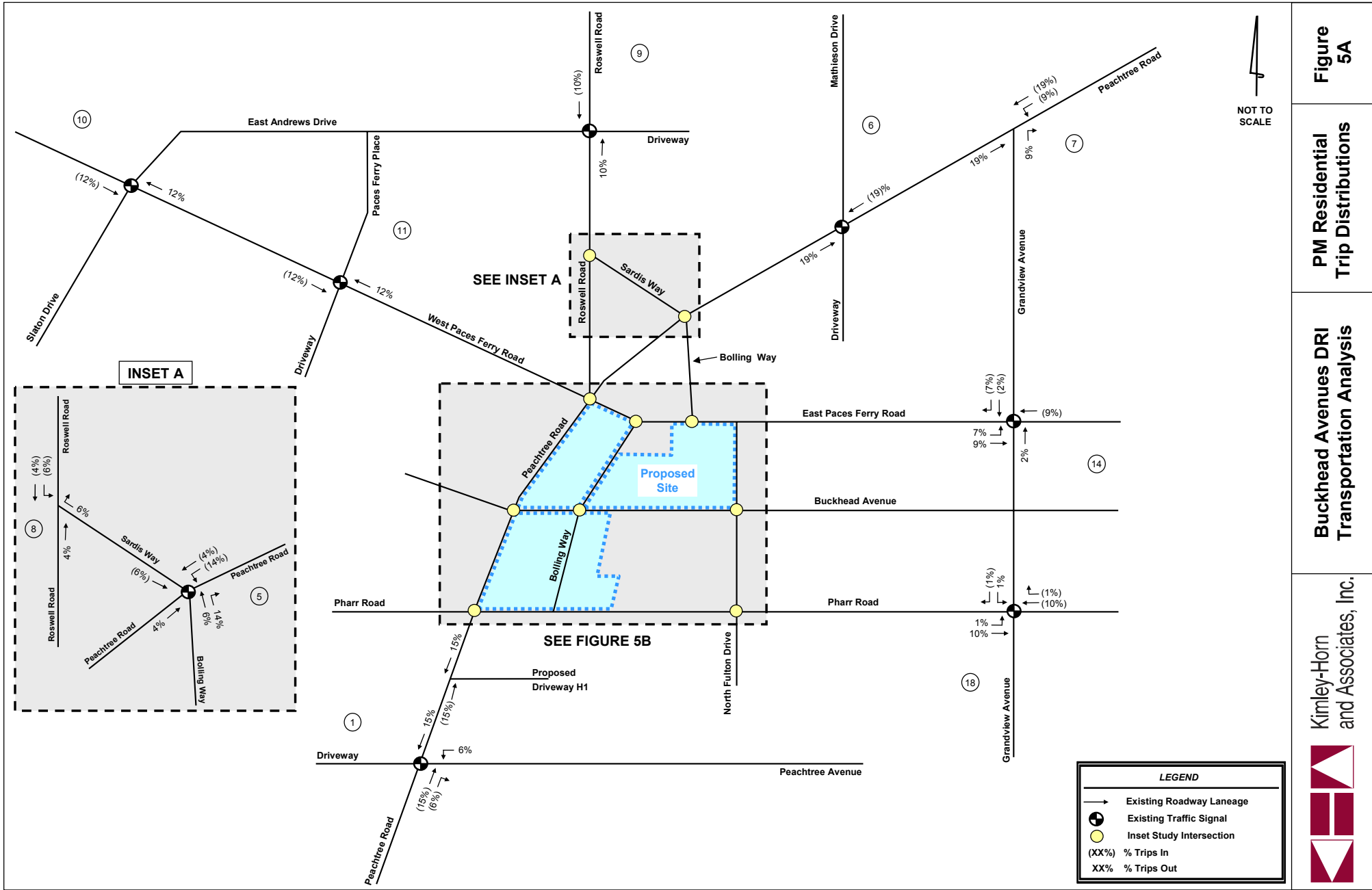
Figure 4B

AM Residential Trip Distributions

Buckhead Avenues DRI Transportation Analysis

Kimley-Horn and Associates, Inc.





**Figure 5A**

**PM Residential Trip Distributions**

**Buckhead Avenues DRI Transportation Analysis**



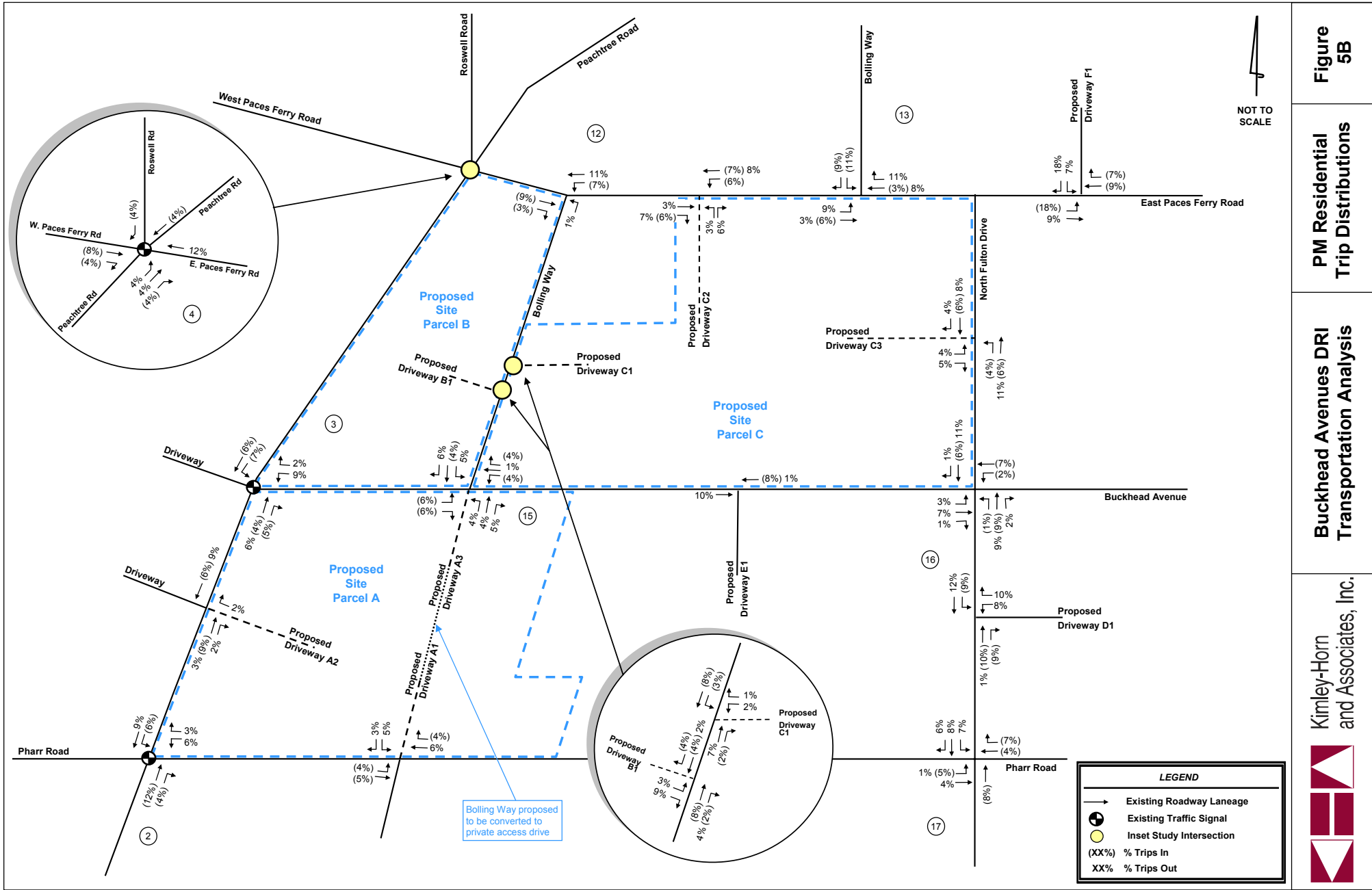


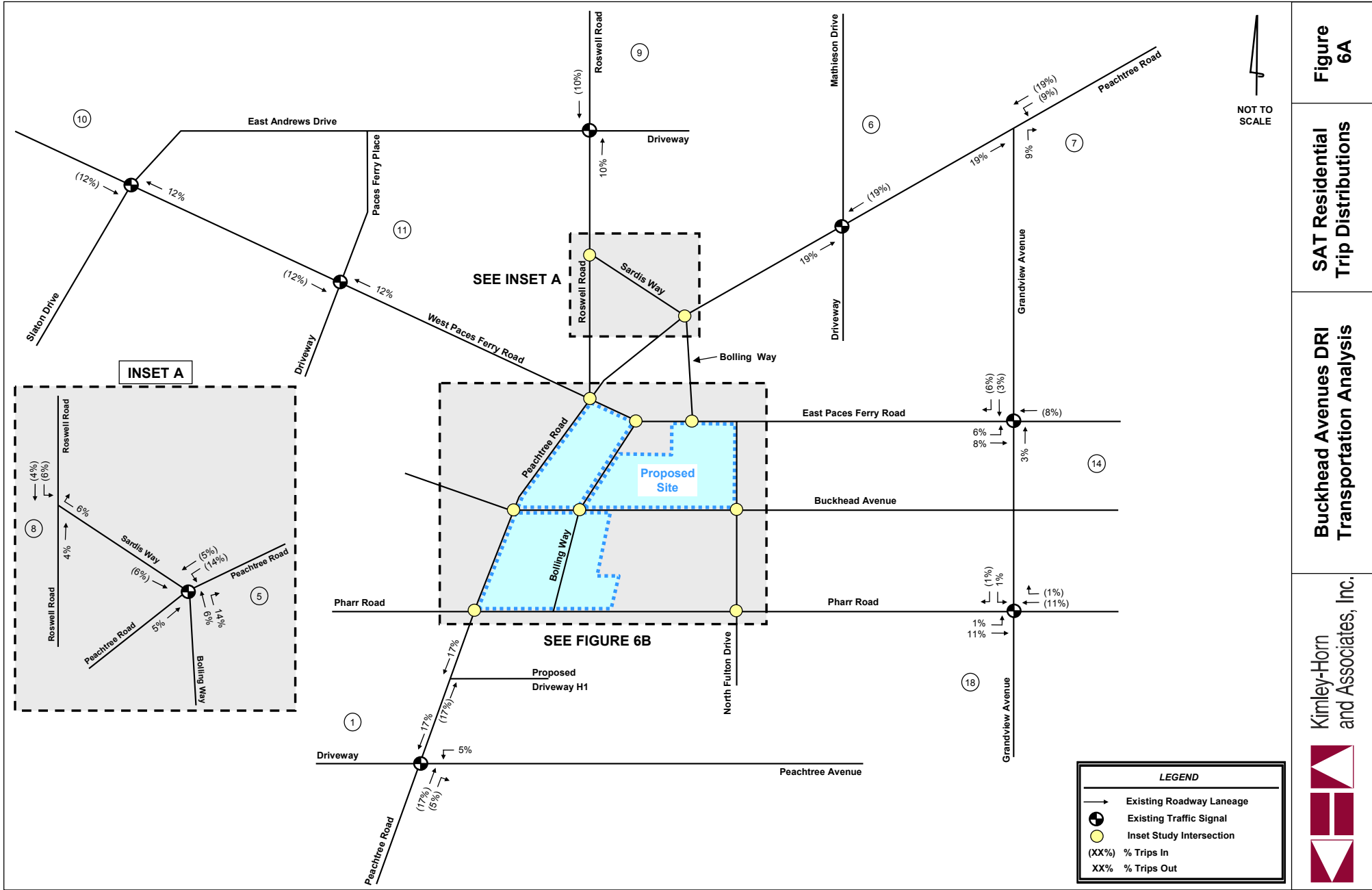
Figure 5B

PM Residential Trip Distributions

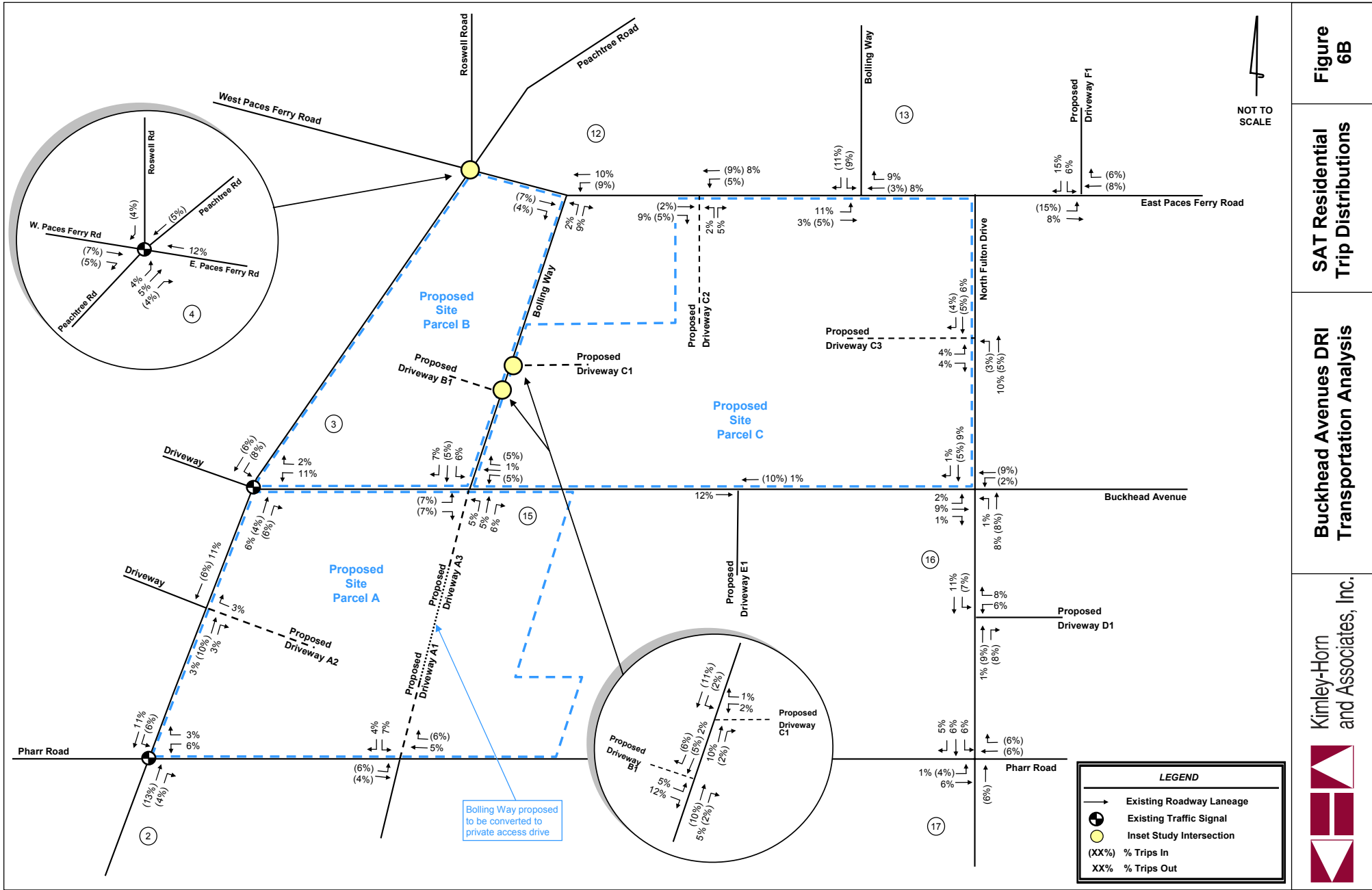
Buckhead Avenues DRI Transportation Analysis

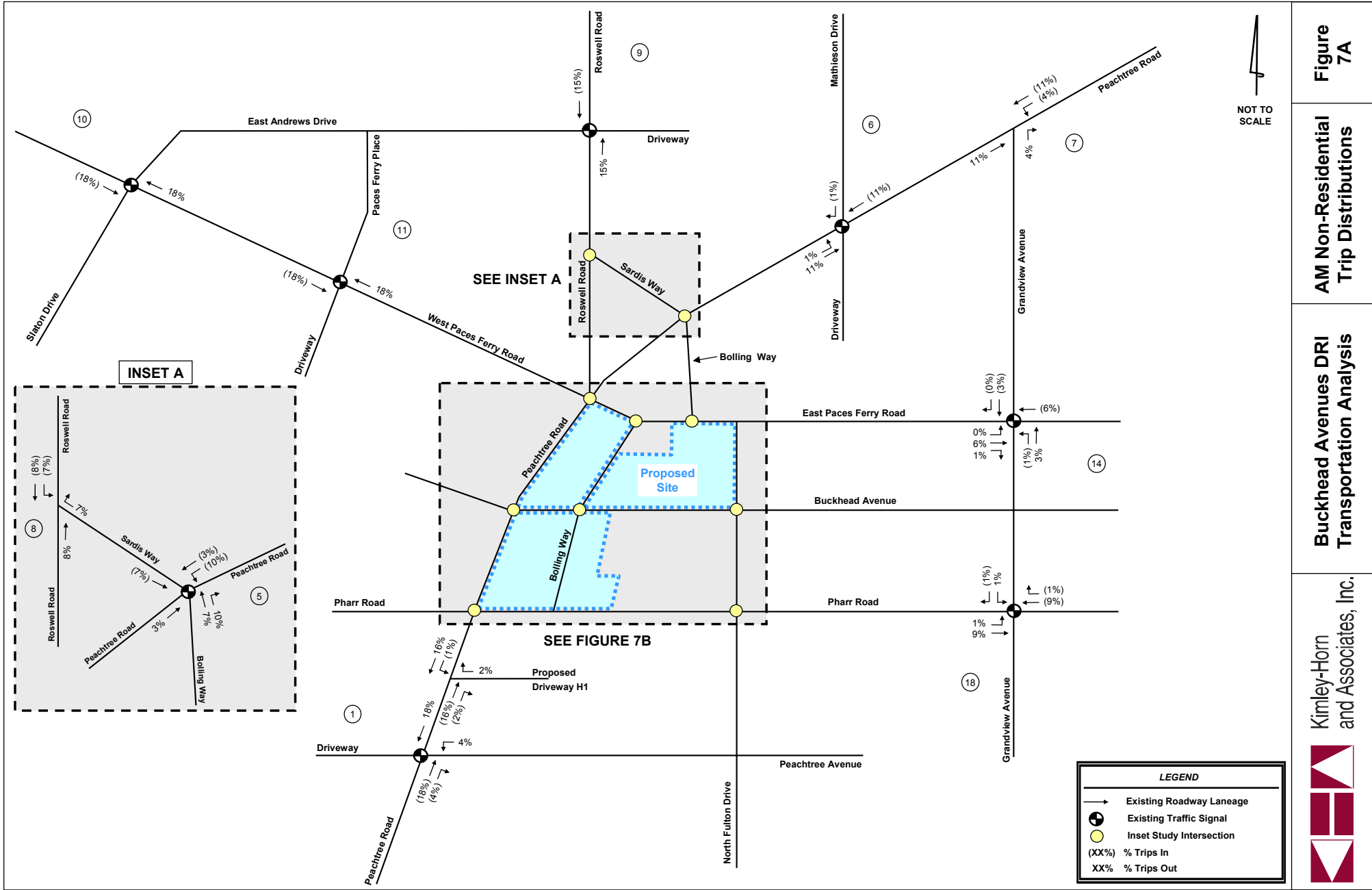
Kimley-Horn and Associates, Inc.











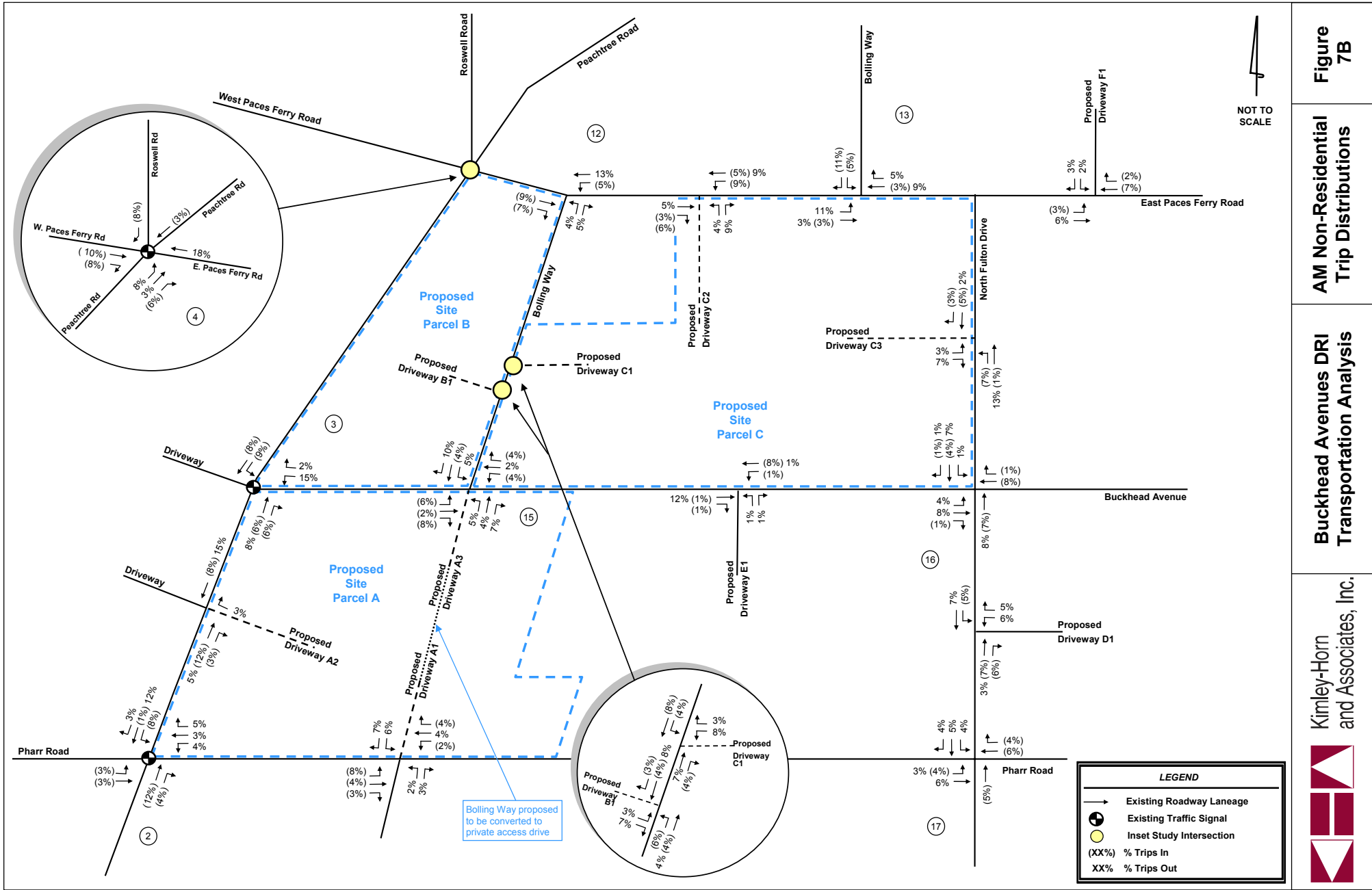
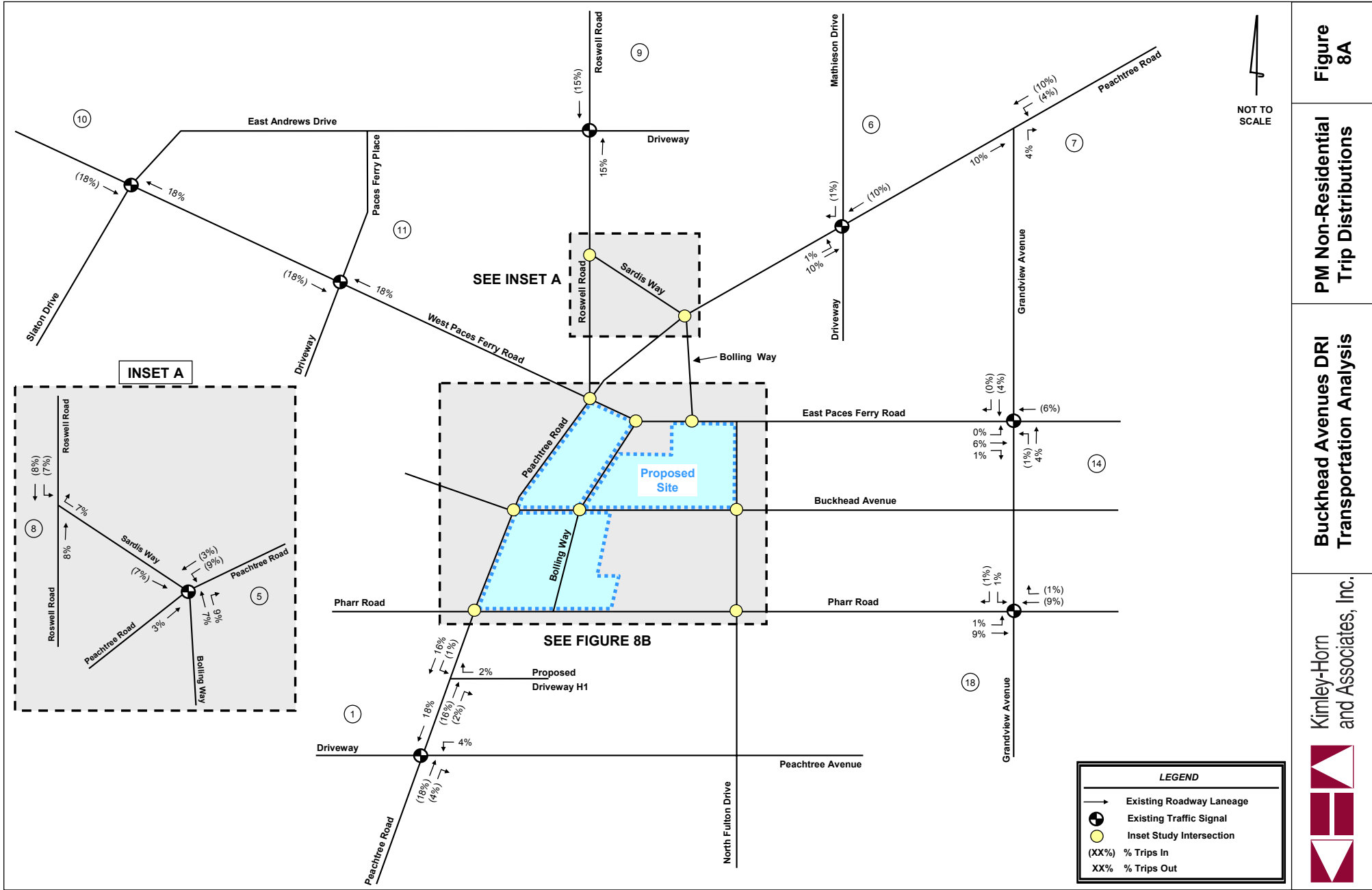


Figure 7B

AM Non-Residential Trip Distributions

Buckhead Avenues DRI Transportation Analysis



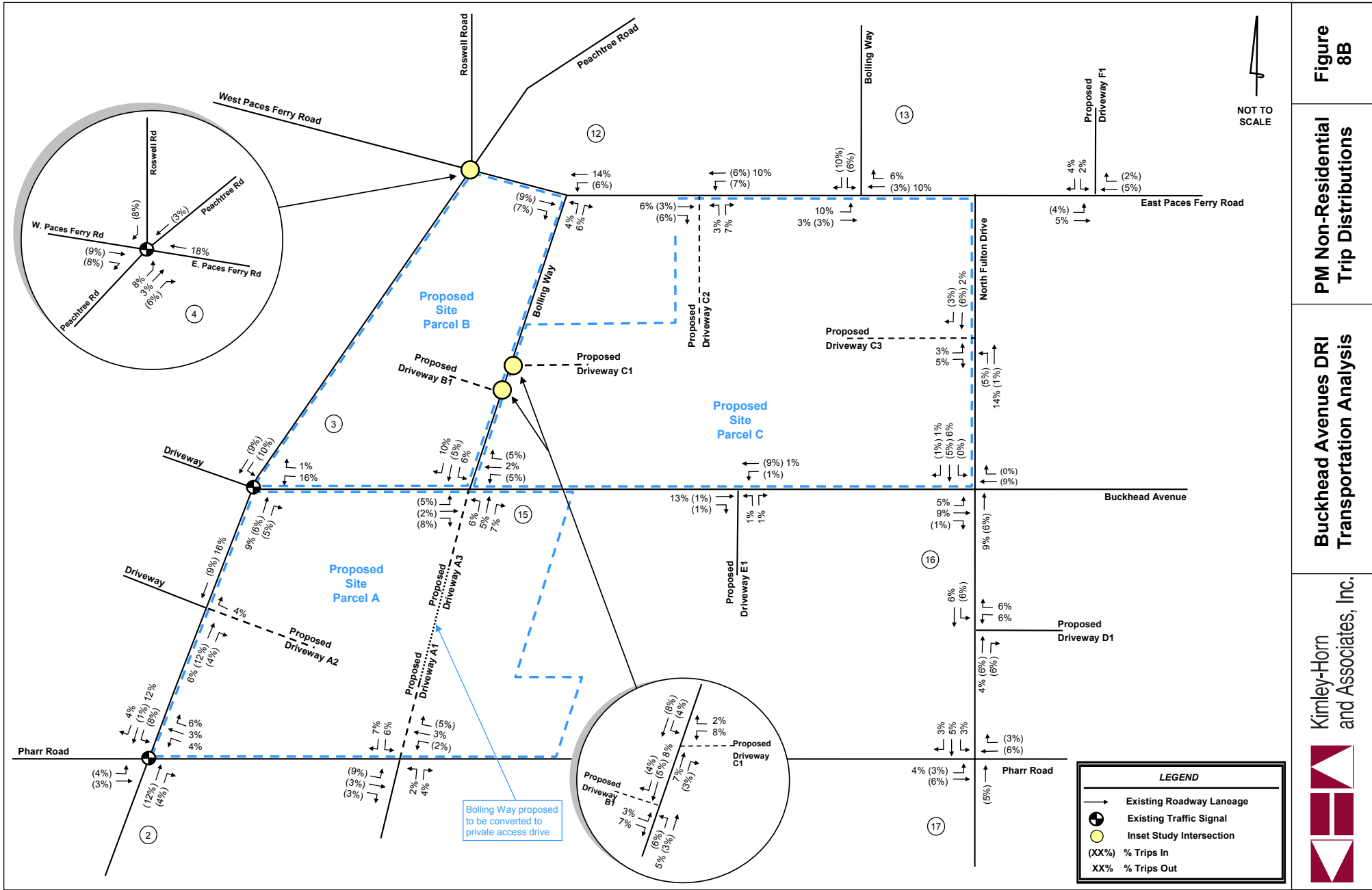


**Figure 8A**

**PM Non-Residential Trip Distributions**

**Buckhead Avenues DRI Transportation Analysis**





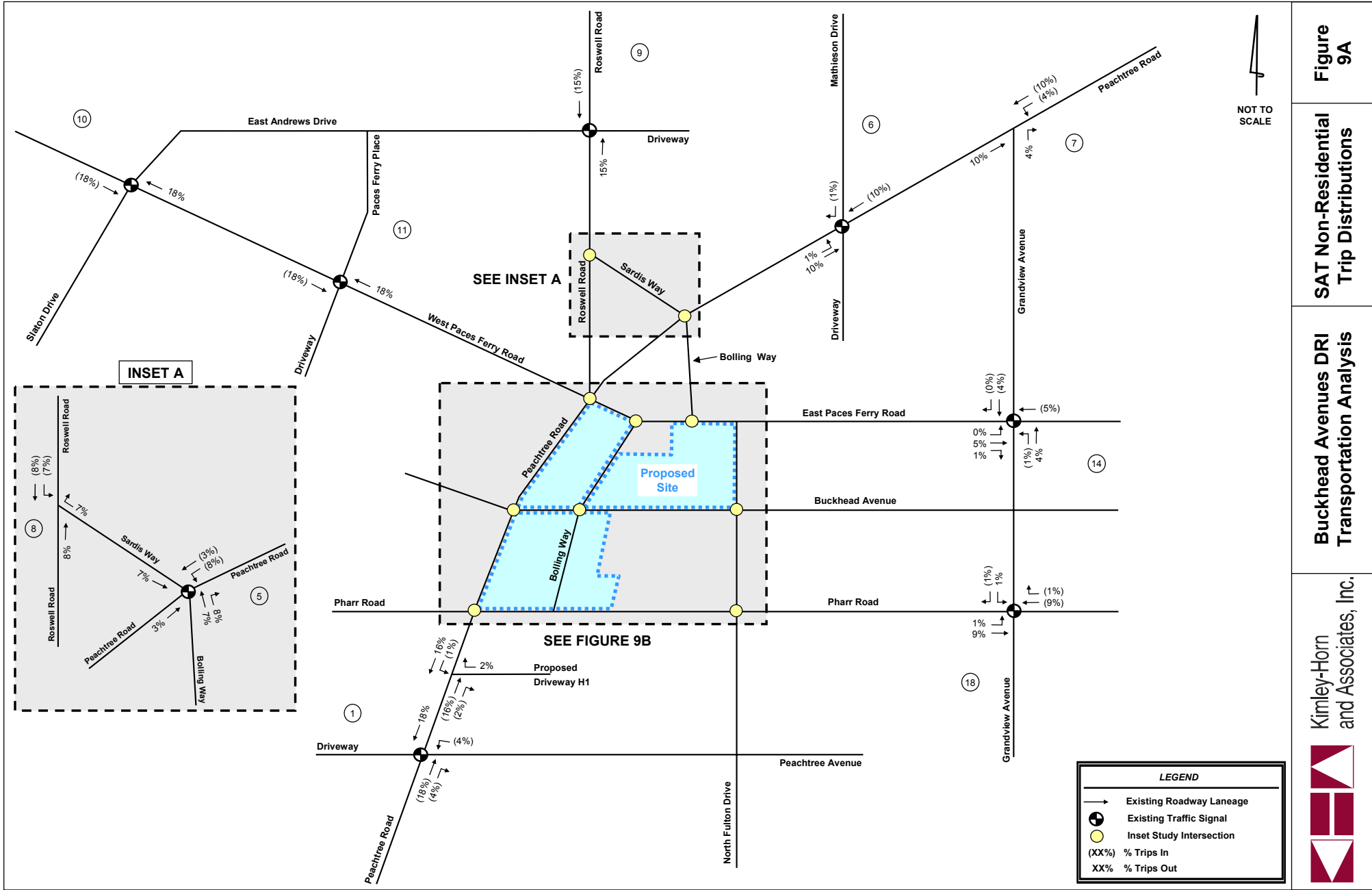
**Figure 8B**

**PM Non-Residential Trip Distributions**

**Buckhead Avenues DRI Transportation Analysis**

**Kimley-Horn and Associates, Inc.**





**Figure 9A**

**SAT Non-Residential Trip Distributions**

**Buckhead Avenues DRI Transportation Analysis**

**Kimley-Horn and Associates, Inc.**



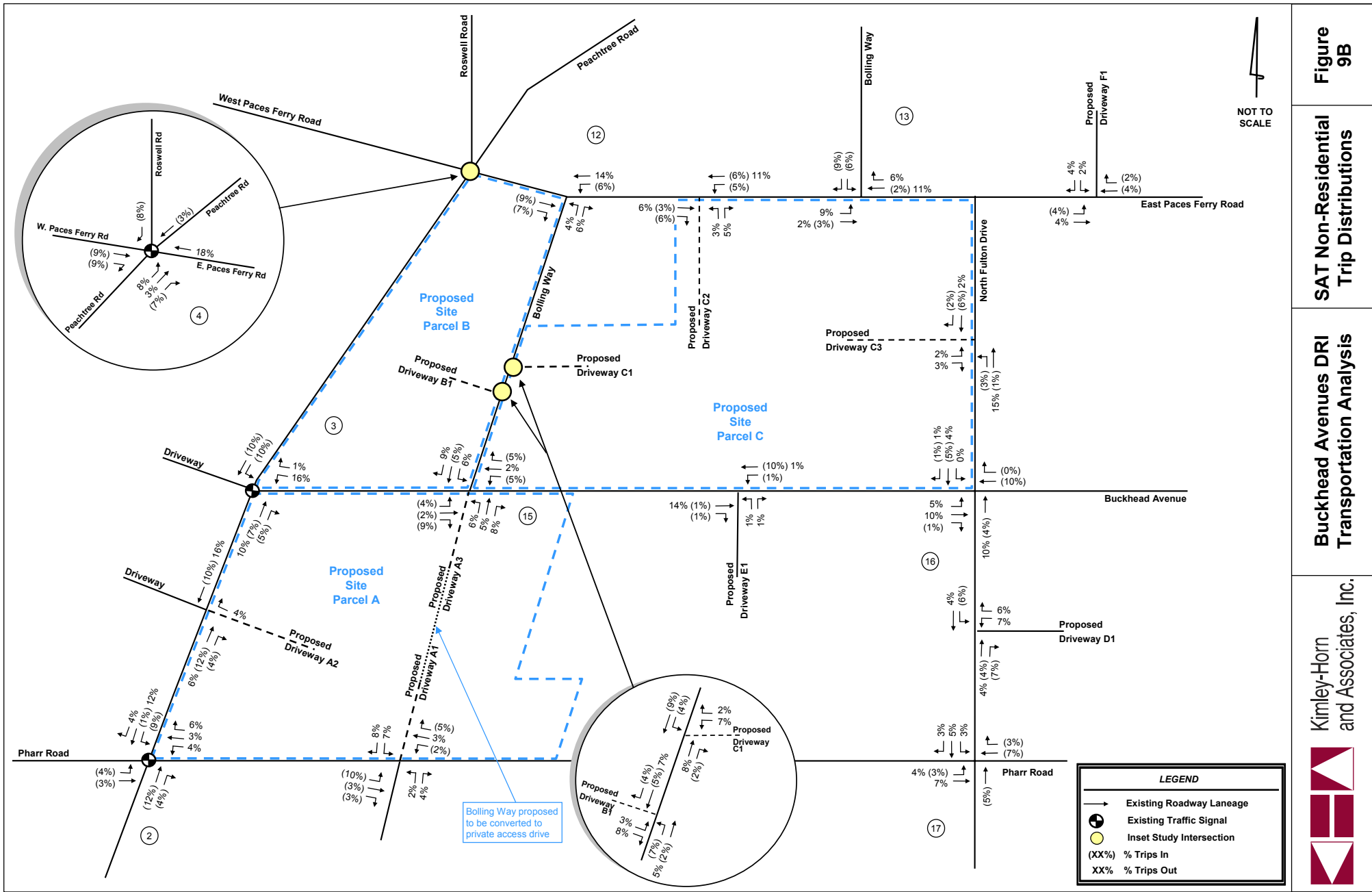


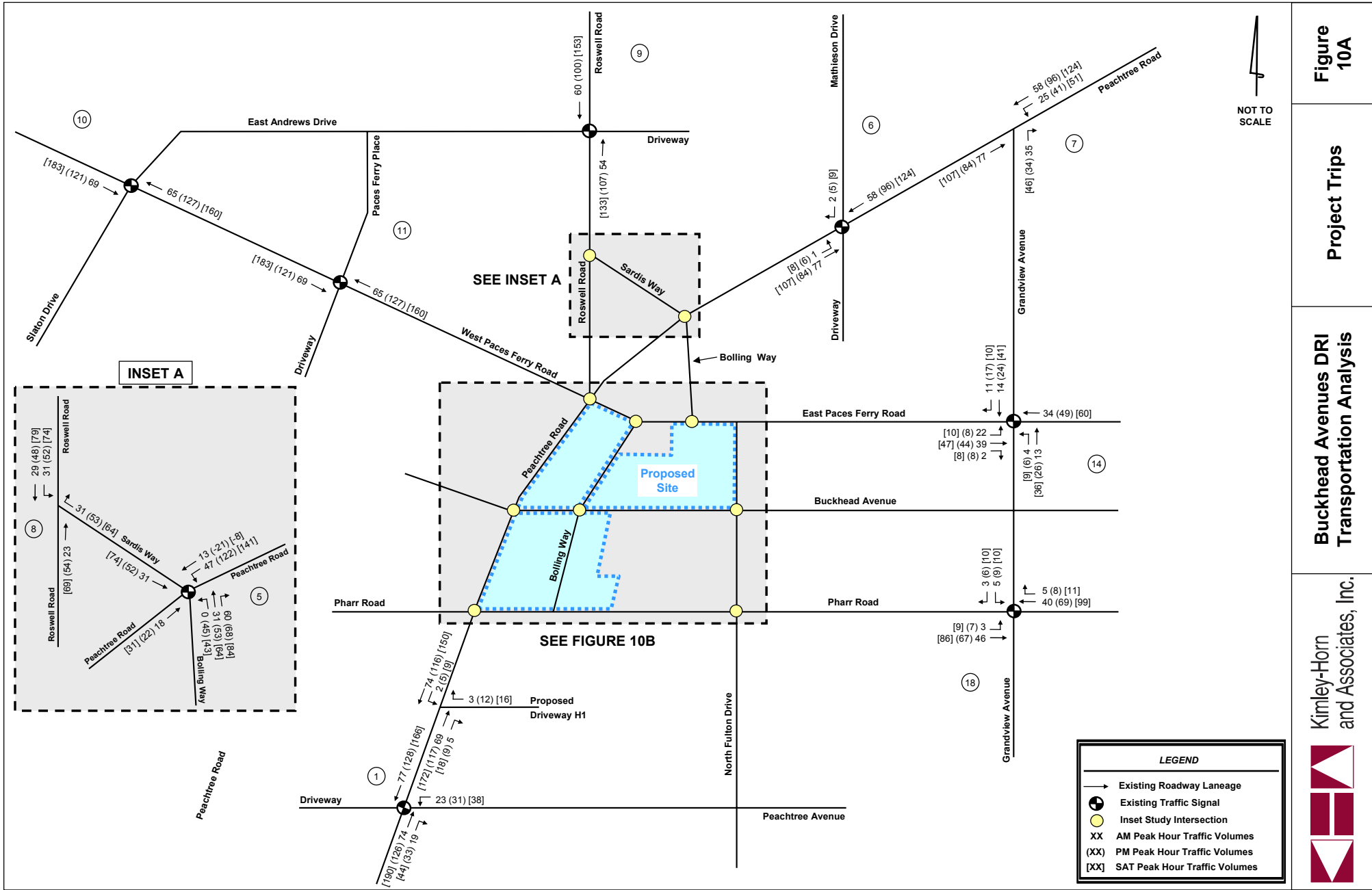
Figure 9B

SAT Non-Residential Trip Distributions

Buckhead Avenues DRI Transportation Analysis

Kimley-Horn and Associates, Inc.







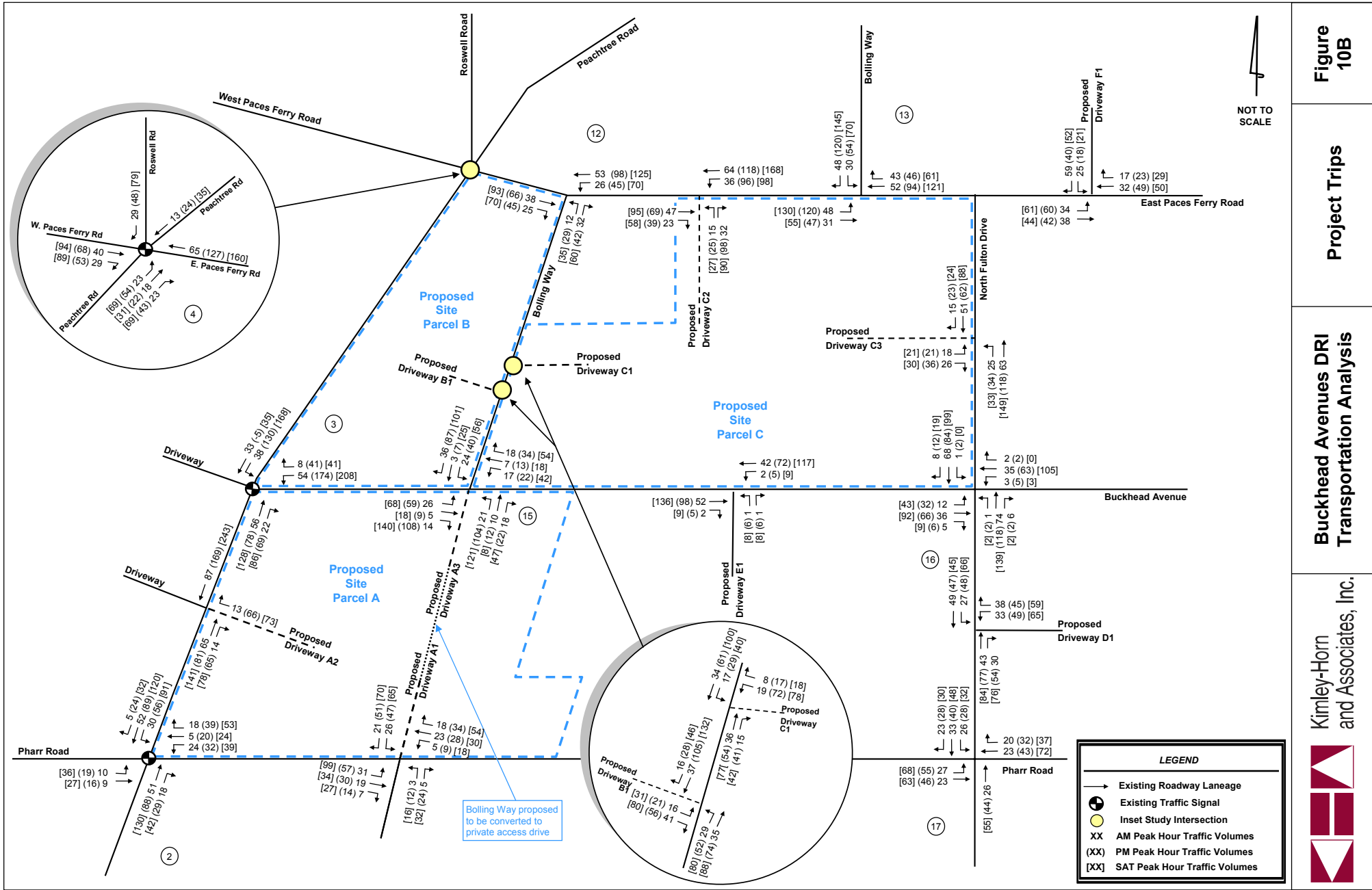


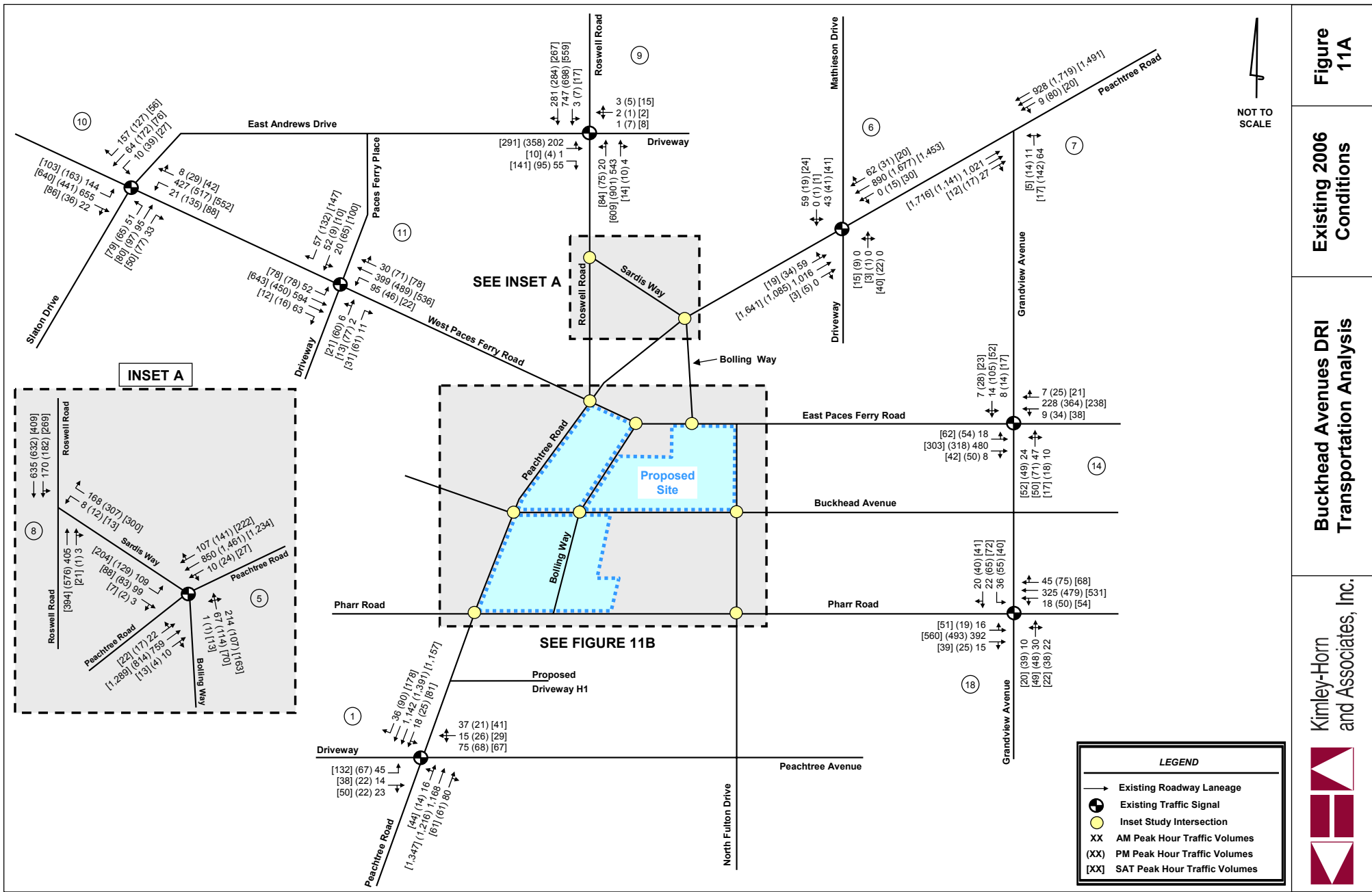
Figure 10B

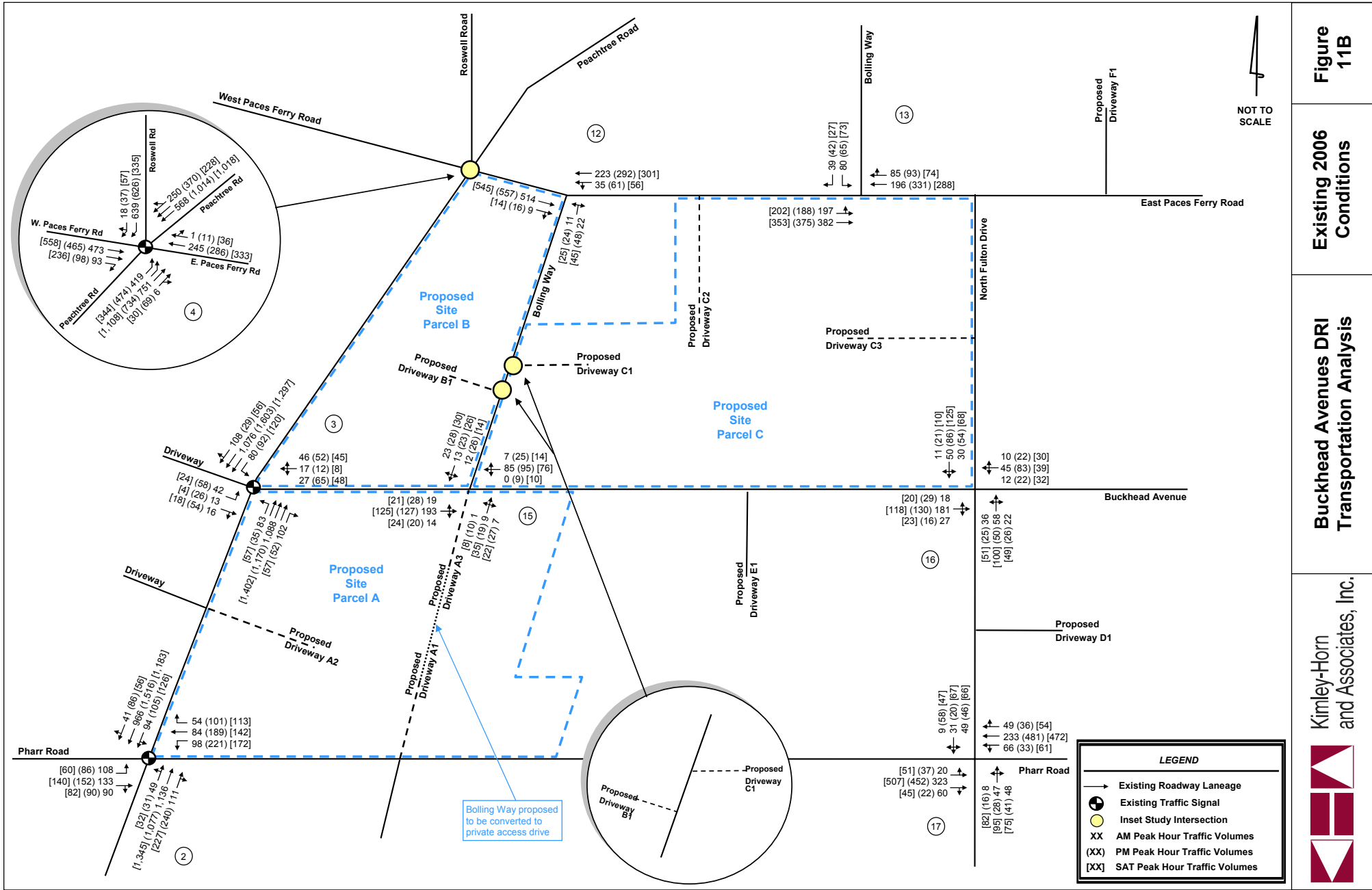
Project Trips

Buckhead Avenues DRI Transportation Analysis

Kimley-Horn and Associates, Inc.







**Figure 11B**

**Existing 2006 Conditions**

**Buckhead Avenues DRI Transportation Analysis**

**Kimley-Horn and Associates, Inc.**



**Table 6**  
**Buckhead Avenues**  
**Existing 2006 Intersection Levels-of-Service**  
**(delay in seconds)**

Intersection		Control	AM Peak Hour	PM Peak Hour	SAT Peak Hour
1	Peachtree Road at Peachtree Avenue	Signal	A (9.7)	A (7.4)	B (11.7)
2	Peachtree Road at Pharr Road	Signal	B (17.5)	C (33.5)	C (23.7)
3	Peachtree Road at Buckhead Avenue	Signal	A (6.5)	A (8.9)	A (6.0)
4	Peachtree Road at West Paces Ferry/Roswell Road	Signal	C (33.5)	C (30.8)	C (31.3)
5	Peachtree Road at Bolling Way/Sardis Way	Signal	B (17.8)	C (24.8)	B (13.4)
6	Peachtree Road at Mathieson Drive	Signal	A (9.9)	B (12.0)	B (12.3)
7	Peachtree Road at Grandview Avenue	NB STOP	B	C	E
8	Roswell Road at Sardis Way	WB STOP	B	C	B
9	Roswell Road at East Andrews Drive	Signal	B (12.6)	C (23.2)	B (17.9)
10	West Paces Ferry Road at East Andrews Drive	Signal	C (28.9)	C (26.7)	C (25.2)
11	West Paces Ferry Road at Paces Ferry Place	Signal	A (9.2)	B (18.9)	B (15.5)
12	East Paces Ferry Road at Bolling Way (Northbound)	NB STOP	B	B	B
13	East Paces Ferry Road at Bolling Way (Southbound)	SB STOP	C	C	D
14	East Paces Ferry Road at Grandview Avenue	Signal	A (6.2)	A (9.7)	A (8.4)
15	Buckhead Avenue at Bolling Way	NB STOP	B	B	B
		SB STOP	B	B	B
16	Buckhead Avenue at North Fulton Drive	NB STOP	B	B	C
		SB STOP	B	B	C
17	Pharr Road at North Fulton Drive	NB STOP	C	D	F
		SB STOP	D	E	F
18	Pharr Road at Grandview Avenue	Signal	B (17.1)	B (17.3)	B (18.2)

As can be seen from the data displayed in the table above, the Highway Capacity Manual (HCM) method of evaluating LOS indicates that only two of the intersections currently operate below the standard of LOS D. The study area surrounding the proposed development is regarded as being heavily congested, specifically along Peachtree Road. Because HCM analysis does not take in to account the queues from other upstream intersections (commonly referred to as 'spillback'), Synchro LOS reports (which do generally account for spillback) were also reviewed to further quantify the existing conditions. These results also indicated more favorable conditions than expected for the existing conditions.

Field observations were conducted during different peak periods to verify the existing conditions analysis. It was observed that the traffic and travel patterns in this area are highly variable from day to day. During one PM peak period observations, queues extended from Piedmont Avenue (outside the study network) south to Peachtree Avenue. Another PM peak observation revealed no delay, and near free-flow conditions on many of the study facilities.

Intersection queue reports from Synchro were also reviewed to identify areas in need of improvement. The results for four intersections are displayed below in **Table 7**. These results indicate areas of sub-standard performance along Peachtree Road at Pharr Road, as well as Peachtree Road at West Paces Ferry Road/Roswell Road.

Also included in the queue length table below are two intersections within the Buckhead Village. These intersections were included to quantify another observation made during peak hour field visits – the available capacity within the Village. Even during heavily congested times along Peachtree Road, vehicles were able to efficiently travel through the Village along Pharr Road, Peachtree Avenue, North Fulton Drive, and Buckhead Avenue, and East Paces Ferry Road (east of North Fulton Drive). These facilities offer a good north-south alternative to Peachtree Road during congested time periods, as indicated by the comparatively shorter north and south queue lengths displayed in the table below.

Table 7 Buckhead Avenues Existing 2006 Intersection Queues (for informational purposes)					
Intersection		Queue Length in Feet			
		NB	SB	EB	WB
2	Peachtree Road at Pharr Road				
	AM Peak	172’	258’	260’	112’
	PM Peak	406’	808’	293’	215’
	SAT Peak	441’	481’	241’	144’
4	Peachtree Road at West Paces Ferry/Roswell Road				
	AM Peak	234’	332’/357’	287’	149’
	PM Peak	262’	749’/357’	284’	180’
	SAT Peak	226’	493’/232’	288’	226’
16	Buckhead Avenue at North Fulton Drive				
	AM Peak	25’	18’	-	-
	PM Peak	19’	37’	-	-
	SAT Peak	47’	66’	-	-
18	Pharr Road at Grandview Avenue				
	AM Peak	24’	18’	123’	71’
	PM Peak	75’	47’	156’	107’
	SAT Peak	70’	64’	201’	118’

## 6.2 Projected 2010 "No-Build" Traffic

The existing 2006 traffic volumes were grown at 3.0% per year for 4 years along all roadway links within the study network. Additionally, volumes obtained from traffic impact studies on other area developments were included, consistent with the GRTA Letter of Understanding. These developments included:

- The Roxy (Roswell Road at Irby Avenue) – DRI # 1068
- Terminus (Piedmont Avenue at Peachtree Road)
- Gallery (Peachtree Road at Rumson Road)

These volumes were input in Synchro 6.0, and analyses of the Projected 2010 "No-Build" conditions were performed. The results are displayed below in **Table 8**, and corresponding volumes are shown in **Figure 12A and 12B**. Levels of service and delay in seconds are reported for the overall intersection when signalized, while levels of service are reported for the minor street approach only for unsignalized intersections.

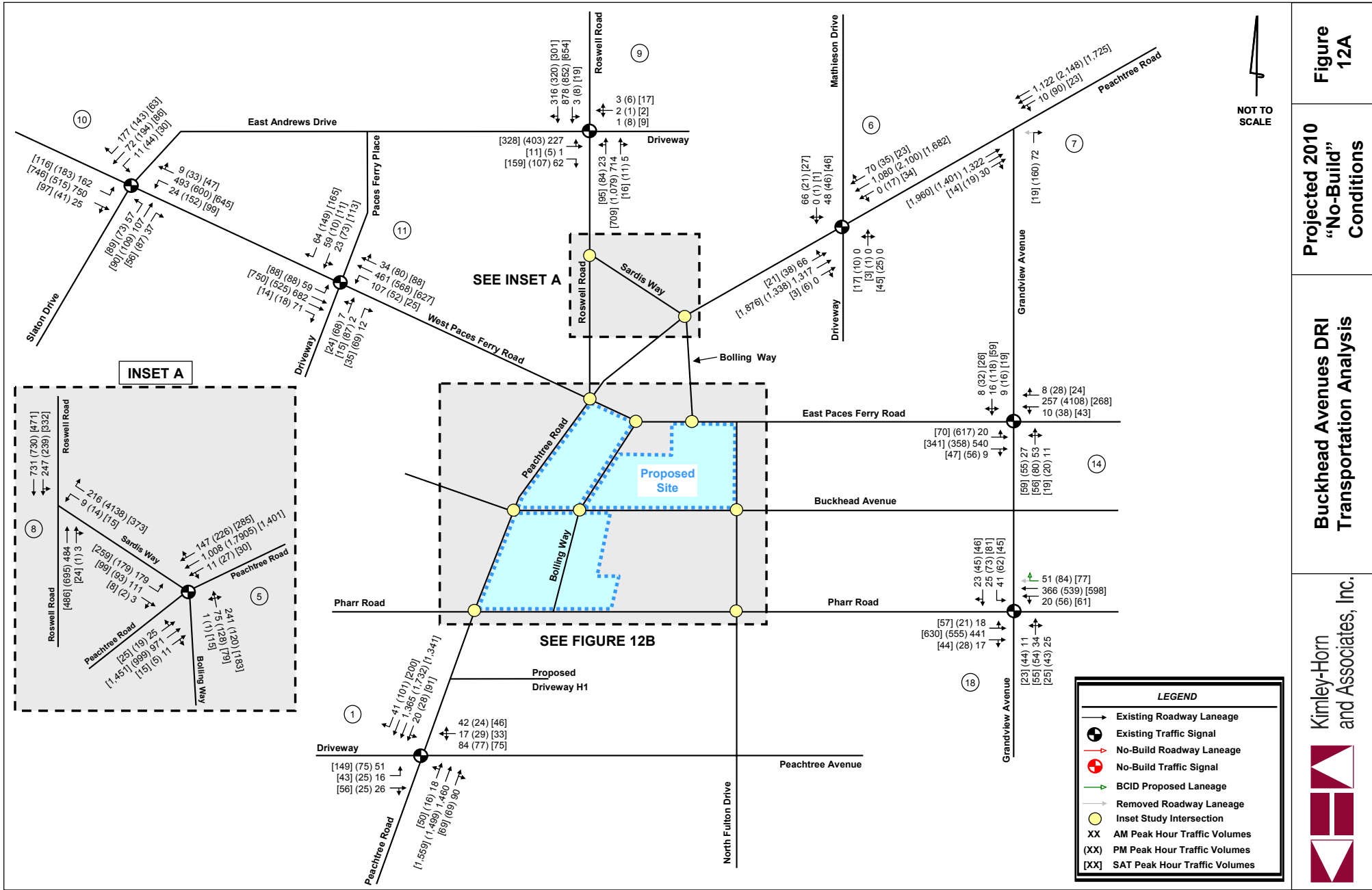


Figure 12A

Projected 2010  
“No-Build”  
Conditions

Buckhead Avenues DRI  
Transportation Analysis

Kimley-Horn  
and Associates, Inc.



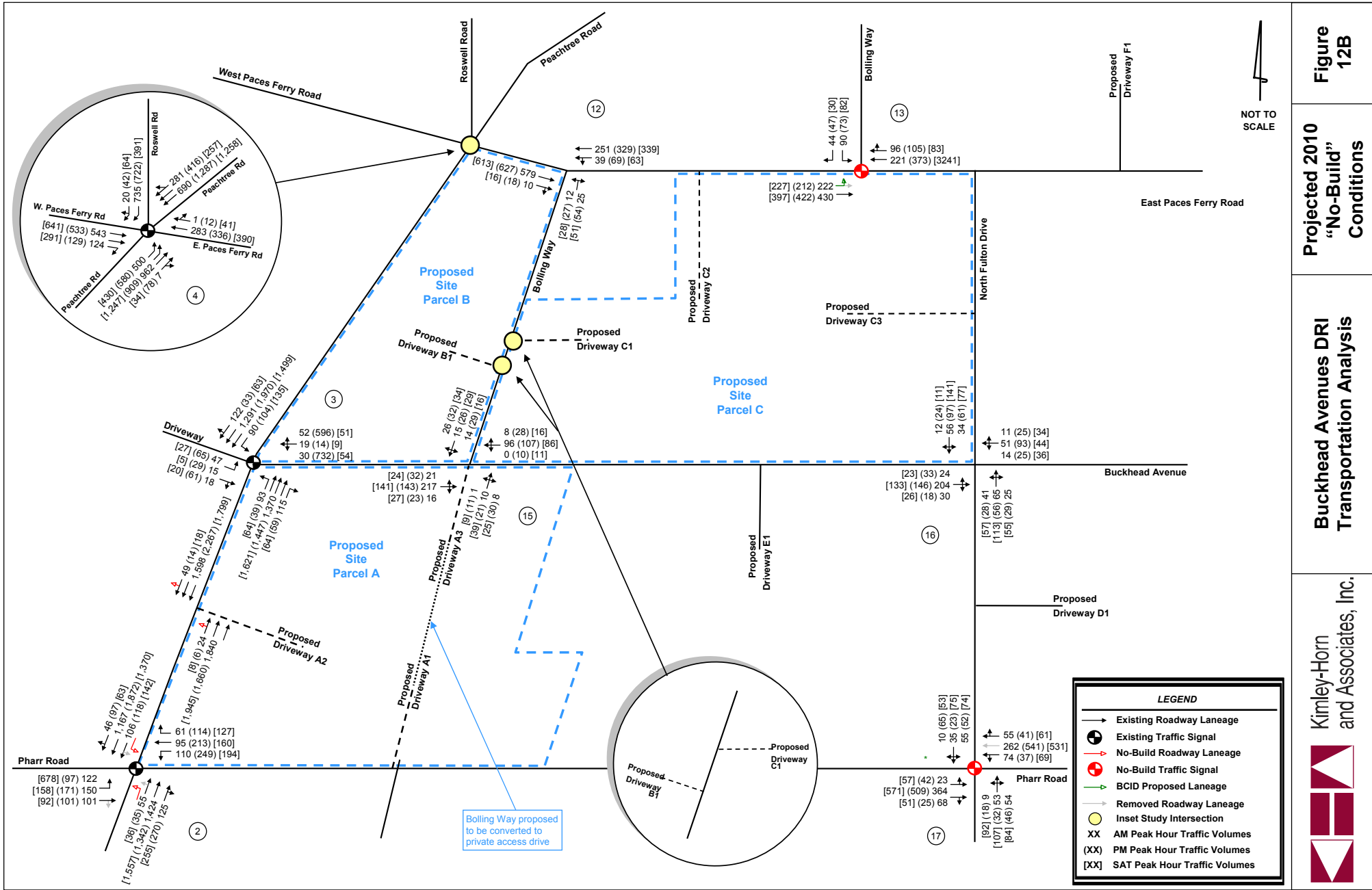


Figure 12B

Projected 2010  
"No-Build"  
Conditions

Buckhead Avenues DRI  
Transportation Analysis



**Table 8**  
**Buckhead Avenues**  
**Projected 2010 No-Build\* Intersection Levels-of-Service**  
**(delay in seconds)**

Intersection		Control	AM Peak Hour	PM Peak Hour	SAT Peak Hour
1	Peachtree Road at Peachtree Avenue	Signal	B (10.3)	A (7.5)	B (13.1)
2	Peachtree Road at Pharr Road	Signal	C (20.3)	F (103.8)	D (39.7)
3	Peachtree Road at Buckhead Avenue	Signal	A (7.5)	B (11.4)	A (7.1)
4	Peachtree Road at West Paces Ferry/Roswell Road	Signal	D (35.5)	F (113.1)	D (35.4)
5	Peachtree Road at Bolling Way/Sardis Way	Signal	D (44.6)	C (29.2)	B (18.6)
6	Peachtree Road at Mathieson Drive	Signal	B (10.5)	B (14.1)	B (14.8)
7	Peachtree Road at Grandview Avenue	NB STOP	C	E	F
8	Roswell Road at Sardis Way	WB STOP	B	D	C
9	Roswell Road at East Andrews Drive	Signal	B (12.7)	D (36.9)	C (20.5)
10	West Paces Ferry Road at East Andrews Drive	Signal	D (36.7)	D (34.2)	D (34.8)
11	West Paces Ferry Road at Paces Ferry Place	Signal	A (9.2)	C (20.8)	B (15.8)
12	East Paces Ferry Road at Bolling Way (Northbound)	NB STOP	B	B	C
13	East Paces Ferry Road at Bolling Way (Southbound)	SB STOP	F	F	F
14	East Paces Ferry Road at Grandview Avenue	Signal	B (7.3)	B (11.6)	A (9.2)
15	Buckhead Avenue at Bolling Way	NB STOP	B	B	B
		SB STOP	B	B	B
16	Buckhead Avenue at North Fulton Drive	NB STOP	B	B	C
		SB STOP	B	C	C
17	Pharr Road at North Fulton Drive	NB STOP	C	E	F
		SB STOP	E	F	F
18	Pharr Road at Grandview Avenue	Signal	B (17.6)	B (18.6)	B (19.9)

\* Includes lane reduction per BCID Village Streetscape Project plans

The results of the No-Build Conditions analysis indicate that five intersections are projected to operate below the standard of LOS D.

Additionally, a queue analysis was performed for the No-Build Conditions analysis, and four of the intersections are displayed in **Table 9** below. Consistent with the results of the Existing Conditions analysis, significant peak hour queues are projected along Peachtree Road, while queues within the Village are projected to manageable.

Table 9 Buckhead Avenues Projected 2010 No-Build Intersection Queues (for informational purposes)					
Intersection		Queue Length in Feet			
		NB	SB	EB	WB
2	Peachtree Road at Pharr Road				
	AM Peak	589'	325'	284'	121'
	PM Peak	298'	1090'	333'	246'
	SAT Peak	683'	609'	283'	163'
4	Peachtree Road at West Paces Ferry/Roswell Road				
	AM Peak	275'	419'/456'	319'	163'
	PM Peak	307'	959'/459'	314'	200'
	SAT Peak	256'	744'/260'	323'	190'
16	Buckhead Avenue at North Fulton Drive				
	AM Peak	32'	23'	-	-
	PM Peak	25'	50'	-	-
	SAT Peak	66'	98'	-	-
18	Pharr Road at Grandview Avenue				
	AM Peak	42'	27'	138'	115'
	PM Peak	100'	65'	176'	177'
	SAT Peak	87'	81'	233'	206'

Several improvements were identified to mitigate the delays and queues projected for the No-Build Conditions. These improvements are listed and discussed, by intersection, below:

#### Peachtree Road @ Pharr Road (Intersection #2)

The lengthy queues that currently exist and that are projected along Peachtree Road at Pharr Road can be largely attributed to the capacity ‘lost’ by north and southbound left-turn vehicles in the inside lanes along Peachtree Road – both shared through/left-turn lanes. During peak times, left-turn vehicles queue in these lanes due to significant through volumes in the opposing direction. The result is essentially a de facto left-turn lane, reducing through capacity along Peachtree Road. To mitigate this, we recommend the following:

- Provide an exclusive northbound left-turn lane with protected + permissive phasing.
- Provide an exclusive southbound left-turn lane with protected + permissive phasing.

#### Peachtree Road @ West Paces Ferry Road/Roswell Road (Intersection #4)

Significant queues and delays at this intersection can be expected due to the convergence of two large-volume facilities (Peachtree Road and Roswell Road) to form a five-legged intersection. Turning movements have been prohibited at this intersection, leaving few options for improvements. However, a review of the signal timings for this intersection reveals long all red times (8.5 seconds) for the southbound Peachtree Road and Roswell Road approaches. These long all red times are a result of the length of time required to clear the intersection due to the spacing between the northbound and southbound stop bars. This signal could operate more efficiently with reduced stop bar separation and shorter all red times. To achieve this, we recommend the following:

- Relocate the mast-arm supporting the southbound signal heads for Peachtree Road.

#### Peachtree Road @ Grandview Avenue (Intersection #7)

Delay at this intersection is due to the lack of gaps in traffic along Peachtree Road to allow for northbound left-turn vehicles along Grandview Avenue to enter mainline traffic. While an exclusive left-turn lane is not currently present, the existing roadway width is adequate enough to allow some right-turn vehicles to maneuver around the left-turn queues. Signalization at this intersection is not recommended due to its proximity to the signalized intersection of Peachtree Road at Mathieson Drive (located less than 200’ to the south). Long-term recommendations included examining the potential to prohibit access from the residential neighborhood to the north to Mathieson Drive, and relocation of the existing signal from Mathieson Drive to Grandview Drive. Short-term recommendations for mitigation include the following:

- Prohibit the northbound left-turn maneuver along Grandview Drive at Peachtree Road.

#### East Paces Ferry Road @ Bolling Way (Southbound) (Intersection #13)

Heavy east and westbound volumes along East Paces Ferry Road cause significant delays for southbound left-turning vehicles along Bolling Way. Separate right-turn and left-turn lanes currently exist, and the southbound queue is projected to be less than 100’ during the PM peak period (this roadway link is approximately 300’). In order to improve the southbound LOS, signalization would be necessary; however, southbound left-turn volumes may not be high enough to meet warrants. Eastbound left-turn volumes (212 PM peak hour vehicles) along East Paces Ferry Road opposing westbound through volumes (373 PM peak hour vehicles) may justify warrants. We recommend:

- Install a traffic signal, if warranted, and coordinate with the Peachtree Road @ West Paces Ferry Road/Roswell Road traffic signal.

### Pharr Road @ North Fulton Drive (Intersection #17)

This intersection is currently operated as a two-way stop, creating significant side-street delays due to the high volume of east and westbound vehicles. A traffic signal would improve the operation of this intersection, as well as provide safe crossing of Pharr Road for pedestrians. We recommend:

- Install a traffic signal, with pedestrian actuation.

**Table 10** shows the Projected 2010 “No-Build” LOS with the addition of the recommended improvements.

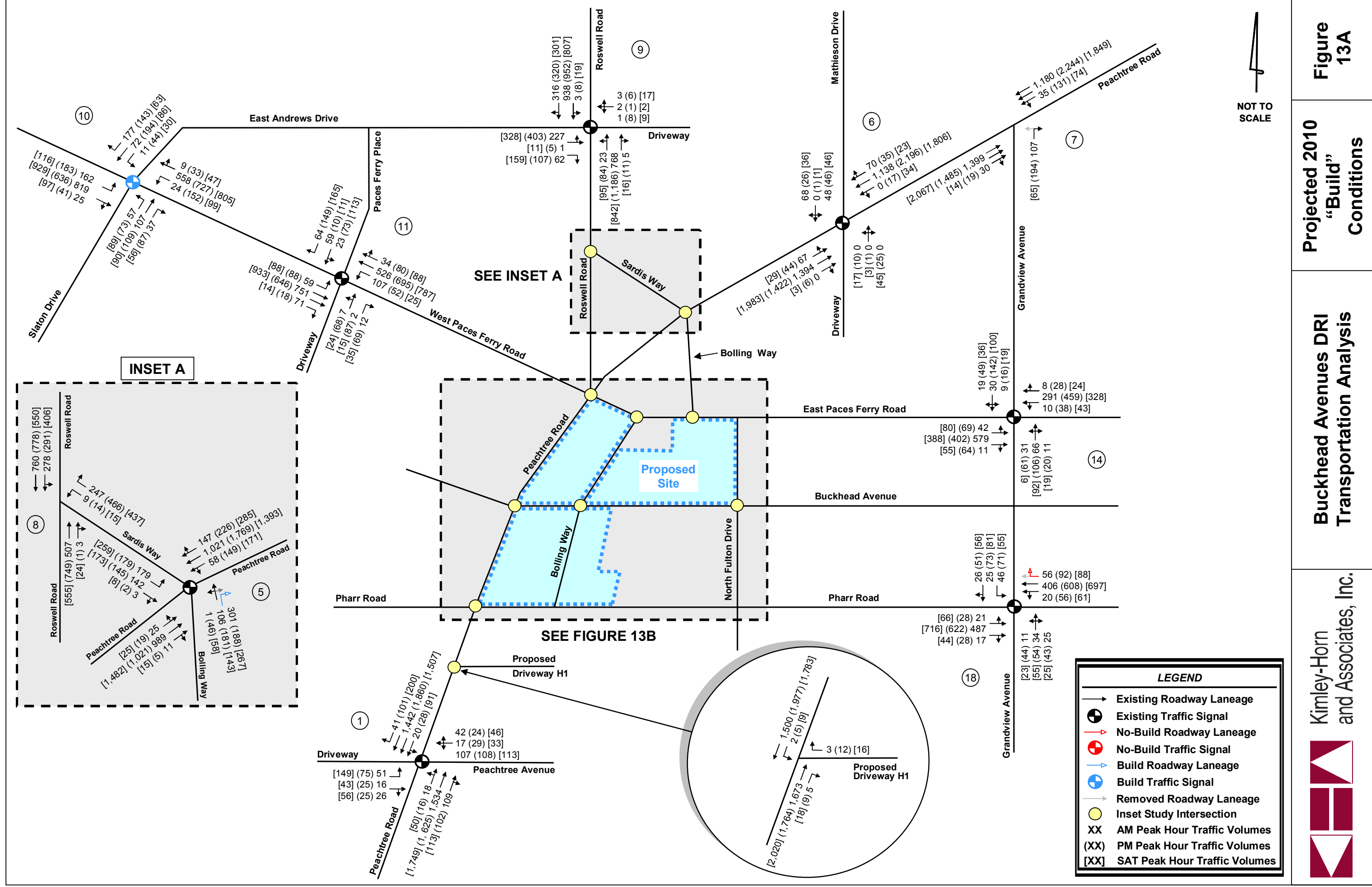
<b>Table 10</b> <b>Buckhead Avenues</b> <b>Projected 2010 No-Build IMPROVED Intersection Levels-of-Service</b> <b>(delay in seconds)</b>					
Intersection		Control	AM Peak Hour	PM Peak Hour	SAT Peak Hour
2	Peachtree Road at Pharr Road	Signal	C (20.8)	C (32.7)	C (27.4)
4	Peachtree Road at West Paces Ferry/Roswell Road	Signal	D (36.2)	D (39.8)	D (33.2)
7	Peachtree Road at Grandview Avenue	NB STOP	B	B	A
13	East Paces Ferry Road at Bolling Way (Southbound)	Signal	B (16.3)	B (19.7)	B (19.1)
17	Pharr Road at North Fulton Drive	Signal	A (6.1)	A (6.3)	A (8.8)

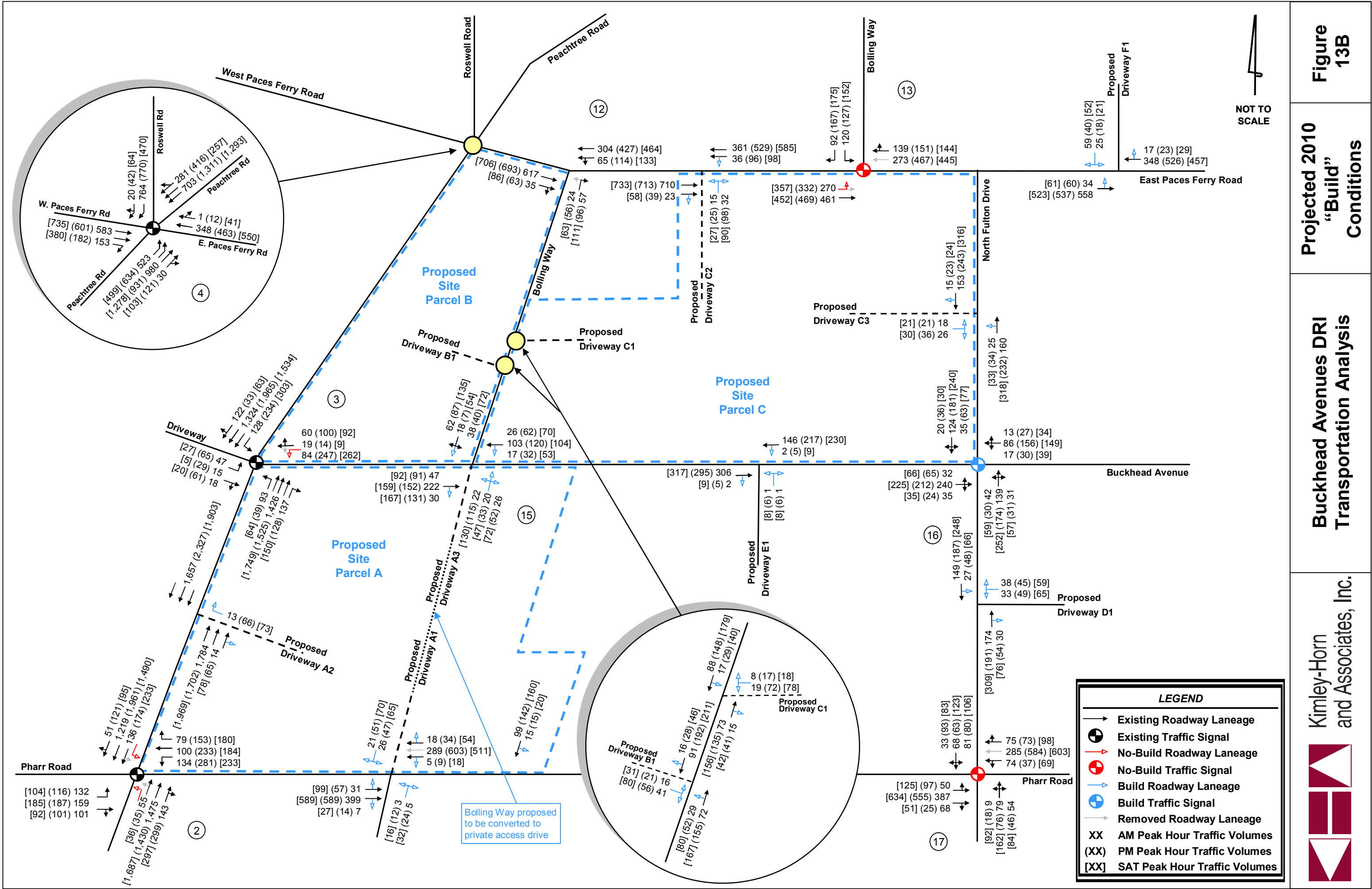
### 6.3 Projected 2010 “Build” Traffic

The traffic associated with the proposed development (Buckhead Avenues) was added to the 2010 “No-Build” volumes. These volumes were then input into Synchro 6.0. The results of the analyses are displayed in **Table 11a and 11b** on the following pages and in **Figures 13A and 13B**.

**Table 11a**  
**Buckhead Avenues**  
**Projected 2010 Build Intersection Levels-of-Service**  
**(delay in seconds)**

Intersection		Control	AM Peak Hour	PM Peak Hour	SAT Peak Hour
1	Peachtree Road at Peachtree Avenue	Signal	B (10.8)	B (11.5)	B (16.9)
2	Peachtree Road at Pharr Road	Signal	C (25.3)	D (40.8)	D (41.8)
3	Peachtree Road at Buckhead Avenue	Signal	A (9.8)	C (28.3)	C (27.3)
4	Peachtree Road at West Paces Ferry/Roswell Road	Signal	D (36.7)	D (50.1)	D (37.4)
5	Peachtree Road at Bolling Way/Sardis Way	Signal	C (29.5)	E (65.9)	E (57.6)
6	Peachtree Road at Mathieson Drive	Signal	B (10.2)	B (14.9)	B (16.1)
7	Peachtree Road at Grandview Avenue	NB STOP	B	B	B
8	Roswell Road at Sardis Way	WB STOP	C	F	D
9	Roswell Road at East Andrews Drive	Signal	B (12.5)	D (54.3)	C (23.7)
10	West Paces Ferry Road at East Andrews Drive	Signal	D (35.5)	D (39.0)	E (58.1)
11	West Paces Ferry Road at Paces Ferry Place	Signal	A (7.6)	B (19.9)	B (15.6)
12	East Paces Ferry Road at Bolling Way (Northbound)	NB STOP	B	D	F
13	East Paces Ferry Road at Bolling Way (Southbound)	Signal	C (24.9)	C (24.5)	D (35.5)
14	East Paces Ferry Road at Grandview Avenue	Signal	A (8.9)	B (13.9)	B (12.4)
15	Buckhead Avenue at Bolling Way / Driveway A3	NB STOP	B	F	F
		SB STOP	B	C	E
16	Buckhead Avenue at North Fulton Drive	NB STOP	C	E	F
		SB STOP	C	F	F
17	Pharr Road at North Fulton Drive	Signal	A (6.9)	A (8.2)	B (15.5)
18	Pharr Road at Grandview Avenue	Signal	B (17.6)	B (19.2)	C (21.6)





**Table 11b**  
**Buckhead Avenues**  
**Projected 2010 Build Intersection Levels-of-Service (continued)**  
**(delay in seconds)**

Intersection		Control	AM Peak Hour	PM Peak Hour	SAT Peak Hour
19	Pharr Road at Driveway A1/ Driveway H2	NB STOP	B	D	E
		SB STOP	B	D	F
20	Peachtree Road at Driveway A2	WB STOP	A	B	B
21	Bolling Way at Driveway B1	EB STOP	A	B	B
22	Bolling Way at Driveway C1	WB STOP	A	B	B
23	East Paces Ferry Road at Driveway C2	NB STOP	B	C	C
24	North Fulton Drive at Driveway C3	EB STOP	B	B	B
25	North Fulton Drive at Driveway D1	WB STOP	B	B	C
26	Buckhead Avenue at Driveway E1	NB STOP	B	B	B
27	East Paces Ferry Road at Driveway F1	SB STOP	C	C	C
28	Peachtree Road at Driveway H1*	WB STOP	-	-	-

\* Driveway H1 is entrance only and does not have an LOS.

The results of the Build Conditions analysis indicate that seven intersections are projected to operate below the standard of LOS D.

Additionally, a queue analysis was performed for the Build Conditions analysis, and four of the intersections are displayed in **Table 12** below. Due to improvements recommended during the No-Build Conditions analysis, northbound and southbound queues at intersections along Peachtree Road have been somewhat improved, while northbound and southbound queues within the Village have lengthened due to the increase in traffic from the proposed Buckhead Avenues development.



<b>Table 12</b> <b>Buckhead Avenues</b> <b>Projected 2010 Build Intersection Queues</b> <b>(for informational purposes)</b>					
Intersection		Queue Length in Feet			
		NB	SB	EB	WB
2	Peachtree Road at Pharr Road				
	AM Peak	536'	158'	363'	163'
	PM Peak	633'	705'	418'	379'
	SAT Peak	712'	342'	329'	271'
4	Peachtree Road at West Paces Ferry/Roswell Road				
	AM Peak	327'	430'/526'	334'	163'
	PM Peak	404'	442'/643'	421'	272'
	SAT Peak	297'	263'/366'	463'	293'
16	Buckhead Avenue at North Fulton Drive				
	AM Peak	81'	62'	-	-
	PM Peak	172'	300'	-	-
	SAT Peak	692'	783'	-	-
18	Pharr Road at Grandview Avenue				
	AM Peak	42'	30'	153'	121'
	PM Peak	108'	73'	201'	202'
	SAT Peak	86'	87'	282'	248'

Several improvements were identified to mitigate the delays and queues projected for the Build Conditions. These improvements are in addition to the No-Build improvements and are listed and discussed, by intersection, below:

#### Peachtree Road @ Buckhead Avenue (Intersection #3)

While the LOS for this intersection is above the standard of LOS D, a review of the Sim Traffic model indicates that westbound queues along Buckhead Avenue could extend east into the intersection with Bolling Way. Extended queues at this location would impact proposed site driveways, and create difficulty for vehicles attempting to exit the proposed development. We recommend:

- Provide an exclusive westbound left-turn lane along Buckhead Avenue.

#### Peachtree Road @ Bolling Way/Sardis Way (Intersection #5)

This intersection is projected to experience significant delay due to the high number of projected northbound right-turn vehicles from Bolling Way onto Peachtree Road. We recommend:

- Re-stripe existing on-street parking to provide an exclusive northbound right-turn lane along Bolling Way.

#### Roswell Road @ Sardis Way (Intersection #8)

This is an unsignalized intersection that experiences delay due to the large number of through vehicles along Roswell Road. Signalization would be required to improve the LOS, but is likely not warranted, and is not recommended due to the proximity to adjacent signals. Multiple lanes exist in each direction as well; therefore we recommend:

- No additional improvements.

#### West Paces Ferry Road @ East Andrews Drive (Intersection #10)

The substandard LOS at this intersection during the Saturday peak hour can be mitigated with no additional lanes; therefore we recommend:

- Optimize signal timings.

#### East Paces Ferry Road @ Bolling Way (Northbound) (Intersection # 12)

Delay at this intersection (and subsequently the poor LOS) is due to northbound vehicles attempting to make a left-turn onto westbound East Paces Ferry Road. Queues extending east from the Peachtree Road @ East Paces Ferry Road intersection prevent left-turn vehicles from entering the roadway. To mitigate this problem (and prevent excessive queues along Bolling Way) we recommend:

- Prohibit northbound left-turn movements along Bolling Way.

#### Buckhead Avenue @ Bolling Way / Driveway A3 (Intersection #15)

With the increase in vehicles along Buckhead Avenue, southbound delay along Bolling Way is expected. It is not uncommon for minor approaches of intersections with major roadways to experience delay during the peak hours of operation. Signalization would be required to improve the LOS; however, the nearest signalized intersection of Buckhead Avenue at Peachtree Road is located less than 300' away. Therefore, we recommend:

- No additional improvements.

#### Buckhead Avenue @ North Fulton Drive (Intersection #16)

With the increase of traffic in the Village as a result of the proposed development, delays and queues are increased along the minor legs of this unsignalized intersection. An all-way stop was analyzed, but LOS was not improved to the standard of LOS D. Signalization would be required to improve the LOS, and could also provide safe crossing for pedestrians (important due to the expected increase in pedestrian traffic due to the proposed development). We recommend:

- Install a signal, if warranted, with pedestrian actuation.

### Pharr Road @ Driveway A1 / Driveway H2 (Intersection #19)

Delay at Driveways A1 and H2 is incurred due to the high number of northbound and southbound left-turning vehicles in addition to the low number of available gaps along Pharr Road. Once again, it is not uncommon for minor approaches of intersections with major roadways to experience delay during the peak hours of operation. Additionally, two other access points for Parcel A exist and therefore, provide alternative options for exiting the development. Left-turning vehicles from Parcel H that may experience delays can choose alternate routes through Buckhead Village when necessary. Therefore, we recommend:

- No additional improvements.

The improvements listed above were input into Synchro and the roadway network was then re-analyzed. The LOS rating of the intersections identified as projected to operate below the LOS standard are displayed in the **Table 13** below, with the adjusted LOS ratings as a result of the recommended improvements.

<b>Table 13</b> <b>Buckhead Avenues</b> <b>Projected 2010 Build IMPROVED Intersection Levels-of-Service</b> <b>(delay in seconds)</b>					
Intersection		Control	AM Peak Hour	PM Peak Hour	SAT Peak Hour
3	Peachtree Road at Buckhead Avenue	Signal	A (9.1)	B (19.6)	B (19.1)
5	Peachtree Road at Bolling Way/Sardis Way	Signal	B (16.2)	C (26.4)	C (26.5)
8	Roswell Road at Sardis Way	WB STOP	C	F	D
10	West Paces Ferry Road at East Andrews Drive	Signal	C (32.4)	C (28.1)	D (39.4)
12	East Paces Ferry Road at Bolling Way (Northbound)	NB STOP	A	A	B
15	Buckhead Avenue at Bolling Way	NB STOP	B	F	F
		SB STOP	B	D	F
16	Buckhead Avenue at North Fulton Drive	Signal	A (8.3)	A (8.8)	B (11.0)
19	Pharr Road at Driveway A1 / Driveway H2	NB Stop	B	D	E
		SB Stop	B	D	F

## 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. Two projects are listed in **Table 14** and displayed in **Figure 14**; both projects are sponsored by the Buckhead Community Improvement District (BCID).

<b>Table 14</b> <b>Buckhead Avenues</b> <b>Area Programmed Improvements</b>	
<b>SR 141 Multimodal Corridor Enhancements</b>  <b>Sponsor: Buckhead Community Improvement District (BCID)</b>	This project will upgrade the current bicycle and pedestrian environments from Shadowlawn Avenue to Maple Drive along Peachtree Road including refurbishing sidewalks, adding bicycle lanes, and adding a center raised median.
<b>Buckhead Village Streetscape Improvements</b>  <b>Sponsor: Buckhead Community Improvement District (BCID)</b>	Streetscape and bike/ped improvements along East Paces Ferry Road and Pharr Road within the Buckhead Village. Improvements include widening of sidewalks, capacity reduction in conjunction with the addition of on-street parking, and other pedestrian upgrades and enhancements. This project is being coordinated with the Buckhead Avenues project.

## 8.0 INGRESS/EGRESS ANALYSIS

Because the Buckhead Avenues development is comprised of multiple parcels surrounded by numerous public roadways, multiple entry points exist for accessing the development including the following major roadways: Peachtree Road, Roswell Road, East / West Paces Ferry Road, and Pharr Road. No structured connections exist between parcels; therefore, vehicular access between parcels can be accomplished through use of separate driveways and the existing roadway network. Sidewalks will be constructed to connect with existing sidewalks for seamless pedestrian connections. Parking is provided within each parcel for the uses contained on site; however, the proximity of the parcels to each other should encourage walking between parcels. The existing Bolling Way segment which connects Pharr Road and Buckhead Avenue will be abandoned in conjunction with the construction of the Buckhead Avenues development, and the current roadway will become two driveway entrances into the Parcel A parking deck.

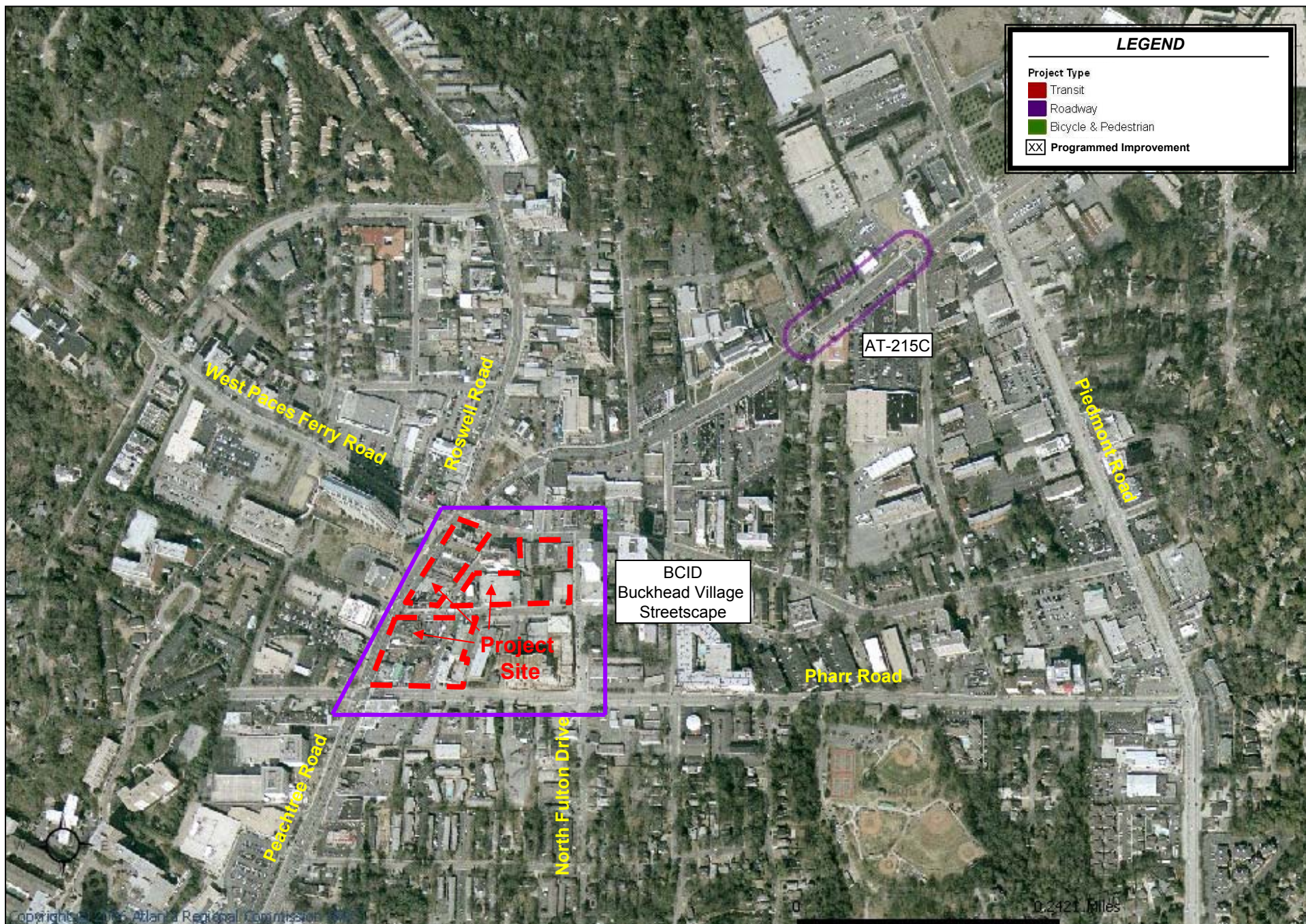
## 9.0 INTERNAL CIRCULATION ANALYSIS

As previously mentioned, each parcel is surrounded by an extensive existing roadway network. Internal circulation within the development as a whole will occur along these roadways (both for vehicles and pedestrians). Within each parcel, centralized parking is available for all uses. Pedestrians are able to travel between uses easily as the uses are either housed in one building (or connecting facilities) or attractive pedestrian connections will be provided. With the capacity reductions along East Paces Ferry Road and Pharr Road as part of the Buckhead Village Streetscape project, pedestrian circulation between parcels will be enhanced as well.

## 10.0 COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The future development complies with the City of Atlanta's Future Land Use map which shows this area as high density commercial. Additionally, the project is being coordinated with the BCID's Streetscape plan which ensures that the community vision is being incorporated into the design.





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**Buckhead Avenues  
Transportation Analysis**

**Programmed  
Improvements**

**Figure 14**



## 11.0 NON-EXPEDITED CRITERIA

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

MARTA bus routes currently serve the proposed site, and a MARTA rail station is located approximately one mile from the site.

### 11.2 *Vehicle Miles Traveled*

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

<b>Table 15</b> <b>Buckhead Avenues</b> <b>Vehicle Trip Reductions</b>	
	Build-out Total
Daily Gross Trip Generation:	26,020
(-)Mixed-use reductions (internal capture)	-4,710
(-)Alternative modes	-1,066
(-)Pass-by trips	-3,600
Net Trips:	16,644

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

The proposed development is located within an urban core. It is situated along two MARTA bus routes (which operate along Peachtree Road) and is approximately one mile from two MARTA rail stations. Additionally, the project is located one mile from GA-400 which provides direct connections to I-75/I-85 southbound and I-285.

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

Two MARTA bus routes access the proposed development: Route 23 and Route 38. Route 23 connects the Lenox station, the Buckhead station, and the Arts Center station along Peachtree Road and operates under 5-to 15-minute headways. Route 38 connects Chastain Park and the Lindbergh station along Roswell Road, Peachtree Road, Pharr Road, and Piedmont Road. Route 38 operates under 60-minute headways. The Lindbergh station and Buckhead station are approximately one mile from the development as well.

### 11.5 *Transportation Management Area Designation*

The development is located within the Buckhead Area Transportation Management Area.

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

Mixed-use, alternative mode, and pass-by trip reductions were taken according to the *ITE Trip Generation Handbook, 1998*. Calculating internal capture by parcel only resulted in a reduction of 18.1% of daily gross trips and 20.0% of PM peak trips. On Saturday, approximately 15.4% of the gross trips were projected to be internal. The proximity to MARTA bus routes and enhanced walkability within the Village warranted an alternative mode reduction of 5%. Pass-by reductions for the retail land uses were taken at approximately 10% of the existing ADT along Peachtree Road, per GRTA technical guidelines.

### *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 adequate to serve the needs of the development upon build-out (2010).

## **12.0 AREA OF INFLUENCE**

The proposed development, Buckhead Avenues, is expected to consist of 1,012 condominium units, 287 hotel rooms, 32,200 SF of office space, and 474,198 SF of retail. Due to the nature of the development, it will be classified as “predominantly employment” for purposes of the AOI. 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:

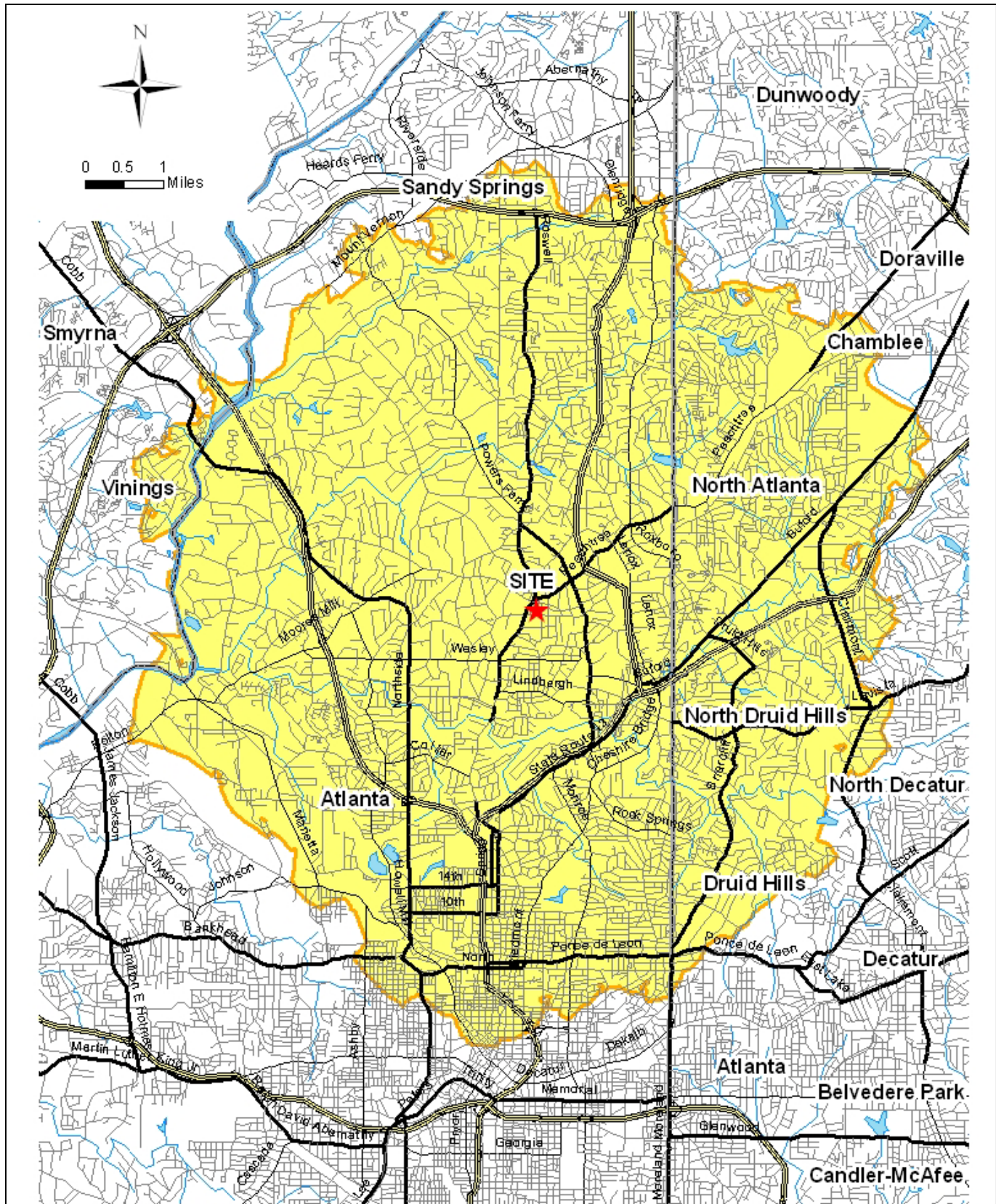
The proposed DRI:

- (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 (Buckhead Avenue at Bolling Way). 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 Fulton, DeKalb, and Cobb counties) can be seen in **Figure 15**.

The total population within the Area of Influence is 236,139, residing within 117,340 households (an average of 2.01 people per household). There are approximately 147,450 workers in the AOI for an average of 1.26 workers per household. The AOI area over the three counties totals 49,876 acres.



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## Buckhead Avenues Transportation Analysis

Area of  
Influence

Figure  
15



### 12.3 DRI Employment and Salary Figures

The DRI is expected to employ approximately 1,313 workers in the following land uses: Hotel, General Office, and Shopping Center. For the hotel land use, the total number of workers is estimated at 258, based on an assumption of 0.9 workers per room from the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Seventh Edition, 2003*. The numbers of workers for the office and shopping center land uses are based on assumptions provided in the *Area of Influence (AOI) Guidebook for Non-Expedited Reviews, April 2003*. For the office land use, 1 employee per 300 SF yields 107 office employees. For the shopping center land use (general retail), 1 employee per 500 SF results in 948 shopping center employees.

For the hotel land use, it is assumed that employment will be comprised of the following occupations: lodging managers, bellhops, housekeepers, desk clerks, and food preparers and servers. For the office land use, employees are assumed to work in the following occupations: management, technical, office and administrative support, computers, and business and financial operations. The shopping center land use will include 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 2005 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:

11-0000	Management Occupations
11-9081	Lodging Managers
13-0000	Business and Financial Operations Occupations
15-0000	Computer Occupations
17-0000	Technical Occupations
35-0000	Food Preparation and Serving Related Occupations
37-2012	Maids and Housekeeping Cleaners
39-6011	Baggage Porters and Bellhops
41-1011	Managers of Retail Sales
41-2031	Retail Salespersons
43-0000	Office and Administrative Support Occupations
43-4081	Hotel, Motel, and Resort Desk Clerks
49-9042	Maintenance and Repair, General

Household salary was calculated based on the computed workers per household ratio of 1.26 multiplied by the salary in each bracket. It is assumed then that each household has 1.26 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 16** displays the department positions, the numbers of employees in each occupation, the monthly employee and household salaries, and the respective affordable housing payments.

**Table 16**  
**Buckhead Avenues**  
**Employment, Salary, and Affordable Housing Payment by Occupation**

Land Use	Occupation	Employees	Monthly Employee Salary	Monthly Household Salary	Affordable Housing Payment
Hotel	Lodging Managers	52	\$5,446	\$6,862	\$2,059
	Baggage Porters and Bellhops	13	\$1,539	\$1,939	\$582
	Maids and Housekeeping Cleaners	64	\$1,419	\$1,788	\$536
	Hotel, Motel, and Resort Desk Clerks	64	\$1,445	\$1,821	\$546
	Maintenance and Repair, General	13	\$2,781	\$3,504	\$1,051
	Food Preparation and Serving	52	\$1,403	\$1,768	\$530
General Office	Management Occupations	21	\$7,690	\$9,689	\$2,907
	Technical Occupations	27	\$5,020	\$6,325	\$1,898
	Office and Administrative Support	11	\$2,541	\$3,201	\$960
	Computer Occupations	21	\$5,501	\$6,931	\$2,079
	Business and Financial Operations	27	\$5,049	\$6,362	\$1,909
Shopping Center	Managers of Retail Sales	190	\$2,937	\$3,700	\$1,110
	Retail Salespersons	758	\$1,932	\$2,434	\$730
<b>Total Employees</b>		<b>1,313</b>	-	-	-

Given the above calculated salaries, each household is eligible for a specific housing tier within the Area of Influence. **Table 17** below displays the number of households that fall into each tier based on the household salary.

<b>Table 17</b> <b>Buckhead Avenues</b> <b>Number of Households in the DRI by</b> <b>Range of Monthly Income</b>	
Range of Monthly Income for Housing	Number of Households
\$499 or less	0
\$500 to \$599	193
\$600 to \$699	0
\$700 to \$799	758
\$800 to \$899	0
\$900 to \$999	11
\$1,000 to \$1,249	203
\$1,250 to \$1,499	0
\$1,500 to \$1,999	54
\$2,000 or more	94
<b>Total</b>	<b>1,313</b>

## 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 65,000 owner-occupied units and 86,000 renter-occupied units in the AOI. **Table 18** below displays the housing units in comparable price tiers as are shown in **Table 17**. 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.

<b>Table 18</b> <b>Buckhead Avenues</b> <b>Selected Monthly Costs for All Occupied Housing Units in the AOI</b>			
<b>Monthly Dollar Range</b>	<b>Owner-Occupied Housing Units in the AOI</b>	<b>Renter-Occupied Housing Units in the AOI</b>	<b>Total Occupied Housing Units in the AOI</b>
\$499 or less	6,343	14,168	20,511
\$500 to \$599	2,465	8,428	10,893
\$600 to \$699	2,218	13,550	15,768
\$700 to \$799	2,555	14,915	17,470
\$800 to \$899	2,787	11,580	14,367
\$900 to \$999	2,815	7,177	9,992
\$1,000 to \$1,249	8,875	9,604	18,479
\$1,250 to \$1,499	6,967	3,554	10,521
\$1,500 to \$1,999	10,801	2,500	13,301
\$2,000 or more	19,097	1,007	20,104
<b>Total</b>	<b>64,923</b>	<b>86,483</b>	<b>151,406</b>

Using the households in the DRI per price tier information in Table Y and the renter / owner distribution of occupied housing in the AOI in Table Z 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 19**.

<b>Table 19</b> <b>Buckhead Avenues</b> <b>Comparison of Workers' Monthly Household Incomes in the DRI</b> <b>and Monthly Costs of Housing Units in the AOI</b>			
<b>Monthly Dollar Range</b>	<b>Total Occupied Housing Units in the AOI</b>	<b>Number of DRI Households with One or More Workers Working in the DRI</b>	<b>Difference in Number of Housing Units in AOI and Number of Households with Workers in DRI</b>
\$499 or less	20,511	0	20,511
\$500 to \$599	10,893	193	10,700
\$600 to \$699	15,768	0	15,768
\$700 to \$799	17,470	758	16,712
\$800 to \$899	14,367	0	14,367
\$900 to \$999	9,992	11	9,981
\$1,000 to \$1,249	18,479	203	18,276
\$1,250 to \$1,499	10,521	0	10,521
\$1,500 to \$1,999	13,301	54	13,247
\$2,000 or more	20,104	94	20,010
<b>Total</b>	<b>151,406</b>	<b>1,313</b>	<b>150,093</b>

As can be seen from **Table 16**, 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 1,012 residential units, 474,198 SF of retail space, 32,200 SF of office space, and 287 hotel rooms. Using the Department of Community Affairs required estimation of 1,800 SF per residential dwelling unit for DRIs, and assuming 900 SF per hotel room, the total development square footage (for the purpose of these calculations) equals 2,586,298 SF.

Because residential is the dominant use (based on square footage using the Department of Community Affairs estimation of 1,800 SF per residential unit) and the proposed development contains more than 15 dwelling units per acre, the development meets the ARC criteria (1 B), for a 6% reduction.

Again, because the proposed development contains a mix of uses (with residential as the dominant use) and at least 10% of the floor area is retail (474,198 SF retail / 2,586,298 total calculated SF ~ 18.3% retail), this mixed use development meets the ARC criteria (2 C) for an additional 4% reduction.

MARTA bus routes serve a stop within ¼ mile walking distance of the proposed site, so the proposed development is eligible for an additional 3% reduction.

The development is located within the Buckhead Area Transportation Management Association (BATMA), and the develop will seek a variance in parking (to provide less spaces than required by code), so the proposed development is eligible for an additional 5% reduction.

There will be bike and pedestrian networks providing connections to uses within the site. The development meets the ARC criteria (6 E) for an additional 5% reduction since the development also meets the mixed use target and connects to adjacent uses.

The proposed development meets the ARC criteria for a total 22% VMT reduction. These reductions are displayed below in **Table 20**.

<b>Table 20</b> <b>Buckhead Avenues</b> <b>ARC VMT Reductions</b>	
<b>Mixed-Use Projects where Residential is the dominant use</b>	
Meets the relative density target (1B)	-6%
Contains a 'mix' of uses (2C)	-4%
< ¼ mile from a MARTA bus stop (4A)	-3%
Within a Transportation Management Association	-5%
Bike/ped networks provided, meets a mixed use 'target', and connects to adjacent uses (6E)	-4%
<b>Total Reductions</b>	<b>22%</b>

## 14.0 ROADWAY ABANDONMENT JUSTIFICATION

In conjunction with the Special Use Permit approval for the proposed Buckhead Avenues development, the applicant is also seeking the abandonment of City of Atlanta right-of-way for the portion of Bolling Way from Pharr Road to Buckhead Avenue. This abandonment of public right-of-way is necessary for execution of the proposed project in order to accommodate the planned uses for this parcel (bound by Buckhead Avenue to the north, Pharr Road to the south, the Buckhead Library to the east, and Peachtree Road to the west.

This section of Bolling Way, between Buckhead Avenue and Pharr Road, is a two-lane Urban Local Street with on-street parking along both sides of the roadway. A 24-hour automatic tube count was performed on a weekday along this section of Bolling Way. Over the 24-hour period, 1,915 vehicles used this section of Bolling Way. The northbound and southbound breakdowns are as follows:

- Northbound 24-hour count = 930 vehicles
- Southbound 24-hour count = 985 vehicles

These volumes represent both vehicles utilizing the land uses adjacent to the facility (which will no longer be present following the redevelopment) as well as some ‘cut-through’ traffic from uses to the north and south of the facility. It is likely that a large portion of the vehicles currently utilizing this section of Bolling Way are from other existing land uses also planned to be redevelopment as part of this project. For the remaining ‘cut-through’ vehicles, the surrounding roadway network offers two viable north/south alternatives to this section of Bolling Way, as described below:

### North Fulton Drive

- North Fulton Drive is a two-lane Urban Local Street that begins in the project study network at East Paces Ferry Road and extends south of the project to Delmont Drive.

### Grandview Avenue

- Grandview Avenue is a two-lane Urban Local Street that begins at Peachtree Road within the study network and extends south to Delmont Drive.

As documented in the traffic analysis in the preceding sections of this report, these alternative facilities have adequate capacity to absorb the vehicles that will be re-routed as a result of the abandonment.