Belmont Hills

City of Smyrna, Cobb County, Georgia

GRTA DRI Review Package

Site Plan Elements
Traffic Impact Analysis
Area of Influence Analysis
DRI Review Criteria
Air Quality Benchmark Statement

Prepared for:

Halpern Enterprises, Inc.

Prepared by:

STREET SMARTS®
Planning • Transportation Engineering • Surveying

October 2007

3090 Premiere Parkway • Suite 200 • Duluth, Georgia 30097 • (770) 813-0882

TABLE OF CONTENTS

APPENDICES

Appendix A – Trip Generation Worksheet
Appendix B – Counts
Appendix C – Capacity Analyses: Existing Conditions
Appendix D – Programmed Improvements
Appendix E – Capacity Analyses: Future Background Conditions
Appendix F – Capacity Analyses: Future Year Total Conditions
Appendix G – Bus Schedule and Route Map

LIST OF TABLES

LIST OF FIGURES

\\10.10.30.205\projects 700\1500\1509-7 Belmont Hills DRI 1563\Report\draft Report.doc

EXECUTIVE SUMMARY

SITE INFORMATION: This report presents a variety of analyses and documentation for submittal as the major portion of the Georgia Regional Transportation Authority (GRTA) Development of Regional Impact (DRI) Review Package. This study presents an analysis of the traffic impact expected to result from a multi-use redevelopment located in the southwest quadrant of the intersection of Windy Hill Road and Atlanta Road in the City of Smyrna, Cobb County, Georgia. The Site is called Belmont Hills. The Site will be developed in one phase and the anticipated build-out year is 2013. The proposed redevelopment consists of a total of 776 residential condominiums/townhomes, 8 single-family homes, and 110,511 square feet of retail space on approximately 50 acres. The Site has 10 access points: three along Windy Hill Road, three along Atlanta Road and four along Fleming Street.

The Site is currently zoned as General Commercial, with a small portion on Fleming Street (five lots with three existing houses) currently zoned Residential. The Site is proposed to be included in a Mixed-Use Overlay of the General Commercial zoning classification. The future land use plan shows the land use to be Mixed Use and Low Density Residential.

SITE TRIPS: At Site Build-Out (Year 2013), the Site is expected to generate approximately 11,014 new vehicle trips per day (gross), but after internal capture, pass-by trips and alternate mode reduction are considered, it will generate approximately 7,980 new external trips (to/from the Site) per day. The new trips expected at the existing external intersections were reduced by the existing trips counted at the site driveways on each adjacent street. After this reduction, approximately 173 new external trips (14 in and 159 out) will be generated during the AM peak hour and approximately 71 new external trips (58 in and 13 out) will be generated during the PM peak hour.

Approximately 25% of the Site's retail and 15% of the residential trips are expected to use Atlanta Road from the north, about 40% of the retail and 30% of the residential are expected to use Atlanta Road from the south, 20% of the retail and 40% of the residential are expected to use Windy Hill Road from the east and the remaining 15% of the retail and 15% of the residential are expected to use Windy Hill Road from the west.

AREA OF INFLUENCE: The Site is located within an Area of Influence with employment opportunities such that approximately 100% of the persons who are reasonably anticipated to live in the Site and reasonably expected to be employed will have an opportunity to find employment within the Area of Influence.

FINDINGS AND CONCLUSIONS: The Site is not located in an area where the anticipated level of development and availability of infrastructure within the study network is such that the Site is reasonably anticipated to result in unplanned and poorly served development. As shown in the traffic impact analysis, the roadways and intersections serving the Site can be reasonably expected to operate at adequate Levels of Service (LOS).

No improvements were identified as being needed at any of the existing intersections for existing, future background, or future with project traffic volumes with the existing lane configurations and traffic controls when the signal timings were optimized at the intersections. The proposed Site will have three driveway access points onto Windy Hill Road, three on Atlanta Road and four on Fleming Street. Briefly, the driveways are as follows:

- Driveway 1 (Intersection #10): A full movement access point onto Windy Hill Road via East Retail Access Road.
- Driveway 2 (Intersection #11): A full movement, signalized access point onto Windy Hill Road via Middle Street.
- Driveway 3 (Intersection #12): A restricted, right-in/right-out access point onto Windy Hill Road via West Retail Access Road.
- Driveway 4 (Intersection #13): A restricted, right-in/right-out access point onto Atlanta Road via North Residential Access Road.
- Driveway 5 (Intersection #14): A full movement, signalized access point onto Atlanta Road via Central Parkway.
- Driveway 6 (Intersection #15): A full movement access point onto Atlanta Road via South Residential Access Road.
- Driveway 7 (Intersection #16): A full movement access point onto Fleming Street via Southeast Retail Access Road.
- Driveway 8 (Intersection #17): A full movement access point onto Fleming Street via East Residential Access Road.
- Driveway 9 (Intersection #18): A full movement access point onto Fleming Street via Middle Street.
- Driveway 10 (Intersection #19): A full movement access point onto Fleming Street via Central Residential Access Road.

In addition, train traffic in the vicinity of the site was researched. According to the GDOT Intermodal Rail Programs, up to 99 trains per day travel on the main CSX Atlanta to Chattanooga rail corridor near the site. On average, four trains per hour will cross Fleming Street/Hawthorne Avenue and Spring Street, just east of Atlanta Road. This number of crossings has a minimal impact on the study intersections during the peak hours.

PROJECT SUMMARY

Name and Number of DRI	Belmont Hills (DRI #1563)
Jurisdiction	City of Smyrna, GA
Local Development Approval Sought	Rezoning
Location	Northeastern section of the City of Smyrna
Uses and Intensities of Uses	776 Residential Condominiums/Townhomes, 8 Single-Family Detached Housing and 110,511 square feet of retail proposed
Project Phasing and Build-Out	2013 Build-Out
Trip Generation (ADT, AM Peak, PM Peak)	7,980 / 185 / 120

1. INTRODUCTION

This report presents a variety of analyses and documentation for submittal as the major portion of the Georgia Regional Transportation Authority (GRTA) Development of Regional Impact (DRI) Review Package for the proposed Belmont Hills redevelopment. Belmont Hills, when redeveloped, is proposed to be a mixed-use development located in the southwest quadrant of the intersection of Windy Hill Road and Atlanta Road in the City of Smyrna, Cobb County, Georgia. These analyses have been initiated in response to a rezoning from General Commercial and Residential to a Mixed-Use Overlay of the General Commercial zoning classification. Due to the size and characteristics of the Site, it qualifies for a DRI level of review and analysis per rules and guidelines established by GRTA, the Atlanta Regional Commission (ARC), and the Georgia Department of Community Affairs (DCA).

The proposed development consists of a total of 776 residential condominiums/townhomes, 8 single-family homes, and 110,511 square feet of retail space on approximately 50 acres. The traffic impact from the Site will be analyzed as a single phase build-out to be completed in the year of 2013.

2. SITE DESCRIPTION / SITE PLAN ELEMENTS

2.1 Project Description

The Site is located in the southwest quadrant of the intersection of Windy Hill Road and Atlanta Road in the northeast section of the City of Smyrna, Cobb County, Georgia. Figure 2-1 shows the Site orientation with respect to the surrounding communities and interstates and provides a more detailed Site Location Map showing the roadways in the immediate vicinity of the Site. Figure 2-2 shows an aerial photograph of the near vicinity of the Site.

2.2 Site Plan – Types and Amounts of Development

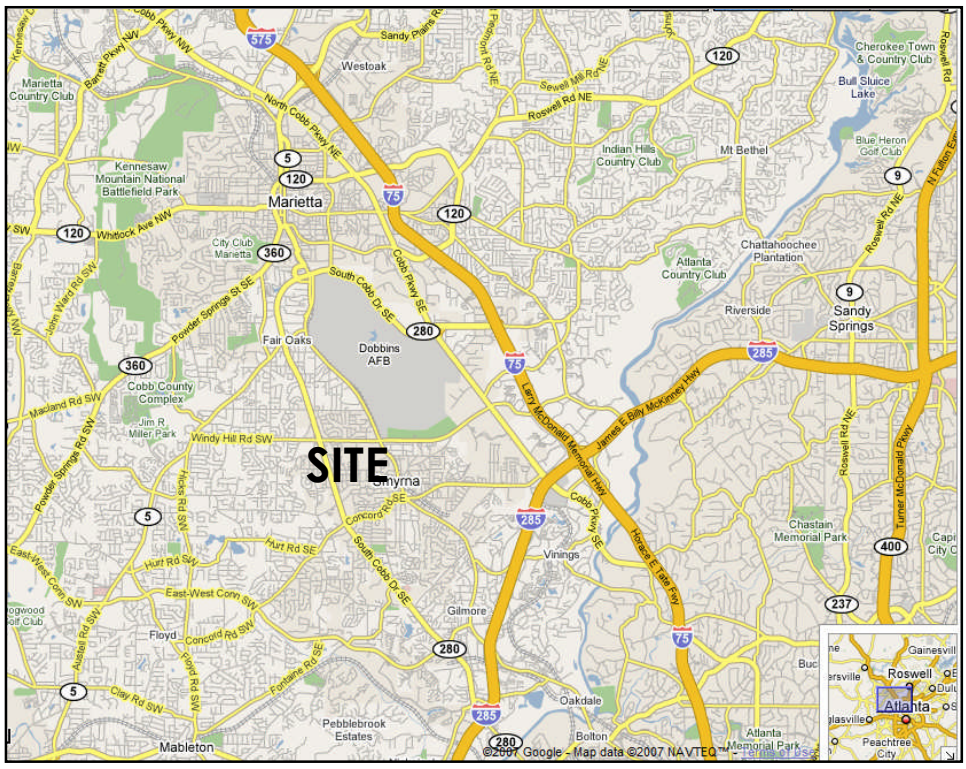
The Site is proposed to consist of 776 Condominiums/Townhomes, 8 single-family homes and 110,511 square feet of retail space. The Build-Out Year for the Site is 2013. The Site Plan is shown in Figure 2-3.

The land uses surrounding the Site are primarily Commercial, Institutional, Low Density Residential and High Density Residential.

2.3 Consistency with Adopted Comprehensive Plans

The existing zoning of the Site is Commercial and Residential according to the City of Smyrna Planning Department. The Site is proposed to be included in a Mixed-Use Overlay of the General Commercial zoning classification, which is consistent with the Mixed-Use and Low Density Residential uses shown in the City of Smyrna's Future Land Use Plan.

Figure 2-1. Site Orientation and Site Location Maps



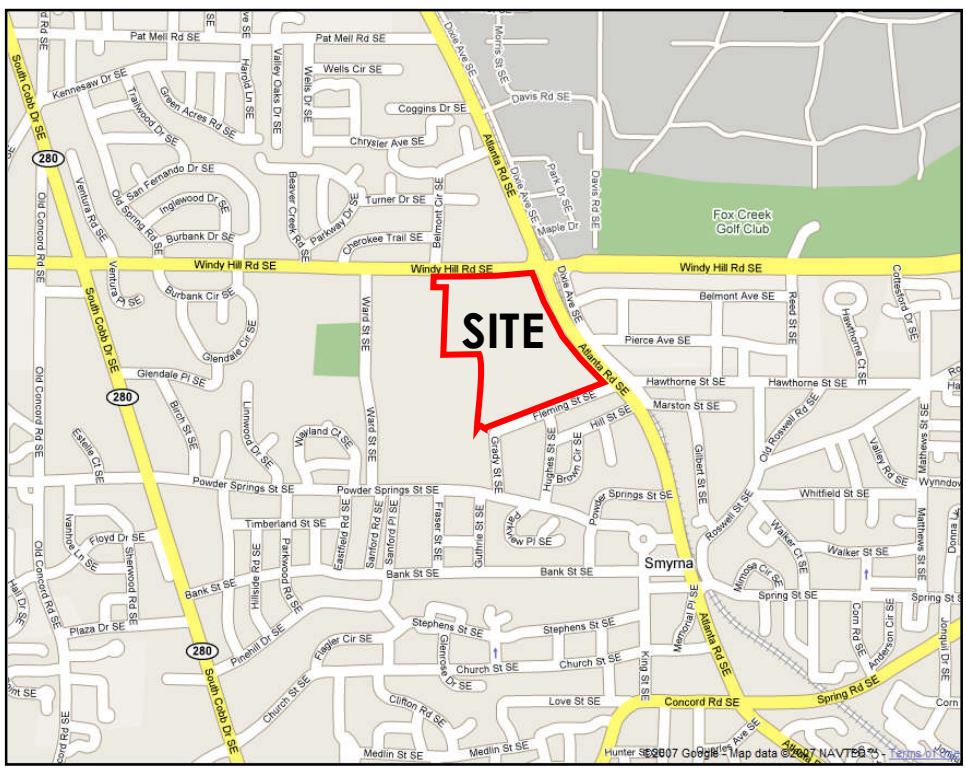
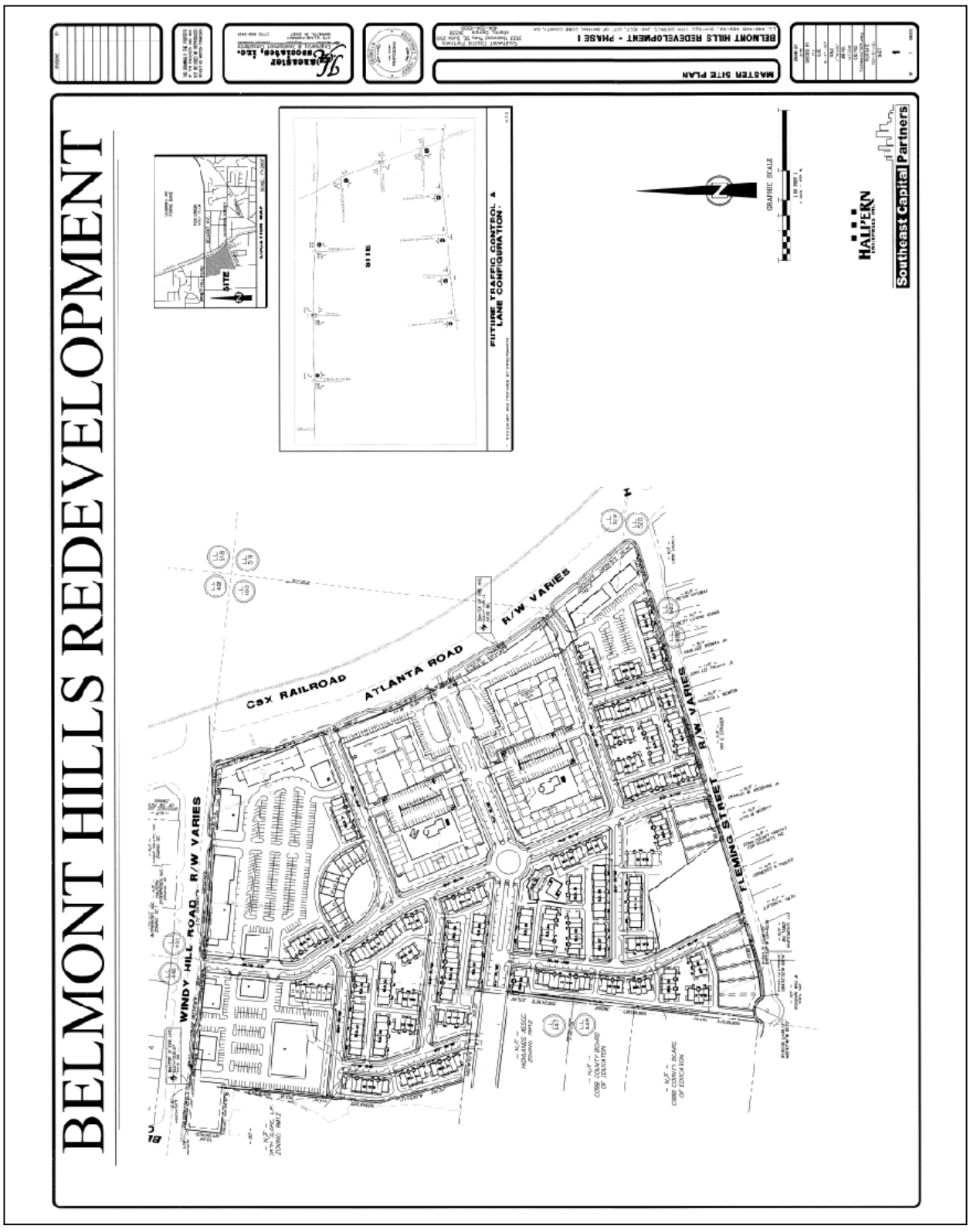


Figure 2-2. Site Aerial

Figure 2-3. Site Plan



2.4 Project Phasing Schedule

The traffic impact associated with the redevelopment of the Site will be analyzed in one phase, with a Build-Out Year of 2013.

2.5 Site Parking Requirements

The parking requirements for the Site, per the City of Smyrna, are:

- 4.5 spaces per 1000 square feet of commercial space;
- 1.75 spaces per multifamily dwelling unit; and
- 2 spaces per single family home and/or townhome.

Based on the City of Smyrna's requirements, the Belmont Hills development must provide 1,957 parking spaces. The parking that the Site will be providing is 1,976 spaces.

2.6 Site Access Points and Driveways

The City of Smyrna is the permitting agency for driveway access. The existing Site has six driveway access points on Windy Hill Road, seven on Atlanta Road and five on Fleming Street. The proposed Site will have three driveway access points onto Windy Hill Road, three on Atlanta Road and four on Fleming Street. Briefly, the driveways are as follows:

- Driveway 1 (Intersection #10): A full movement access point onto Windy Hill Road via East Retail Access Road.
- Driveway 2 (Intersection #11): A full movement, signalized access point onto Windy Hill Road via Middle Street.
- Driveway 3 (Intersection #12): A restricted, right-in/right-out access point onto Windy Hill Road via West Retail Access Road.
- Driveway 4 (Intersection #13): A restricted, right-in/right-out access point onto Atlanta Road via North Residential Access Road.
- Driveway 5 (Intersection #14): A full movement, signalized access point onto Atlanta Road via Central Parkway.
- Driveway 6 (Intersection #15): A full movement access point onto Atlanta Road via South Residential Access Road.
- Driveway 7 (Intersection #16): A full movement access point onto Fleming Street via Southeast Retail Access Road.
- Driveway 8 (Intersection #17): A full movement access point onto Fleming Street via East Residential Access Road.
- Driveway 9 (Intersection #18): A full movement access point onto Fleming Street via Middle Street.
- Driveway 10 (Intersection #19): A full movement access point onto Fleming Street via Central Residential Access Road.

2.7 Pedestrian and Transit Facilities

External to the Site, there are existing sidewalks on:

- Both sides of Atlanta Road; and
- Both sides of Windy Hill Road.

The developer is proposing on-site sidewalks linking all uses and buildings on the Site. The on-site sidewalks will connect to the external sidewalk network at multiple points. A trail system will be designed to provide access to all open space areas. The Kennesaw Mountain to Chattahoochee River Trail is an existing trail that parallels Atlanta Highway north of Windy Hill Road and is programmed to be extended south of Windy Hill Road to a point south of Concord Road / Spring Road.

There is an existing Cobb Community Transit (CCT) bus stop at the Site on Windy Hill Road at the existing Belmont Hills shopping center. This stop is served by CCT Route #15 and runs from Wildwood Office Park to the Marietta Transfer Center approximately every hour from 5 AM to 8 PM weekdays, every ½ hour from 6 AM to 9 AM and from 3 PM to 7 PM weekdays, and from 7 AM to 7 PM on Saturday.

3.1 Trip Generation

As noted above, the Site will consist of 776 Condominiums/Townhomes, 8 single-family homes and 110,511 square feet of retail space.

The number of vehicle trips expected from the Site was estimated. The trip generation was based on the Site Plan and information provided by the owner and their land planner.

The typical procedure for determining the traffic generated by a new development is to apply the rates or equations developed by the Institute of Transportation Engineers (ITE) as published in *Trip Generation, 7th Edition*, 2003, an ITE Informational Report, and related information in the *Trip Generation Handbook*, 2nd Edition an ITE Recommended Practice, 2004. The rates and equations in these documents are calculated from nationally collected data. The rates and equations were used to estimate the number of trips expected for the Site. The ITE Land Use Codes used in the analyses are shown in Table 3-1.

Internal capture rates, published in ITE's *Trip Generation Handbook*, 2nd Edition 2004, between retail and residential land uses were used to reduce trips based on the mixed-use nature of the Site.

Pass-by trips were also reduced from the trip generation for the shopping center. The pass-by rate was calculated using ITE's *Trip Generation Handbook*, 2nd Edition 2004. The pass-by rate was found to be 22%. GRTA caps pass-by trips at 10% of the average daily traffic (ADT) on the adjacent roadway. The limits test was performed to determine whether the pass-by trips that would be expected based on the rates given in ITE's *Trip Generation Handbook* would be more than 10% of the ADT for the adjacent roadway. It was determined that the pass-by trips were expected to be 2.5% of the Year 2013 projected ADT for Atlanta Road and Windy Hill Road.

Trip Generation has been determined for the Site Build-Out (Year 2013). The results of the trip generation are shown in Table 3-1. The Trip Generation and Internal Capture Worksheets are included in Appendix A.

Table 3-1. Site Build-Out Trip Generation

Land Use (ITE Code)	Intensity		Daily	AM Peak Hour		PM Peak Hour	
				In	Out	In	Out
Residential / Condominium / Townhouse (230)	776	units	3,664	45	221	216	107
Single-Family Housing (210)	8	ksf	102	4	11	7	4
Shopping Center (820)	111	ksf	7,248	101	65	321	348
Total New Trips			**11,014**	**150**	**297**	**544**	**459**
Internally Captured Trips		13%	-1,450	-14	-12	-79	-81
New Driveway Trips			**9,564**	**136**	**285**	**465**	**378**
Retail Pass-By Trips		22%	-1,422	n/a	n/a	-62	-64
New External Trips			**8,142**	**136**	**285**	**403**	314
Alternate Mode Reduction		2%	-162	-3	-6	-8	-6
New External Vehicular Trips			**7,980**	**133**	**279**	**395**	**308**
Existing Driveway Trips Replaced			n/a	-119	-120	-337	-295
Net Total New Site Generated Trips			**7,980**	**14**	**159**	**58**	**13**

3.2 Trip Distribution and Traffic Assignment

For the purposes of developing the residential land use trip distribution, a radius of fifteen miles was used with the assumption that the vast majority of home to work trips will be satisfied within that fifteen mile radius. For the retail land use trip distribution, a three-mile radius was used to account for the other shopping opportunities in the immediate area.

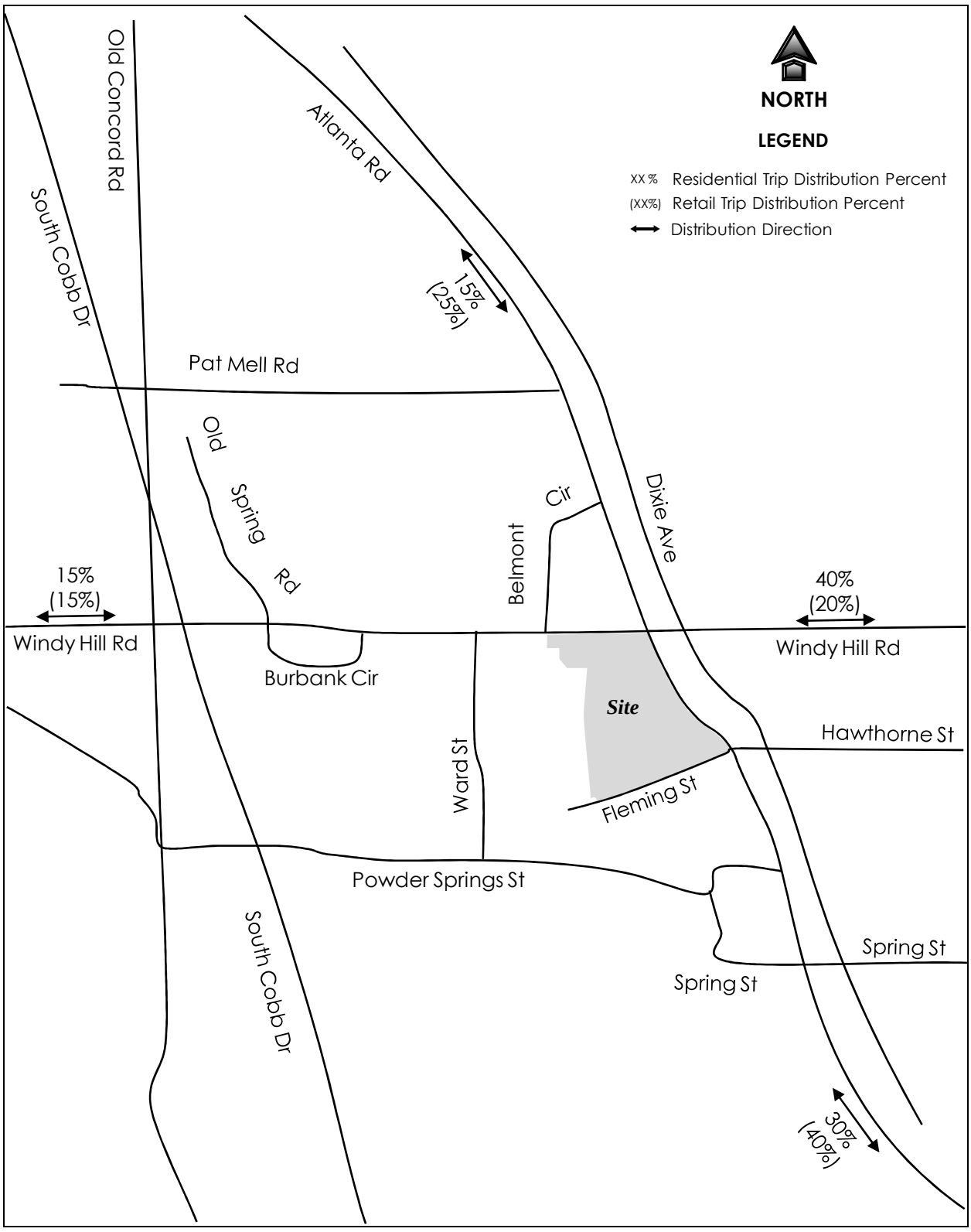
The trip distribution for the Site was calculated using Census data with the GIS software *Maptitude*.

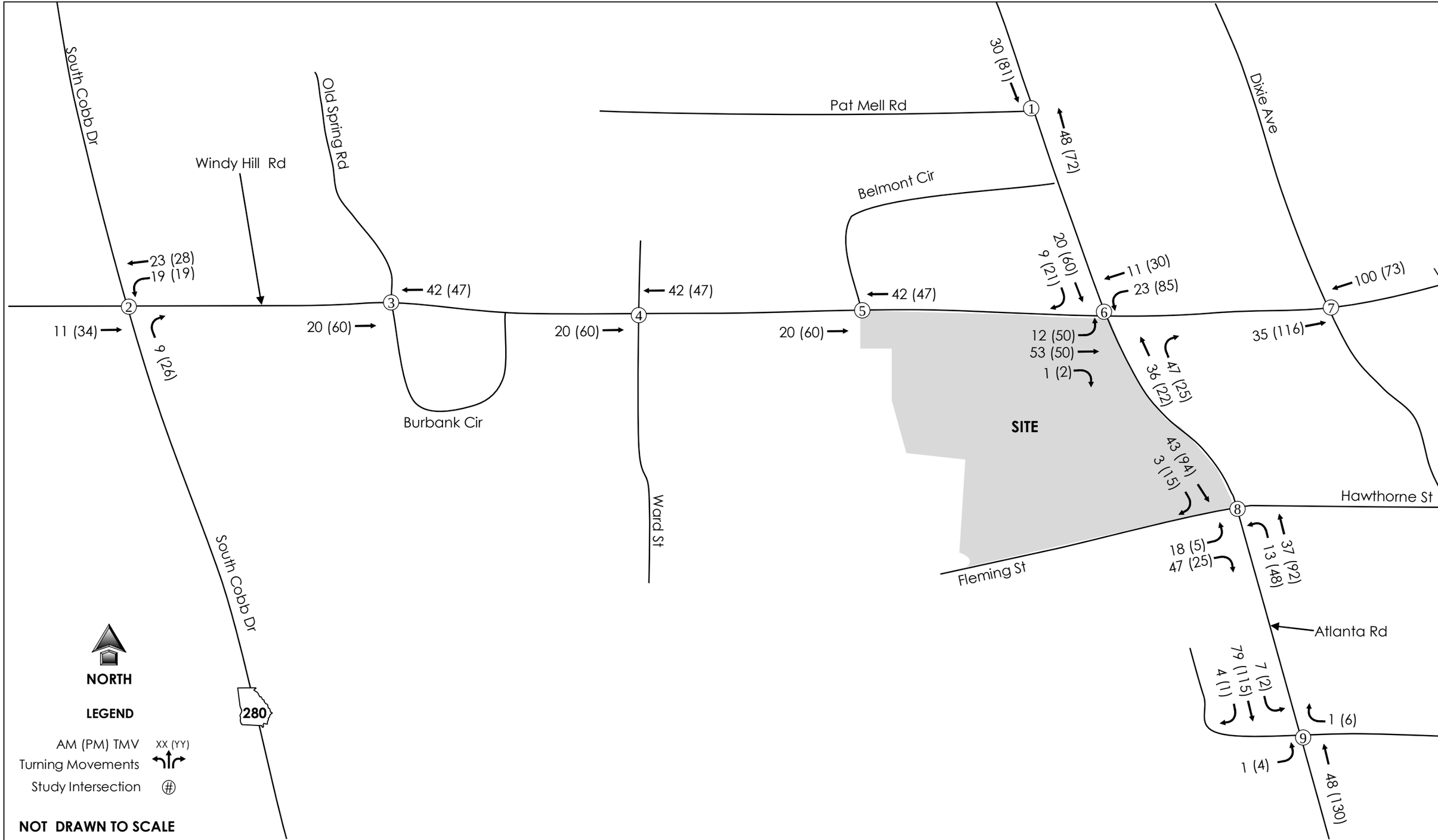
The trip distribution for the Site, in its simplest terms, is as follows:

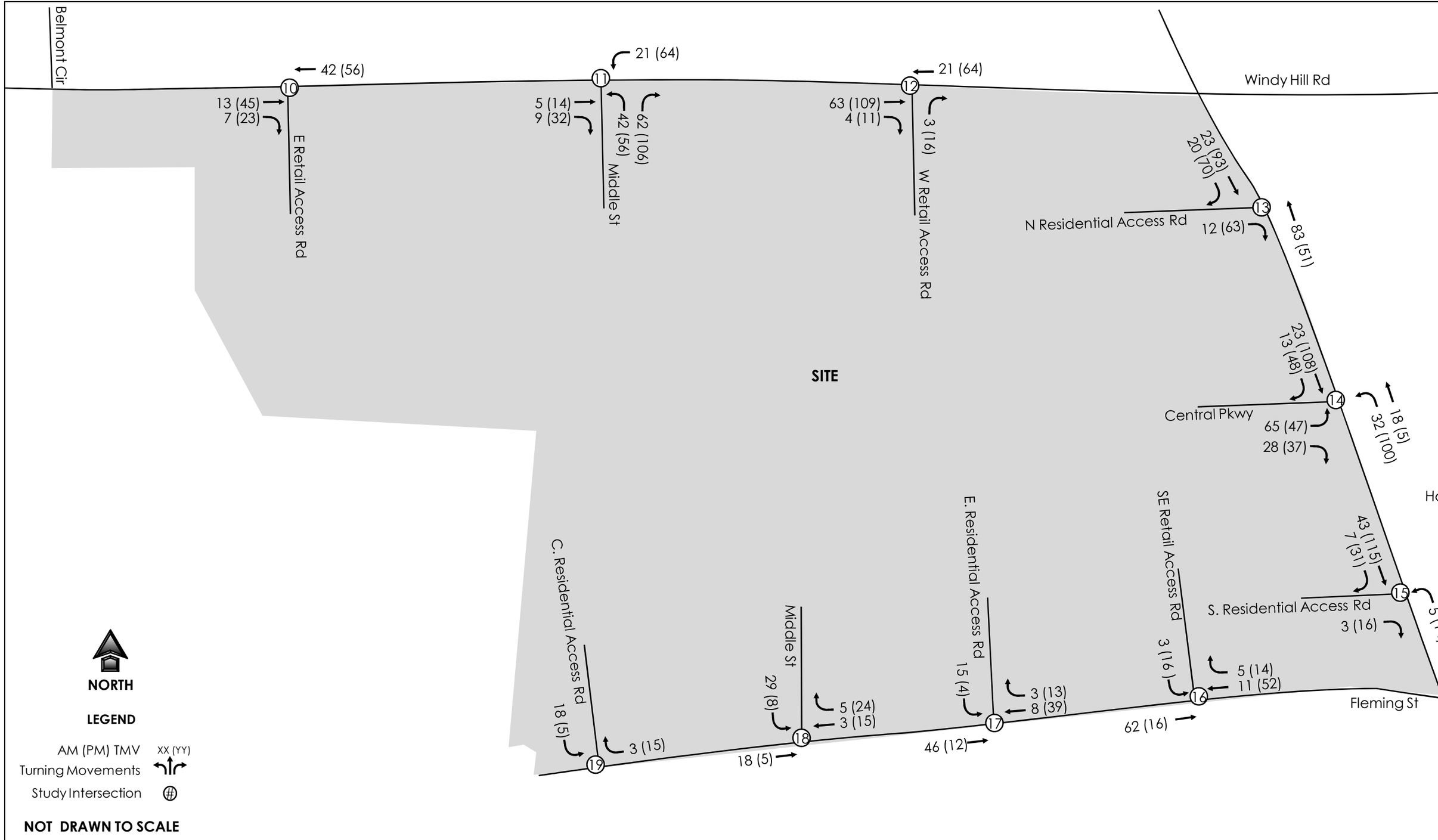
- From the north on Atlanta Road – 25% Retail and 15% Residential
- From the south on Atlanta Road – 40% Retail and 30% Residential
- From the east on Windy Hill Road – 20% Retail and 40% Residential
- From the west on Windy Hill Road – 15% Retail and 15% Residential

The trip distributions developed for the Site are shown in Figure 3-1 for Site Build-Out (Year 2013). The appropriate distribution percentages were applied to the trips generated by the Site as shown in Table 3-1 for Site Build-Out (Year 2013), and the traffic volumes were assigned to the road network. The weekday AM and PM peak hour turning volumes expected at the study intersections from the Site are shown in Figure 3-2 for Site Build-Out (Year 2013).

Figure 3-1. Site Build-Out Trip Distribution




South Cobb Dr
Windy Hill Rd
Old Spring Rd
Pat Mell Rd
Belmont Cir
Dixie Ave
Burbank Cir
Ward St
Fleming St
Hawthorne St
Atlanta Rd
SITE
30 (81)
48 (72)
23 (28)
19 (19)
42 (47)
42 (47)
42 (47)
20 (60)
9 (21)
11 (30)
23 (85)
100 (73)
11 (34)
9 (26)
20 (60)
20 (60)
20 (60)
12 (50)
53 (50)
1 (2)
47 (25)
36 (22)
35 (116)
43 (94)
3 (15)
18 (5)
47 (25)
37 (92)
13 (48)
7 (2)
79 (115)
4 (1)
1 (6)
1 (4)
48 (130)
280
NORTH
LEGEND
AM (PM) TMV
Turning Movements
Study Intersection
XX (YY)
NOT DRAWN TO SCALE


Belmont Cir
Windy Hill Rd
42 (56)
21 (64)
21 (64)
10
11
12
13
14
15
16
17
18
19
13 (45)
7 (23)
E Retail Access Rd
5 (14)
9 (32)
42 (56)
62 (106)
Middle St
63 (109)
4 (11)
3 (16)
W Retail Access Rd
23 (93)
20 (70)
N Residential Access Rd
12 (63)
83 (51)
SITE
23 (108)
13 (48)
Central Pkwy
65 (47)
28 (37)
18 (5)
32 (100)
43 (115)
7 (31)
S. Residential Access Rd
3 (16)
SE Retail Access Rd
3 (16)
5 (14)
11 (52)
Fleming St
62 (16)
E. Residential Access Rd
15 (4)
3 (13)
8 (39)
46 (12)
C. Residential Access Rd
18 (5)
3 (15)
Middle St
29 (8)
5 (24)
3 (15)
18 (5)
NORTH
LEGEND
AM (PM) TMV XX (YY)
Turning Movements
Study Intersection
NOT DRAWN TO SCALE

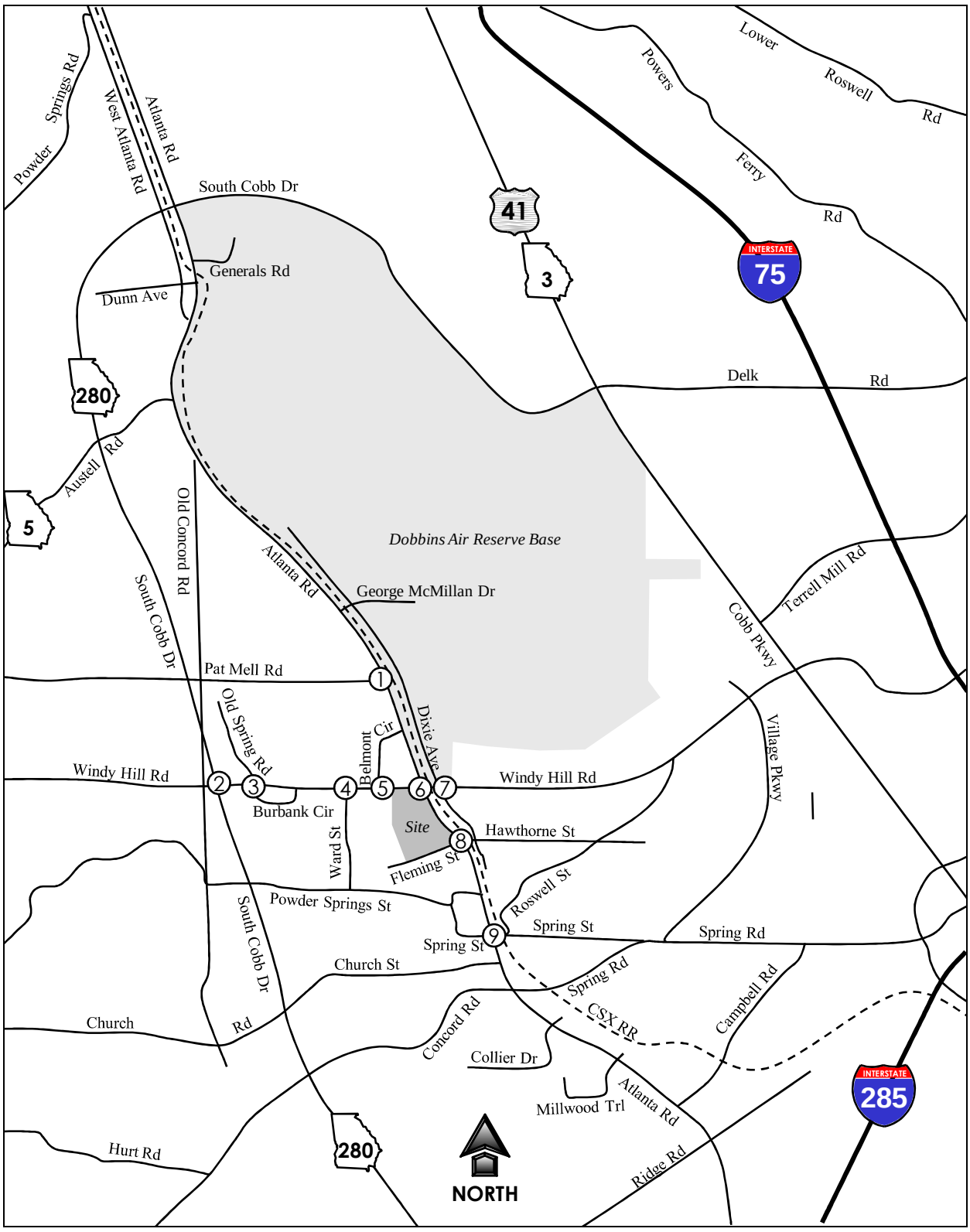
4. IDENTIFICATION OF THE STUDY NETWORK

An early step in the GRTA DRI Non-Expedited Review Process is the determination of the Study Network utilizing the 7% Rule. The 7% Rule requires study of each roadway segment that is impacted to determine if traffic from the Site consumes 7% or more of the Service Volume (traffic volume at a specific Level of Service (LOS)) of that roadway segment. LOS D is generally used as a default value for urban areas (LOS C may be used as a default in more rural areas). The LOS standard for the City of Smyrna is assumed to be LOS D.

After consultation with GRTA, the following intersections were agreed upon for investigation as part of the Traffic Impact Analysis. Figure 4-1 shows the location of the study intersections.

- All ten Site driveway access points;
- Atlanta Road at Pat Mell Road;
- Windy Hill Road at South Cobb Drive;
- Windy Hill Road at Old Spring Road/Burbank Circle;
- Windy Hill Road at Ward Street;
- Windy Hill Road at Belmont Circle;
- Windy Hill Road at Atlanta Road;
- Windy Hill Road at Dixie Avenue;
- Atlanta Road at Fleming Street/Hawthorne Avenue; and
- Atlanta Road at Spring Street.

Figure 4-1. Location of Study Intersections



5. CAPACITY ANALYSIS METHODOLOGY

5.1 Level of Service Standards

Operating conditions at intersections and roadway segments are evaluated in terms of Levels of Service (LOS). For the GRTA DRI process, the City of Smyrna's LOS Standards for the roadways in the Study Area are assumed to be LOS D. Therefore, LOS A through D are considered to be adequate peak hour operations, and LOS E and F are considered inadequate peak hour conditions. It is desirable, after new development has been put in place, that no less than LOS D be maintained. However, if a specific location operates at LOS E or F under existing traffic conditions, then GRTA may find as acceptable, (after background traffic and also after the Site's traffic has been added to the specific location), a return to LOS E.

5.2 Intersection Capacity Analysis Methodology

Capacity analyses of the study intersections were completed using procedures in the *Highway Capacity Manual (HCM), 2000*. This is the usual methodology for the analysis of traffic conditions. The software program *Synchro 6* (a nationally recognized computer software package for analyzing capacities and Levels of Service) was used to perform the capacity analyses for the study intersections.

Levels of Service for signalized intersections are reported in composite fashion, i.e., one LOS for the entire intersection, and are presented in terms of average control delay. Individual turning movements at signalized intersections may experience inadequate LOS, even when those volumes are relatively low, while the intersection as a whole has an adequate LOS. This is because the major movements on the major roadway are given priority in assigning signal green time.

Traffic conditions at unsignalized intersections, with stop sign control on the minor street only, are evaluated for the minor street approach(es) and for the left turns from the major street. This is because the major street traffic is assumed to have no delay since there is no control (no stop sign). Inadequate Levels of Service for minor street approaches to unsignalized intersections are not uncommon, as the continuous flow traffic will always get the priority. For two-way stop controlled intersections, the *Highway Capacity Manual* does not calculate a composite Level of Service for the entire intersection.

Levels of Service for all-way STOP controlled intersections are reported both for study intersection movements, and in composite fashion, i.e., one LOS for the entire intersection, and are based on average control delay.

The *Highway Capacity Manual* Level of Service criteria for signalized and unsignalized intersections are shown in Table 5-1.

Table 5-1. Highway Capacity Manual Intersection LOS Criteria

Level of Service	Control Delay (seconds per vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10	≤ 10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	> 80	> 50

Source: Highway Capacity Manual, 2000.

6.1 Existing Roadway Facilities

To determine existing traffic conditions of the identified study roadway segments and study intersections in the area, an inventory was made of the major roads surrounding the Site. The physical and traffic control elements of each of the roadways, as well as the functional classification and other important elements for the study roadways, follows:

Atlanta Road runs southeast from the City of Marietta (as a continuation of Atlanta Street) to the City of Atlanta (as Marietta Street), intersecting with South Cobb Drive (State Route 280) and Austell Road (State Route 5) north of the site and with the East-West Connector/Cumberland Parkway and an interchange with I-285 south of the site. Atlanta Road has four lanes with a center two-way left turn lane. The posted speed limit is 45 mph with traffic signals at major intersections. Atlanta Road is classified as an Urban Collector Street. The main Atlanta to Chattanooga rail corridor runs approximately 100 feet east of Atlanta Road in the vicinity of the site. There are a limited number of at-grade crossings of the rail line to the east of Atlanta Road. Dixie Avenue is a two-lane road paralleling Atlanta Road approximately120 feet east of the rails in the vicinity of the site.

Belmont Circle is a two-lane undivided local roadway running north-south from a signalized intersection at Windy Hill Road to an unsignalized intersection of Atlanta Road, north of the site. The land uses along Belmont Circle are residential.

Burbank Circle/Old Spring Road is a two-lane undivided local roadway running north-south from a signalized intersection at Windy Hill Road to an unsignalized intersection of Burbank Drive, northwest of the site and an unsignalized intersection of Glendale Circle West of the site. The land uses along Burbank Circle/Old Spring Road are residential.

Fleming Street/Hawthorne Street is a two-lane local roadway running west from Atlanta Road to the rear entrance of a school parking lot and to the east to Spring Street/Roswell Road. Fleming Street forms the southern boundary of the site and continues as Hawthorne Street east of the signalized intersection at Atlanta Road via an at-grade rail crossing.

Ward Street is a four-lane undivided local roadway running north-south from Windy Hill Road to Powder Springs Street west of the site. The posted speed limit is 35 mph.

Spring Street/Roswell Street/Smyrna Roswell Road are two-lane local roadways that run east from a signalized intersection at Atlanta Road to intersect Windy Hill Road to the northeast and Spring Road to the east. The posted speed limit is 35 mph.

Pat Mell Road is a two-lane local roadway that runs west from a signalized intersection at Atlanta Road, intersects with South Cobb Drive, and continues to Austell Road. The posted speed limit is 35 mph.

South Cobb Drive runs east from I-75 as Delk Road to intersect with North Cobb Parkway, Atlanta Road, Austell Road, Windy Hill Road, and continue to an interchange with I-285 to

the south. South Cobb Drive has four to six lanes with a center two-way left turn lane in the vicinity of Atlanta Road and Windy Hill Road. The posted speed limit is 45 mph with traffic signals at major intersections. Atlanta Road is classified as an Urban Minor Arterial.

Windy Hill Road runs east from Austell Road (State Route 5) to an interchange with I-75, an intersection with Powers Ferry Road. Windy Hill Road has four lanes with left turn lanes at signalized intersections and a center two-way left turn lane except from Atlanta Road to Northwest Village Parkway, where there is a median. Windy Hill Road is classified as an Urban Minor Arterial. The posted speed limit west of the site is 40 mph and east of the site is 45 mph with traffic signals at major intersections. There is a grade-separated rail crossing approximately 100 feet east of Atlanta Road adjacent to the site.

Figure 6-1 shows the existing traffic controls and lane configurations at the study intersections.

6.2 Existing Traffic Volumes

After consultation with GRTA, ARC, and GDOT, it was determined that capacity analyses would be performed at the study intersections for the weekday AM peak hour and the weekday PM peak hour. For these two peak periods, turning movement counts were collected on Tuesday and Wednesday, September 11-12, 2007 at the following intersections:

- Atlanta Road at Pat Mell Road;
- Windy Hill Road at South Cobb Drive;
- Windy Hill Road at Old Spring Road/Burbank Circle;
- Windy Hill Road at Ward Street;
- Windy Hill Road at Belmont Circle;
- Windy Hill Road at Atlanta Road;
- Windy Hill Road at Dixie Avenue;
- Atlanta Road at Fleming Street/Hawthorne Avenue; and
- Atlanta Road at Spring Street.

Figure 6-2 shows the existing volumes at the study intersections for the weekday AM peak hour and the weekday PM peak hour.

Twenty-four-hour directional machine counts were collected on Wednesday, 12 September 2007, at the following locations:

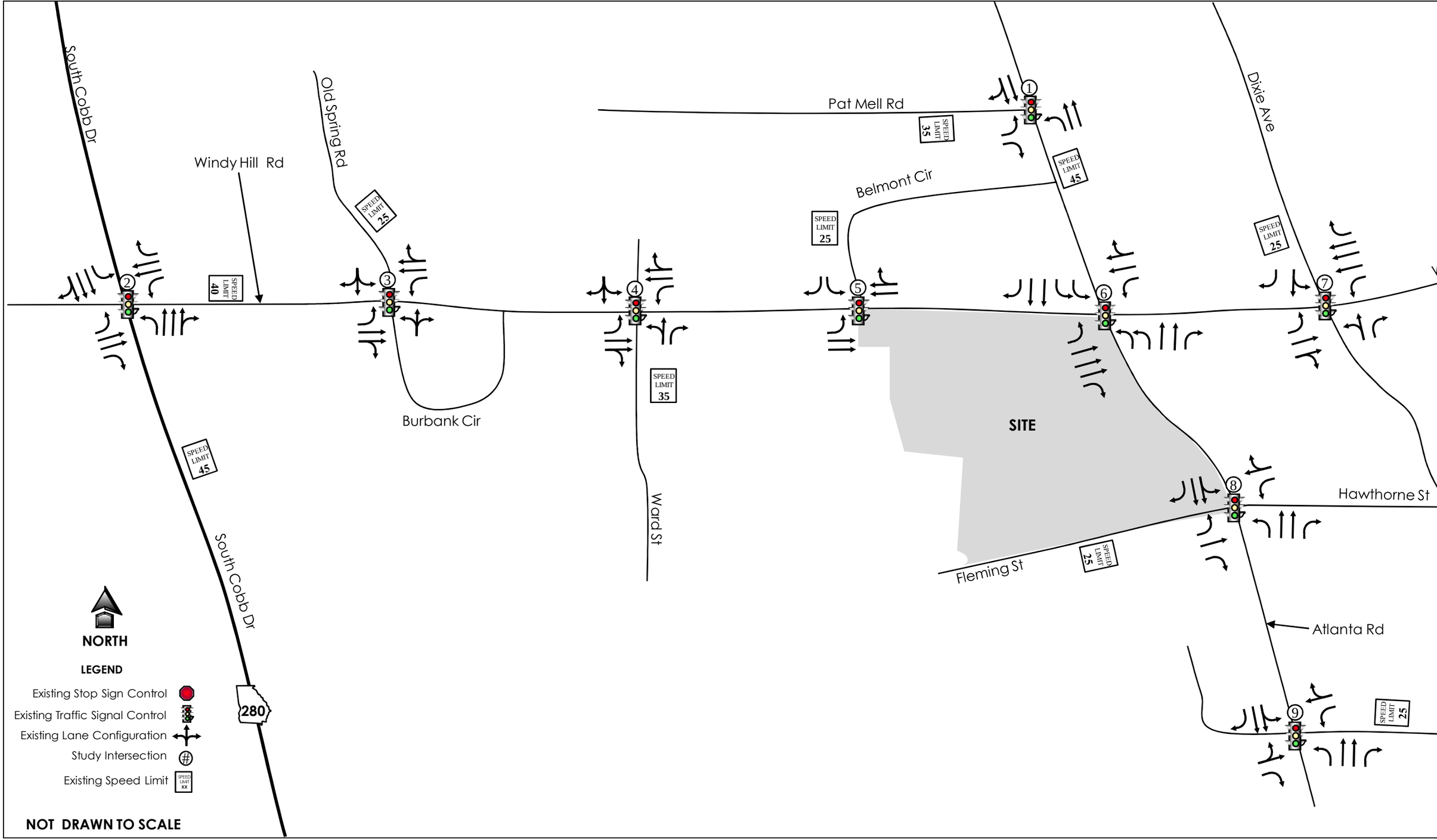
- Windy Hill Road west of Atlanta Road; and,
- Atlanta Road south of Windy Hill Road.

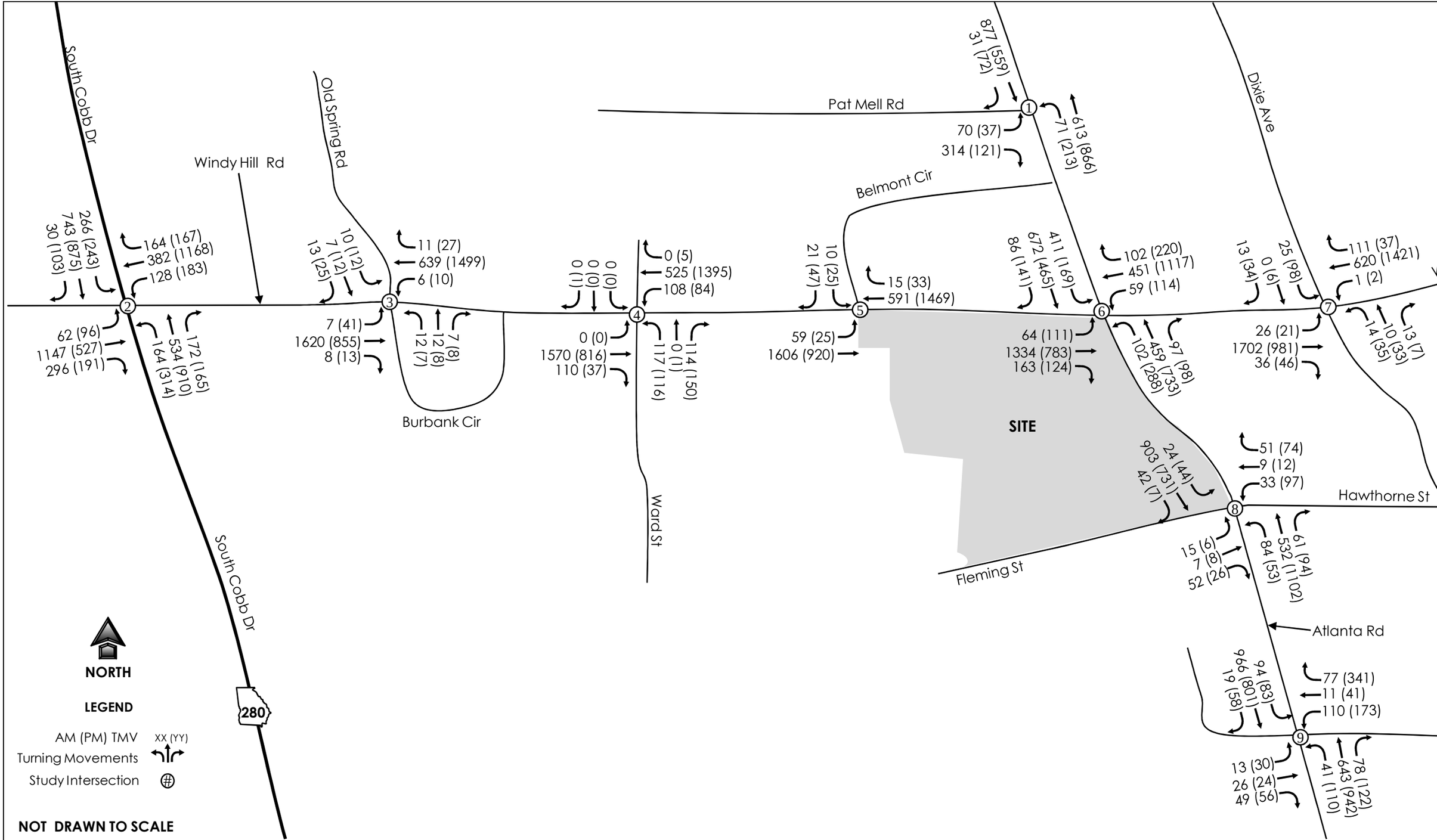
The total number of vehicles counted during the 24-hour period was 31,953 on Windy Hill Road and 21,809 on Atlanta Road.

Driveway vehicular turning movement counts for the existing Belmont Hill site had been previously collected on Thursday, April 14, 2006. By comparing the number of outbound trips

to the west on Fleming Street from the site to the number of inbound trips from southbound Atlanta Road into the site, we determined the likely number of cut-through trips and deducted these trips from the turning movement counts before reducing the number of new trips at the external intersections. The number of existing trips counted on each adjacent roadway was used to decrease the new turning movement volumes being produced by the redeveloped site on the same roadways only.

The count data is included in Appendix B.


South Cobb Dr
Windy Hill Rd
Old Spring Rd
Pat Mell Rd
Belmont Cir
Dixie Ave
Burbank Cir
Ward St
SITE
Hawthorne St
Fleming St
Atlanta Rd
South Cobb Dr
280
SPEED LIMIT 40
SPEED LIMIT 25
SPEED LIMIT 35
SPEED LIMIT 45
SPEED LIMIT 25
SPEED LIMIT 35
SPEED LIMIT 45
SPEED LIMIT 25
SPEED LIMIT 25
SPEED LIMIT 25
1
2
3
4
5
6
7
8
9
NORTH
LEGEND
Existing Stop Sign Control
Existing Traffic Signal Control
Existing Lane Configuration
Study Intersection
Existing Speed Limit
SPEED LIMIT XX
NOT DRAWN TO SCALE


South Cobb Dr
Windy Hill Rd
Old Spring Rd
Pat Mell Rd
Belmont Cir
Dixie Ave
Burbank Cir
Ward St
Fleming St
Hawthorne St
Atlanta Rd
SITE
South Cobb Dr
280
NORTH
LEGEND
AM (PM) TMV
Turning Movements
XX (YY)
Study Intersection
NOT DRAWN TO SCALE
266 (243)
743 (875)
30 (103)
164 (167)
382 (1168)
128 (183)
62 (96)
1147 (527)
296 (191)
534 (910)
164 (314)
172 (165)
10 (12)
7 (12)
13 (25)
7 (41)
1620 (855)
8 (13)
11 (27)
639 (1499)
6 (10)
12 (8)
12 (7)
7 (8)
0 (0)
0 (0)
0 (1)
0 (0)
1570 (816)
110 (37)
0 (5)
525 (1395)
108 (84)
117 (116)
0 (1)
114 (150)
877 (559)
31 (72)
70 (37)
314 (121)
613 (866)
71 (213)
10 (25)
21 (47)
15 (33)
591 (1469)
59 (25)
1606 (920)
411 (169)
672 (465)
86 (141)
64 (111)
1334 (783)
163 (124)
102 (220)
451 (1117)
59 (114)
459 (733)
102 (288)
97 (98)
25 (98)
0 (6)
13 (34)
26 (21)
1702 (981)
36 (46)
111 (37)
620 (1421)
1 (2)
10 (33)
14 (35)
13 (7)
24 (44)
903 (731)
42 (7)
51 (74)
9 (12)
33 (97)
15 (6)
7 (8)
52 (26)
61 (94)
532 (1102)
84 (53)
94 (83)
966 (801)
19 (58)
77 (341)
11 (41)
110 (173)
13 (30)
26 (24)
49 (56)
78 (122)
643 (942)
41 (110)

6.3 Intersection Capacity Analysis – Existing Conditions

Using the methodologies previously described, intersection Levels of Service were determined for the study intersections for Existing conditions. Table 6-1 presents the results of the intersection capacity analysis for Existing conditions. Printouts of these analyses are included in Appendix C.

Table 6-1. Intersection LOS – Existing

#	Intersection	Control	Peak Hour LOS (delay in sec/veh)	
			AM	PM
1	Pat Mell Rd & Atlanta Rd	Signal	B (12)	A (8)
2	Windy Hill Rd & S. Cobb Dr	Signal	D (43)	D (39)
3	Windy Hill Rd & Old Spring	Signal	D (43)	C (21)
4	Windy Hill Rd & Private Drive	Signal	B (18)	B (16)
5	Windy Hill & Belmont Cir	Signal	B (17)	B (17)
6	Windy Hill Rd & Atlanta Rd	Signal	C (29)	C (30)
7	Windy Hill Rd & Dixie Ave	Signal	B (14)	B (12)
8	Fleming St & Atlanta Rd	Signal	B (12)	B (16)
9	Spring St & Atlanta Rd	Signal	B (11)	B (17)

As can be seen from Table 6-1, the intersections operate at overall adequate Levels of Service for Existing conditions. It should be noted that train traffic in the vicinity of the site was researched. Based on information provided by the Georgia Department of Transportation Intermodal Rail Programs, up to 99 trains per day travel on the main CSX Atlanta to Chattanooga rail corridor near the site. On average, four trains per hour will cross Fleming Street/Hawthorne Avenue and Spring Street, just east of Atlanta Road. This number of crossings has a minimal impact on the study intersections during the peak hours.

6.4 Calculated Level of Service Standards

Based upon the results of the analysis of the Existing conditions, Table 6-2 presents the calculated Level of Service Standards for intersections that must be met when considering Future Background and Future Year Total conditions.

Table 6-2. Calculated Intersection LOS Standards

Intersection		AM Peak Hour LOS	PM Peak Hour LOS
#	Name		
1	Pat Mell Rd & Atlanta Rd	D	D
2	Windy Hill Rd & S. Cobb Dr	D	D
3	Windy Hill Rd & Old Spring	D	D
4	Windy Hill Rd & Private Drive	D	D
5	Windy Hill & Belmont Cir	D	D
6	Windy Hill Rd & Atlanta Rd	D	D
7	Windy Hill Rd & Dixie Ave	D	D
8	Fleming St & Atlanta Rd	D	D
9	Spring St & Atlanta Rd	D	D

7. PLANNED AND PROGRAMMED IMPROVEMENTS

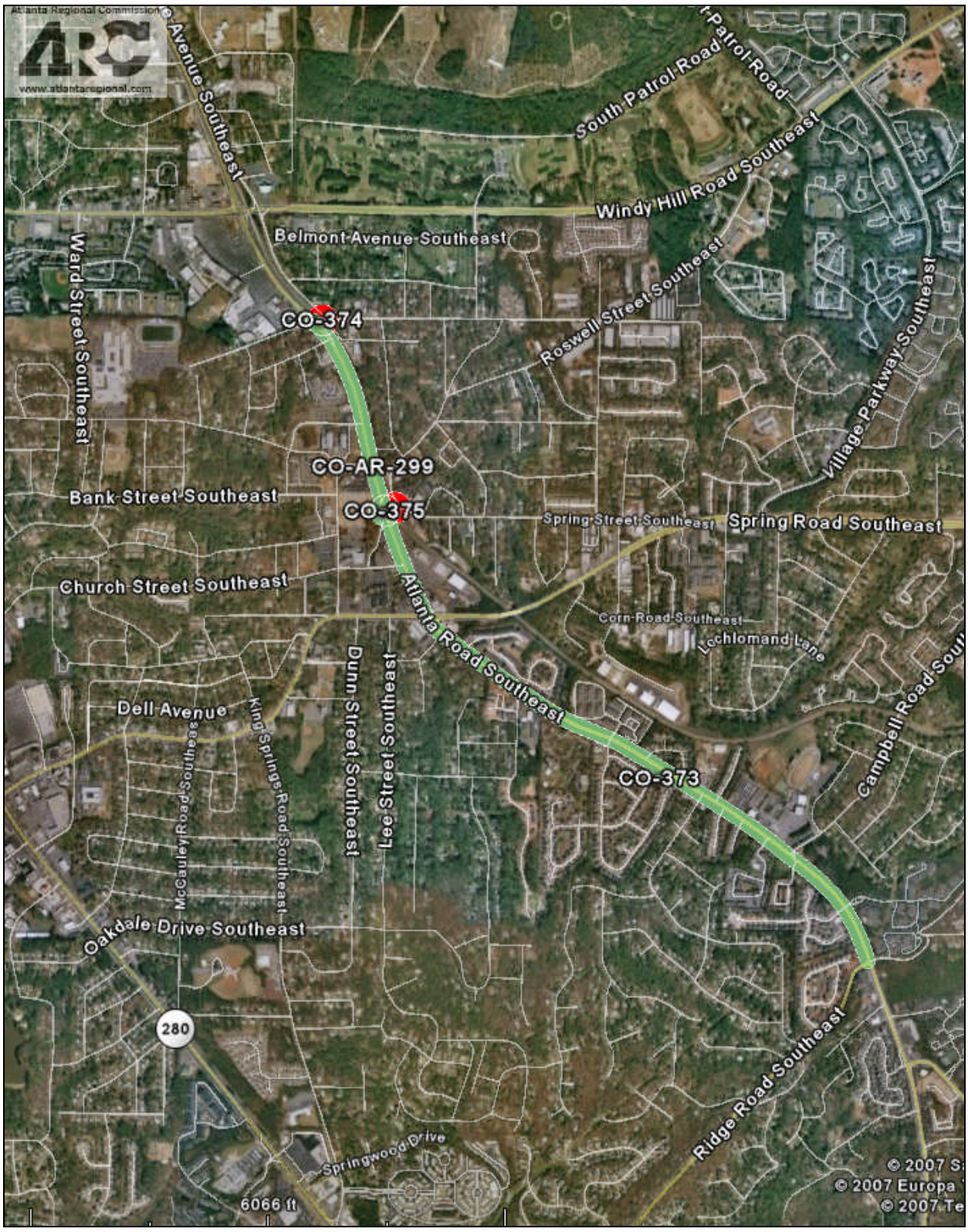
The local Transportation Improvement Program (TIP), the State Transportation Improvement Program (STIP), the Regional Transportation Plan (RTP), and the GDOT Construction Work Program have been researched to determine if there are any proposed transportation improvements, either programmed or planned, that would impact the Site. For identified projects, the opening-to-traffic dates, sponsors, costs of projects, funding sources, and logical termini are usually also identified. Detailed information about the programmed improvements is included in Appendix F.

The following improvements are scheduled to be completed by the Site Build-Out (Year 2013).

- CO-AR-299 – Atlanta Road from Concord Road to Fleming Street; Intersection improvements and multi-use path; Completion date is 2008; est. $1,955,401; Federal and Local Funding Sources.
- CO-373 – Atlanta Road from Spring Road / Concord Road to Ridge Road; Multi-use path; Completion Date is 2010; est. $1,250,000; Federal and Local Funding Sources.
- CO-374 – Railroad at Fleming Street / Hawthorne Avenue, Spring Street, and Nickajack Road crossings; Railroad quiet zones; Completion date is 2009; est. $1,250,000; Federal and Local Funding Sources.
- CO-375 – Spring Street; Pedestrian bridge over railroad; Completion date is 2010; est. $1,250,000; Federal and Local Funding Sources.

The programmed improvements are shown in Figure 7-1.

Figure 7-1. Programmed Improvements



8. FUTURE BACKGROUND CONDITIONS

8.1 Future Background Traffic Volumes

Between the time this study is performed and the Site is built out in Year 2013, the traffic volumes on the adjacent roadways are expected to increase. This is due to other development which will take place both in the study area by the Year 2013, as well as growth outside of it, whether or not the Site being studied is built. This growth is called background traffic growth. There are generally two components to background traffic growth:

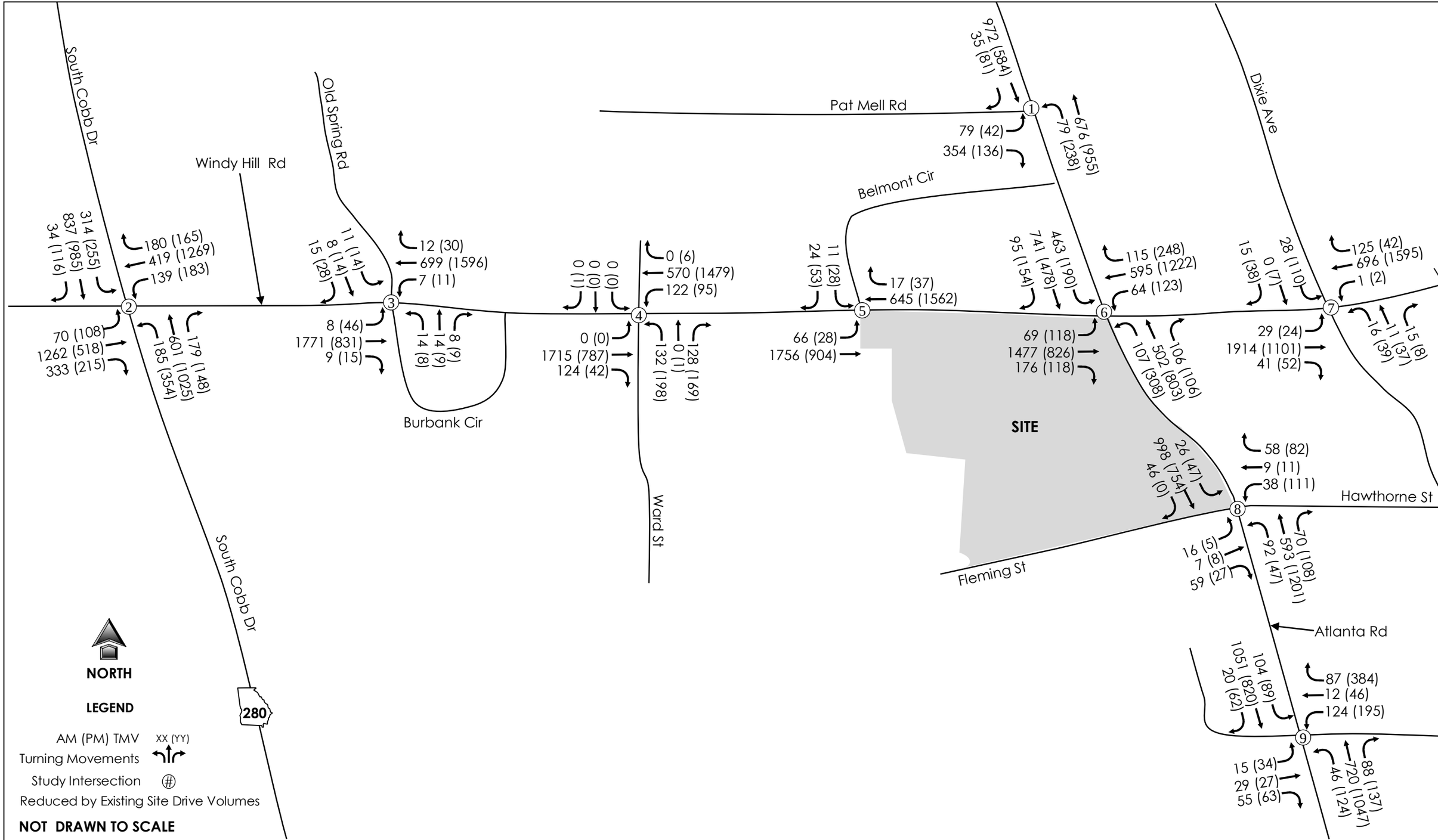
(a) growth close to the Site due to specific, identified developments already in the "pipeline" (that is, actual nearby developments already approved, or further along in the approval process, that can reasonably be expected to be built by Site Build-Out (Year 2013)), sometimes called "background development"; and

(b) general traffic growth along major roadways due to the expanding nature of the region, and to other non-specific development further from the Site, often simply referred to as "background growth". Growth of this nature can generally be determined by examining historic trends in the vicinity of the Site, and by applying those trends to the appropriate roadways.

There were no background developments identified close enough to the Site to be considered either before or in the same time frame as Site Build-Out (Year 2013).

Historical traffic volume trends on the study network were taken into account. Where available, the last six years (2000 – 2006) of historical Annual Average Daily Traffic (AADT) collected by GDOT were used to help develop traffic volume trends on the study area roadways. Based on the historical traffic volumes collected in the vicinity of the Site and after discussion with GRTA, a 2% annual traffic growth percentage was used.

The Future Background traffic volumes were developed by adding the background growth out to the Year 2013 to existing traffic. It should also be noted that site driveway trips produced by the existing Belmont Hills Shopping Center were reduced from 2013 future background traffic volumes. The reduced Future Background traffic volumes are shown in Figure 8-1.


South Cobb Dr
Windy Hill Rd
Old Spring Rd
Pat Mell Rd
Belmont Cir
Dixie Ave
Burbank Cir
Ward St
Hawthorne St
Fleming St
Atlanta Rd
South Cobb Dr
280
SITE
NORTH
LEGEND
AM (PM) TMV
XX (YY)
Turning Movements
Study Intersection
Reduced by Existing Site Drive Volumes
NOT DRAWN TO SCALE
314 (255)
837 (985)
34 (116)
180 (165)
419 (1269)
139 (183)
70 (108)
1262 (518)
333 (215)
185 (354)
601 (1025)
179 (148)
11 (14)
8 (14)
15 (28)
12 (30)
699 (1596)
7 (11)
8 (46)
1771 (831)
9 (15)
14 (8)
14 (9)
8 (9)
0 (1)
0 (0)
0 (0)
0 (0)
1715 (787)
124 (42)
0 (6)
570 (1479)
122 (95)
132 (198)
0 (1)
128 (169)
66 (28)
1756 (904)
11 (28)
24 (53)
17 (37)
645 (1562)
972 (584)
35 (81)
79 (42)
354 (136)
676 (955)
79 (238)
463 (190)
741 (478)
95 (154)
69 (118)
1477 (826)
176 (118)
115 (248)
595 (1222)
64 (123)
106 (106)
502 (803)
107 (308)
28 (110)
0 (7)
15 (38)
29 (24)
1914 (1101)
41 (52)
125 (42)
696 (1595)
1 (2)
15 (8)
11 (37)
16 (39)
26 (47)
998 (754)
46 (0)
58 (82)
9 (11)
38 (111)
16 (5)
7 (8)
59 (27)
70 (108)
593 (1201)
92 (47)
104 (89)
1051 (820)
20 (62)
87 (384)
12 (46)
124 (195)
15 (34)
29 (27)
55 (63)
88 (137)
720 (1047)
46 (124)

8.2 Intersection Capacity Analysis – Future Background Conditions

Using the methodologies previously described, intersection Levels of Service were determined for the study intersections for Future Background conditions. Table 8-1 presents the results of the intersection capacity analyses for Future Background traffic conditions, assuming existing lane configurations and traffic control. Printouts of these analyses are included in Appendix G.

Table 8-1. Intersection LOS – Future Background

#	Intersection	Control	Peak Hour LOS (delay in sec/veh)	
			AM	PM
1	Pat Mell Rd & Atlanta Rd	Signal	B (14)	A (8)
2	Windy Hill Rd & S. Cobb Dr	Signal	D (49)	D (53)
3	Windy Hill Rd & Old Spring	Signal	D (36)	C (27)
4	Windy Hill Rd & Private Drive	Signal	B (20)	B (17)
5	Windy Hill & Belmont Cir	Signal	B (17)	C (21)
6	Windy Hill Rd & Atlanta Rd	Signal	D (40)	D (40)
7	Windy Hill Rd & Dixie Ave	Signal	C (30)	B (12)
8	Fleming St & Atlanta Rd	Signal	B (12)	B (17)
9	Spring St & Atlanta Rd	Signal	B (12)	B (18)

As can be seen from Table 8-1, the intersections operate at overall adequate Levels of Service for Future Background conditions. It should be noted that train traffic in the vicinity of the site was researched. Based on information provided by the Georgia Department of Transportation Intermodal Rail Programs, up to 99 trains per day travel on the main CSX Atlanta to Chattanooga rail corridor near the site. On average, four trains per hour will cross Fleming Street/Hawthorne Avenue and Spring Street, just east of Atlanta Road. This number of crossings has a minimal impact on the study intersections during the peak hours.

The projected volumes for Site Build-Out were added to the Future Background traffic volumes to represent the total traffic expected in the area when the Site is complete. The Future Year Total traffic volumes are shown in Figures 9-1a and 9-1b.

9.1 Intersection Capacity Analysis – Future Year Total Conditions

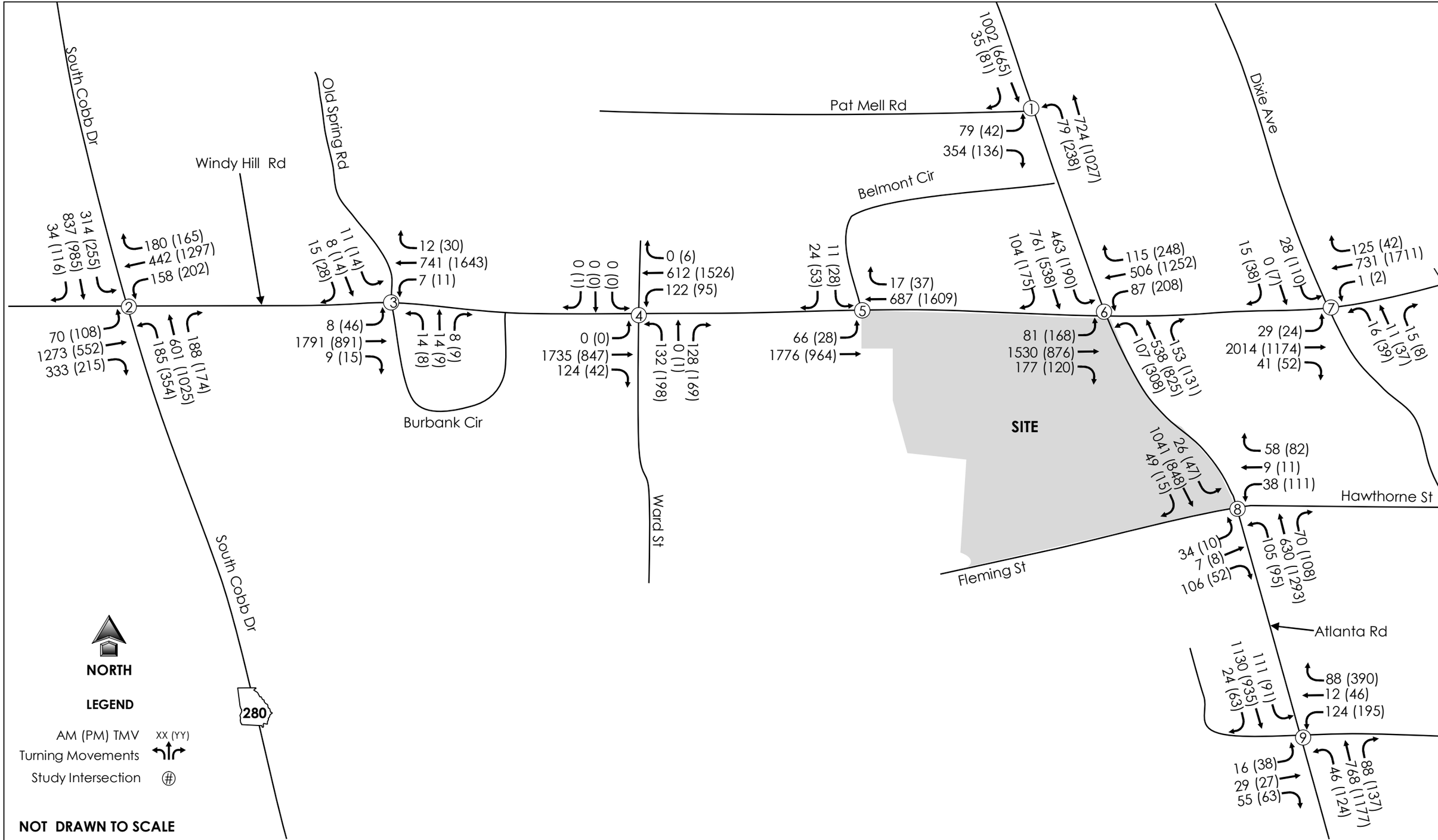
Using the methodologies previously described, intersection Levels of Service were determined for the study intersections for Future Year Total traffic conditions. Table 9-1a presents the results of the external intersection capacity analysis for Future Year Total traffic conditions using existing lane configurations and traffic controls. Table 9-1b presents the results of the site drive intersection capacity analysis for Future Year Total traffic conditions. Printouts of these analyses are included in Appendix I.

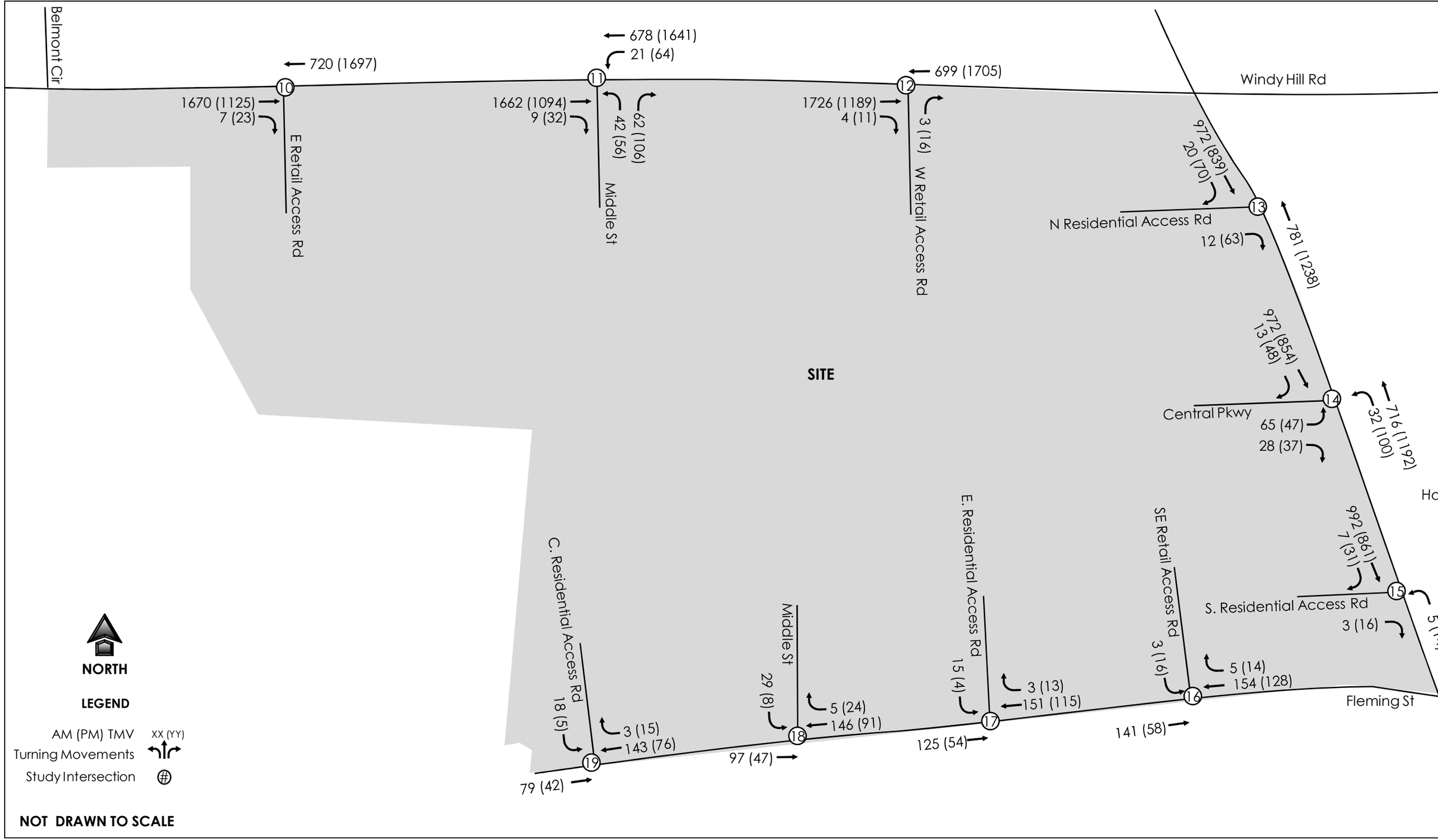
Table 9-1a. Intersection LOS – Future Year Total

#	Intersection	Control	Peak Hour LOS (delay in sec/veh)	
			AM	PM
1	Pat Mell Rd & Atlanta Rd	Signal	B (14)	A (8)
2	Windy Hill Rd & S. Cobb Dr	Signal	D (50)	D (54)
3	Windy Hill Rd & Old Spring	Signal	D (42)	C (31)
4	Windy Hill Rd & Private Drive	Signal	B (20)	B (17)
5	Windy Hill & Belmont Cir	Signal	B (17)	C (23)
6	Windy Hill Rd & Atlanta Rd	Signal	D (44)	D (43)
7	Windy Hill Rd & Dixie Ave	Signal	D (43)	B (13)
8	Fleming St & Atlanta Rd	Signal	B (14)	B (18)
9	Spring St & Atlanta Rd	Signal	B (12)	C (20)

Table 9-1b. Intersection LOS for Proposed Site Drives – Future Year Total

#	Intersection	Control	Movement	Peak Hour LOS (delay in sec/veh)	
				AM	PM
10	Windy Hill Rd & E Retail Access Rd	Side-Street Stop	NBL/R	A (0)	A (0)
			WBL	A (0)	A (0)
11	Windy Hill Rd & Middle St	Traffic Signal	Overall	A (5)	A (9)
12	Windy Hill Rd & W Retail Access Rd	Side-Street Stop	NBR	A (9)	A (9)
13	N Resident. Access Rd & Atlanta Rd	Side-Street Stop	NBL	A (0)	A (0)
			EBL/R	B (11)	B (11)
14	Central Pkwy & Atlanta Rd	Traffic Signal	Overall	A (7)	A (5)
15	S Resident. Access Rd & Atlanta Rd	Side-Street Stop	NBL	B (0)	B (0)
			EBL/R	B (10)	B (11)
16	Fleming St & SE Retail Access Rd	Side-Street Stop	SBL/R	B (10)	A (10)
			EBL/T	A (0)	A (0)
17	Fleming St & E Resident Access Rd	Side-Street Stop	SBL/R	B (10)	A (10)
			EBL/T	A (0)	A (0)
18	Fleming St & Middle St	Side-Street Stop	SBL/R	B (10)	A (9)
			EBL/T	A (0)	A (0)
19	Fleming St & C Resident Access Rd	Side-Street Stop	SBL/R	A (10)	A (9)
			EBL/T	A (0)	A (0)

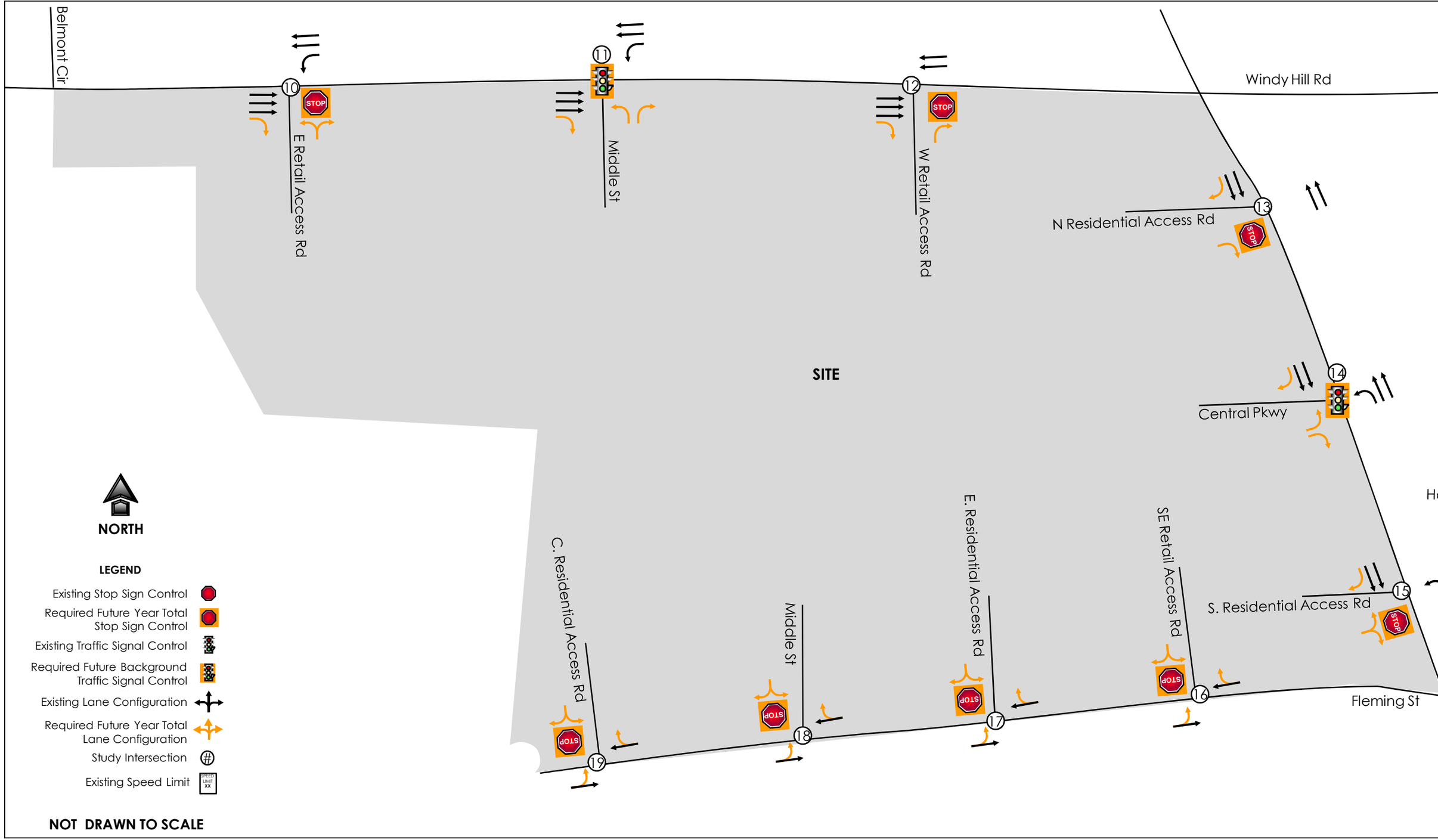

South Cobb Dr
Windy Hill Rd
Old Spring Rd
Pat Mell Rd
Belmont Cir
Dixie Ave
Burbank Cir
Ward St
Hawthorne St
Fleming St
Atlanta Rd
South Cobb Dr
280
SITE
NORTH
LEGEND
AM (PM) TMV
Turning Movements
Study Intersection
NOT DRAWN TO SCALE
1002 (665)
35 (81)
79 (42)
354 (136)
724 (1027)
79 (238)
314 (255)
837 (985)
34 (116)
180 (165)
442 (1297)
158 (202)
11 (14)
8 (14)
15 (28)
12 (30)
741 (1643)
7 (11)
0 (0)
0 (0)
0 (1)
0 (6)
612 (1526)
122 (95)
11 (28)
24 (53)
17 (37)
687 (1609)
463 (190)
761 (538)
104 (175)
115 (248)
506 (1252)
87 (208)
28 (110)
0 (7)
15 (38)
125 (42)
731 (1711)
1 (2)
70 (108)
1273 (552)
333 (215)
185 (354)
601 (1025)
188 (174)
8 (46)
1791 (891)
9 (15)
14 (9)
14 (8)
8 (9)
0 (0)
1735 (847)
124 (42)
132 (198)
0 (1)
128 (169)
66 (28)
1776 (964)
81 (168)
1530 (876)
177 (120)
107 (308)
538 (825)
53 (131)
29 (24)
2014 (1174)
41 (52)
15 (8)
11 (37)
16 (39)
26 (47)
1041 (848)
49 (15)
58 (82)
9 (11)
38 (111)
34 (10)
7 (8)
106 (52)
105 (95)
630 (1293)
70 (108)
111 (91)
1130 (935)
24 (63)
88 (390)
12 (46)
124 (195)
16 (38)
29 (27)
55 (63)
46 (124)
768 (1177)
88 (137)


Belmont Cir
Windy Hill Rd
720 (1697)
678 (1641)
21 (64)
699 (1705)
10
11
12
13
14
15
16
17
18
19
1670 (1125)
7 (23)
E Retail Access Rd
1662 (1094)
9 (32)
42 (56)
62 (106)
Middle St
1726 (1189)
4 (11)
3 (16)
W Retail Access Rd
972 (839)
20 (70)
N Residential Access Rd
12 (63)
781 (1238)
SITE
972 (854)
13 (48)
Central Pkwy
65 (47)
28 (37)
716 (1192)
32 (100)
992 (861)
7 (31)
S. Residential Access Rd
3 (16)
5 (14)
154 (128)
SE Retail Access Rd
3 (16)
3 (13)
151 (115)
E. Residential Access Rd
15 (4)
5 (24)
146 (91)
Middle St
29 (8)
3 (15)
143 (76)
C. Residential Access Rd
18 (5)
79 (42)
97 (47)
125 (54)
141 (58)
Fleming St
NORTH
LEGEND
AM (PM) TMV
XX (YY)
Turning Movements
Study Intersection
NOT DRAWN TO SCALE

As can be seen from Tables 9-1a and 9-1b, all of the movements, and all of the overall intersection operations, are expected to function at adequate Levels of Service for Future Year Total traffic conditions. It should be noted that train traffic in the vicinity of the site was researched. Based on information provided by the Georgia Department of Transportation Intermodal Rail Programs, up to 99 trains per day travel on the main CSX Atlanta to Chattanooga rail corridor near the site. On average, four trains per hour will cross Fleming Street/Hawthorne Avenue and Spring Street, just east of Atlanta Road. This number of crossings has a minimal impact on the study intersections during the peak hours.

9.2 Site Access Analysis

As can be seen in Table 9-1b, the Site access driveways operate at acceptable Levels of Service if they are provided with the appropriate lane configurations and traffic control. See Figure 9-2 for the desired Site access lane configurations and traffic control.


Belmont Cir
Windy Hill Rd
E Retail Access Rd
Middle St
W Retail Access Rd
N Residential Access Rd
Central Pkwy
S. Residential Access Rd
SE Retail Access Rd
E. Residential Access Rd
Middle St
C. Residential Access Rd
Fleming St
SITE
STOP
10
11
12
13
14
15
16
17
18
19
NORTH
LEGEND
Existing Stop Sign Control
Required Future Year Total Stop Sign Control
Existing Traffic Signal Control
Required Future Background Traffic Signal Control
Existing Lane Configuration
Required Future Year Total Lane Configuration
Study Intersection
Existing Speed Limit
SPEED LIMIT xx
NOT DRAWN TO SCALE

10. AREA OF INFLUENCE ANALYSIS

10.1 Introduction

The Area of Influence (AOI) is the area within six-road miles of the Site. This section of the study presents an analysis of the opportunities for the residents of the Site to work within the AOI. The Site is classified as predominantly residential for the purpose of the AOI analysis. Because only 222 retail workers are expected on the site (110,511 square feet at 1 worker per 500 square feet), this analysis will focus on comparing the 1,176 residents of the Site who are expected to be employed by the 121,341 jobs in the AOI. This section will describe the study parameters and methodologies, the sources of data used for the analysis, and information concerning the demographics and economic conditions in the Site and the AOI.

The following sections of the report will address Criterion 7c of Section 3-103 of GRTA's DRI requirements. Criterion 7c states:

7. The proposed DRI:

    (c) Is located in an Area of Influence with employment opportunities which are such that at least twenty-five percent (25%) of the persons who are reasonably anticipated to live in the proposed DRI and are reasonably expected to be employed have an opportunity to find employment appropriate to the person's qualifications and experience within the Area of Influence.

A map of the AOI is provided in Figure 10-1.

10.2 Study Parameters and Methodology

In order to identify the employment and other data for the AOI, the boundaries were created in a geographic information system (GIS) format and were placed over a GIS layer of the census tracts containing the applicable data from the 2000 U.S. Census. Where 2000 U.S. Census data were not available, the analysis incorporated data from other sources, including GRTA, U.S. Bureau of Labor Statistics, and ESRI. The sources and methodologies for obtaining data for various elements of the AOI analysis have been referenced throughout the document.

Figure 10-1. Area of Influence

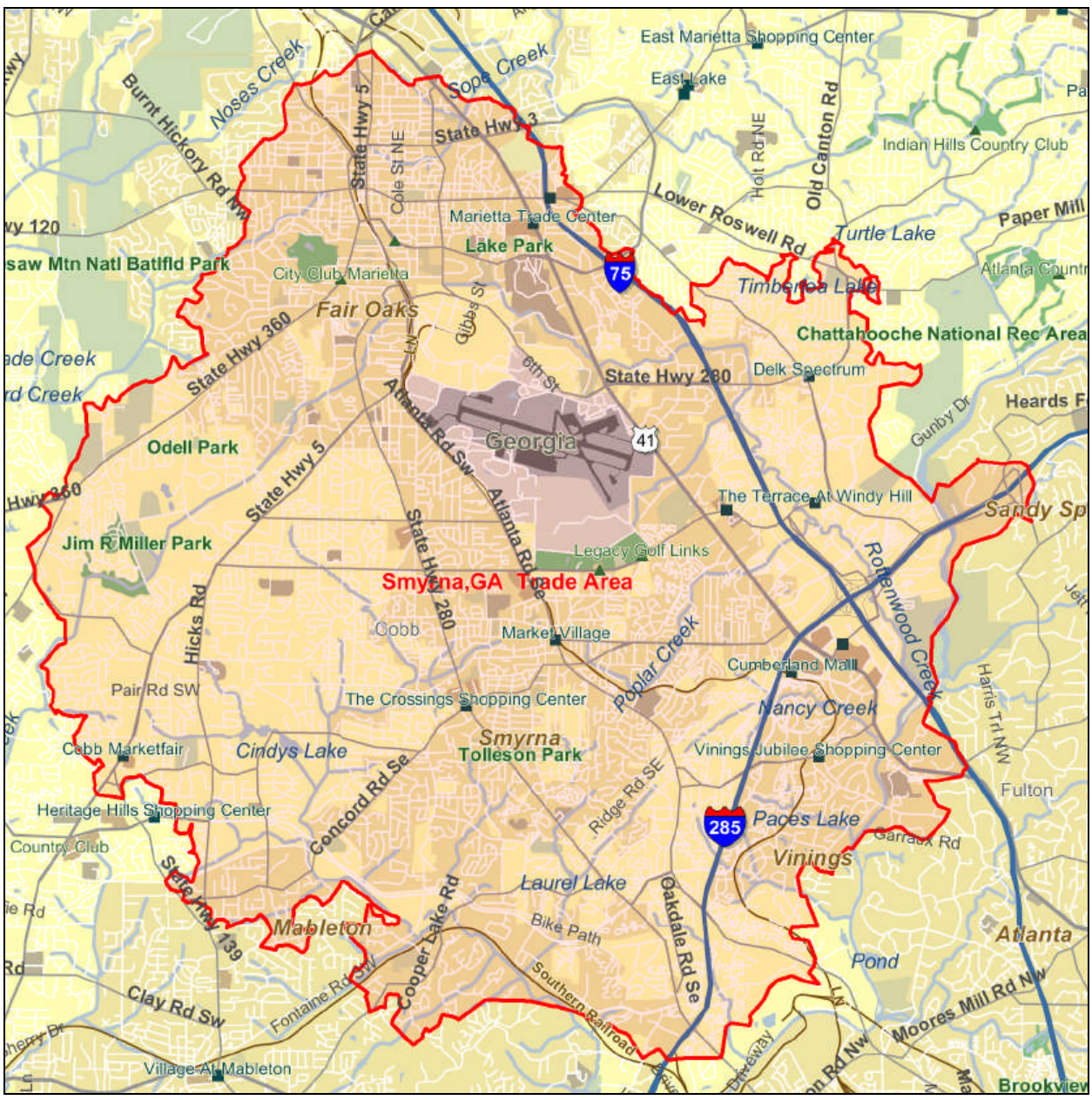


Table 10-1 presents characteristics of the AOI.

Table 10-1. Summary of AOI Characteristics

Characteristic	Year 2013
Size (acres)	43,373
Jurisdiction(s)	Cobb County / City of Smyrna / City of Marietta
Population	214,930
Number of Housing Units	88,505
Rental / Owner / Vacant	52.2% / 38.5% / 9.3%
Price of Housing / Rent	Range of Owner Occupied Housing Units by Value: less than $50,000 to greater than $1,000,000 Average Home Value: $159,144 Average Rent: $705

Source: ESRI and TransCAD

10.3 Criterion 7c Evaluation

The Site is proposed to contain 784 residential units. The number of Site households was assumed to be 784 based on one household being established for each housing unit. Using the assumed ratio of 1.5 workers per household, the number of Site residents who are expected to be employed was calculated to be 1,176.

The industries in which Cobb County residents are employed were obtained from the U.S. Census Bureau. It was assumed that the residents of the Site would be employed in the same industries as the residents of Cobb County. The results are summarized in Table 10-2.

The number of jobs in the AOI in each industry was estimated using data purchased from ESRI. The number of Site residents expected to be employed in each industry was compared to the number of jobs in the AOI. The results are summarized in Table 10-2.

As can be seen in Table 10-2, 1,176 of the 1,176 Site residents who are expected to work have the opportunity to find a job within the AOI. Therefore, the Site is located within an AOI with employment opportunities such that approximately 100% of the persons who are anticipated to live in the Site and are reasonably expected to be employed will have an opportunity to find employment within the AOI. The Site meets GRTA's evaluation Criterion 7c.

Table 10-2. Criterion 7c Evaluation

Industry	Number of Cobb County Residents Employed in Industry	Number of Site Residents Expected To Be Employed in Industry	Number of Jobs in AOI in Industry	Lesser of Number of Site Residents Expected To Be Employed in Industry or Number of Jobs in AOI in Industry
Agriculture, Forestry, Fishing & Hunting, & Mining	771	3	246	3
Construction	24,62	89	7,726	89
Manufacturing	33,019	118	15,421	118
Wholesale Trade	15,779	56	4,776	56
Retail Trade	42,841	153	14,869	153
Transportation & Warehousing, & Utilities	18,472	66	4,558	66
Information	17,174	61	3,683	61
Finance, Insurance, Real Estate, & Rental & Leasing	29,580	106	12,253	106
Professional, Scientific, Management, Administrative, & Waste Management Services	49,539	177	17,852	177
Educational, Health & Social Services	49,522	177	14,556	177
Arts, Entertainment, Recreation, Accommodation & Food Services	22,686	81	2,433	81
Other Services (except Public Administration)	14,191	51	6,101	51
Public Administration	10,600	38	7,500	38
TOTAL	329,16	*1,176*	111,974	*1,176*

11.1 Introduction

This section of the report presents a summary of the data and information that address the GRTA DRI Review Criteria that are contained in Section 3-103(A) of the *Procedures and Principles for GRTA Development of Regional Impact Review*, January 14, 2002.

11.2 Section 3-103(A) Review Criteria

1. *Indicate whether or not the proposed DRI is likely to promote improved regional mobility in terms of the quality, character, convenience and flexibility of transportation options.* The Site is likely to promote improved regional mobility in terms of the quality, character, convenience, and flexibility of transportation options that exist at this time. The Site is located in an area where there are practical transportation options other than the personal vehicle. The developer will build sidewalks within the Site and sidewalks connecting to existing external sidewalks.

2. *Indicate whether or not the proposed DRI is likely to promote improved regional mobility by reducing Vehicle Miles of Travel.* The Site is likely to promote improved regional mobility by reducing Vehicle Miles of Travel (VMT) because 100% of the persons who are reasonably anticipated to live in the Site have an opportunity to work within the Area of Influence, thus potentially reducing the VMT for work. In addition, due to the mixed-use nature of the Site, some of the Site's trips (13%) will be internally captured and will not add traffic to the external roadway system.

3. *Indicate whether or not the proposed DRI is likely to promote improved regional mobility because it is located in an urban core, town center, an activity center previously designated by an RDC, a rail/transit station development or is part of a publicly sponsored redevelopment or infill initiative.* The Site is not located in an urban core, a town center, an activity center previously designated by an RDC, or a rail/transit station development, and it is not part of a publicly sponsored redevelopment or infill initiative.

4. *Indicate whether or not the proposed DRI is located sufficiently close to existing or planned transit facilities to indicate a likelihood of significant use of transit by residents, employees and visitors of the proposed DRI.* There is currently a bus stop at the Site (at the intersection of Atlanta Road and Windy Hill Road).

5. *Indicate whether or not the proposed DRI is located within an established Transportation Management Area which creates a likelihood that the proposed DRI is reasonably anticipated to result in improved regional mobility as a result of the Transportation Management Area.* The Site is not located within an established Transportation Management Area.

6. *Indicate whether or not off-Site trip generation from the proposed DRI is reduced by at least fifteen percent (15%), or, in the event that a proposed DRI is unable to satisfy the trip reduction standard established in this subsection because of other conditions which are beyond the control of the developer or the affected local government, the proposed DRI implements all available trip reduction techniques which are reasonably practical.* The number of new off-site trips that would be expected from the same land uses individually is reduced by 13% for trips internally captured within the site, by 2% for alternate mode reduction, and by 22% for retail pass-by trip reduction, which recognizes that many of the retail site generated trips would have been on the adjacent roadways, whether or not the Site was redeveloped. In addition, significant additional existing trips generated by the Site as it is currently developed as primarily retail would also be eliminated from the area roadway network by the redevelopment of this Site.

7. *Indicate whether or not the proposed DRI:*
   (a) Contains a mix of uses which are reasonably anticipated to contribute to a balancing of land uses such that it would be affordable for at least ten percent (10%) of the persons who are reasonably anticipated to be employed in the proposed DRI are reasonably anticipated to have an opportunity reside within the DRI; or,
   (b) Is located in an Area of Influence where the proposed DRI is reasonably anticipated to contribute to a balancing of land uses within the Area of Influence such that twenty-five percent (25%) of the persons who are reasonably anticipated to be employed in the proposed DRI have the opportunity to live within the Area of Influence; or,
   (c) Is located in an Area of Influence with employment opportunities which are such that at least twenty-five percent (25%) of the persons who are reasonably anticipated to live in the proposed DRI and are reasonably expected to be employed will have an opportunity to find employment appropriate to such persons' qualifications and experience within the Area of Influence.

The Site is located in an Area of Influence with employment opportunities which are such that at least twenty-five percent (25%) of the persons who are reasonably anticipated to live in the proposed DRI and are reasonably expected to be employed will have an opportunity to find employment appropriate to such persons' qualifications and experience within the Area of Influence.

8. *Indicate whether or not the proposed DRI is located in an area where the existing level of development and availability of infrastructure within the Area of Influence of the proposed DRI is such that the proposed DRI is reasonably anticipated to result in unplanned and poorly served development which would not otherwise occur until well-planned growth and development and adequate public facilities are available.* The Site is not located in an area where the anticipated level of development and availability of infrastructure within the study network is such that the Site is reasonably anticipated to result in unplanned and poorly served development.

12. AIR QUALITY BENCHMARK STATEMENT

12.1 Introduction

This section of the study presents an analysis of the Site layout for the Site in relation to its compliance with the air quality guidelines established by the Atlanta Regional Commission (ARC). The ARC procedure for reviewing and approving Developments of Regional Impact (DRI) requires the establishment of Air Quality "Performance Benchmarks." These benchmarks are necessary for the region to identify air quality progress in accordance with federal air quality regulations.

ARC Specifications

ARC guidelines indicate that a reduction in emissions from 250 to 214 tons per day is needed to bring the region into compliance with the National Ambient Air Quality Standards (NAAQS). This desired reduction applies to developments reviewed by the ARC. Each development must incorporate transportation-related measures that contribute to a 15% reduction in vehicle miles traveled (VMT), which are directly linked to improvements in air quality. Roadway infrastructure and non-vehicular connectivity features such as walking trails, bike lanes, sidewalks, and public transit concepts are a few proactive solutions that would induce VMT reductions.

Reductions in VMT are directly linked to improvements in air quality. There is a strong relationship between a vehicle mile of travel and NOx emissions. A decrease in VMT results in a direct decrease in NOx emissions. Therefore, a 15% reduction in VMT is appropriate to reduce NOx emissions in the amount by which the Atlanta region exceeds federal air quality standards.

An assortment of measures may be incorporated in project design and implementation that will help achieve the needed reduction in mobile source emissions (VMT 'credits'). These measures range from programs that may be implemented (e.g. shuttle service to nearby centers) to design elements that may be defined generically (net density levels) or specifically (interconnected sidewalks). A number of mitigation measures identified in the following section have been demonstrated by transportation practitioners and academics to reduce levels of VMT by 1) reducing the length of trips; 2) reducing the quantity or frequency of vehicular trips and/or 3) shifting trip making from vehicles to alternative modes. (Other mitigation measures may be considered subject to submission of appropriate justification and data supporting the reductions in VMT/NOx.)

12.2 Evaluation

VMT reductions were taken for the Site as follows:

1. Projects that meet the relevant density target levels will receive the following VMT credits:
    b. For projects where Residential is the dominant use:

        Greater than 15 dwelling units/acre (-6%)
2. Projects that contain a 'mix' of uses will receive the following VMT credits (ITE Trip Generation Manual - 7th Edition):
    c. For projects where Residential is the dominant use based on area*:

        If both target levels are met (-9%)
4. Proximity to Public Transportation

    For all project types:
    If the project is located within 1/4 mile of a bus stop (CCT) (-3%)
6. Projects that contain bicycle or pedestrian facilities within the site receive the following VMT credits:
    a. Bike/ped networks in developments that meet one Density or Mixed Use 'target' (-4%)

A 6% reduction was taken since the dominant use of the site is residential with greater than 15 dwelling units per acre. A 9% reduction was taken since the dominant use of the Site is residential with at least 10% of gross floor area as retail space. 3% was taken since the site is within 1/4 mile of CCT. 4% was taken to account for sidewalks provided throughout the Site for interconnectivity. The sum of the VMT reductions is 22%.

12.3 Conclusion

Based on the data and information presented in this study, it is concluded that the layout of the Site coincides with the air quality guidelines set out by the ARC. The residential linkage to the proposed on-site retail center is expected to substantially reduce the overall VMT for the Site and accelerate air quality improvements.

Appendix A – Trip Generation Worksheets

Appendix B – Peak Hour Turning Movement Counts

Appendix C – Capacity Analyses: Existing Conditions

Appendix D – Programmed Improvements

Appendix E – Capacity Analyses: Future Background Conditions

Appendix F – Capacity Analyses: Future Year Total Conditions

Appendix G – Bus Schedule and Route Map

APPENDIX A - TRIP GENERATION WORKSHEET

APPENDIX B - COUNTS

APPENDIX C – CAPACITY ANALYSES - EXISTING CONDITIONS

APPENDIX D - PROGRAMMED IMPROVEMENTS

APPENDIX E - CAPACITY ANALYSES: FUTURE BACKGROUND CONDITIONS

APPENDIX F - CAPACITY ANALYSES: FUTURE YEAR TOTAL CONDITIONS

APPENDIX G – BUS SCHEDULE AND ROUTE MAP