# existing conditions

# 3.0 Existing Conditions

The current state of Piedmont Road is the result of decades of substantial use without requisite investment in maintenance and improvement to the transit, pedestrian, bicycle, and roadway infrastructure along the corridor. Most bus stops lack protection from the elements, pedestrians must wade through high grass and tread on broken concrete, bicyclists must share the roadway with speeding vehicles or find other ways of getting around, and motorists endure long delays during much of the day. The corridor lacks a sense of place. The view from Piedmont Road is poor; tangled overhead wires, large metal poles, two power substations on the side of the road, narrow sidewalks with no protection from moving vehicles, billboards, and a linear slab of concrete in the median that virtually goes ignored. To identify what changes need to occur to address its current and future deficiencies, a complete understanding of all the existing issues is presented herein.

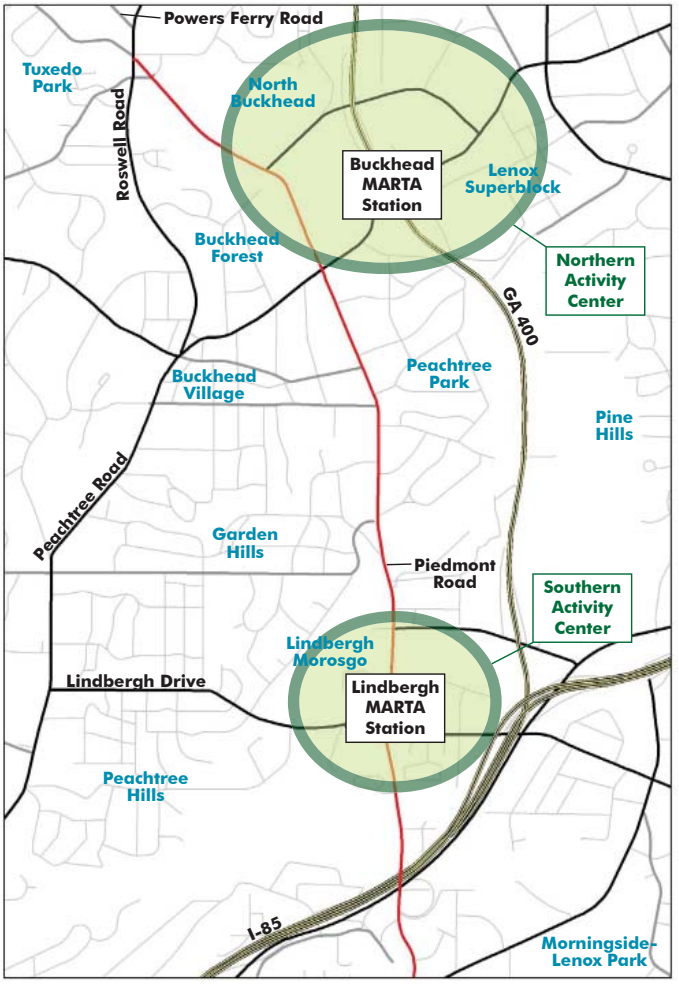
## 3.2 Corridor Inventory

The following sections discuss the physical characteristics of the corridor and attributes that are contributing to its declining performance as one of Atlanta's most important corridors.

### 3.2.1 Activity Centers

The study corridor traverses multiple districts and neighborhoods, organized into two predominant activity centers. One is centered around the Buckhead MARTA station (northern activity center) and the other is centered around the Lindbergh Center MARTA station (southern activity center). Each activity center draws pedestrian, bicycle, transit, and vehicular traffic demand. Each has a mix of land uses within proximity such that walking between buildings is practical. Buildings and streetscapes are of high quality and entice people to walk.

Figure 3.1 Activity Centers



The northern activity center consists of dense high-rise and mid-rise office, retail, and residential development with an activity center circulator shuttle bus, the "buc," which operates during peak traffic periods.

The southern activity center is a relatively new area of activity that began its rapid growth with the recent transit oriented development investment at the Lindbergh Center MARTA rail station. This activity center consists of mid-rise office, retail, and residential development.

By observation, the predominant mode of travel within and between activity centers appears to be the single occupant vehicle; however, a constant low volume flow of pedestrians traverse the corridor, mainly to access MARTA bus stops and rail stations. MARTA bus route 5 provides service between the centers and MARTA rail also serves both of the centers via the Lindbergh Center and Buckhead stations.

### 3.2.2 Corridor Location and Use

Piedmont Road is Georgia State Route 237 and is classified by GDOT as an Urban Minor Arterial, denoting its role in moving traffic within and through Buckhead. It is within a larger north-south network of roads, including:

- Georgia State Route 400 – an urban six-lane freeway
- Peachtree Road – an urban six-lane principal arterial
- Piedmont Road – an urban six-lane minor arterial
- Lenox Road – an urban four-lane minor arterial

Separated by only one-half mile, these four major streets and highways provide 22 lanes of traffic movement capacity traveling in a north-south orientation. Several major collector and arterial roadways intersect Piedmont Road at various locations. These intersecting roadways are as follows:

- Powers Ferry Road
- Roswell Road (US Highway 19 / State Route 9)
- Habersham Road
- Buckhead Loop / Lenox Road (SR 141)
- Peachtree Road (State Route 141)
- East Paces Ferry Road
- Pharr Road
- East Wesley Road
- Sidney Marcus Boulevard
- Lindbergh Drive (State Route 236, east of Piedmont Road)
- Interstate 85 (State Route 403)

The corridor is not identified by GDOT as a designated truck route.

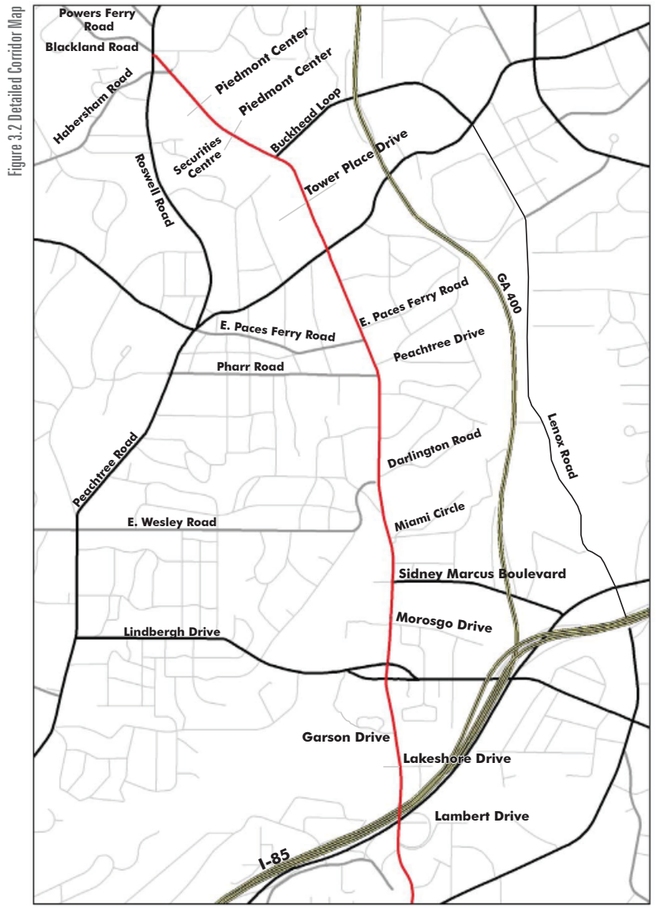
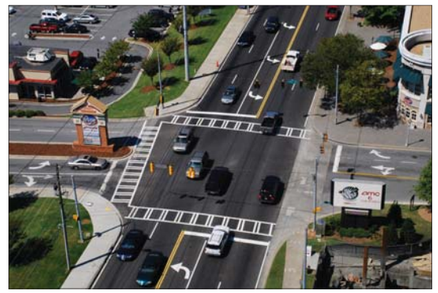



Figure 3.2 Detailed Corridor Map

### 3.2.3 Physical Conditions and Geometrics

The physical characteristics of the corridor vary greatly, especially between the northern and southern segments. North of Peachtree Road, Piedmont Road consists of asphalt pavement and two lanes each in the northbound and southbound directions. A limited number of driveway access points exist with a posted speed limit of 35 miles per hour. A large tree canopy exists on both sides of the corridor from Habersham Road to the Buckhead Loop. Left-turn lanes are provided at most major intersections and driveways and a center two-way left-turn lane stretches from the Buckhead Loop to Peachtree Road.



Segments south of Peachtree Road consist of concrete pavement and three travel lanes in both the northbound and southbound directions with a continuous four-foot wide, four-inch raised concrete median. Median breaks are provided at major intersections; however, the median is low enough that it is often crossed by vehicles making prohibited left turns into and out of driveways. Designated left-turn lanes are provided at Peachtree Road, Sidney Marcus Boulevard, and Morosgo Drive. The inside travel lanes at Sidney Marcus Boulevard and Morosgo Drive are designated as left-turn only lanes, reducing the roadway section to two through lanes in both the northbound and southbound directions at these intersections. Designated right-turn deceleration lanes are provided at Peachtree Road, Garson Drive, and several commercial parcels along the corridor.

Due to generally smaller parcel sizes south of Peachtree Road, there are numerous driveways. With the exception of a posted speed limit of 35 miles per hour just south of Peachtree Road, the remainder of these segments have a posted speed limit of 40 miles per hour. With the exception of the area between Pharr Road and the MARTA bridge over Piedmont Road, this area is typically void of a large tree canopy. Right-of-way varies along the length of the corridor, but is very limited throughout most of the corridor, as the existing roadway and sidewalks occupy essentially the entire right-of-way.

Overhead utility lines clutter the space above the roadway. A main Georgia Power transmission line travels adjacent to Roswell Road and Piedmont Road throughout the study area. Power substations are located in two locations along the corridor; one along the east side of Piedmont Road, south of East Paces Ferry Road, and one along the west side of Piedmont Road, north of Sidney Marcus Boulevard. The transmission line travels along the west side of the road north of East Paces Ferry Road, and along the east side of the road south of that point.

### 3.2.4 Bridge Inventory

Six bridge structures exist along or over Piedmont Road within the study area, all of which are rated by their owners (GDOT, Norfolk Southern, and MARTA). The overall bridge rating in the bridge inventory is indicated by its sufficiency rating, where a sufficiency rating greater than 50 is considered satisfactory and a rating less than 50 is considered unsatisfactory and in need of replacement. A total of six bridge reports were reviewed. Two of the bridges along the corridor are not owned or maintained by GDOT and are therefore not inspected by GDOT, so no sufficiency rating was available. The remaining four bridges are considered by GDOT to be in satisfactory condition. Table 1 shows the location and condition of each bridge within the study area.

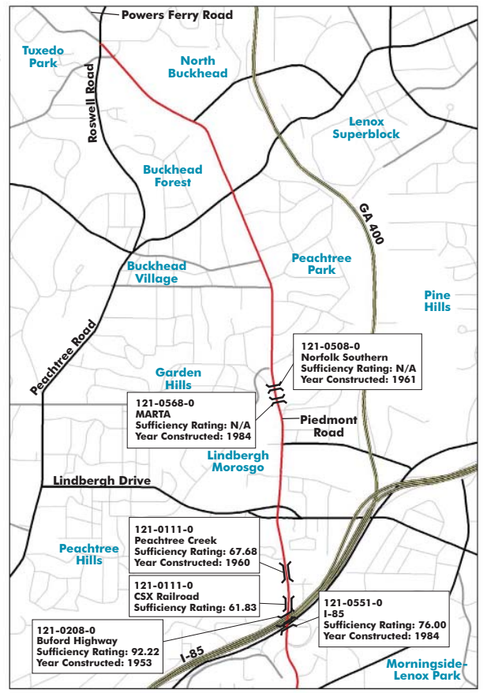
**Table 1**
**Bridge Inventory**

| Structure ID | Facility Carried | Feature Intersection | Sufficiency Rating | Year Constructed |
|---|---|---|---|---|
| 121-0110-0 | Piedmont Road | CSX Railroad | 61.83 | 1960 |
| 121-0111-0 | Piedmont Road | Peachtree Creek | 67.68 | 1960 |
| 121-0208-0 | SR 13 (Buford Hwy) | SR 237 Piedmont Road | 92.22 | 1953 |
| 121-0508-0 | Norfolk Southern | SR 237 Piedmont Road | N/A[1] | 1961 |
| 121-0551-0 | I-85 | SR 237 Piedmont Road | 76.00 | 1984 |
| 121-0568-0 | MARTA | SR 237 Piedmont Road | N/A[1] | 1984 |

Source: Georgia Department of Transportation
[1] Bridge is not owned/maintained by GDOT, therefore no sufficiency rating is available.

The first two bridges listed carry Piedmont Road over the CSX Railroad and Peachtree Creek, both located in Segment 5 of the corridor. The remaining bridges all carry other facilities over Piedmont Road. SR 13 (Buford Highway) and I-85 are both located at the southern end of the corridor. The Norfolk Southern and MARTA bridges are located adjacent to one another, just north of Miami Circle, in Segment 3. The width of Piedmont Road at that location is constrained by the width of the railroad bridge supports, which allow for only a very narrow sidewalk along the roadway. This bridge is considered to continue to be a constraint on any pedestrian, bicycle, or roadway widening projects in the near future. It is anticipated that it's replacement will not be needed for many years. The MARTA bridge supports are more widely-spaced and can support minor roadway widening.

Figure 3.3
Bridge
Locations




### 3.2.5 Traffic Signals

Movement and balance of traffic flow is directly linked to the traffic control devices which operate along the corridor. Due to the high volume of traffic on Piedmont Road, traffic signals are provided at most intersections with public roadways and some driveways, totaling 21 along the entire study corridor. The average spacing of traffic signals is 850 feet; however, some are as close as 200 feet (e.g. Pharr Road and Peachtree Drive). This irregularity of signal spacing creates difficult locations for pedestrians to cross and the perception of heavier traffic congestion.

Efficient coordination of the traffic signals along any corridor is extremely important and Piedmont Road is no exception. Due to aging equipment, traffic signal equipment slowly gets out of coordination over a period of time. It is evident that the corridor is experiencing some of this. A corridor timing plan for the entire corridor is currently underway by GDOT. This new timing plan will aid in traffic movement along the corridor.

Signal phasing at most intersections with dedicated left-turn lanes consists of leading protected left-turn phases (green arrow begins before the through movement in the sequence of phases). In some instances on Piedmont Road, protected left turns are provided even when dedicated left-turn lanes are not present. This is an uncommon practice that can result in extreme inefficiencies in signal operation when the left-turn arrow is provided for both directions.

## Figure 3.4 – Traffic Signal Locations

One example of this deficiency along the corridor occurs at Lakeshore Drive, where protected left turns are provided in both the northbound and southbound directions, despite the absence of left-turn lanes in both directions. Upon a green left-turn arrow indication, if the vehicles at the stop bar are not turning left, the entire left-turn phase is unused. It should be noted that inefficiencies are not as severe if protected left-turn phases are provided in only one direction, even when left-turn lanes are not provided. In this case, the through movement can operate concurrently with the left-turn phase in that same direction, eliminating this unnecessary delay.

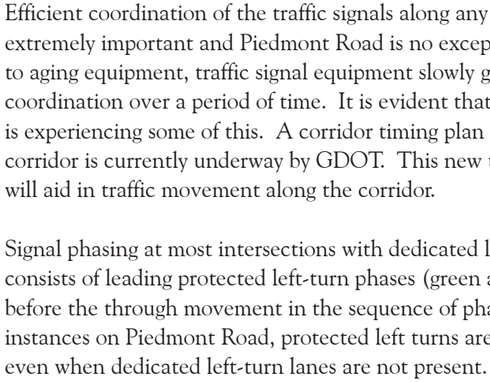
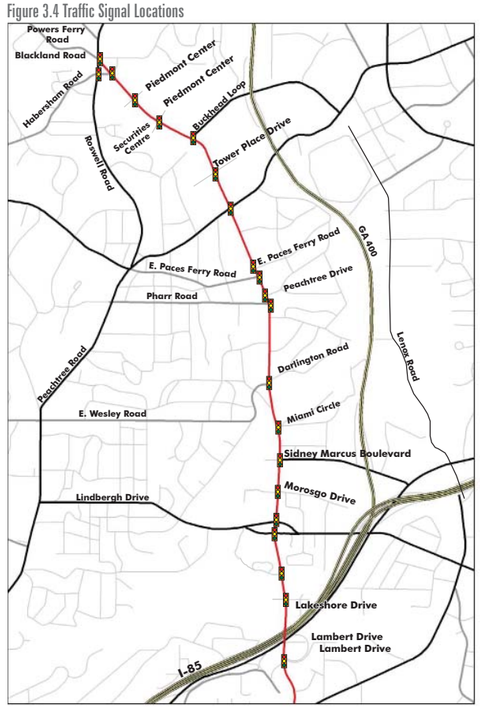



Figure 3.4 Traffic Signal Locations




A list of traffic signal locations by segment is included in Table 2.

**Table 2**
**Traffic Signal Locations**

| Segment | | Traffic Signal Location |
|---|---|---|
| 1 | Roswell Road to Peachtree Road | Piedmont Road/Blackland Road at Roswell Road |
| | | Roswell Road at Habersham Road |
| | | Piedmont Road at Habersham Road |
| | | Piedmont Road at Piedmont Center/The Manor at Buckhead |
| | | Piedmont Road at Piedmont Center/Securities Centre |
| | | Piedmont Road at Buckhead Loop/Lenox Road |
| | | Piedmont Road at Tower Place |
| | | Piedmont Road at Peachtree Road |
| 2 | Peachtree Road to Pharr Road | Piedmont Road at East Paces Ferry Road (east leg)/Driveway |
| | | Piedmont Road at East Paces Ferry Road (west leg) |
| | | Piedmont Road at Peachtree Drive |
| | | Piedmont Road at Pharr Road/Driveway |
| 3 | Pharr Road to Sidney Marcus Boulevard | Piedmont Road at East Wesley Road/Darlington Road/Driveway |
| | | Piedmont Road at Miami Circle |
| | | Piedmont Road at Sidney Marcus Boulevard |
| 4 | Sidney Marcus Boulevard to Lindbergh Drive | Piedmont Road at Morosgo Drive |
| | | Piedmont Road at Lindbergh Drive |
| | | Piedmont Road at Lindbergh Way |
| 5 | Lindbergh Drive to Interstate 85 | Piedmont Road at Garson Drive |
| | | Piedmont Road at Lakeshore Drive/Driveway |
| | | Piedmont Road at Piedmont Circle/Lambert Drive/Buford Highway Off-ramp |

## 3.3 Land Use and Zoning

The study corridor is located within two Neighborhood Planning Units (NPU); which are citizen advisory councils that make recommendations to the Mayor and City Council on zoning, land use, and other planning issues. The northernmost portion of the study area, Roswell Road and Piedmont Road from Powers Ferry Road to Garson Drive lies within NPU-B. The portion of Piedmont Road within the study area south of Garson Drive lies within NPU-F.

The City of Atlanta 15-Year Future Land Use Map (2004-2019 Comprehensive Development Plan) identifies future land uses along the corridor in an array of densities. Most of the corridor is designated by high density development, with the exception of the portion between Pharr Road and Sidney Marcus Boulevard which currently consists of very low density commercial that abuts well-

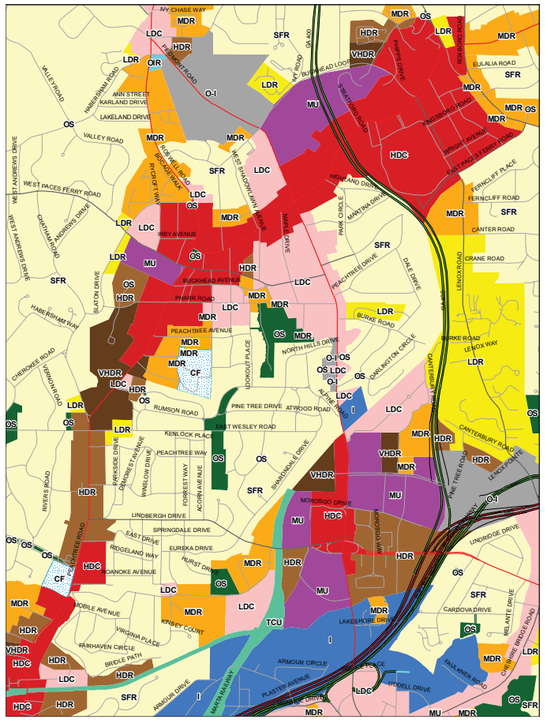



Figure 3.5 Future Land Use

established single family residential on both sides of Piedmont Road. The most important guiding principle in this study is the "preservation of property values and character of existing residential neighborhoods." Land uses for each study segment are provided in Table 3.

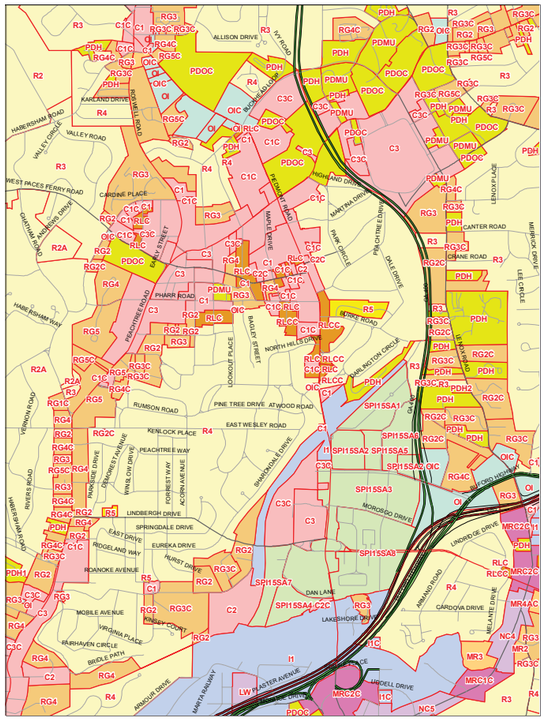



Figure 3.6 Zoning

**Table 3**
**City of Atlanta 15 Year Future Land Uses**

| Segment | | Adjacent Future Land Uses |
|---|---|---|
| 1 | Roswell Road to Peachtree Road | Mixed Use, High Density Commercial, Low Density Commercial, High Density Residential, Office/Institutional |
| 2 | Peachtree Road to Pharr Road | High Density Commercial, Low Density Commercial |
| 3 | Pharr Road to Sidney Marcus Boulevard | Mixed Use, High Density Commercial, Low Density Commercial, Single Family Residential[1], Industrial |
| 4 | Sidney Marcus Boulevard to Lindbergh Drive | Mixed Use, High Density Commercial |
| 5 | Lindbergh Drive to Interstate 85 | Mixed Use, High Density Commercial, Low Density Commercial, High Density Residential, Industrial |

Source: City of Atlanta
[1] Only a few parcels are adjacent to Piedmont Road.

The corridor consists of many zoning designations. In general, it includes mixed use, commercial, office, residential, and industrial zoning. Mixed use, commercial, and high density commercial zoning appear in each segment. Office is generally located along the northern portions of the study area. High density residential is located along the northern and southern extents (in and around the activity centers), while low density residential is generally located in the mid section of the study area. Industrial zoning generally occurs along the far southern portion of the study area.

Zoning designations depict that several areas, such as the area around the Piedmont/Roswell/Habersham triangle and the area between Peachtree Road and Pharr Road may see changes from low-rise commercial to mid and high-rise commercial properties in the future. When market demand increases, these areas may be the first to undergo redevelopment.

To implement adopted urban design standards, the City of Atlanta designates certain areas as Special Public Interest (SPI) districts. These districts include separate and specific zoning regulations in addition to those already provided in the City of Atlanta zoning code. Four SPIs exist within or in the vicinity of the study area: SPI-9 – Buckhead Village, SPI-12 – Buckhead/Lenox Transit Station Areas, SPI-15 – Lindbergh Transit Station Area, and SPI-19 – Buckhead Peachtree Corridor. SPI-9 – Buckhead Village lies to the west of the corridor, south of Peachtree Road, and was recently expanded to include parcels closer to the corridor. SPI-12 includes the east side of Piedmont Road from the Buckhead Loop/Lenox Road to Tower Place Drive. SPI-15 includes areas on both sides of Piedmont Road from Miami Circle to Garson Drive. SPI-19 includes both sides of Peachtree Road from East Shadowlawn Avenue to Roxboro Road and was initiated as part of the Peachtree Road Complete Streets project.

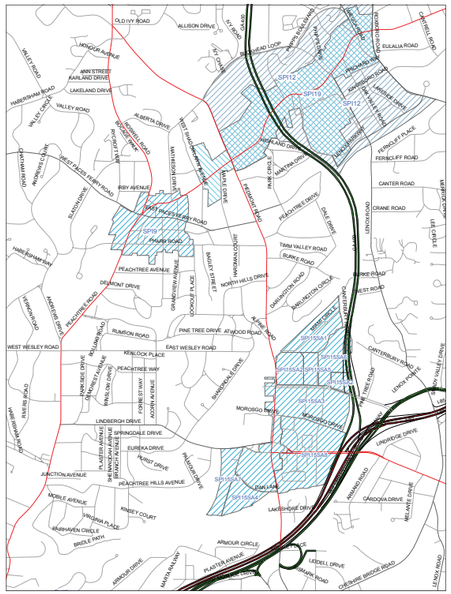



Figure 3.7 Special Public Interest Districts

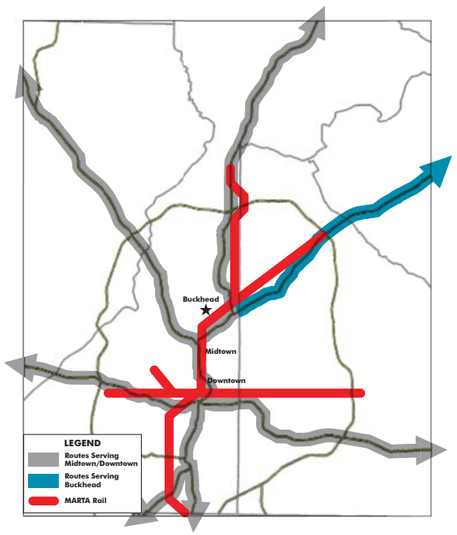



Figure 3.8 Regional Transit

## 3.4 Infrastructure Analysis by Mode

Transportation plans are not just for motorists. In the search for an improved quality of life, plans strive to create and support livable communities that balance travel between modes and allow for a variety of transportation options. The study corridor currently serves transit users, pedestrians, bicyclists, and general automobile traffic in different capacities and with different levels of success throughout. While existing data yield low volumes of pedestrian and bicycle activity, it is reasonable to believe that with a daytime population of 140,000 people that a healthy demand to walk currently exists. This section provides an account of current alternative modes of travel activities.

### 3.4.1 Transit Infrastructure

Four types of public transit service operate within the study corridor: MARTA rail, MARTA bus, GRTA Xpress regional bus, and The Buckhead Uptown Connection (the "buc") activity center circulator bus service. Comments from stakeholders suggest that existing transit service on Piedmont Road is not convenient, thus keeping most travelers in their cars. Rail and bus service is provided with longer than desired headways while buses share the same congested roadway with general traffic.

Other than the two rail stations along the corridor, the condition of existing bus stops reflect deferred maintenance, leaving patrons to wait for the bus in uncomfortable and uninviting places. Capitalizing on the rapid and dense growth of the area and incorporating transit-friendly facilities into future development will benefit transit service now more than ever.

Buckhead is located along MARTA's North-South rail line, which consists of stops at the Lindbergh Center and Buckhead rail stations. The Lindbergh Center rail station is located just north of Lindbergh Drive in the southern activity center, while the Buckhead station is located just east of Piedmont Road, along Peachtree Road in the northern activity center. The Northeast-South rail line, which travels northeast to Doraville, also serves the Lindbergh rail station. Weekday peak rail service currently operates at 10-minute headways, while off-peak service and weekend service operates at 20-mintue headways. These headways can, however, be unpredictable according to public feedback provided at study meetings.


*Some shelters obstruct sidewalks or are located in poorly maintained areas*

Average monthly rail station entries for the Buckhead and Lindbergh Center stations for Fiscal Year 2007 were 2,625 and 8,402 people per day, respectively; making use of the Buckhead station much lower than the Lindbergh Center station. The average entries per month at MARTA's 38 rail stations is approximately 5,261 entries per day. In general, the Buckhead community's rail use is relatively close to that of the overall system average; however, the average ridership at the Buckhead station is only half that of the average. This is rather disconcerting because of the station's placement in one of the most densely populated areas in the City of Atlanta. The Buckhead station represents a significant opportunity to improve ridership, perhaps with better visibility and accessibility to the transit station. As another point of comparison, ridership for the Lenox rail station (located along Lenox Road adjacent to Lenox Square) was recorded as 4,173 entries per day during Fiscal Year 2007.

Ten MARTA bus routes currently serve the areas in the immediate vicinity of the study area, nine of which serve the Lindbergh Center MARTA rail station including one "Blue Flyer" express route with limited stops (Route 245). Routes travel in most directions from Buckhead, intersecting with other MARTA rail stations along the East line, North line, and Northeast line. Fewer routes directly serve the west and south areas of Atlanta. Bus headways widely range, but the average is approximately 15 to 60 minutes during peak commute periods. Bus route 5 (15 minute headways) travels the entire length of the study corridor, while route 38 (1 hour headways) travels along the portion of Piedmont Road between the Lindbergh Center station to Pharr Road.

Thirty-two MARTA bus stops (excluding the Lindbergh Center rail station) are located along Piedmont Road within the study corridor. There are 15 stops serving the northbound direction and 17 stops serving the southbound direction. Throughout the corridor, average spacing between the stops is approximately 650 feet. With the exception of the Lindbergh Center rail station, most of the stops include minimal amenities, most consisting of as little as a sign, with some providing a bench and a shelter from the elements. The stops had a total average of 1,635 weekday riders during the

period between April and August 2007. This averages to 51 riders per bus stop per day. The bus stops with the largest ridership are located in the northern activity center. Bus stops with the least ridership are generally located between Pharr Road and Miami Circle.

Twelve of the 32 bus stops serve MARTA routes 38 and 5 (from Pharr Road to the Lindbergh Center rail station), however the remaining 20 stops serve only route 5 (from Roswell Road to Pharr Road). During 2007, the stop with the highest daily boardings was located in the northbound direction north of the intersection of Piedmont Road/Peachtree Road, with 250 average daily boardings. Bus stops at Piedmont Road and Tower Place Drive (southbound) and Miami Circle (northbound) held the second and third highest average daily boardings at 125 and 113 boardings per day, respectively.

**Descriptions of the existing MARTA bus routes follow:**

*Route 5 – Sandy Springs* – Travels between the Dunwoody Station near Perimeter Mall and the Lindbergh Station in Buckhead. The route utilizes Piedmont Road, Roswell Road, Glenridge, and Hammond Drive and runs on 15-minute headways during the week.

*Route 6 – Emory* – Travels between the Inman Park Station and the Lindbergh Station, through the main Emory campus past Emory Hospital, Emory Clinic, Children's Healthcare of Atlanta at Egleston, and Emory University. The route utilizes Lindbergh Drive, Lavista Road, Briarcliff Road, Clifton Road, N. Decatur Road, Moreland Avenue, and DeKalb Avenue and runs on 20-minute headways during the week.

"... the roadway is only one part. We have to get the whole system working, and the system is not just the roadway. It's MARTA, the "buc" shuttle, carpools, vanpools and everything else because the road's broke and it's not going to get any better with the growth that is coming."

*Route 23 – Lenox/Arts Center* – Travels between the Arts Center Station in Midtown and the Lenox Station near Lenox Square and Phipps Plaza. The route utilizes 15th, 16th, and 17th Streets, Peachtree Road, and Lenox Road and runs on 15- to 30-minute headways during the week.

*Route 27 – Monroe Drive* – Travels between the North Avenue Station in Midtown and the Lindbergh Station. The route utilizes Lindbergh Drive, Cheshire Bridge Road, Piedmont Circle, Monroe Drive, Boulevard Drive, and North Avenue with selective weekday loop trips along Armour Drive, Ottley Drive, and Clayton Drive. The route runs on 30- to 40-minute headways during the week.

*Route 30 – LaVista* – Travels between Northlake Parkway near Northlake Mall and the Lindbergh Station. The route utilizes Lindbergh Drive, LaVista Road, Briarcliff Road, Northlake Parkway, and Parklake Drive and runs on 45-minute headways during the week.

*Route 33 – Briarcliff Road* – Travels between the Chamblee Station and the Lindbergh Station. The route utilizes Lindbergh Drive, Woodland Avenue, Woodland Hills Drive, LaVista Road, Briarcliff Road, Shallowford Road, Chamblee Dunwoody Road, and New Peachtree Road. The route runs on 40-minute headways during the week.



*Route 38 – Chastain Park* – Travels between Chastain Park and the Lindbergh Station. The route utilizes Piedmont Road, Pharr Road, Peachtree Road, Roswell Road, and Powers Ferry Road, and runs on 1-hour headways during the week.

*Route 39 – Buford Highway* – Travels between the Doraville Station and the Lindbergh Station. The route utilizes Sidney Marcus Boulevard, Buford Highway, Park Avenue, and New Peachtree Road and runs on 12-minute headways during the week.

*Route 44* – West Wesley – Travels between Northside Parkway/Moores Mill Road and the Lindbergh Station. The route utilizes Lindbergh Drive, Peachtree Hills Avenue, Peachtree Road, Peachtree Battle Avenue, Northside Drive, West Wesley Road, Howell Mill Road, Moores Mill Road, West Paces Ferry Road, and Northside Parkway, with some trips to Marietta Boulevard. The route runs on roughly 1-hour headways during the week.

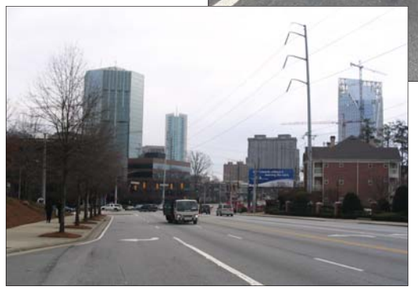
*Route 245 – Kensington/Emory Express* – Travels between the Kensington Station and the Lindbergh Station. The route utilizes Blue Flyer express services (limited stops) along Piedmont Road, LaVista Road, and Briarcliff Road, with regular service along Clifton Road through the Emory campus including service to Emory University Hospital and Emory University. The route resumes express service along North Decatur Road, Memorial Drive, and Kensington Road. The route runs on 20- to 30-minute headways during the week.

The Lindbergh Center MARTA station is also served by GRTA Xpress Route 410 which travels between the Lindbergh Station and Discover Mills Mall in Gwinnett County during peak commute periods. Morning departures start from Discover Mills at 6:00 am and continue roughly every 45 minutes until 8:00 am. Evening departures start from Lindbergh Station at 4:10 pm and continue roughly every 45 minutes until 6:00 pm. Arrivals are generally 30 minutes after departure. This is the only GRTA Xpress bus route that directly serves the Buckhead area. Other GRTA Xpress bus routes primarily serve Downtown and Midtown Atlanta from destinations around the metro area, including Clayton, Cherokee, Cobb, Coweta, DeKalb, Douglas, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale Counties.

During the first half of 2007, GRTA Xpress Route 410 (express from Discover Mills to the Lindbergh Center station) had an average of 133 riders per day during its busiest month (January) and 116 riders per day during its least busy month (February). The average passengers per trip was approximately 15.

For all "buc" routes from January to August, 2007, average weekday daily boardings have varied from approximately 1,290 passengers boarding (January), to approximately 1,660 passengers boarding (August), with an average of approximately 1,440 weekday boardings per day for the year. This is slightly down from 2006, which had an average of 1,720 boardings per weekday from January to August. The fluctuations in ridership of the "buc" at various times during the last few years can be attributed to reductions in service initiated by lack of ongoing federal participation after startup grants were exhausted.

The "buc" shuttle operates as a fare-free Buckhead area circulator service with several front-door stops in areas with high employment and retail density. The service was initiated in 2004 through a grant from the Federal government and is managed by BATMA. The "buc" provides service along Piedmont Road from the Buckhead Loop to the Piedmont Center office complex. Service extends east of the study area and accesses major destinations such as Lenox Mall, and Phipps Plaza, and major roads such as the Buckhead Loop and Peachtree Road.





## 3.4.2 Pedestrian Infrastructure

Sidewalks are located along both sides of Piedmont Road; however, conditions vary significantly throughout the study area. Sidewalks in areas in and around the two activity centers tend to be of better quality, while sidewalks in less densely-populated areas tend to be deteriorating, and are in some cases impassable by wheelchair. While crosswalks and pedestrian signals are provided in some form at all of the signalized study intersections, some are in need of repair or replacement.

Existing sidewalk conditions are identified as in "good", "fair", or "poor" condition.

- Good Condition – Sidewalks generally considered to consist of adequate width (at least four feet), are maintained in good condition with no missing segments or major cracking, and generally meet ADA standards.
- Fair Condition – Sidewalks have some maintenance and aging issues and may not consist of transition ramps from the sidewalk into the crosswalk, but are generally passable. These sidewalks may be difficult for people with disabilities to navigate.
- Poor Condition – Sidewalks in poor condition have missing segments or are in such a state of disrepair as to be generally unusable.

For each segment of roadway (between adjacent intersections), the lowest observed sidewalk condition was applied, i.e., any "poor" section between two intersections resulted in the entire segment being classified as poor, since there is an impassable section.

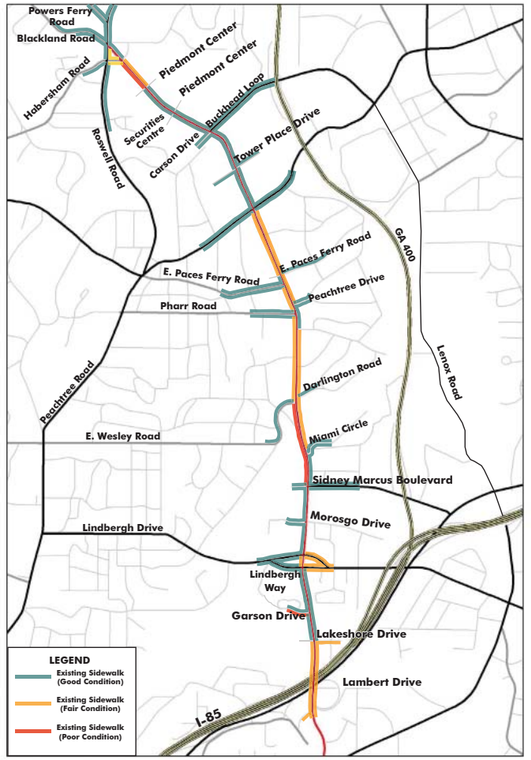
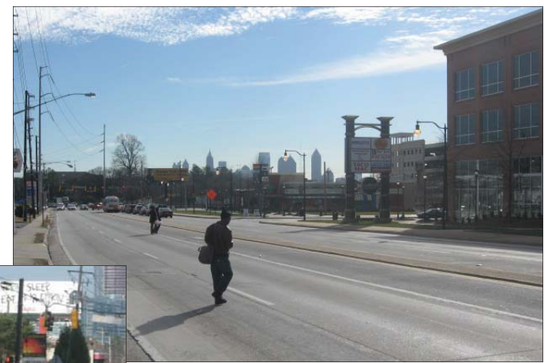



Figure 3.9 Pedestrian Facility Conditions

Pedestrian volumes vary greatly throughout the corridor. Areas with the most pedestrians include the segment between the Buckhead Loop and Peachtree Road, as well as between Sidney Marcus Boulevard and Lindbergh Drive. Pedestrian volume counts are provided in Table 4. The area located between Morosgo Drive and Lindbergh Drive (Main Street) is a high pedestrian crossing area relative to the rest of the corridor, with over 30 pedestrians observed crossing Piedmont Road during the afternoon peak hour. There are few pedestrian safety measures in place. The high volume of pedestrian activity is attributed to the combination of the MARTA Lindbergh Center station on the west side of the road and medium density housing and retail on the east. No signal currently exists at Main Street, leading many pedestrians to use the existing four-foot median as a point of refuge while crossing the road.



*Pedestrians using the existing median as refuge while crossing Piedmont Road in the Lindbergh Center/Main Street area*

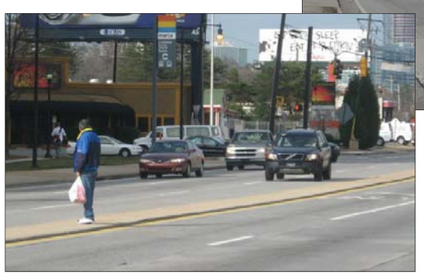




**Table 4**
**Existing 2007 One-Hour (PM peak traffic hour) Pedestrian Counts**

| Intersecting Road | Pedestrians Crossing Approach | | | |
|---|---|---|---|---|
| | NB[1] | SB[2] | EB[3] | WB[4] |
| Powers Ferry Road | 0 | 16 | 8 | 12 |
| Roswell Road | 2 | 1 | 5 | 4 |
| Habersham Road | 0 | 0 | 8 | 0 |
| Habersham Road | 3 | 4 | 2 | 3 |
| Piedmont Center/The Manor at Buckhead | 8 | 4 | 8 | 12 |
| Piedmont Center/Securities Centre | 0 | 8 | 16 | 24 |
| Buckhead Loop/Lenox Road | 3 | 3 | 9 | 10 |
| Tower Place Drive | 18 | 27 | 8 | 17 |
| Peachtree Road | 22 | 22 | 13 | 14 |
| East Paces Ferry Road (east leg)/Driveway | 0 | 0 | 12 | 8 |
| East Paces Ferry Road (west leg) | 0 | 0 | 12 | N/A |
| Peachtree Drive | 4 | 0 | N/A | 8 |
| Pharr Road/Driveway | 0 | 4 | 14 | 8 |
| East Wesley Road/Darlington Road/Driveway | 0 | 4 | 35 | 25 |
| Miami Circle | 6 | 8 | N/A | 2 |
| Sidney Marcus Boulevard | 6 | 5 | 23 | 14 |
| Morosgo Drive | 10 | 10 | 84 | 22 |
| Main Street (No Crosswalk) | 16 | 16 | 41 | N/A |
| Lindbergh Drive | 2 | 3 | 18 | 26 |
| Lindbergh Way | 12 | 6 | 10 | 3 |
| Garson Drive | 1 | 2 | 0 | N/A |
| Lakeshore Drive/Driveway | 4 | 0 | 0 | 0 |
| Piedmont Circle/Lambert Drive/Buford Highway Off-Ramp | 4 | 2 | 2 | 2 |

[1] NB – Northbound
[2] SB – Southbound
[3] EB – Eastbound
[4] WB – Westbound

### 3.4.3 Bicycle Infrastructure

To the average rider, bicycling in Buckhead is difficult, especially on Piedmont Road. There are no exclusive bicycle lanes on Piedmont Road or along most of the adjacent roadways. Bicycle lanes were, however, recently completed on Peachtree Road from Maple Drive to GA 400 as part of the Peachtree Road Complete Streets project. This is part of a larger "complete streets" project that will incorporate bicycle lanes and wider sidewalks along much of the Peachtree Road corridor in Buckhead.

The ARC identifies suitability ratings of major roadways in the Atlanta region for their appropriateness for cycling activity. Each facility is given one of three suitability ratings: best conditions for bicycling, medium conditions for bicycling, and difficult conditions for bicycling. Suitability ratings are based on the five following factors: traffic volumes, posted speed, outside lane and shoulder width, percent truck traffic, and functional classification. The ARC identifies Roswell Road and Piedmont Road within the study area as "difficult conditions for bicycling" and recommends that cyclists exercise a high level of caution and awareness when cycling along these facilities.

Although the City of Atlanta developed the Atlanta Commuter On-Street Bike Plan in September 1995 that identified one-, five-, and fifteen-year bicycle projects within the City of Atlanta, that plan is undergoing a major revision. No portion of Piedmont Road within the study corridor was included in any of the identified projects in the 1995 plan. Several other plans including bicycle recommendations have been published during recent years such as the Urban Land Institute Buckhead Study (1998) and the Lindbergh Transportation Urban Design Plan (2000). These and other studies have recommended accommodating bicyclists in the Buckhead community in several different capacities, including exclusive bicycle lanes as well as wider outside lanes shared between motorists and bicyclists.

The observed number of bicyclists riding on Piedmont Road corridor at peak hours varies throughout the corridor. Counts reveal that fewer than ten bicyclists ride on Piedmont Road through any given intersection during the afternoon rush hour. Given the vehicular volume and speeds along the corridor, it is reasonable to expect that many bicyclists are finding alternate routes or simply choosing not to ride during peak traffic periods. The ARC recently released the Atlanta Region Bicycle Transportation & Pedestrian Walkways Plan, which includes a latent demand analysis for the region. Latent demand is

**Table 5**
**Existing 2007 One-Hour (PM peak traffic hour) Bicycle Counts**

| Intersecting Road | Number of Bicycles | | | |
|---|---|---|---|---|
| | NB[1] | SB[2] | EB[3] | WB[4] |
| Powers Ferry Road | 0 | 4 | 0 | 0 |
| East Wesley Road/Darlington Road/Driveway | 0 | 4 | 0 | 2 |
| Main Street | 0 | 4 | 0 | N/A |

[1] NB – Northbound
[2] SB – Southbound
[3] EB – Eastbound
[4] WB – Westbound

defined as the relative travel demand if a pre-selected set of (improved) conditions were provided. Although Piedmont Road was not included in the analysis, several adjacent arterials were analyzed. Peachtree Road and Roswell Road both yielded very high levels of bicycle latent demand. It is reasonable to assume that latent demand on Piedmont Road would realize very high demand as well.

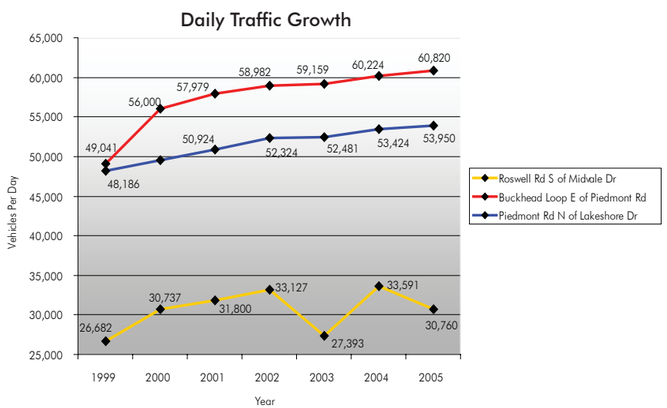
Bicycle riders were counted at several locations throughout the corridor. Table 5 shows the bicycle volumes at the only locations where bicycles were observed riding in mixed-traffic. The counts reveal that a limited number of bicyclists currently ride along Piedmont Road. Some riders do; however, ride along the sidewalk. These riders were not counted, but are generally the same as the number riding in the roadway. Approximately four bikes were observed during the peak hour in the more dense portions of the study network (Roswell Road to the Buckhead Loop and Darlington Road to Lindbergh Drive). While the actual number of bicyclists on the roadway now is very low, the ARC's study defends the "if you build it, they will come" argument. That is, if bicycle lanes are built on Piedmont Road, then it is reasonable to believe they will be used routinely.

### 3.4.4 General Traffic Infrastructure

Among the most notable challenges the Piedmont Road corridor faces is the congestion caused by traffic during peak hours. Traffic volumes have rapidly increased over the past several years and are expected to continue to increase as the region and community grows.

#### 3.4.4.1 Historical Traffic Volume Growth Trends

Historical daily traffic counts obtained from GDOT reinforce that the study area continues to experience growth. Traffic counts along and near the study corridor were reviewed from 1999 to 2005. The counts reveal that several areas have experienced a reduction in traffic volumes (the central portion of the study area), while others have experienced an increase (the northern and southern portions of the study area). The chart below shows traffic volume increases during the period from 1999 to 2005 in the fastest growing segments along the corridor.




Taking into account all the growth rates in and around the corridor, an overall growth of about 3 percent has occurred over the six year period. It can be expected, however, that growth along the central portion of the study area has increased since 2005 due to the recent development in and around the Lindbergh Center area. For comparison purposes, growth along Peachtree Road in the vicinity of Piedmont Road has remained very low over the six year period.

#### 3.4.4.2 Projected Traffic Volume Growth

A review of the ARC's 2030 future traffic volume projections reveals that the Piedmont Road corridor is expected to experience high levels of growth, approximately one half to one percent per year for the 25 year period from 2005 to 2030. This growth results in over a 13 percent increase in traffic over the next 20 to 25 years.

#### 3.4.4.3 Observed Traffic Volumes

There are several high-volume cross-streets that create bottlenecks along the corridor and contribute to unbalanced traffic flow. Specifically, the following intersections create the highest levels of delay along the corridor:

- Piedmont Road at Habersham Road/Roswell Road
- Piedmont Road at Buckhead Loop
- Piedmont Road at Peachtree Road
- Piedmont Road at Sidney Marcus Boulevard
- Piedmont Road at Lindbergh Drive

Two types of vehicular volume counts were performed within the study network. Daily peak hour traffic counts were performed at several locations along Piedmont Road, while specific intersection turning movement counts (TMC) were performed at each of the study intersections. Historical GDOT average daily traffic counts were also collected.

Daily traffic volumes were collected along Piedmont Road at six locations on Thursday and Tuesday, January 18th and 23rd, and at three locations on Saturday, January 20th, 2007. The traffic volumes are provided in Table 6. The data represent the total volume of vehicles that traveled in both the northbound and southbound directions on the days listed.

While observing the corridor during peak hours makes it evident that Piedmont Road is an important regional connection, data confirms its importance. For comparison purposes, while the below data provide a calculated average weekday daily trips of 39,579 along Piedmont Road, Peachtree Road in the vicinity of Piedmont Road carried an average of 45,350 vehicles per day during 2005. Counts also revealed that less than 2 percent of the traffic along Piedmont Road is that of trucks.

Traffic volumes on Saturday are very close to, and in some cases higher than, weekday traffic volumes. This points to the fact that Piedmont is a key corridor in the movement of people in the City of Atlanta and even in the region, and that it serves a wide variety of users, from employees to residents to retail patrons shopping during the weekend.

**Table 6**
**Daily Traffic Volumes**

| Count Location | | Tuesday | | | Thursday | | | Saturday | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | NB[1] | SB[2] | Total | NB | SB | Total | NB | SB | Total |
| Piedmont Road | South of Habersham Drive | 18,986 | 19,062 | 38,048 | 21,016 | 22,460 | 43,476 | N/A | N/A | N/A |
| | North of Peachtree Road | 24,780[3] | 17,252 | 42,032 | 15,962 | 17,470 | 33,432 | 16,232 | 17,591 | 33,823 |
| | North of East Paces Ferry Road | 15,773 | 20,516 | 36,289 | 15,085 | 17,646 | 32,731 | 17,892 | 18,921 | 36,813 |
| | North of East Wesley Road | 19,476 | 21,356 | 40,832 | 18,547 | 19,827 | 38,374 | N/A | N/A | N/A |
| | South of Sidney Marcus Boulevard | 16,257 | 24,188 | 40,445 | 18,134 | 23,853 | 41,987 | 17,782 | 23,004 | 40,786 |
| | South of Garson Drive | 19,151 | 25,658 | 44,809 | 18,531 | 23,965 | 42,496 | N/A | N/A | N/A |

[1] NB – Northbound
[2] SB – Southbound
[3] Volume is inconsistent with other locations/dates

Traffic along Piedmont Road is caused by both local attractors as well as regional factors. For example, as the Atlanta region's freeway system becomes congested during peak times, motorists tend to leak onto the surface street network. Piedmont Road is a very convenient alternative to GA 400 during peak times; therefore it processes a lot of non-local and commuter traffic.

Traffic volumes collected along the corridor provide insight into a realization of how Piedmont Road is used for commuter and regional traffic. A review of the data determined a clear trend that the southern segments along the corridor have a higher southbound directional split. This means that on a 24-hour basis, more vehicles travel along Piedmont Road in the southbound direction than in the northbound direction. Based on observation, it is reasonable to conclude that this condition arises from the congestion (vehicle queues) along southbound GA 400 caused by severe traffic congestion along southbound I-85 extending beyond I-75 as far as I-20, which is nine miles south of Buckhead. During the morning commute, the I-85 and GA 400 corridors are usually free of heavy congestion, keeping commuters off of Piedmont Road and on the freeways. During afternoon peak conditions, the freeway corridors experience heavy levels of delay. Many drivers decide to "bail out" onto Piedmont Road at the Buckhead Loop and Sidney Marcus Boulevard when they notice congestion ahead.



In order to quantify the use of Piedmont Road as an alternative to southbound GA 400, daily traffic counts were performed at locations on both the east and west sides of GA 400 along the Buckhead Loop and Sidney Marcus Boulevard on Wednesday, September 19, 2007 and are provided in Table 7.

**Table 7**
**Existing 2007 Daily Traffic Volumes**
**Areas Adjacent to GA 400**

| Location | | Direction | Daily Traffic Volume |
|---|---|---|---|
| Buckhead Loop | West of GA 400 | EB[1] | 22,721 |
| | | WB[2] | 28,736 |
| | East of GA 400 | EB | 29,399 |
| | | WB | 26,180 |
| Sidney Marcus Boulevard | West of GA 400 | EB | 18,544 |
| | | WB | 22,354 |
| | East of GA 400 | EB | 27,931 |
| | | WB | 32,637 |

[1] EB – Eastbound
[2] WB – Westbound

The above counts show that a higher volume of vehicles travel away from GA 400 on a daily basis (except for westbound Sidney Marcus east of GA 400. This can be attributed a high number of vehicles entering GA 400 from Buford Highway), which further reinforces Piedmont Road's use as a southbound alternative to GA 400.

## 3.5 Safety

From 2003 to 2005, a total of 2,254 reported vehicular crashes occurred along the study corridor. Of the crashes recorded, the predominant types were rear-end, angle, and same-direction sideswipe crashes. Accident rates along the study corridor range from 2.4 to 2.9 times higher than the statewide average accident rate, and injury rates are 1.6 to 2.0 times higher than the statewide average. Due to the low number of fatalities over the three-year period, it is difficult to compare fatality rates with the statewide average. Table 8 shows the accident rate history of the corridor.

**Table 8**
**Accident Rate History**
**(Roswell Road from Powers Ferry Road to Habersham Road and Piedmont Road from Roswell Road to Piedmont Circle: Urban Minor Arterial)**

| Year | Number of Accidents | Number of Injuries | Number of Fatalities | Accident Rate[1] | Injury Rate[1] | Fatality Rate[1] | Statewide Average Accident Rate[1] | Statewide Average Injury Rate[1] | Statewide Average Fatality Rate[1] |
|---|---|---|---|---|---|---|---|---|---|
| 2003 | 741 | 235 | 0 | 1393 | 442 | 0 | 572 | 218 | 1.48 |
| 2004 | 784 | 176 | 3 | 1433 | 322 | 5.48 | 490 | 187 | 1.41 |
| 2005 | 729 | 180 | 1 | 1367 | 338 | 1.88 | 534 | 206 | 1.56 |

[1] Rates per 100 Million Vehicle Miles

Different crash types can reflect certain types of deficiencies that a corridor has:

- Rear-end collisions – Often occur in congested conditions, when sudden stops may occur due to drivers braking quickly due to conflicting vehicles making turn movements. Tailgating contributes to rear-end collisions, as does limited sight distance, shorter or longer than average yellow signal intervals, or simply anxiety at a high-volume intersection.
- Angle collisions – Often occur at intersections or driveways, particularly involving left turns. At intersections where there is no protected left-turn phase, vehicles must find adequate gaps in which to turn through the opposing traffic. In congested conditions, this can be difficult, and drivers may be tempted to accept less-than-adequate gaps. The same is true with left-turn movements into and out of driveways.
- Same-direction sideswipe collisions – Tend to occur due to lane-changing maneuvers, when drivers do not see vehicles in the adjacent lane. These lane-changing maneuvers may happen as drivers try to get around turning vehicles (particularly when turn lanes are shared with through lanes), to bypass buses stopped at bus stops, or simply because another lane is perceived to be moving faster.

All of these crash types are exacerbated by congested traffic conditions, when drivers are more likely to make sudden maneuvers without adequate clearance between their vehicle and other vehicles. The number of each type of crash is provided in Table 9 from 2003 to 2005.

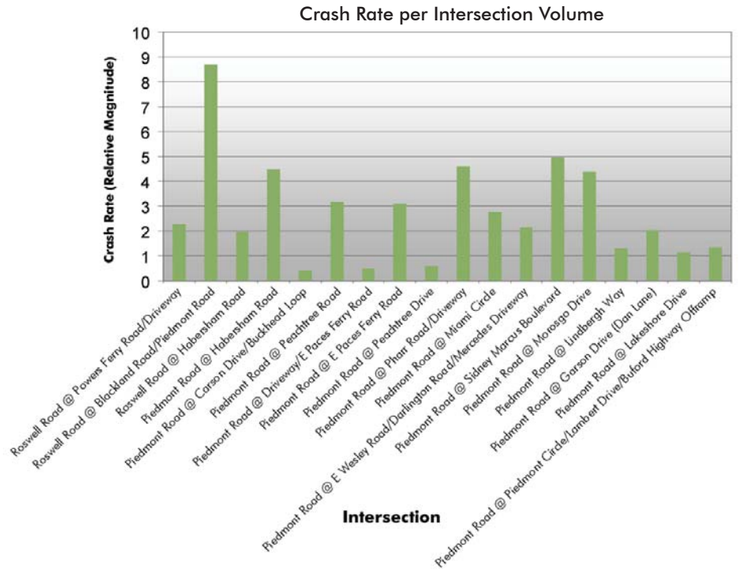
**Table 9**
**Crash History by Type**

| Collision Type | 2003 | 2004 | 2005 | Total Collisions |
|---|---|---|---|---|
| Angle | 245 | 229 | 231 | 705 |
| Head On | 11 | 20 | 12 | 43 |
| Not a Collision with a Motor Vehicle | 14 | 21 | 15 | 50 |
| On Roadway | 21 | 19 | 20 | 60 |
| On Shoulder | 0 | 0 | 1 | 1 |
| Rear End | 334 | 364 | 344 | 1042 |
| Sideswipe – Opposite Direction | 17 | 14 | 3 | 34 |
| Sideswipe – Same Direction | 99 | 117 | 103 | 319 |
| **Total** | **741** | **784** | **729** | **2254** |

Source: Georgia Department of Transportation

Analyzing crash data is most effective if looked at in the context of overall intersection volumes with number and types of crashes. Turning movement counts were used to create crash rates based on intersection volumes. Intersections with the highest number of crashes per volume are as follows:

- Roswell Road at Blackland Road/Piedmont Road
- Piedmont Road at Habersham Road
- Piedmont Road at Pharr Road/Driveway
- Piedmont Road at Sidney Marcus Boulevard
- Piedmont Road at Morosgo Drive




The chart (at right) provides a crash rate per intersection volume among the studied intersections. The rate was calculated by dividing the total three year number of crashes by the intersection's PM peak hour volume. These rates should be used for comparison purposes only.

The predominant crash type at these intersections was rear-end, which can be explained by high left-turning vehicle volumes with no exclusive turn lanes. The Piedmont corridor consists of many locations where left-turning vehicles stop in a lane that is shared with general through moving traffic. This happens

along the northern part of the corridor where left-turn lanes are not long enough to accommodate all turning vehicles, as well as in the southern portion of the corridor, where left-turning vehicles share the lane with through-moving vehicles. Specifically, the intersections of Piedmont Road with Pharr Road, Sidney Marcus Boulevard, and Morosgo Drive consist of alternating the inside lane between exclusive left-turn lanes and shared left-turn/through lanes. In these locations, motorists frequently encounter unexpected stopped vehicles in the inside lane.

Crash data were also reviewed specifically for crashes involving pedestrians. The data conclude that the area with the most pedestrian-involved crashes is the Piedmont Road/Habersham Road/Roswell Road triangle. Nine pedestrian-involved crashes were reported in this area from 2003 to 2005. Two other areas with pedestrian-involved crashes are the intersections of Piedmont Road at Sidney Marcus Boulevard and Piedmont Road at Garson Drive. A complete listing of pedestrian-involved crashes along the corridor is provided in Table 10.

**Table 10**
**Pedestrian Involved Crashes – 2003 to 2005**

| Location | Number of Injury Involved Crashes |
|---|---|
| Roswell Road at Powers Ferry Road | 3 |
| Roswell Road between Powers Ferry Road and Blackland Road | 1 |
| Roswell Road at Blackland Road/Piedmont Road | 4[1] |
| Piedmont Road at Habersham Road | 1 |
| Piedmont Road at Piedmont Center | 1 |
| Piedmont Road at Tower Place Drive | 2[2] |
| Piedmont Road at E Paces Ferry Road | 1 |
| Piedmont Road at Pharr Road | 1 |
| Piedmont Road at North Hills Drive | 1 |
| Piedmont Road at Sidney Marcus Boulevard | 2 |
| Piedmont Road between Sidney Marcus Boulevard and Morosgo Drive | 1 |
| Piedmont Road at Morosgo Drive | 1 |
| Piedmont Road at Garson Drive | 2 |

[1] Two crashes involved injuries to multiple persons
[2] One crash involved a fatally injured pedestrian



## 3.6 Operational Analysis/Corridor Performance

### 3.6.1 Analysis Methodology

In order to understand existing and future levels-of-service and operation of each study intersection, Existing and Future Conditions analyses were performed for the entire corridor using Synchro Professional, Version 6.0. Synchro is an industry standard computer software program that uses methodologies contained in the 2000 Highway Capacity Manual and user inputs to determine the operating characteristics of the study intersections. The program utilizes user inputs to determine capacity at each study intersection. Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a specified period under prevailing roadway, traffic, and control conditions. Based on this capacity, Sychro calculates average delay per vehicle to determine intersection Level-of-Service (LOS), queue lengths, and many more valuable measures for the efficiency of intersections within a study network.

While Synchro focuses mainly on vehicular operation; pedestrian, bicycle, and heavy vehicle (busses) volumes are incorporated in calculations. This study incorporates vehicular, pedestrian, and bicycle volumes to most accurately model existing and future conditions. Since existing transit operations utilize the same network as general vehicular traffic, delay for transit is assumed to be the same as general vehicular operations.

This study reports specifically on LOS for each study intersection during the highest volume hour of the AM (morning), Midday (lunch), and PM (afternoon) peak periods. 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 11 illustrates LOS thresholds for unsignalized and signalized intersections.

**Table 11**
**Level-of-Service Criteria for Unsignalized 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

LOS D or better is typically described as being a passing level-of-service by local government agencies. Locations with LOS E or F tend to consist of lengthy levels of delay and are generally accepted as candidates for mitigation efforts. While the above standards hold true in many less congested communities, Buckhead motorists are no stranger to much lower levels of operation (such as LOS E or F). Given the existing and expected future congestion in the Buckhead area, this study aims to balance congestion for all user groups, and not benefit only the motorists.

Additionally, this study reports on an arterial travel time analysis for the corridor. Arterial travel times represent the amount of running time plus signal delay, where running time represents time to travel through the corridor at posted speed limits and signal delay is delay caused by traffic signals and congestion located along the corridor.

### 3.6.2 Existing Conditions Operational Analysis/Corridor Performance

While most of the 22 study intersections along the corridor currently operate at LOS D or better, several currently cause moderate to extreme delay, causing far-reaching congestion along the corridor, especially during the afternoon peak period. The following intersections currently operate at poor levels during at least one daily peak period:

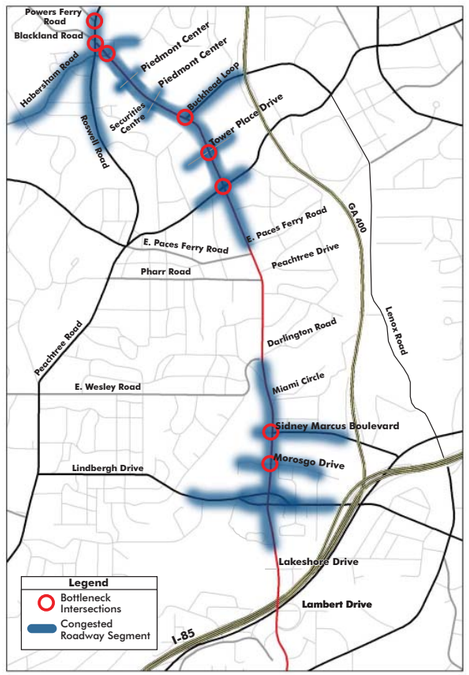
**Roswell Road at**

- Powers Ferry Road/Tuxedo Festival Shopping Center Driveway (unsignalized)

**Piedmont Road at**

- Roswell Road/Habersham Road Triangle
- Buckhead Loop/Carson Drive
- Tower Place Drive/Driveway
- Peachtree Road
- Sidney Marcus Boulevard
- Morosgo Drive

Figure 3.10 Intersection Bottlenecks




## Figure 3.10 – Intersection Bottlenecks

The following are descriptions of capacity deficiencies at each of the above locations:

**Powers Ferry Road/Tuxedo Festival Shopping Center Driveway**
This unsignalized intersection serves the north-south through movements along Roswell Road well; however, the strain it places on Powers Ferry Road, the Tuxedo Festival Shopping Center Driveway, and the northbound left-turn movement from Roswell Road onto Powers Ferry Road is tremendous. With over 1,000 vehicles traveling in both the north and southbound directions along Roswell Road during the afternoon peak hour, turning left out of and left into Powers Ferry Road and the Tuxedo Festival Shopping Center driveway is very difficult and causes queuing which stretches into adjacent intersections such as Piedmont Road/Roswell Road.

**Piedmont/Roswell/Habersham Triangle**
The Piedmont/Roswell/Habersham Triangle creates delay along northbound Piedmont Road, northbound Roswell Road, and Habersham Road in both directions. While much of the congestion along Habersham Road is related to the low capacity provided by a regional network of two-lane roads (specifically West Paces Ferry Road), there is a particular impact felt on northbound Piedmont Road. The storage length for the large number of northbound left-turning vehicles (over 450 during the afternoon peak hour) from Piedmont Road onto Habersham Road is very short (approximately 75 feet). This causes left-turning vehicles to back into the two northbound through lanes, thus causing the entire northbound approach to experience heavy queuing, sometimes as far south as the Buckhead Loop.

**Buckhead Loop/Carson Drive**
This intersection carries much of the load for the Buckhead area. The Buckhead Loop terminates into Piedmont Road, creating multiple conflicting high-volume turning movements. The Buckhead Loop carries both local traffic and traffic avoiding GA 400; over 1,000 vehicles per hour turning left from the Buckhead Loop onto Piedmont Road during both the morning and afternoon peak hours. The intersection's inability to process the 5,500 vehicle demand during the afternoon peak creates long queues in every direction, especially the southbound and westbound directions along Piedmont Road and the Buckhead Loop.

**Tower Place Drive**
The narrow Tower Place Drive carries over 500 vehicles during the morning and afternoon peak hours. With only two lanes in both the eastbound and westbound approaches, a large percentage of the traffic signal time is given to Tower Place Drive, reducing much needed time given to Piedmont Road for northbound and southbound travel.

**Peachtree Road**
The problems associated with this intersection are much like those of the Buckhead Loop intersection to the north. Peachtree Road is an arterial that travels through the heart of Buckhead and carries 4,300 vehicles during the morning and afternoon peak hours. With Piedmont Road's demand in addition, the intersection attempts to process 7,500 vehicles each during the morning and afternoon peak hours. Much of the time, queuing backs in all directions, impacting the intersections of Tower Place Drive (at both its intersections with Piedmont Road and Peachtree Road), Maple Drive, and East Paces Ferry Road.

**Sidney Marcus Boulevard**

When southbound GA 400 queues north to the Buckhead area (mainly during the afternoon peak hour) many vehicles traveling to portions of midtown and downtown, as well as I-85, exit at Sidney Marcus Boulevard and use Piedmont Road as a southbound alternative to GA 400. This "bail out" of traffic creates large volumes of westbound left-turning vehicles (nearly 700 during the afternoon peak hour) onto Piedmont Road. Intersection operation is further deteriorated by lowered capacity along Piedmont Road at this intersection, with the inside lanes designated as left-turn lanes (leaving only two northbound and two southbound through movement lanes). The delay created at this intersection causes extreme queues during most afternoon peak hours, sometimes backing as far north along Piedmont Road to Pharr Road (almost a mile away), as far east along Sidney Marcus Boulevard as GA 400, and as far south along Piedmont Road as I-85.

**Morosgo Drive**

This intersection operates at poor levels, even without the negative effects of the Sidney Marcus Boulevard intersection. Like Sidney Marcus Boulevard to the north, Piedmont Road is reduced to only two northbound and two southbound through movement lanes. The lack of adequate capacity adds to the delay along Piedmont Road created at Sidney Marcus Boulevard.

Existing 2007 peak hour levels-of-service model outputs are provide in Table 12. Highlighted boxes indicate that an intersection operates at a poor level-of-service during a particular peak hour.

**Table 12**
**Existing 2007 Intersection Levels-of-Service**
**(delay in seconds)**

| | Intersection | Level-of-Service | | |
|---|---|---|---|---|
| | | AM Peak Hour | MD Peak Hour | PM Peak Hour |
| Roswell Road at | Powers Ferry Road/Driveway (Unsignalized) | F (72.1)[1] | F (N/A)[2] | F (N/A)[2] |
| | Piedmont Road/Blackland Road | C (32.8) | C (28.9) | D (40.4) |
| | Habersham Road | D (42.3) | D (36.6) | D (36.3) |
| Piedmont Road at | Habersham Road | D (36.6) | C (23.5) | C (28.1) |
| | Piedmont Center/Driveway | A (9.6) | A (9.9) | C (20.7) |
| | Piedmont Center/Securities Centre | A (8.2) | C (29.1) | D (49.8) |
| | Buckhead Loop/Carson Drive | F (84.1) | F (260.1) | F (177.2) |
| | Tower Place/Driveway | C (29.9) | F (164.7) | F (98.4) |
| | Peachtree Road | F (89.3) | F (138.8) | F (133.5) |
| | East Paces Ferry Road/Driveway | A (3.5) | B (10.6) | A (8.0) |
| | East Paces Ferry Road | A (7.2) | A (7.5) | B (10.2) |
| | Peachtree Drive | A (2.0) | A (2.2) | A (1.9) |
| | Pharr Road/Driveway | C (21.7) | D (35.7) | C (34.3) |
| | East Wesley Road/Darlington Road/Driveway | D (38.0) | B (14.3) | C (20.4) |
| | Miami Circle | A (3.1) | A (9.0) | A (7.9) |
| | Sidney Marcus Boulevard | E (58.7) | C (33.3) | E (60.8) |
| | Morosgo Drive | C (32.0) | C (28.3) | E (56.5) |
| | Lindbergh Drive | C (26.2) | C (21.6) | C (22.8) |
| | Lindbergh Way | B (14.8) | B (17.3) | B (18.2) |
| | Garson Drive | C (26.9) | A (9.0) | C (21.5) |
| | Lakeshore Drive | C (30.9) | B (16.9) | C (23.5) |
| | Piedmont Circle/Lambert Drive/Buford Highway Off-Ramp | C (20.3) | B (15.3) | B (17.2) |

Since intersection level-of-service describes only what is happening at individual intersections, it does not always tell the whole story of the corridor. Results from an arterial travel time analysis for the corridor are provided in Table 13. Compared with the posted speed limit of 35-40 mph, the actual speed when factoring for stopped time at traffic signals and in congestion is closer to 10 mph during the most congested conditions.

**Table 13**
**Existing 2007 Corridor Travel Time on Piedmont Road**
**(Between Roswell Road at Powers Ferry Road and Piedmont Road at Piedmont Circle/Lambert Drive)**

| | Existing 2007 | | | | | |
|---|---|---|---|---|---|---|
| | AM Peak Hour | | Mid-Day (lunchtime) Peak Hour | | PM Peak Hour | |
| | NB[1] | SB[2] | NB | SB | NB | SB |
| Travel Time (minutes) | 15.6 | 12.9 | 19.8 | 19.0 | 16.3 | 20.8 |
| Average Speed (mph) | 13.1 | 15.8 | 10.3 | 10.7 | 12.5 | 9.8 |

[1] NB – Northbound
[2] SB – Southbound

The model results reflect that the afternoon peak hour is the most heavily congested time of day, with a travel time through the 3.4 mile long corridor of over 20 minutes, an average speed of approximately 9 miles per hour. Additionally, the heavy traffic volume in the southbound direction during the afternoon peak hour is reflected in the travel time differences in the northbound and southbound directions.