Transportation Analysis

Perimeter Park South
DRI# 1939
Dekalb County, Georgia

Prepared for:
Julian LeCraw and Company

October 2008
019461007

TABLE OF CONTENTS

APPENDIX
- Site Photos
- Transit Information
- Future Roadway/Intersection Projects
- Trip Generation and Volume Worksheets
- Peak Hour Turning Movement Counts
- Capacity Analyses – Existing 2008 Conditions
- Capacity Analyses – Existing 2008 Conditions IMPROVED
- Capacity Analyses – Projected 2012 No-Build Conditions
- Capacity Analyses – Projected 2012 No-Build Conditions IMPROVED
- Capacity Analyses – Projected 2012 Build Conditions
- Capacity Analyses – Projected 2012 Build Conditions IMPROVED

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts of a proposed 19.84-acre mixed-use redevelopment (Perimeter Park South) in DeKalb County, Georgia. This report is being prepared as part of a submittal requesting a demolition permit with DeKalb County. Because the project will exceed 400,000 square feet (SF) of mixed-use development area, the proposed redevelopment is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review.

The proposed redevelopment is expected to consist of 744 total residential units (636 multi-family apartments - convertible to condominium units - and 108 townhomes), 40,000 SF of office space, 22,500 SF of retail space, and 9,000 SF of restaurant space. The development is scheduled to be completed in a single phase, by the year 2012.

The results of the detailed intersection analysis for the 2008 Existing, Projected 2012 No-Build (excluding the Perimeter Park South development) and Projected 2012 Build conditions (including the Perimeter Park South development) identify the following improvements are necessary in order to maintain the Level of Service standard within the study network.

2008 Existing recommended improvements:

I-285 Westbound Ramps / Cotillion Drive at North Peachtree Road (Subject to available right-of-way to implement these improvements.)

- Install an additional westbound through lane.
- Install an additional eastbound left-turn lane, creating dual left-turn lanes.

2012 No-Build recommended improvements (includes background growth but does not include Perimeter Park South DRI project traffic):

I-285 Westbound Ramps / Cotillion Drive at North Peachtree Road (Subject to available right-of-way to implement these improvements.)

- Install an additional westbound through lane.
- Install an additional eastbound left-turn lane, creating dual left-turn lanes.

North Shallowford Road (south) at North Peachtree Road

- Install a traffic signal, if warranted by projected volumes.

2012 Build recommended improvements (includes the Perimeter Park South DRI project traffic):

I-285 Westbound Ramps / Cotillion Drive at North Peachtree Road (Subject to available right-of-way to implement these improvements.)

- Install an additional westbound through lane.
- Install an additional eastbound left-turn lane, creating dual left-turn lanes.

I-285 Eastbound Ramps / Savoy Drive at North Peachtree Road

- Optimize signal timing splits to improve PM peak hour.

Perimeter Park Drive at North Peachtree Road

- Install a traffic signal, if warranted.

North Shallowford Road (south) at North Peachtree Road

- Install a traffic signal, if warranted.

Peachtree Industrial Boulevard at North Peachtree Road

- Optimize signal timing splits to improve AM peak hour.

1.0 PROJECT DESCRIPTION

1.1 Introduction

This report presents the analysis of the anticipated traffic impacts of a proposed 19.84-acre mixed-use redevelopment (Perimeter Park South) in DeKalb County, Georgia. This report is being prepared as part of a submittal requesting a demolition permit with DeKalb County. Because the project will exceed 400,000 square feet (SF) of mixed-use development area, the proposed redevelopment is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review.

The proposed redevelopment is expected to consist of 744 total residential units (636 multi-family apartments - convertible to condominium units - and 108 townhomes), 40,000 SF of office space, 22,500 SF of retail space, and 9,000 SF of restaurant space. The development is scheduled to be completed in a single phase, by the year 2012.

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

Table 1
Perimeter Park South DRI
Proposed Development Program

Apartments (convertible to Condominium)	636 dwelling units
Townhomes	108 dwelling units
Office	40,000 SF
Retail	22,500 SF
Restaurant	9,000 SF

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

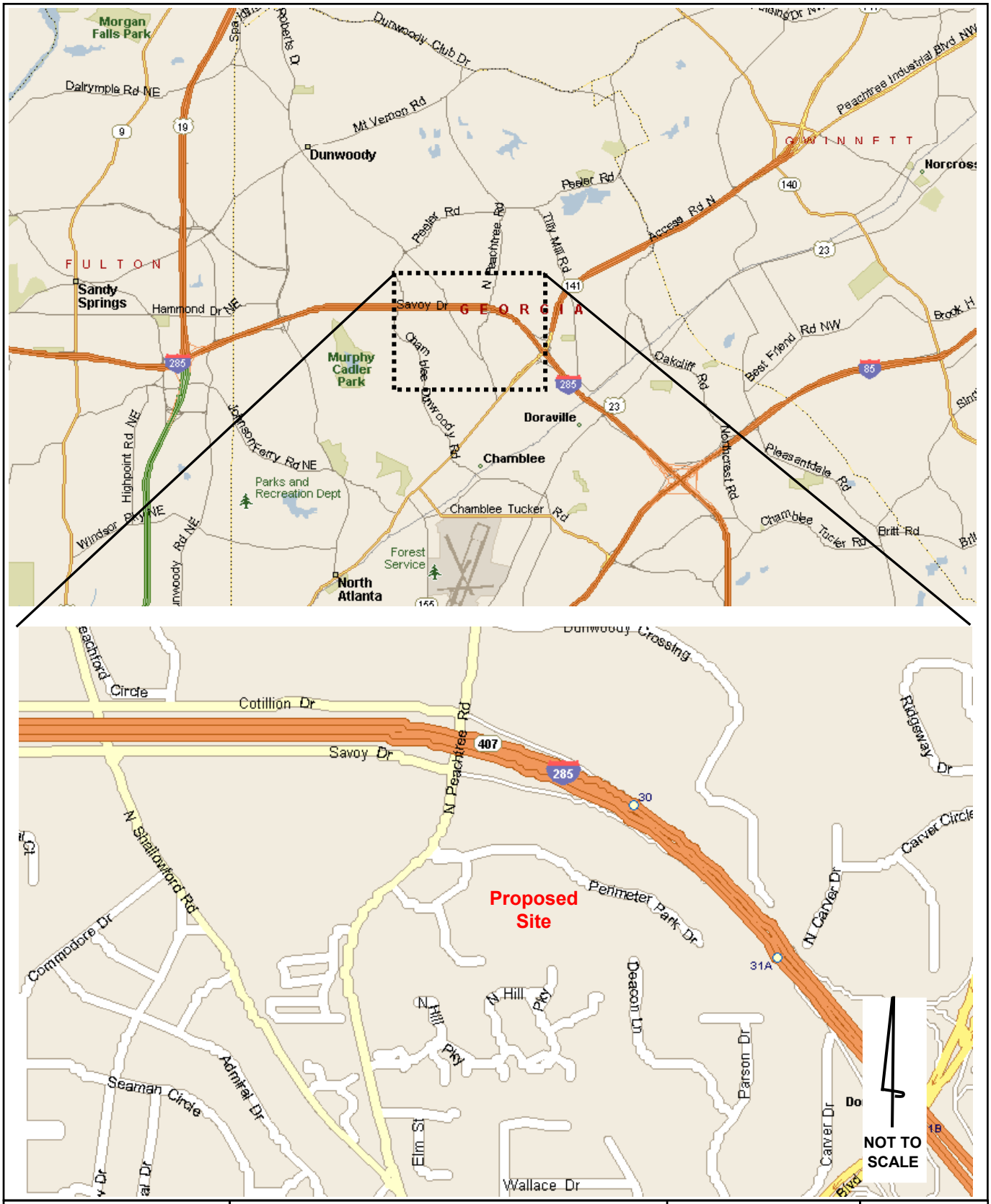
1.2 Site Plan Review

The redevelopment plan is scheduled to be completed in one phase. The proposed site is located along the south side of Perimeter Park Drive and the east side of Perimeter Park South and Perimeter Park East. The office buildings are proposed to be located to the north of the site along Perimeter Park Drive, the residential buildings are located to the south and east of the site, the retail buildings are located to the northwest of the site along North Peachtree Road, and the restaurant buildings are located to the north of the site near Perimeter Park South.

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.

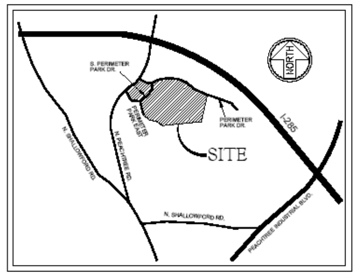
1.3 Site Access

Four site driveways currently exist along Perimeter Park Drive and two exist along Perimeter Park South/East. Perimeter Park East is a public road that terminates near the south side of the development. The proposed site driveways will be in the general vicinity of the existing driveways. Driveway #1 is located on the east side of the property and provides access to some of the residential units. Driveway #2 is located approximately 560 feet west of Driveway #1, and Driveway #3 is located approximately 560 feet west of Driveway #2. Driveway #2 provides primarily residential access, while Driveway #3 provides access to residential, office, and retail uses. Driveway #4 provides access to the retail/restaurant uses primarily and is located approximately 115 feet west of Driveway



Kimley-Horn and Associates, Inc.	**Perimeter Park South Transportation Analysis**	**Site Location**	**Figure 1**

Kimley-Horn and Associates, Inc.	**Perimeter Park South Transportation Analysis**	**Site Aerial**	**Figure 2**



Location Map

DEVELOPMENT SUMMARY

Site Acreage	19.844 acres
ROW "to be abandoned"	0.5193 ac
ROW "to be created"	0.9539 ac
Surplus ROW created	0.4346 ac
Residential Units	744 units
Residential Density	37.5 du/ac
Other Density	0.1 FAR

* No Bike lanes / trails proposed

Building Square Footage

Restaurant	9,000 sf
Retail	22,500 sf
Office	40,000 sf
Community Center	8,000 sf
M-F Dwellings, (E - 5/6-sty)	535,000 sf
M-F Dwellings, (F - 4-sty)	175,000 sf
M-F Dwellings, (G - 4/5/6- sty)	507,000 sf

Ground Floor Dwellings of all M-F are (Live Work)

Open Space

Total Open Space	3.97 ac min

Site Plan Legend

A - Restaurant / Retail-Office

B - Retail

C - Office

D - Community Center

E - M-F Dwellings, 4/5/6-stories
- Without using density bonus
- Using density bonus

F - M-F Dwelling, 4-stories
- Without using density bonus
- Using density bonus

G - M-F Dwellings, 4/5/6-stories
- Without using density bonus
- Using density bonus

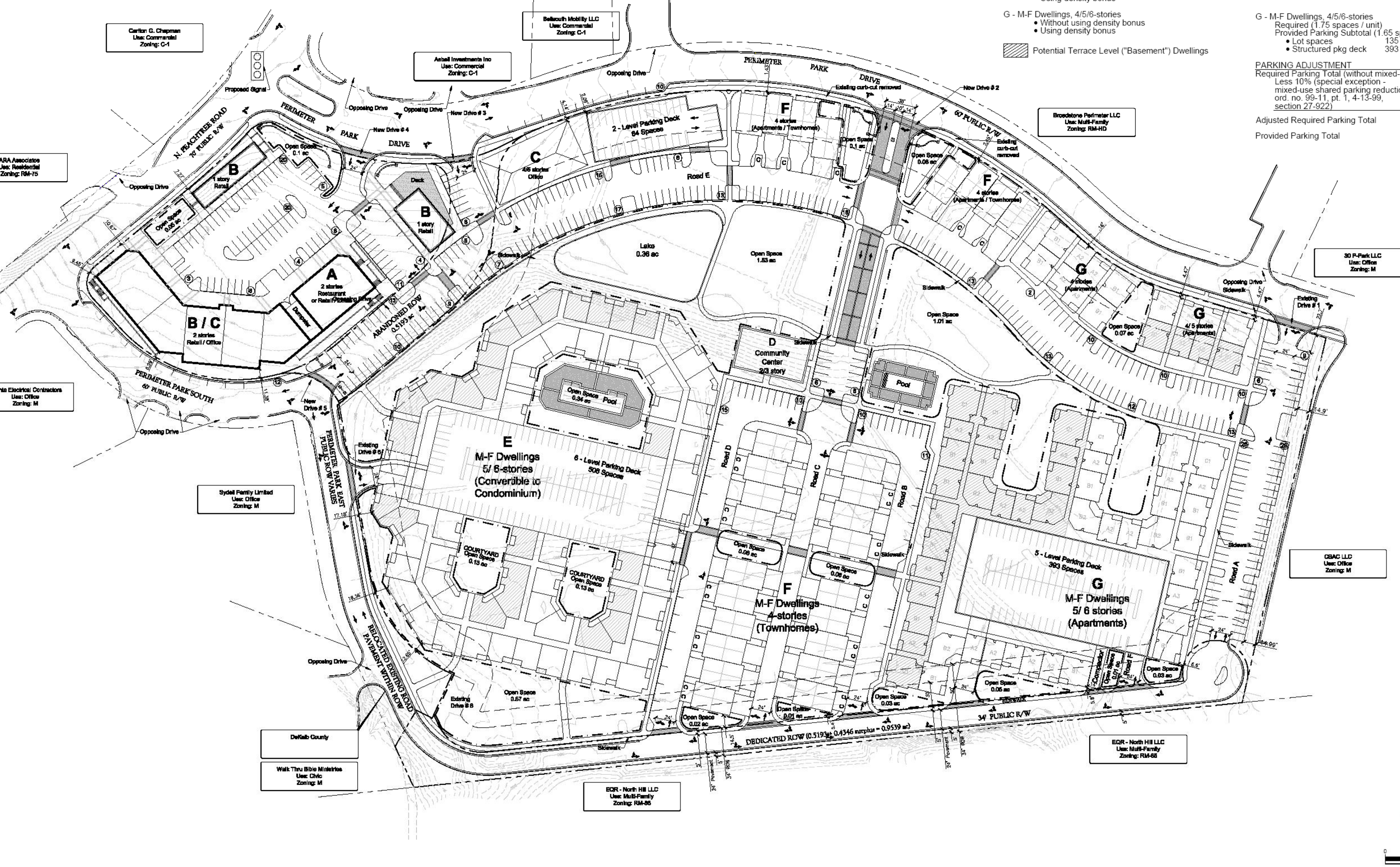
Potential Terrace Level ("Basement") Dwellings

Parking Summary (see parking adjustment below)

A - Restaurant		
Required (1 space / 75 sf)		120 spaces
B - Retail		
Required (4 spaces / 1000 sf)		90 spaces
C - Office		
Required (1 space / 250 sf)		160 spaces
Required Parking Subtotal		370 spaces
Provided Parking Subtotal		316 spaces
• Lot spaces	230 spaces	
• Structured pkg deck	64 spaces	
• On-street parking	22 spaces	
D - Community Center		
Required (20 minimum)		20 spaces
F - M-F Dwelling, 4-stories		
Required (1.75 spaces / unit)		189 spaces
Required Parking Subtotal		209 spaces
Provided Parking Subtotal		232 spaces
• Lot spaces - standard	43 spaces	
• Lot spaces - compact	5 spaces	
• Garage	92 spaces	
• Driveway spaces - std	72 spaces	
• Driveway spaces - compt	20 spaces	
E - M-F Dwellings, 4/5/6-stories		
Required (1.75 spaces / unit)		553 spaces
Provided Parking Subtotal (1.60 sp/unit)		506 spaces
• Structured pkg deck	506 spaces	
G - M-F Dwellings, 4/5/6-stories		
Required (1.75 spaces / unit)		560 spaces
Provided Parking Subtotal (1.65 sp/unit)		528 spaces
• Lot spaces	135 spaces	
• Structured pkg deck	393 spaces	

PARKING ADJUSTMENT

Required Parking Total (without mixed-use)	1,692 spaces
Less 10% (special exception - mixed-use shared parking reduction; ord. no. 99-11, pt. 1, 4-13-99, section 27-922)	-169 spaces
Adjusted Required Parking Total	1,523 spaces
Provided Parking Total	1,582 spaces



Kimley-Horn and Associates, Inc.
817 WEST PEACHTREE ST. NW
SUITE 915
ATLANTA, GEORGIA 30308-1121
Tel: (404) 419-8700
Fax: (404) 419-8701

PERIMETER PARK
DEKALB COUNTY
SITE PLAN

Julian LeCraw and Company
1575 Northside Drive
100 Atlanta Technology Center, Suite 200
Atlanta, Georgia 30318
Contact: David Bayoura 404.352.2800

SCALE (H):	AS NOTED
SCALE (V):	NONE
DESIGNED BY:	CW
DRAWN BY:	CW
CHECKED BY:	RPS
DATE:	10/07/08

SHEET NUMBER
C1-00

Figure 3

Site Plan

Perimeter Park South Transportation Analysis

Kimley-Horn and Associates, Inc.

#3 and 160 feet east of North Peachtree Road. Driveway #5 is intended to replace a piece of Perimeter Park South and provides access to residential, office, and retail uses. Driveway #6 is located approximately 130 feet south of Driveway #5 on Perimeter Park East and provides access to the residential component of the property. Perimeter Park East continues to the south and east, becomes a new public roadway, and provides access to the other residential driveways for the property.

1.4 Bicycle and Pedestrian Facilities

Limited pedestrian facilities are currently in place in the vicinity of the development. The development is proposing to include sidewalks along all public rights-of-way surrounding the site. Additionally, the development will provide internal pedestrian circulation via internal sidewalks.

1.5 Transit Facilities

The proposed development is located near the intersection of N. Peachtree Road at Perimeter Park Drive. Currently, one MARTA bus route accesses the site: Route 132. Route 132 connects the Chamblee rail station and the North Springs Station on 29-to 33-minute headways. The nearest MARTA bus stop is located approximately one tenth of a mile south of the site along North Peachtree Road. Given the transit options within the vicinity of the project (for both residential and office trips) and the overall project location proximity to nearby MARTA bus stops, transit is a viable option for some of the residents and workers of the new development. An alternative mode reduction of 2% was taken per GRTA's Letter of Understanding.

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 redevelopment, and growth rates of 2.0% per year along all roadways per GRTA's Letter of Understanding.

2.2 Traffic Data Collection

2008 weekday peak hour turning movement counts were conducted on Tuesday January 15, 2008, and on Thursday, September 25, 2008, at the study intersections between 7:00-9:00 AM and 4:00-6:00 PM. The morning and afternoon peak hours varied between the eight intersections:

- N. Peachtree Road @ I-285 WB Ramp/Cotillion Drive (7:30-8:30 AM, 5:00-6:00 PM)
- N. Peachtree Road @ I-285 EB Ramp/Savoy Drive (7:30-8:30 AM, 4:30-5:30 PM)
- N. Peachtree Road @ Perimeter Park Drive (7:45-8:45 AM, 4:45-5:45 PM)
- N. Peachtree Road @ Perimeter Park South (7:45-8:45 AM, 4:30-5:30 PM)
- N. Peachtree Road @ N. Shallowford Road North (7:30-8:30 AM, 5:00-6:00 PM)
- N. Peachtree Road @ N. Shallowford Road South (7:45-8:45 AM, 5:00-6:00 PM)
- Perimeter Park Drive @ Perimeter Park South (8:00-9:00 AM, 5:00-6:00 PM)
- Perimeter Park South @ Perimeter Park East (8:00-9:00 AM, 4:45-5:45 PM)
- N. Peachtree Road @ Peachtree Industrial Boulevard (7:15-8:15 AM, 5:00-6:00 PM)
- N. Shallowford Road @ Savoy Drive (7:45-8:45 AM, 5:00-6:00 PM)

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. **Table 2** illustrates LOS thresholds for unsignalized and signalized intersections. Level of service analyses were conducted at all intersections within the study network using Synchro Professional, Version 6.0.

Level of Service for signalized intersections is reported for the intersection as a whole. One or more movements at an intersection may experience a low LOS, while the intersection as a whole may operate at the LOS standard.

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

Table 2
Level of Service Criteria
Unsignalized and Signalized Intersections

Unsignalized Intersections		Signalized Intersections	
Level-of-Service	**Average Control Delay (sec/veh)**	**Level-of-Service**	**Average Control Delay (sec/veh)**
A	≤ 10	A	≤ 10.0
B	> 10 and ≤ 15	B	> 10.0 and ≤ 20.0
C	> 15 and ≤ 25	C	> 20.0 and ≤ 35.0
D	> 25 and ≤ 35	D	> 35.0 and ≤ 55.0
E	> 35 and ≤ 50	E	> 55.0 and ≤ 80.0
F	> 50	F	> 80.0

Source: 2000 Highway Capacity Manual

Volume to Capacity (v/c) ratio is also used to describe the operating characteristics of a road segment or intersection in relation to its capacity. The *Highway Capacity Manual* describes the v/c ratio as the ratio of traffic demand on a roadway facility divided by the facility's available capacity. V/C is often referred to as the degree of saturation. A facility with a v/c ratio between 0 and 1 operates with excess capacity; however, values above 1.0 indicate an excess of demand, or a facility operating over capacity.

3.0 STUDY NETWORK

3.1 Gross Trip Generation

As stated earlier, the proposed redevelopment is expected to consist of a 744 total residential units (636 multi-family apartments - convertible to condominium units - and 108 townhomes), 40,000 SF of office space, 22,500 SF of retail space, and 9,000 SF of restaurant space. The development is scheduled to be completed in a single phase, by the year 2012.

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 in **Table 3**.

Table 3
Perimeter Park South 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 2012)							
636 Apartment Units	*220*	1,987	1,986	63	252	239	128
108 Townhome Units	*230*	342	343	9	46	43	21
40,000 SF Office	*710*	330	329	79	11	21	103
22,500 SF Retail	*820*	1,287	1,288	39	25	112	122
9,000 Restaurant	*932*	572	572	54	50	60	38
Total		**4,518**	**4,518**	**244**	**384**	**475**	**412**

3.2 Trip Distribution

The directional distribution and assignment of new project trips was based on a review of existing counts, engineering judgment, and discussions with GRTA, GDOT, ARC, and Dekalb County 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 includes the following intersections:

Intersection #1 – N. Peachtree Road @ I-285 WB Ramp/Cotillion Drive	(Signalized)
Intersection #2 – N. Peachtree Road @ I-285 EB Ramp/Savoy Drive	(Signalized)
Intersection #3 – N. Peachtree Road @ Perimeter Park Drive	(Unsignalized)
Intersection #4 – N. Peachtree Road @ Perimeter Park South	(Unsignalized)
Intersection #5 – N. Peachtree Road @ N. Shallowford Road North	(Unsignalized)
Intersection #6 – N. Peachtree Road @ N. Shallowford Road South	(Unsignalized)
Intersection #7 – N. Peachtree Road @ Peachtree Industrial Boulevard	(Signalized)
Intersection #8 – N. Shallowford Road @ Savoy Drive	(Signalized)

Each of the above-listed intersections was analyzed for the AM and PM peak periods under Existing 2008 Condition, the 2012 No-Build Condition, and the 2012 Build Condition. The 2012 No-Build condition represents the existing traffic volumes grown at 2.0% per year for two years. The 2012 Build condition adds the projected trips associated with Perimeter Park South redevelopment to the 2012 No-Build condition.

The additional proposed site access points listed below were only analyzed for 2012 Build Conditions:

Intersection #9 – Perimeter Park Drive at Driveway #1
Intersection #10 – Perimeter Park Drive at Driveway #2
Intersection #11 – Perimeter Park Drive at Perimeter Park South/Driveway #3
Intersection #12 – Perimeter Park Drive at Driveway #4
Intersection #13 – Perimeter Park South/Driveway #5 at Perimeter Park East
Intersection #14 – Perimeter Park East at Driveway #6

3.5 Existing Facilities

North Peachtree Road

- North Peachtree Road is a north-south oriented roadway that extends from Peachtree Industrial Boulevard to Tilly Mill Road. North Peachtree Road is a two-lane undivided urban collector street near the intersection with Perimeter Park Drive. The posted speed limit along the roadway is 35 mph.

Perimeter Park Drive

- Perimeter Park Drive is an east-west oriented roadway that extends eastward from North Peachtree Road. Perimeter Park Drive is a two-lane undivided urban local road that terminates into an existing office park. The posted speed limit along the roadway is 25 mph.

Cotillion Drive

- Cotillion Drive is an east-west oriented roadway that extends from North Peachtree Road to Chamblee-Dunwoody Road. Cotillion Drive is a three-lane undivided urban collector street in the vicinity of the project site with 2 eastbound lanes and 1 westbound lane between North Peachtree Road and Dunwoody Park South, and 1eastbound lane and 2 westbound lanes between Dunwoody Park South and Chamblee-Dunwoody Road. The posted speed limit along the roadway is 45 mph.

Savoy Drive

- Savoy Drive is an east-west oriented roadway that extends from North Peachtree Road to Chamblee-Dunwoody Road. Savoy Drive is a three-lane undivided urban collector street in the vicinity of the project site with 2 eastbound lanes and 1 westbound lane between North Peachtree Road and The Mad Italian Restaurant, 1eastbound lane and 2 westbound lanes between The Mad Italian Restaurant Dunwoody and North Shallowford Road, 2 eastbound lanes and 1 westbound lane between North Shallowford Road and

The Marriott Residence Inn, and 1 eastbound lane and 2 westbound lanes between The Marriott Residence Inn and Chamblee-Dunwoody Road. The posted speed limit along the roadway is 45 mph.

North Shallowford Road

- North Shallowford Road is a north-south oriented roadway that extends from North Peachtree Road to Chamblee-Dunwoody Road. North Shallowford Road is a two-lane undivided urban collector street in the vicinity of the project site, with 1 northbound and 1 southbound lane. The posted speed limit along the roadway is 35 mph.

Peachtree Industrial Boulevard

- Peachtree Industrial Boulevard is a north-south oriented roadway that extends from Peachtree Road to Nelson Brogdon Boulevard. Peachtree Industrial Boulevard is a four-lane undivided urban principle arterial in the vicinity of the project site, with 2 northbound and 2 southbound lanes. The posted speed limit along the roadway is 45 mph.

Table 4 summarizes the existing conditions along roadways in the study network. Roadways adjacent to the site are listed in bold.

Table 4
Perimeter Park South DRI
Roadway Classification

Roadway	Road Type	Number of Lanes	Posted Speed Limit (MPH)	GDOT Functional Classification
North Peachtree Road	**Two-Way**	**2**	**35**	**Urban Collector Street**
Perimeter Park Drive	**Two-Way**	**2**	**25**	**Urban Local Street**
Cotillion Drive	Two-Way	3	45	Urban Collector Street
Savoy Drive	Two-Way	3	45	Urban Collector Street
North Shallowford Road	Two-Way	2	35	Urban Collector Street
Peachtree Industrial Blvd	Two-Way	4	45	Urban Principle Arterial

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 for the entire project due to the mix uses proposed on all three parcels. Alternate modes of transportation reductions of 2% for residential and non-residential were taken, per the Letter of Understanding. Pass-by trip reductions were taken for the proposed retail and restaurant uses (34% daily and PM for retail, and 43% daily and PM for restaurant) following the internal capture and alternative mode reductions. The total trips generated and analyzed in the report are listed in **Table 5**.

Table 5
Perimeter Park South DRI
Net Trip Generation

	Daily Traffic		AM Peak Hour		PM Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Build-Out (Year 2012)						
Gross Trips	**4,518**	**4,518**	**244**	**384**	**475**	**412**
Internal Capture Reductions	*-502*	*-502*	*0*	*0*	*-44*	*-44*
Alternative Mode Reductions	*-81*	*-81*	*-5*	*-8*	*-8*	*-8*
Pass-By Reductions	*-593*	*-592*	*0*	*0*	*-53*	*-53*
New Trips	**3,343**	**3,342**	**239**	**376**	**370**	**307**

The trip generation associated with the existing office space is 326 AM peak hour trips and 302 PM peak hour trips. At the time of the traffic counts, the office space was 28% occupied in January 2008 and 30% occupied in September 2008. The existing restaurant use was not open to the public during the January and September traffic counts; therefore, no reduction was taken for restaurant. Using the trip distribution described in the following section for the proposed uses, the existing trips were removed from the intersections within the study network for 2012 Build Conditions only.

5.0 TRIP DISTRIBUTION AND ASSIGNMENT

New trips were distributed onto the roadway network using the percentages agreed to during the methodology meeting. **Figures 4 through 6** display the expected percentages for the development throughout the roadway network. These percentages were applied to the new trips generated by the development (see Table 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 **Figure 7**.

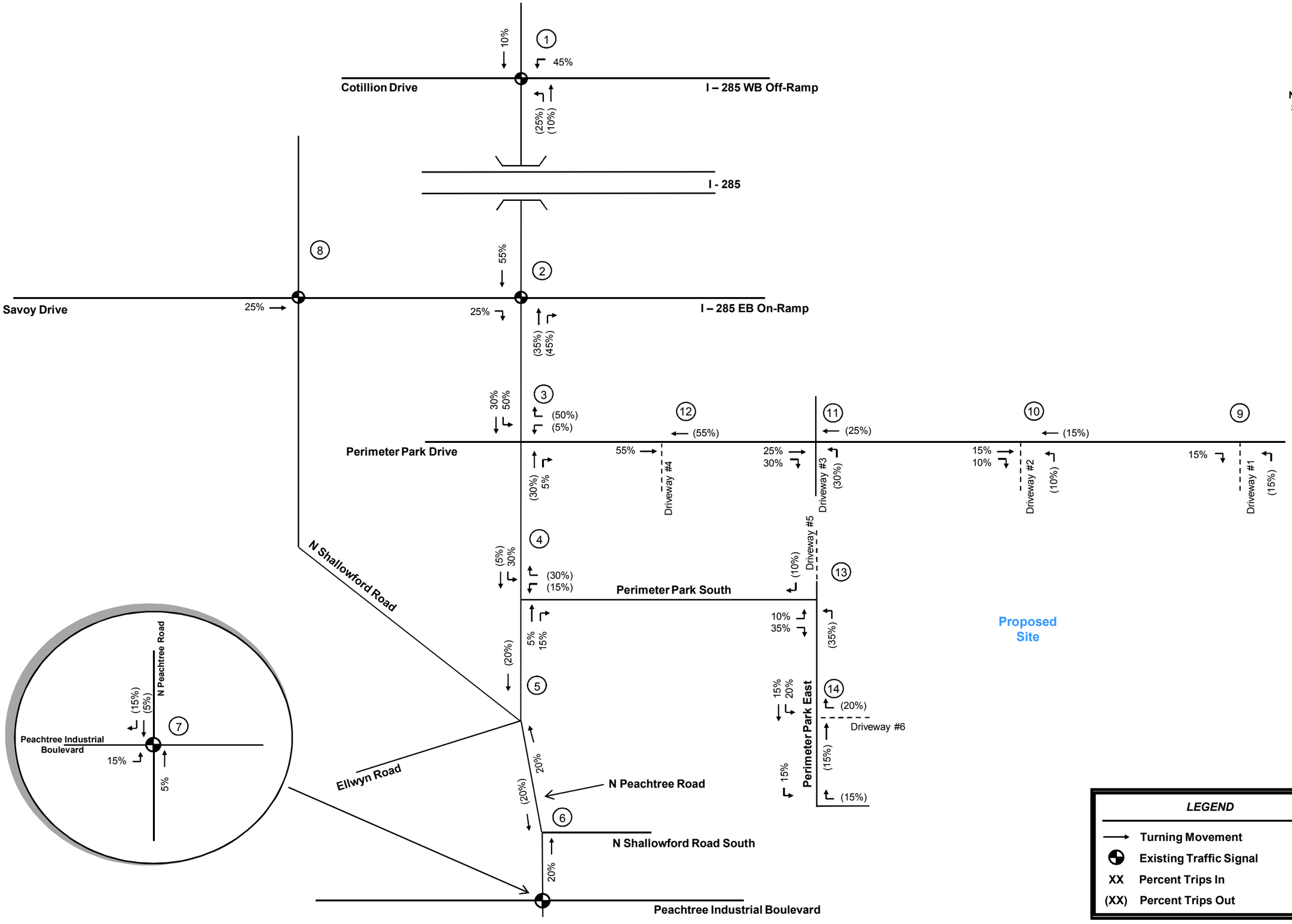


Figure 4

Residential Distribution

Perimeter Park South Transportation Analysis

Kimley-Horn and Associates, Inc.

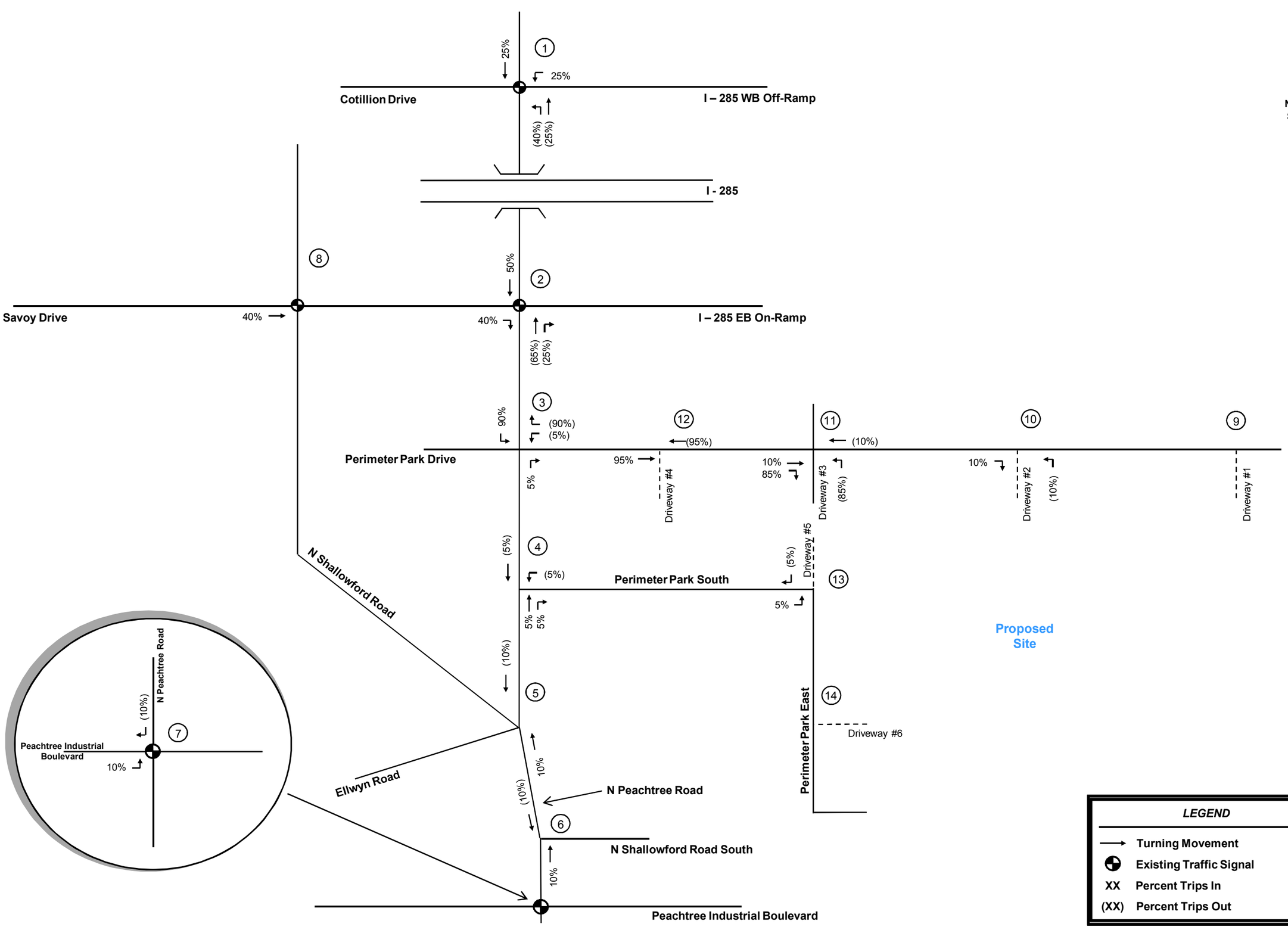


Figure 5

Office Distribution

Perimeter Park South Transportation Analysis

Kimley-Horn and Associates, Inc.

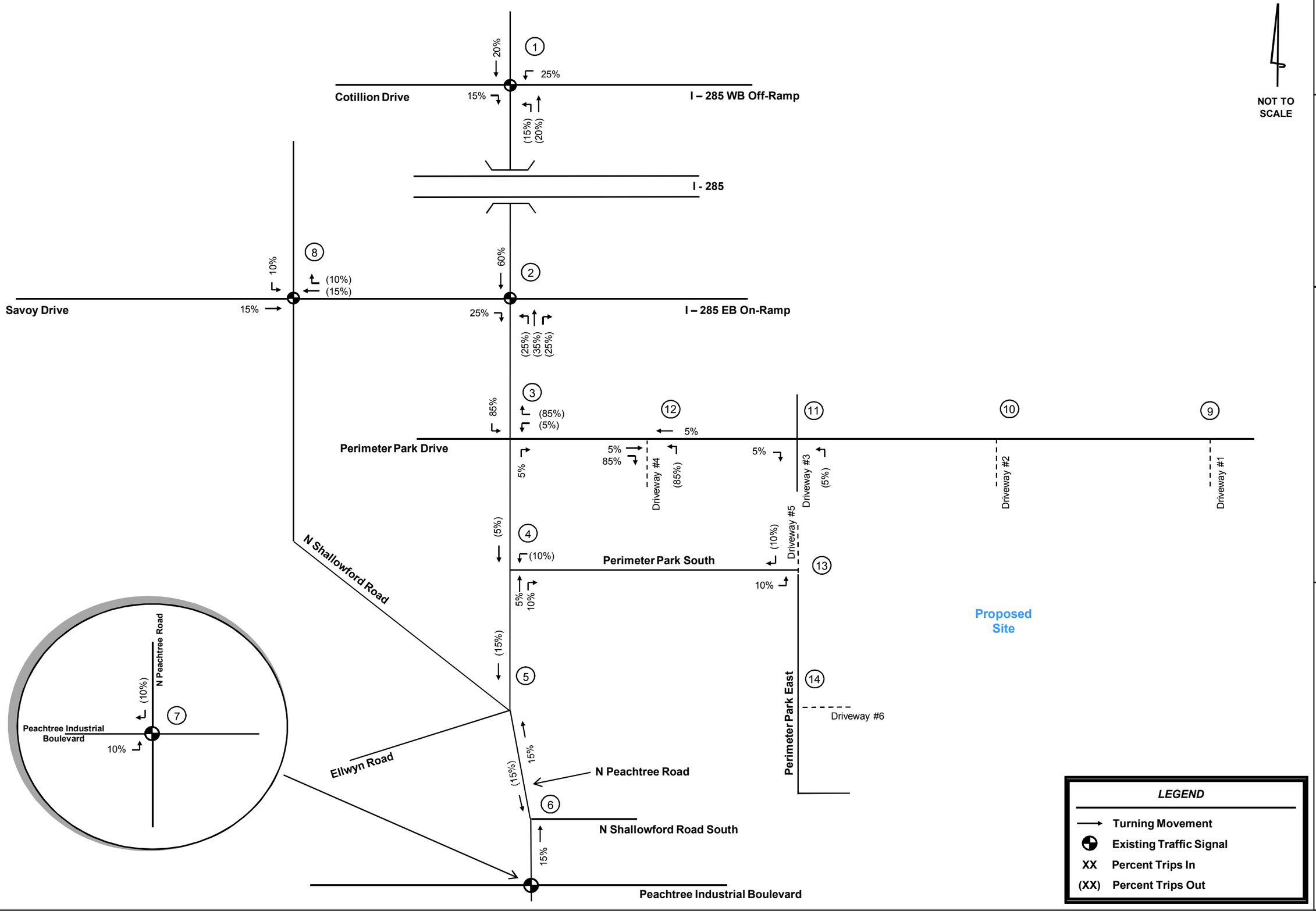


Figure 6

Retail/Restaurant Distribution

Perimeter Park South Transportation Analysis

Kimley-Horn and Associates, Inc.

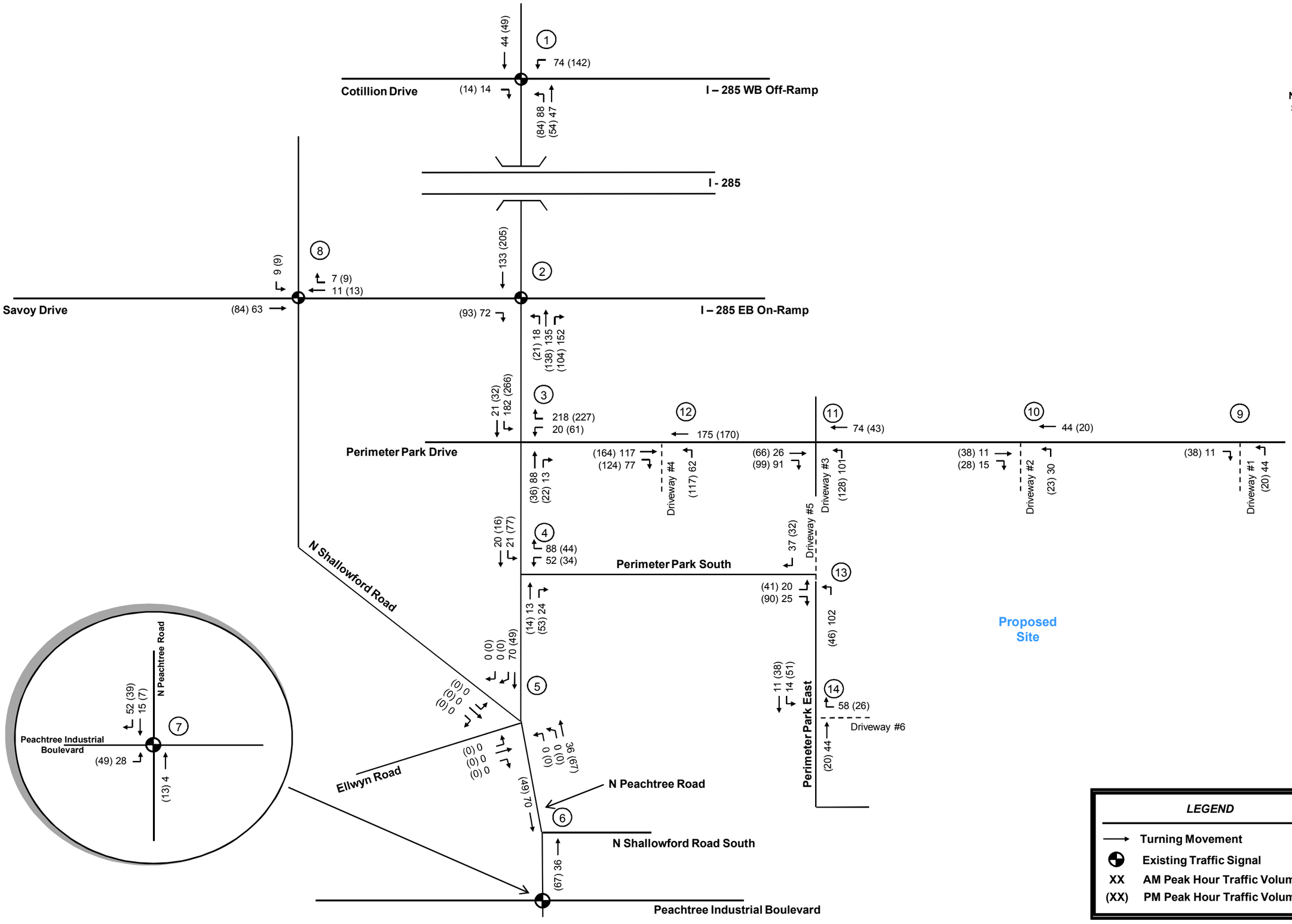


Figure 7

Project Trips

Perimeter Park South
Transportation Analysis

Kimley-Horn and Associates, Inc.

6.0 TRAFFIC ANALYSIS

6.1 Existing 2008 Traffic

These observed existing peak hour traffic volumes (as well as pedestrian volumes and heavy vehicle percentages) were input in *Synchro 6.0*, along with the existing cycle lengths, splits, and offsets, and an Existing 2008 Conditions analysis was performed. The results are displayed in **Table 6**.

The existing traffic volumes are shown in **Figure 8**.

Table 6
Perimeter Park South DRI
Existing 2008 Intersection Operation
(delay in seconds)

	Intersection	Control	AM Peak Hour		PM Peak Hour	
			LOS	v/c	LOS	v/c
1	I-285 WB Ramp/Cotillion Drive @ N. Peachtree Road	Signal	E (69.7)	1.09	F (125.1)	1.03
2	I-285 EB Ramp/Savoy Drive @ N. Peachtree Road	Signal	C (33.1)	0.74	D (43.2)	0.78
3	N. Peachtree Road @ Perimeter Park Drive	Side Street Stop Control	C (21.7)	0.08	C (17.5)	0.02
4	N. Peachtree Road @ Perimeter Park South	Side Street Stop Control	B (12.0)	0.02	B (11.5)	0.03
5	N. Peachtree Road @ N. Shallowford Road North *	Side Street Stop Control	B (13.5)	0.19	C (16.8)	0.09
6	N. Peachtree Road @ N. Shallowford Road South	Side Street Stop Control	B (14.0)	0.50	D (25.5)	0.50
7	N. Peachtree Road @ Peachtree Industrial Blvd	Signal	C (34.2)	0.85	D (38.5)	0.79
8	N. Shallowford Road @ Savoy Drive	Signal	C (23.4)	0.46	C (28.6)	0.53

Additionally, a queue analysis was performed for the Existing Conditions analysis at the intersection that currently operates below the LOS D standard, and is displayed in **Table 7**.

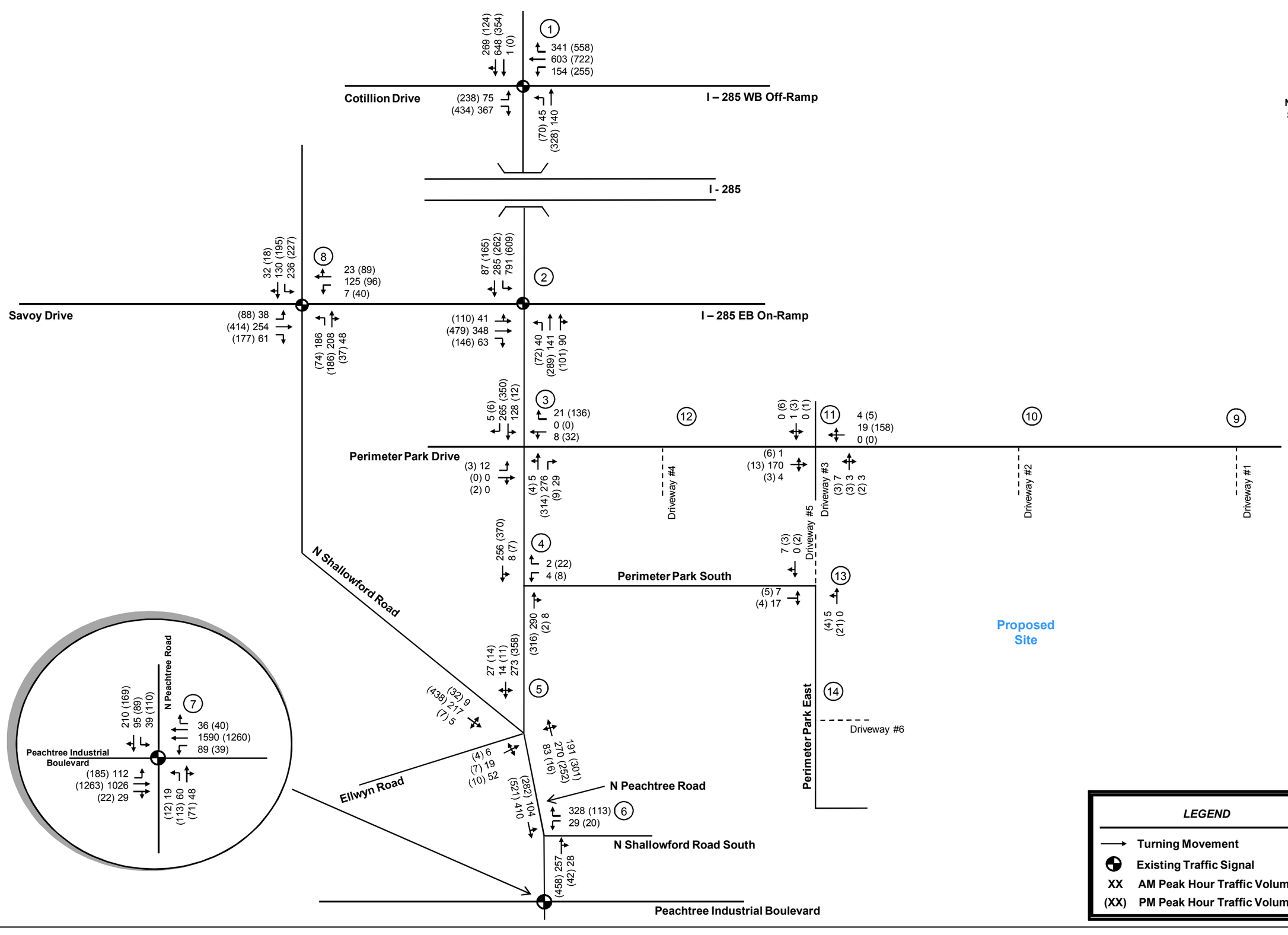


Figure 8

Existing 2008 Conditions

Perimeter Park South Transportation Analysis

Kimley-Horn and Associates, Inc.

Table 7 Perimeter Park South DRI 2008 Existing Intersection Queues (for informational purposes)			
Intersection		Queue Length in Feet	
		EB Left	WB Through
1	I-285 WB Ramp/Cotillion Drive @ N. Peachtree Road		
	AM Peak	123'	871'
	PM Peak	456'	1218'

Maintaining existing signal timings and roadway geometry, one intersection currently operates below the acceptable Level of Service standard (LOS D) during the AM and PM peak hours. The intersection's peak hour LOS standard is therefore lowered to LOS E per GRTA guidelines in the Letter of Understanding (LOU). The intersection of North Peachtree Road at Cotillion Drive/I-285 WB Ramp currently operates at LOS F in the PM peak hour; therefore, improvements were identified to mitigate current deficiencies in the operation of this intersection to reach LOS E conditions. In addition to not meeting the LOS standard, the westbound through and eastbound left-turn queues are significantly high. Adding a second westbound through lane and a second eastbound left-turn lane would improve the LOS and queues at this intersection. An additional through lane would require an additional westbound receiving lane just west of the intersection, and further right-of-way would be required west of the intersection to accommodate the additional eastbound left-turn lane. These improvements may be warranted; however, they are recommended subject to available right-of-way. Therefore, these improvements and the subsequent analysis are for informational purposes only.

2008 Existing recommended improvements:

I-285 Westbound Ramps / Cotillion Drive at North Peachtree Road (Subject to available right-of-way to implement these improvements.)

- Install an additional westbound through lane.
- Install an additional eastbound left-turn lane, creating dual left-turn lanes.

Table 8 shows the 2008 Existing LOS with the addition of the recommended improvements.

Table 8 Perimeter Park South DRI 2008 Existing Intersection Operation IMPROVED (delay in seconds)					
Intersection		Control	LOS Standard	AM Peak Hour	PM Peak Hour
1	I-285 WB Ramp/Cotillion Drive @ N. Peachtree Road	Signal	D	N/A	D (48.2)

6.2 Projected 2012 No-Build Traffic

To account for growth in traffic in the vicinity of the proposed development, the existing traffic volumes were grown at 2.0% per year at all intersections within the study network from 2008 to 2012.

These no-build volumes, along with existing roadway geometry, and existing signal timings were input into *Synchro 6.0* and an analysis of the projected 2012 No-Build Conditions was performed. The results are displayed below in **Table 9.**

Table 9
Perimeter Park South DRI
Projected 2012 No-Build Intersection Operation
(delay in seconds)

	Intersection	Control	AM Peak Hour		PM Peak Hour	
			LOS	v/c	LOS	v/c
1	I-285 WB Ramp/Cotillion Drive @ N. Peachtree Road	Signal	F (97.1)	1.19	F (163.1)	1.12
2	I-285 EB Ramp/Savoy Drive @ N. Peachtree Road	Signal	D (35.9)	0.81	D (50.6)	0.86
3	N. Peachtree Road @ Perimeter Park Drive	Side Street Stop Control	C (24.4)	0.10	C (19.2)	0.03
4	N. Peachtree Road @ Perimeter Park South	Side Street Stop Control	B (12.4)	0.02	B (12.0)	0.04
5	N. Peachtree Road @ N. Shallowford Road North *	Side Street Stop Control	B (14.4)	0.22	C (18.2)	0.11
6	N. Peachtree Road @ N. Shallowford Road South	Side Street Stop Control	C (15.5)	0.56	E (43.9)	0.69
7	N. Peachtree Road @ Peachtree Industrial Blvd	Signal	D (43.3)	0.92	D (43.2)	0.86
8	N. Shallowford Road @ Savoy Drive	Signal	C (23.8)	0.51	C (29.4)	0.62

Additionally, as in Existing Conditions, a queue analysis was performed for the No-Build analysis at the intersection of North Peachtree Road at Cotillion Drive, and is displayed in **Table 10**.

Table 10
Perimeter Park South DRI
Projected 2012 No-Build Intersection Queues
(for informational purposes)

	Intersection	Queue Length in Feet	
		EB Left	WB Through
1	I-285 WB Ramp/Cotillion Drive @ N. Peachtree Road		
	AM Peak	131’	969’
	PM Peak	498’	1342’

Maintaining existing signal timings and roadway geometry, two intersections are projected to operate below the acceptable Level of Service standards during the AM and PM peak hours. The intersection of North Peachtree Road at Cotillion Drive/I-285 WB Ramp is projected to operate at LOS F in both peak hours; therefore, improvements were identified to mitigate deficiencies in the operation of this intersection to reach LOS E conditions. In addition to not meeting the LOS standard, the westbound through and eastbound left-turn queues are projected to be significantly high. Adding a second westbound through lane and a second eastbound left-turn lane would improve the LOS and queues at this intersection. An additional through lane would require an additional westbound receiving lane just west of the intersection, and further right-of-way would be required west of the intersection to accommodate the additional eastbound left-turn lane. These improvements may be warranted; however, they are recommended subject to available right-of-way. Therefore, these improvements and the subsequent analysis are for informational purposes only.

Additionally, the intersection of North Peachtree Road at North Shallowford Road (south) is projected to operate at LOS E in the PM peak hour. The volumes projected at this intersection may warrant the installation of a traffic signal, which would improve the overall operation.

2012 No-Build recommended improvements (includes background growth but does not include Perimeter Park South DRI project traffic):

I-285 Westbound Ramps / Cotillion Drive at North Peachtree Road (Subject to available right-of-way to implement these improvements.)

- Install an additional westbound through lane.
- Install an additional eastbound left-turn lane, creating dual left-turn lanes.

North Shallowford Road (south) at North Peachtree Road

- Install a traffic signal, if warranted by projected volumes.

With the improvements listed above, the two intersections are expected to operate acceptably, as shown in **Table 11**. **Figure 9** displays projected 2012 No-Build Conditions.

Table 11
Perimeter Park South DRI
Projected 2012 No-Build Intersection Operation IMPROVED
(delay in seconds)

	Intersection	Control	AM Peak Hour		PM Peak Hour	
			LOS	v/c	LOS	v/c
1	I-285 WB Ramp/Cotillion Drive N. @ Peachtree Road	Signal	D (57.1)	1.07	D (46.6)	0.84
6	N. Peachtree Road @ N. Shallowford Road South	Side Street Stop Control	A (9.9)	0.59	C (24.3)	0.92

6.3 Projected 2012 Build Traffic

The traffic associated with the proposed development (Perimeter Park South) was added to the 2012 No-Build volumes. Additionally, trips associated with the existing uses as described earlier were removed from the study intersections using the distribution for the proposed uses. These Build volumes, along with existing roadway

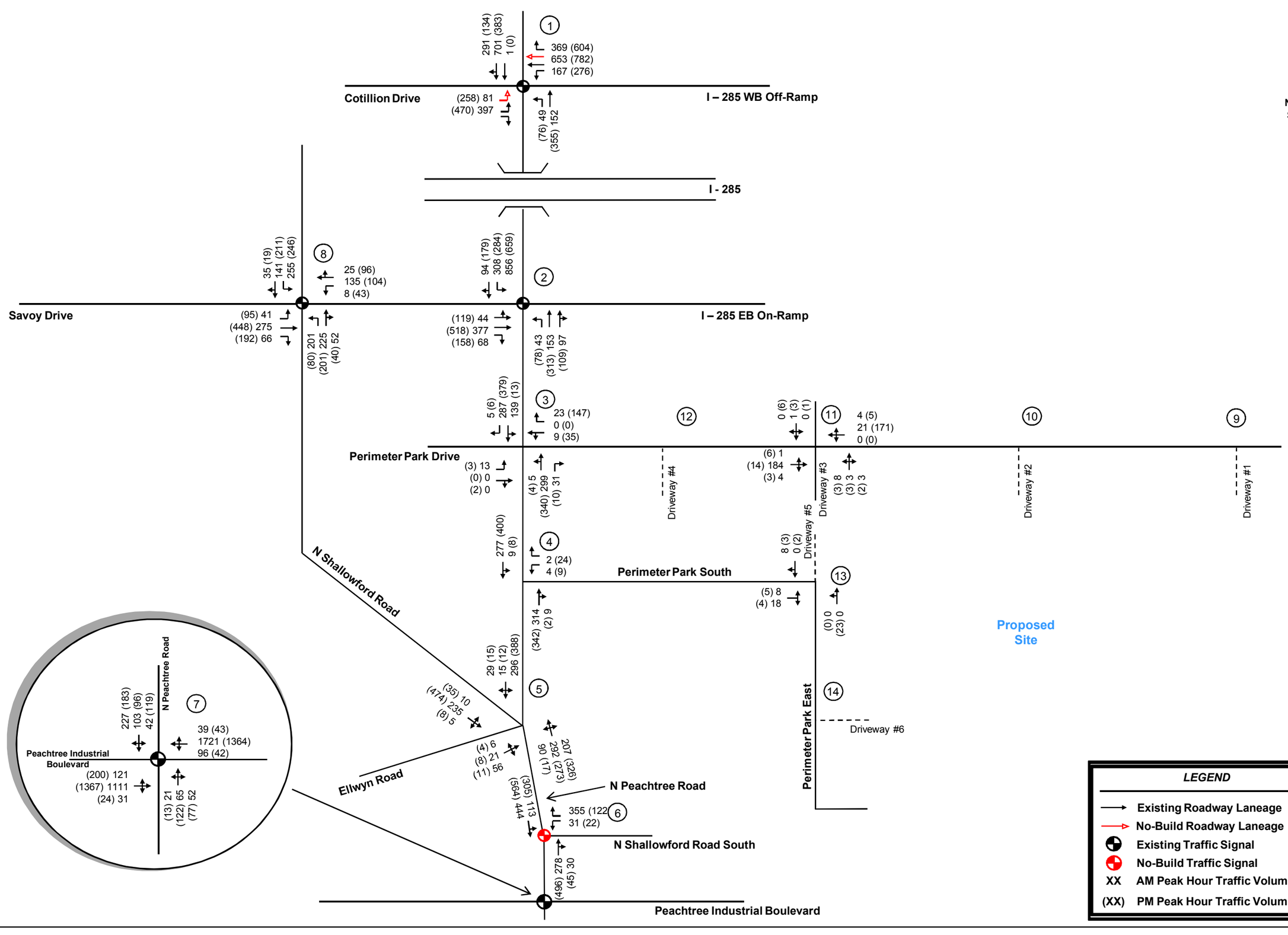


Figure 9

No-Build 2012 Conditions

Perimeter Park South Transportation Analysis

Kimley-Horn and Associates, Inc.

geometry and signal timings, were input into *Synchro 6.0* and an analysis of the projected 2012 Build Conditions was performed. The results of the analyses are displayed in **Table 12**. An analysis of the proposed site driveways was also performed and results are provided in the table.

Table 12
Perimeter Park South DRI
Projected 2012 Build Intersection Operation
(delay in seconds)

Intersection		Control	AM Peak Hour		PM Peak Hour	
			LOS	v/c	LOS	v/c
1	I-285 WB Ramp/Cotillion Drive @ N. Peachtree Road	Signal	F (119.7)	1.25	F (182.8)	1.15
2	I-285 EB Ramp/Savoy Drive @ N. Peachtree Road	Signal	D (44.1)	0.89	E (58.7)	0.92
3	N. Peachtree Road @ Perimeter Park Drive	Side Street Stop Control	F (200.1)	0.57	F (309.3)	1.58
4	N. Peachtree Road @ Perimeter Park South	Side Street Stop Control	B (14.1)	0.25	C (15.9)	0.18
5	N. Peachtree Road @ N. Shallowford Road North *	Side Street Stop Control	C (14.4)	0.22	C (19.6)	0.20
6	N. Peachtree Road @ N. Shallowford Road South	Side Street Stop Control	D (16.5)	0.58	F (84.6)	0.89
7	N. Peachtree Road @ Peachtree Industrial Blvd	Signal	E (57.9)	0.98	D (51.2)	0.92
8	N. Shallowford Road @ Savoy Drive	Signal	C (24.5)	0.55	C (30.6)	0.68
9	Perimeter Park Drive @ Driveway #1	Unsignalized	B (10.1)	0.06	A (9.9)	0.03
10	Perimeter Park Drive @ Driveway #2	Unsignalized	B (10.4)	0.04	B (10.2)	0.02
11	Perimeter Park Drive @ Perimeter Park South/Driveway #3	Unsignalized	B (13.5)	0.25	B (13.7)	0.25
12	Perimeter Park South @ Driveway #4	Unsignalized	B (12.7)	0.13	B (14.9)	0.26
13	Perimeter Park South/Driveway #5 @ Perimeter Park East	Unsignalized	A (9.8)	0.11	B (10.5)	0.28
14	Perimeter Park East @ Driveway #6	Unsignalized	A (8.8)	0.06	A (8.6)	0.03

Additionally, as in Existing and No-Build Conditions, a queue analysis was performed for the Build analysis at the intersection of North Peachtree Road at Cotillion Drive, and is displayed in **Table 13**.

Table 13 Perimeter Park South DRI Projected 2012 Build Intersection Queues (for informational purposes)			
Intersection		Queue Length in Feet	
		EB Left	WB Through
1	I-285 WB Ramp/Cotillion Drive @ N. Peachtree Road		
	AM Peak	131'	939'
	PM Peak	498'	1342'

Maintaining existing signal timings and roadway geometry, five intersections are projected to operate below the acceptable Level of Service standards during the AM and PM peak hours. The intersection of North Peachtree Road at Cotillion Drive/I-285 WB Ramp is projected to operate at LOS F in both peak hours; therefore, improvements were identified to mitigate deficiencies in the operation of this intersection to reach LOS E conditions. In addition to not meeting the LOS standard, the westbound through and eastbound left-turn queues are projected to be significantly high. Adding a second westbound through lane and a second eastbound left-turn lane would improve the LOS and queues at this intersection. An additional through lane would require an additional westbound receiving lane just west of the intersection, and further right-of-way would be required west of the intersection to accommodate the additional eastbound left-turn lane. These improvements may be warranted; however, they are recommended subject to available right-of-way. Therefore, these improvements and the subsequent analysis are for informational purposes only.

The intersection of North Peachtree Road at Savoy Drive/I-285 EB Ramp is projected to operate at LOS E during the PM peak hour; however, optimizing the timing splits at this intersection would improve the LOS without any physical changes to the geometry.

The intersection of North Peachtree Road at Perimeter Park Drive, adjacent to the development, is projected to operate at LOS F during both peak hours. The volumes projected at this intersection may warrant the installation of a traffic signal, which would improve the overall operation.

The intersection of North Peachtree Road at North Shallowford Road (south) is projected to operate at LOS F during the peak hour. The volumes projected at this intersection may warrant the installation of a traffic signal, which would improve the overall operation.

Finally, the intersection of North Peachtree Road at Peachtree Industrial Boulevard is projected to operate at LOS E during the AM peak hour; however, optimizing the timing splits at this intersection would improve the LOS without any physical changes to the geometry.

2012 Build recommended improvements (includes the Perimeter Park South DRI project traffic):

I-285 Westbound Ramps / Cotillion Drive at North Peachtree Road (Subject to available right-of-way to implement these improvements.)

- Install an additional westbound through lane.
- Install an additional eastbound left-turn lane, creating dual left-turn lanes.

I-285 Eastbound Ramps / Savoy Drive at North Peachtree Road

- Optimize signal timing splits to improve PM peak hour.

Perimeter Park Drive at North Peachtree Road

- Install a traffic signal, if warranted.

North Shallowford Road (south) at North Peachtree Road

- Install a traffic signal, if warranted.

Peachtree Industrial Boulevard at North Peachtree Road

- Optimize signal timing splits to improve AM peak hour.

With the improvements listed above, the five intersections are expected to operate acceptably, as shown in **Table 14**. **Figure 10** displays projected 2012 Build Conditions.

Table 14
Perimeter Park South DRI
Projected 2012 Build Intersection Operation IMPROVED
(delay in seconds)

	Intersection	Control	AM Peak Hour		PM Peak Hour	
			LOS	v/c	LOS	v/c
1	I-285 WB Ramp/Cotillion Drive @ N. Peachtree Road	Signal	E (62.4)	0.94	D (54.7)	0.94
2	I-285 EB Ramp/Savoy Drive @ N. Peachtree Road	Signal	--	--	D (47.1)	0.92
3	N. Peachtree Road @ Perimeter Park Drive	Signal	A (7.3)	0.41	A (8.2)	0.47
6	N. Peachtree Road @ N. Shallowford Road South	Signal	B (10.7)	0.63	D (38.1)	1.0
7	N. Peachtree Road @ Peachtree Industrial Blvd	Signal	D (53.9)	0.93	--	--

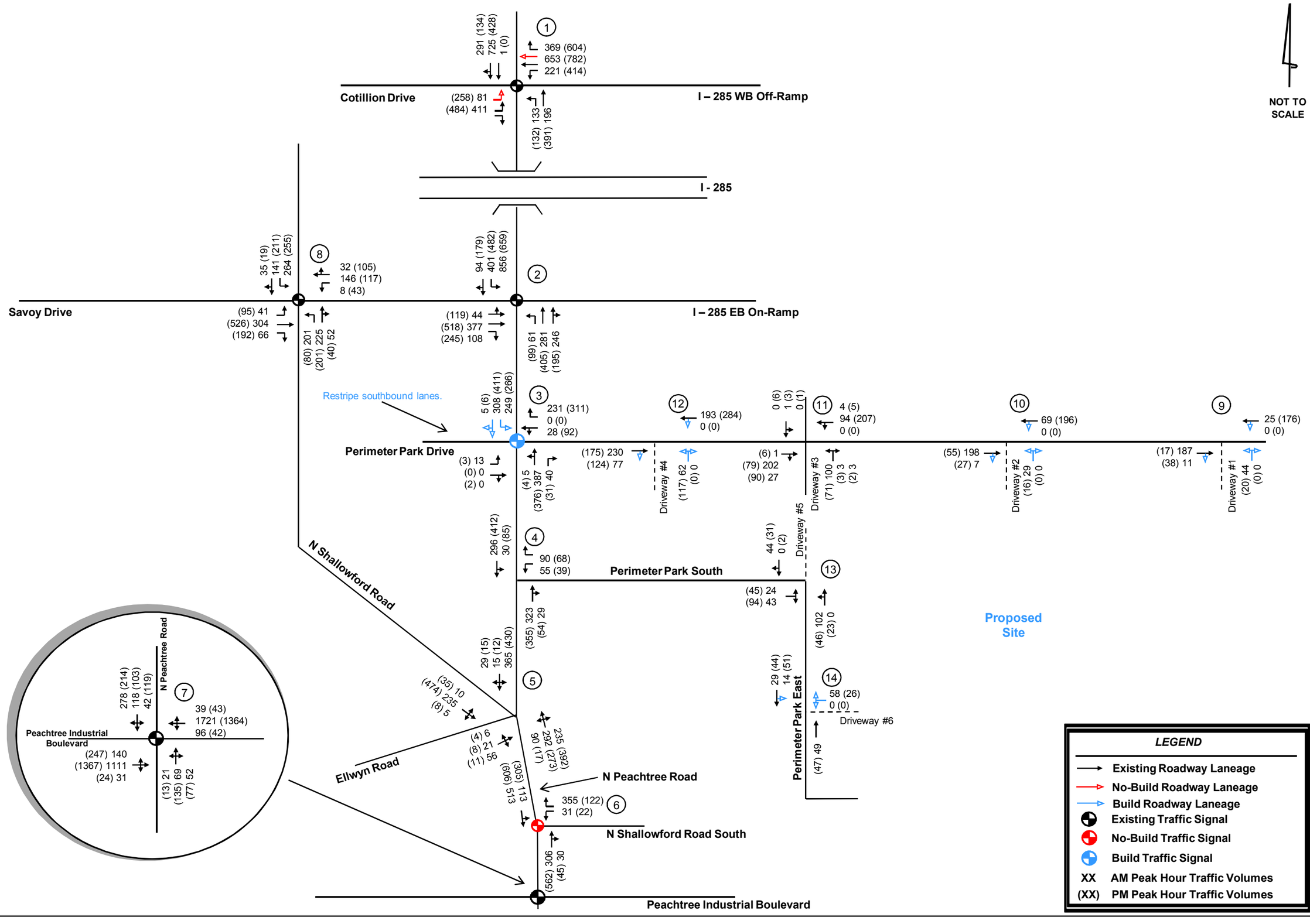


Figure 10

Build 2012 Conditions

Perimeter Park South Transportation Analysis

Kimley-Horn and Associates, Inc.

7.0 IDENTIFICATION OF PROGRAMMED PROJECTS

The Atlanta Regional Commissions' (ARC) Envision6 Regional Transportation Plan (RTP), the ARC's FY 2008-2013 Transportation Improvement Plan (TIP), the GDOT State Transportation Improvement Program (STIP), and the GDOT Construction Work Program (CWP) were all used as resources for future roadway and intersection projects in the vicinity of the proposed site. Area projects are displayed in **Table 15** and shown graphically in **Figure 11**. Descriptions of the projects are included in the Appendix.

Table 15
Perimeter Park South DRI
Programmed Improvements

2012	**DK-AR-219A**	I-285 North from SR 400 to North Shallowford Road – Includes Ashford-Dunwoody Road Interchange.
2012	**DK-AR-BP052** **STIP 0002410**	SR 141 (Peachtree Industrial Boulevard) From McGaw Drive to N. Peachtree Road North – Pedestrian Facility.
2015	**AR-H-300** **STIP 0001758**	I-285 North HOV Lanes from I-75 North in Cobb County to I-85 North in DeKalb County
2020	**AR-901A**	I-285 North Bus Rapid Transit (BRT) from Perimeter Center Area to Doraville MARTA Station.
2020	**AR-901B**	I-285 North Bus Rapid Transit (BRT) from Perimeter Center Area to Doraville MARTA Station.
N/A	**STIP 0002799**	Chamblee-Dunwoody Road from Clairview/Cumberland to Buford Highway.
N/A	**CWP 0006982**	Chamblee-Dunwoody Road from Clairview/Cumberland to Buford Highway.

Kimley-Horn and Associates, Inc.	Perimeter Park South DRI Transportation Analysis	Programmed Improvements	Figure 11

8.0 INGRESS/EGRESS ANALYSIS

Four site driveways currently exist along Perimeter Park Drive and two exist along Perimeter Park South/East. Perimeter Park East is a public road that terminates near the south side of the development. The proposed site driveways will be in the general vicinity of the existing driveways. Driveway #1 is located on the east side of the property and provides access to some of the residential units. Driveway #2 is located approximately 560 feet west of Driveway #1, and Driveway #3 is located approximately 560 feet west of Driveway #2. Driveway #2 provides primarily residential access, while Driveway #3 provides access to residential, office, and retail uses. Driveway #4 provides access to the retail/restaurant uses primarily and is located approximately 115 feet west of Driveway #3 and 160 feet east of North Peachtree Road. Driveway #5 is intended to replace a piece of Perimeter Park South and provides access to residential, office, and retail uses. Driveway #6 is located approximately 130 feet south of Driveway #5 on Perimeter Park East and provides access to the residential component of the property. Perimeter Park East continues to the south and east, becomes a new public roadway, and provides access to the other residential driveways for the property. Since the traffic along Perimeter Park Drive, Perimeter Park South, and Perimeter Park East is minimal, negligible delay is projected at the driveways.

9.0 INTERNAL CIRCULATION ANALYSIS

The proposed redevelopment will generate trips between the residential, retail, restaurant, and office uses. The internal parking and shared driveways connect all of the uses, and will provide connectivity for trips internal to the site. Using the *ITE Trip Generation Handbook, June 2004* as a reference, approximately 11.11% of the gross daily trips will be internal and approximately 9.92% of the gross PM peak hour trips will be internal.

10.0 COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The DeKalb County's Land Use Plan designates this area as a Highway Business Corridor.

11.0 NON-EXPEDITED CRITERIA

11.1 Vehicle Miles Traveled

The following **Table 16** displays the reduction in traffic generation due to internal capture and alternative mode reductions.

Table 16
Perimeter Park South DRI
Trip Reductions

	Build-out Total
Daily Gross Trip Generation	9,036
(-) Mixed-use reductions (internal capture)	-1,004
(-) Alternative modes	-162
(-) Pass-by	-1,185
Net Trips	6,685

11.2 Transportation and Traffic Analysis

11.2.1 Planned and Programmed Improvements

The proposed project is not anticipated to preclude any transportation infrastructure improvement projects as identified by the City of Atlanta.

11.2.2 Preserving Regional Mobility

This proposed project is located near the main interstates and arterials of Interstate 285 and Peachtree Industrial Boulevard via North Peachtree Road. MARTA also provides a bus route which travels immediately adjacent to the site along North Peachtree Road. This route connects to the North Springs and Chamblee MARTA rail stations.

11.2.3 Safe and Efficient Operations

All intersections within the development will provide in the future safe pedestrian crossing features, including crosswalks and curb extensions within this project.

11.2.4 Minimize Congestion

The recommendations as described in this report are targeted at reducing vehicular congestion to standards as described earlier in this report. Recommendations reflect the goal of vehicular congestion mitigation, while providing pedestrian and bicycle safety where needed.

11.3 Relationship of 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 (2012).

11.4 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 (2012).

12.0 ARC'S AIR QUALITY BENCHMARK

The proposed redevelopment is expected to consist of 744 total residential units (636 multi-family units and 108 townhomes), 40,000 SF of office space, 22,500 SF of retail space, and 9,000 SF of restaurant space. Because residential is the dominant use and the dwelling units per acre ratio is approximately 37.5 units per acre, the development meets the ARC criteria (1 b) for a 6% reduction.

Additionally, pedestrians will be able to access other uses within the proposed development via the parking decks and lots. This pedestrian network meets the ARC criteria (6 e) for a 5% reduction.

There are bus stops within ¼ mile of the project and meet the ARC criteria (4) for a 3% reduction.

The proposed development meets the ARC criteria for a total 14% VMT reduction. These reductions are displayed in **Table 17**.

Table 17
ARC VMT Reductions

Mixed-Use Projects where Residential is the dominant use	
Greater than 15 dwelling units/acre	-6%
Bike/ped networks in development that meet one Density 'target' and connect to adjoining uses	-5%
Project is located within ¼ mile of a bus stop	-3%
Total Reductions	**14%**