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EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts associated with the proposed City View at Englewood development, a proposed approximate 10.32-acre mixed-use development bounded by Englewood Avenue to the south, Atlanta West Point Railroad (proposed Beltline) to the north, and is located just east of Mailing Avenue. Because the project requires a rezoning of the property and is a mixed-use development exceeding 400,000 gross square feet (SF), the proposed development is considered a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review. This document is being submitted under non-expedited review.

The proposed development is expected to consist of approximately 600 mid-rise apartment units and 15,000 SF of neighborhood retail.

The development is scheduled to be completed by 2010, and this analysis will consider the full build-out of the proposed site in 2010. The proposed site is located in the City of Atlanta's NPU-Y. The current zoning is I-1C (Industrial) and the proposed zoning is MR4-A (Mixed Use Residential-Commercial Zoning). The City of Atlanta NPU-M 2004-2019 Future Land Use Plan identifies the proposed site as High Density Residential. This site is located within the Beltline Tax Allocation District (TAD). The property currently consists of abandoned buildings and a 57,000 SF industrial laundry facility.

Capacity analyses were performed for the Existing 2007 Conditions, Projected 2010 No-Build Conditions, and Projected 2010 Build Conditions at eight (8) intersections. This study network consists of:

0. McDonough Boulevard/University Avenue/Hank Aaron Drive/Ridge Avenue/Gammon Avenue
0. Georgia Avenue at Hill Street
0. Hill Street at Atlanta Avenue
0. Atlanta Avenue at Grant Street
0. Hill Street at Englewood Avenue
0. Milton Avenue at Hill Street
0. McDonough Boulevard at Milton Avenue
0. Boulevard at Englewood Avenue

Each of the above listed intersections was analyzed for the Existing 2007 Conditions, the 2010 No-Build Conditions, and the 2010 Build Conditions. The Projected 2010 No-Build Conditions represent the existing traffic volumes grown at 2% per year for three years along all roadway links, plus project trips from the Grant Street DRI #1593, East Medinah DRI #981, and the Village at Chosewood Park DRI #1263. The Projected 2010 Build Conditions adds the project trips associated with the City View at Englewood development to the Projected 2010 No-Build Conditions.

During the 2010 No-Build analysis, two (2) intersections are projected to operate below the GRTA standard. The McDonough Boulevard/University Avenue at Hank Aaron Drive intersection is projected to operate at LOS F during the AM peak hour. The Englewood Avenue at Boulevard intersection is projected to operate at LOS E during the AM peak hour.

2010 No-Build recommended improvements (includes background traffic growth and traffic associated with other DRIs, but excludes the City View at Englewood DRI project traffic):

- McDonough Boulevard/University Avenue at Hank Aaron Drive (Intersection #1)
  - Optimize signal timing splits.

- Englewood Avenue at Boulevard 2 (Intersection #8)
  - Optimize signal timing splits.

To obtain LOS D or better at the two signalized intersections, the only improvements needed were to modify the existing signal timings. By maintaining the same cycle length and optimizing the intersection splits through *Synchro 6.0*, an acceptable LOS was obtained. For Intersection #1 in the AM peak hour, the traffic signal splits were adjusted so that the Ridge Avenue approach decreased green time per cycle, the eastbound left-turn phase along University Avenue decreased green time per cycle, and the main through movements along University Avenue/McDonough Boulevard increased green time per cycle length. For Intersection #8 in the AM peak hour, the traffic signal splits were adjusted to give the Englewood Avenue side-street less green time per cycle and the Boulevard mainline more green time per cycle.

2010 Build recommended improvements (includes the City View at Englewood DRI project traffic):

There are no recommended offsite improvements for the 2010 Build Conditions because all of the intersections are projected to operate above the GRTA standard. Please refer to *Section 6.3 2010 Build Traffic* for further explanation. Recommended site access improvements are as follows:

- Englewood Avenue at Driveway 1 (Intersection #9)
  - Provide site access approximately 275' east of Mailing Avenue, consisting of one ingress lane and one egress lane (shared left-turn/right-turn lane).
- Englewood Avenue at Driveway 2 (Intersection #10)
  - Provide site access approximately 600' east of Mailing Avenue, consisting of one ingress lane and one egress lane (shared left-turn/right-turn lane).

1.0 PROJECT DESCRIPTION

1.1 Introduction

This report presents the analysis of the anticipated traffic impacts associated with the proposed City View at Englewood development, a proposed approximate 10.32-acre mixed-use development bounded by Englewood Avenue to the south, Atlanta West Point Railroad (proposed Beltline) to the north, and is located just east of Mailing Avenue. Because the project requires a rezoning of the property and is a mixed-use development exceeding 400,000 gross square feet (SF), the proposed development is considered a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review. This document is being submitted under non-expedited review.

The proposed development is expected to consist of a total of approximately 600 mid-rise apartment units and 15,000 SF of neighborhood retail.

A summary of the proposed land-uses and densities, by building, is provided below in **Table 1.**

Table 1
Proposed Land Uses

Mid-Rise Apartment	600 Dwelling Units
Neighborhood Retail	15,000 Square Feet

The development is scheduled to be completed by 2010, and this analysis will consider the full build-out of the proposed site in 2010. The proposed site is located in the City of Atlanta's NPU-Y. The current zoning is I-1C (Industrial) and the proposed zoning is MR4-A (Mixed Use Residential-Commercial Zoning). The City of Atlanta NPU-M 2004-2019 Future Land Use Plan identifies the proposed site as High Density Residential. This site is located within the Beltline Tax Allocation District (TAD). The property currently consists of abandoned buildings and a 57,000 SF industrial laundry facility.

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

1.2 Site Plan Review

The development plan consists of two buildings, each with their own parking deck. The western building will consist of an 8-story mid-rise building with 300 apartments, 15,000 SF of retail fronting Englewood Avenue, and an 8-story parking deck. The eastern building will consist of an 8-story mid-rise building with 300 apartments and a second parking deck. There are 45 required parking spaces for the retail use, and 45 parking spaces are provided. There are 1,020 required parking spaces for the residential use, and 1,025 parking spaces are provided. The total required parking is 1,065 spaces and there are 1,070 spaces provided. The retail component of the mixed-use development is proposed on the first floor at street level along Englewood Avenue. Approximately 3.65 acres (35% of site) provides usable open space.

Figure 3 is a small-scale copy of the site plan. A full-size site plan consistent with GRTA's Site Plan Guidelines is also being submitted as part of the DRI Review Package.

1.3 Site Access

Vehicular access to City View at Englewood is proposed in two full-movement locations along Englewood Avenue. Driveway 1 is proposed along Englewood Avenue approximately 275' east of Mailing Avenue. This access point is proposed at the same location as an existing driveway that currently serves the property, and aligns directly across from a private driveway on the southern side of Englewood Avenue. Driveway 2 is labeled "Private Drive" on the site plan and is located along Englewood Avenue approximately 600' east of Mailing Avenue, at the same location as an existing driveway that currently serves the property. Photos of both access locations are included in the Appendix.

In addition to the two proposed driveways, on-street parallel parking will be provided along the northern side of Englewood Avenue. These parking spaces will primarily serve the street-front retail proposed within the development.

1.4 Bicycle and Pedestrian Facilities

Pedestrian facilities (sidewalks) currently exist along Englewood Avenue. Sidewalks are located along the northern side of Englewood Avenue between Hill Street and Mailing Avenue, and along the southern side of Englewood Avenue between Mailing Avenue at Boulevard. Near Mailing Avenue, there is a crosswalk for pedestrians to cross Englewood Avenue. The proposed development will install sidewalks along the site frontage.

Fifty (50) bicycle parking spaces are required and provided with the proposed site. Walking trails are proposed that would connect to the future Beltline.

1.5 Transit Facilities

The proposed development is located along a MARTA bus route. Route 49 (McDonough) travels between the Forsyth Street/Alabama Street intersection (near Five Points MARTA station) and the Constitution Road/Forrest Park Road intersection. Along this route, there are approximately seven (7) bus stops along Englewood Avenue between Hill Street and Boulevard. This bus route provides transit access to the Five Points MARTA station.

Twenty different MARTA bus routes access Five Points rail station, and all four of the MARTA rail lines leave from Five Points station. These rail routes include: the East-West Rail Line, the North-South Rail Line, the Northeast-South Rail Line, and the Proctor Creek Rail Line.

Due to the area's bus route (Route 49 – McDonough) and its connection to the Five Points rail station, a 5% alternative mode reduction was applied to the residential trips. No alternative mode reduction was applied to the retail portion of the development. This is consistent with GRTA's Letter of Understanding dated December 10, 2007.

2.0 TRAFFIC ANALYSES METHODOLOGY AND ASSUMPTIONS

2.1 Growth Rate

Background traffic is defined as expected traffic on the roadway network in future year(s) absent the construction and opening of the proposed project. Historical traffic count data from the Georgia DOT was reviewed for the area surrounding the proposed development, and a growth rate of 2% per year for three years along all adjacent roadways was agreed upon during the methodology meeting with GDOT and City of Atlanta staff. In addition to the 2% per year growth rate, the project trips from three (3) DRI developments were added to the projected No-Build and Build conditions:

- Grant Street – DRI #1593
  - Build-Out Year 2010
- East Medinah Village – DRI #981
  - Build-Out Year 2008
- Village at Chosewood Park – DRI #1263
  - Build-Out Year 2013

2.2 Traffic Data Collection

Weekday peak hour turning movement counts were collected in November 2007 at eight (8) intersections during the AM and PM peak periods. The morning and afternoon peak hours varied between the eight (8) intersections and are listed below:

0. McDonough Boulevard/University Avenue/Hank Aaron Drive/Ridge Avenue/Gammon Avenue
   - 7:30 – 8:30 AM Peak Hour, 5:00 – 6:00 PM Peak Hour
0. Georgia Avenue at Hill Street
   - 7:45 – 8:45 AM Peak Hour, 5:00 – 6:00 PM Peak Hour
0. Hill Street at Atlanta Avenue
   - 7:45 – 8:45 AM Peak Hour, 5:00 – 6:00 PM Peak Hour
0. Atlanta Avenue at Grant Street
   - 7:15 – 8:15 AM Peak Hour, 5:00 – 6:00 PM Peak Hour
0. Hill Street at Englewood Avenue
   - 7:15 – 8:15 AM Peak Hour, 4:00 – 5:00 PM Peak Hour
0. Milton Avenue at Hill Street
   - 7:30 – 8:30 AM Peak Hour, 4:00 – 5:00 PM Peak Hour
0. McDonough Boulevard at Milton Avenue
   - 7:30 – 8:30 AM Peak Hour, 4:00 – 5:00 PM Peak Hour
0. Boulevard at Englewood Avenue
   - 7:30 – 8:30 AM Peak Hour, 4:45 – 5:45 PM Peak Hour

All raw count data is included in the Appendix.

2.3 Detailed Intersection Analysis

Level of Service (LOS) is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A being the best and F being the worst. Level of service analyses were conducted at all intersections within the study network using *Synchro Professional, Version 6.0*.

Levels of service for signalized intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a low level of service, while the intersection as a whole may operate acceptably.

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

3.0 STUDY NETWORK

3.1 Gross Trip Generation

As stated earlier, the proposed development is expected to consist of approximately 600 mid-rise apartment units and 15,000 SF of retail. Traffic for these land uses was calculated using equations contained in the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Seventh Edition, 2003*. Average rates were used only when equations were not provided. Gross trips generated are displayed below in **Table 2**.

Table 2
City View at Englewood DRI
Gross Trip Generation

Land Use	ITE Code	Daily Traffic		AM Peak Hour		PM Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
Build-Out (Year 2010)							
600 Mid-Rise Apartment Units	*220*	1,878	1,878	60	238	226	122
15,000 SF of Retail	*820*	990	990	31	19	86	93
Total		**2,868**	**2,868**	**91**	**257**	**312**	**215**

3.2 Trip Distribution

The directional distribution and assignment of new project trips was based on a review of the land uses in the area (aerial mapping), engineering judgment, and methodology discussions with GRTA, ARC, GDOT, and City of Atlanta staff.

3.3 Level of Service Standards

For the purposes of this traffic analysis, a level of service standard of D was assumed for all intersections and segments within the study network. If, however, an intersection or segment currently operates at LOS E or LOS F during an existing peak period, the LOS standard for that peak period becomes LOS E, consistent with GRTA's Letter of Understanding.

3.4 Study Network Determination

A general study area was determined using GRTA's 7% rule. This rule recommends that all intersections and segments be analyzed which are impacted to the extent that the traffic from the proposed site is 7% or more of the service volume of the facility (at a previously established LOS standard, typically LOS D) be considered for analysis. The study area was agreed upon during methodology discussions with GRTA, ARC, GDOT, and City of Atlanta staff, and includes the following intersections:

0. McDonough Boulevard/University Avenue/Hank Aaron Drive/Ridge Avenue/Gammon Avenue
0. Georgia Avenue at Hill Street
0. Hill Street at Atlanta Avenue
0. Atlanta Avenue at Grant Street
0. Hill Street at Englewood Avenue
0. Milton Avenue at Hill Street
0. McDonough Boulevard at Milton Avenue
0. Boulevard at Englewood Avenue

Each of the above listed intersections was analyzed for the Existing 2007 Conditions, the 2010 No-Build Conditions, and the 2010 Build Conditions. The 2010 No-Build Conditions represent the existing traffic volumes grown at 2% per year for three years along all roadway links, plus project trips from the Grant Street DRI #1593, East Medinah DRI #981, and the Village at Chosewood Park DRI #1263. The 2010 Build Conditions adds the project trips associated with the City View at Englewood development to the 2010 No-Build Conditions.

3.5 Existing Facilities

The following are descriptions of the road network in the vicinity of the proposed site:

Englewood Avenue

Englewood Avenue is an east-west oriented roadway that extends from Hill Street to Boulevard. In the vicinity of the project site, Englewood is a 2-lane undivided roadway. Englewood Avenue is classified as an Urban Collector Street with a posted speed limit in the vicinity of the proposed development of 25 MPH. The 2006 daily volume on Englewood Avenue in the vicinity of the proposed development was 2,930 vehicles per hour (VPH), according to GDOT. On-street parking is not currently striped along Englewood Avenue, although the travel lanes are wide enough to accommodate on-street parking along both sides of the roadway.

Hill Street

Hill Street is a north-south oriented roadway that extends from Milton Avenue to north of Martin Luther King Drive, where it changes to Bell Street. In the vicinity of the project site, Hill Street is a 2-lane undivided roadway. North of Ormond Street, Hill Street is a one-way southbound road with two lanes. Hill Street is classified as an Urban Collector Street with a posted speed limit in the vicinity of the proposed development of 30 MPH. The 2006 daily volume on Hill Street in the vicinity of the proposed development was 3,320 vehicles per hour (VPH), according to GDOT.

Boulevard

Boulevard is a north-south oriented roadway that extends from McDonough Boulevard to Ponce de Leon Avenue, where it changes to Monroe Drive. In the vicinity of the project site, Boulevard is a 4-lane undivided roadway. Boulevard is classified as an Urban Minor Arterial with a posted speed limit in the vicinity of the proposed development of 35 MPH. The 2006 daily volume on Boulevard in the vicinity of the proposed development was 10,730 vehicles per hour (VPH), according to GDOT.

Grant Street

Grant Street is a north-south oriented roadway that extends from Englewood Avenue south to McDonough Boulevard and from the future Beltline north to Glenwood Avenue. In the vicinity of the project site, Grant Street is a 2-lane undivided roadway. North of Atlanta Avenue, Grant Street is a one-way northbound road with two lanes. Grant Street is classified as an Urban Local Street with a posted speed limit in the vicinity of the proposed development of 30 MPH. No GDOT historical data is available for Grant Street in the vicinity of the proposed development.

Milton Avenue

Milton Avenue is a northwest-southeast oriented roadway that extends from Hank Aaron Drive southeast to McDonough Boulevard. In the vicinity of the project site, Milton Avenue is a 2-lane undivided roadway. Milton Avenue is classified as an Urban Collector Street with a posted speed limit in the vicinity of the proposed development of 30 MPH. The 2006 daily volume on Milton Avenue in the vicinity of the proposed development was 4,550 vehicles per hour (VPH), according to GDOT.

McDonough Boulevard (SR 42 Spur)

McDonough Boulevard is an east-west oriented roadway that extends from University Avenue west to US 23 / SR 42. In the vicinity of the project site, McDonough Boulevard varies between a 2-lane undivided roadway and a 4-lane undivided roadway. McDonough Boulevard is classified as an Urban Minor Arterial with a posted speed limit in the vicinity of the proposed development of 30 MPH. The 2006 daily volume on McDonough Boulevard in the vicinity of the proposed development was 8,440 vehicles per hour (VPH), according to GDOT.

Atlanta Avenue

Atlanta Avenue is an east-west oriented roadway that extends from Pulliam Street to Confederate Avenue. In the vicinity of the project site, Atlanta Avenue is a 2-lane undivided roadway. West of Hill Street, Atlanta Avenue is a one-way eastbound road with two lanes. Atlanta Avenue is classified as an Urban Collector Street with a posted speed limit in the vicinity of the proposed development of 30 MPH. The 2006 daily volume on Atlanta Avenue in the vicinity of the proposed development was 2,620 vehicles per hour (VPH), according to GDOT.

Roadway classification descriptions for the entire study area are provided in **Table 3**.

Table 3
City View at Englewood DRI
Roadway Classification

Roadway	Road Type	Number of Lanes	Posted Speed Limit (MPH)	GDOT Functional Classification
Englewood Avenue	Two-Way	2	25	Urban Collector Street
Hill Street	One-Way/ Two-Way	1 / 2	30	Urban Collector Street
Boulevard	Two-Way	2 / 4	35	Urban Minor Arterial
Grant Street	One-Way/ Two-Way	2	30	Urban Local Street
Hank Aaron Drive	Two-Way	4	30	Urban Minor Arterial
Gammon Avenue	Two-Way	2	Not Posted	Urban Local Street
Milton Avenue	Two-Way	2	30	Urban Collector Street
McDonough Boulevard (SR 42 Sp)	Two-Way	2	30	Urban Minor Arterial
Atlanta Avenue	One-Way/ Two-Way	2	30	Urban Collector Street
University Avenue (SR 54)	Two-Way	4	30	Urban Collector Street
Ridge Avenue	Two-Way	2	35	Urban Minor Arterial
Georgia Avenue	Two-Way	4	30	Urban Collector Street

4.0 TRIP GENERATION

As stated earlier, trips associated with the proposed development were estimated using the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Seventh Edition, 2003*, using equations where available.

Mixed-use vehicle trip reductions were taken according to the *ITE Trip Generation Handbook, June 2004*. Total daily internal capture and vehicle trip reduction between the residential and retail uses is expected to be 6.90%, whereas total PM peak hour internal capture is expected to be 7.21%.

Alternative transportation mode (walking, bicycle, and transit) reductions were applied at 5% for the residential uses only, per the Letter of Understanding dated December 10, 2007.

The total (net) trips generated and analyzed in this report are listed in **Table 4**.

Table 4
City View at Englewood DRI
Net Trip Generation

	Daily Traffic		AM Peak Hour		PM Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Build-Out (Year 2010)						
Gross Project Trips	**2,868**	**2,868**	**91**	**257**	**312**	**215**
Mixed-Use Reduction	*- 198*	*- 198*	*- 0*	*- 0*	*- 19*	*- 19*
Alternative Mode Reduction	*- 89*	*- 89*	*- 3*	*- 12*	*- 11*	*- 6*
Pass-By Reduction	*- 303*	*- 303*	*- 0*	*- 0*	*- 27*	*- 27*
Net New Trips	**2,278**	**2,278**	**88**	**245**	**255**	**163**

5.0 TRIP DISTRIBUTION AND ASSIGNMENT

New trips were distributed onto the roadway network using the percentages agreed to during methodology discussions with GRTA, ARC, GDOT, and City of Atlanta staff. **Figure 4A,4B** and **Figure 5A,5B** display the expected residential and retail trip percentages for the development throughout the roadway network. These percentages were applied to the new trips generated by the development, and the volumes were assigned to the roadway network. The expected peak hour turning movements generated by the proposed development are shown in **Figure 6A,6B**.

6.0 TRAFFIC ANALYSIS

6.1 Existing 2007 Conditions

The observed existing peak hour traffic volumes were input in *Synchro 6.0*, along with the existing traffic signal timings obtained from the City of Atlanta. An Existing 2007 Conditions analysis was performed, and the results are displayed in **Table 5**. The existing peak hour traffic volumes are shown in **Figure 7A,7B**.

Table 5
City View at Englewood DRI
Existing 2007 Intersection Levels of Service
(delay in seconds)

Intersection		Control	AM Peak Hour	PM Peak Hour
1	McDonough Boulevard/University Avenue at Hank Aaron Drive	Signal	C (32.7)	C (24.1)
2	Georgia Avenue at Hill Street	Signal	A (6.7)	B (12.2)
3	Atlanta Avenue at Hill Street	Signal	A (9.5)	B (11.4)
4	Atlanta Avenue at Grant Street	Northbound Stop Controlled	B (11.6)	A (9.7)
5	Englewood Avenue at Hill Street	Westbound Stop Controlled	A (9.6)	B (10.3)
6	Milton Avenue at Hill Street	Southbound Stop Controlled	B (12.2)	B (11.4)
7	McDonough Boulevard at Milton Avenue	Signal	A (5.8)	B (15.3)
8	Englewood Avenue at Boulevard	Signal	C (31.6)	B (16.3)

All intersections currently operate above the acceptable Level of Service standard (LOS D) during both the AM Peak Hour and the PM Peak Hour. All intersections' No-Build and Build Peak Hour LOS standard, therefore, is LOS D per GRTA guidelines in the Letter of Understanding (LOU).

It should be noted that Intersection #1 will occasionally experience delay due to the proximity of four (4) Norfolk Southern railroad tracks that cross the intersection at-grade. This intersection is programmed for improvements by GDOT (see *Section 7.0*).

6.2 Projected 2010 No-Build Conditions

To account for growth in the vicinity of the proposed development, the existing traffic volumes were grown at 2.0% per year for three years along all roadway links within the study network. Additionally, project trips from the Grant Street DRI #1593, East Medinah DRI #981, and the Village at Chosewood Park DRI #1263 were specifically added to the background conditions. These volumes and the existing signal timings were input into *Synchro 6.0* and an analysis of the projected No-Build Conditions was performed. The results are displayed in **Table 6**. The intersection laneage and traffic volumes for the year 2010 No-Build Conditions are shown in **Figure 8A,8B**.

Table 6
City View at Englewood DRI
No-Build 2010 Intersection Levels of Service
(delay in seconds)

	Intersection	Control	AM Peak Hour	PM Peak Hour
1	McDonough Boulevard/University Avenue at Hank Aaron Drive	Signal	F (190.7)	D (38.9)
2	Georgia Avenue at Hill Street	Signal	A (7.2)	B (11.4)
3	Atlanta Avenue at Hill Street	Signal	B (10.0)	B (10.5)
4	Atlanta Avenue at Grant Street	Northbound Stop Controlled	C (19.5)	B (12.9)
5	Englewood Avenue at Hill Street	Westbound Stop Controlled	B (10.1)	B (11.4)
6	Milton Avenue at Hill Street	Southbound Stop Controlled	B (14.8)	C (15.4)
7	McDonough Boulevard at Milton Avenue	Signal	A (9.7)	B (18.5)
8	Englewood Avenue at Boulevard	Signal	E (77.8)	B (16.9)

Maintaining the existing signal timings and roadway geometry, two (2) intersections are projected to operate below the acceptable Level of Service standards for the year 2010 No-Build Conditions during the AM peak hours. The McDonough Boulevard/University Avenue at Hank Aaron Drive intersection is projected to operate at LOS F during the AM peak hour. The Englewood Avenue at Boulevard intersection is projected to operate at LOS E during the AM peak hour.

To obtain LOS D or better at the two signalized intersections, modifications to the existing signal timings were made. By maintaining the same cycle length and optimizing the intersection splits through *Synchro 6.0*, an acceptable LOS was obtained. For Intersection #1 in the AM peak hour, the traffic signal splits were adjusted so that the Ridge Avenue approach decreased green time per cycle, the eastbound left-turn phase along University Avenue decreased green time per cycle, and the main through movements along University Avenue/McDonough Boulevard increased green time per cycle length. For Intersection #8 in the AM peak hour, the traffic signal splits were adjusted to give the Englewood Avenue side-street less green time per cycle and the Boulevard mainline more green time per cycle.

The improved levels of service with the signal timing improvements stated above are shown in **Table 7** on the following page.

Table 7
City View at Englewood DRI
No-Build 2010 Intersection Levels of Service IMPROVED
(delay in seconds)

Intersection		Control	AM Peak Hour	PM Peak Hour
1	McDonough Boulevard/University Avenue at Hank Aaron Drive	Signal	C (28.8)	D (36.2)
8	Englewood Avenue at Boulevard	Signal	B (11.7)	B (14.7)

6.3 Projected 2010 Build Conditions

The traffic associated with the proposed development was added to the 2010 No-Build volumes. These volumes were then input into *Synchro 6.0,* and the optimized signal timings and existing roadway geometry were maintained. The results of the analysis are displayed in **Table 8**. The intersection laneage and traffic volumes for the year 2010 Build Conditions, as well as the recommended driveway configurations, are shown in **Figure 9A,9B**.

Table 8
City View at Englewood DRI
Build 2010 Intersection Levels of Service
(delay in seconds)

	Intersection	Control	AM Peak Hour	PM Peak Hour
1	McDonough Boulevard/University Avenue at Hank Aaron Drive	Signal	C (31.5)	D (39.6)
2	Georgia Avenue at Hill Street	Signal	A (7.3)	B (11.7)
3	Atlanta Avenue at Hill Street	Signal	B (10.5)	A (9.8)
4	Atlanta Avenue at Grant Street	Northbound Stop Controlled	C (23.8)	B (13.8)
5	Englewood Avenue at Hill Street	Westbound Stop Controlled	C (15.6)	C (23.7)
6	Milton Avenue at Hill Street	Southbound Stop Controlled	C (19.9)	C (22.8)
7	McDonough Boulevard at Milton Avenue	Signal	B (12.9)	C (26.6)
8	Englewood Avenue at Boulevard	Signal	B (12.7)	B (15.4)
9	Englewood Avenue at Site Driveway 2	Southbound Stop Controlled	B (12.0)	C (15.3)
10	Englewood Avenue at Site Driveway 2	Southbound Stop Controlled	B (11.4)	B (13.2)

For the Build Condition, all intersections are expected to operate above the acceptable Level of Service standard (LOS D) during both the AM Peak Hour and the PM Peak Hour. Because an acceptable LOS was obtained, no improvements are recommended.

7.0 IDENTIFICATION OF PROGRAMMED PROJECTS

The *TIP, STIP, RTP, and GDOT's Construction Work Program* were searched for currently programmed transportation projects within the vicinity of the proposed development. The identified projects are listed below:

2008	AR-118A, GDOT 762590-:	Intersection Improvement (Safety) to reconfigure the existing 5-leg intersection at University Avenue/McDonough Boulevard/Hank Aaron Drive/Ridge Ave/Gammon Avenue, which also has 4 Norfolk Southern railroad tracks crossing through the intersection at-grade
2020	AR-450, GDOT 0007683:	Beltline Multi-Use Path
2030	AT-175, GDOT 0002641:	University Avenue widening from Metropolitan Parkway (US 19/SR 41) to McDonough Boulevard (SR 54)
2030	AR-451	Transit Service in the Southeast Corridor of the Belt Line

The safety improvement project for the existing 5-leg intersection at University Avenue/McDonough Boulevard/Hank Aaron Drive/Ridge Avenue/Gammon Avenue will reconfigure the intersection to allow for the installation of railroad crossing gates to supplement the existing lights and bells. There are currently four (4) Norfolk Southern railroad tracks that cross at-grade through this intersection. The intersection will be reconfigured by aligning University Avenue with Hank Aaron Drive, and moving McDonough Boulevard to intersect the mainline at approximately 75 degrees to form a signalized T-intersection. The Ridge Avenue approach will be removed and a cul-de-sac will be installed. Gammon Avenue will be relocated approximately 240' to the east, further away from the T-intersection. Engineering and Right of Way were approved for 2006, and Construction is approved for 2008 (according to the GDOT Preconstruction Status Report).

This intersection was not analyzed with the proposed GDOT improvements. However, preliminary analyses were performed to determine if the reconfigured intersection would operate acceptably. For both the No-Build and Build 2010 conditions, the AM and PM peak hours are projected to operate at LOS B or better utilizing the proposed GDOT improvements included in AR-118A (GDOT 762590-). A figure from the GDOT Concept Report can be found in the Appendix.

Information on the proposed improvements is included in the Appendix. **Figure 10** shows the locations of the programmed transportation projects.

8.0 INGRESS/EGRESS ANALYSIS

Vehicular access to City View at Englewood is proposed in two full-movement locations along Englewood Avenue. Driveway 1 is proposed along Englewood Avenue approximately 275' east of Mailing Avenue. This access point is proposed at the same location as an existing driveway that currently serves the property, and aligns directly across from a private driveway on the southern side of Englewood Avenue. Driveway 2 is labeled "Private Drive" on the site plan and is located along Englewood Avenue approximately 600' east of Mailing Avenue, at the same location as an existing driveway that currently serves the property. Photos of both access locations are included in the Appendix.

In addition to the two proposed driveways, on-street parallel parking will be provided along the northern side of Englewood Avenue. These parking spaces will primarily serve the street-front retail proposed within the development.

9.0 INTERNAL CIRCULATION ANALYSIS

As explained in *Section 8.0 Ingress/Egress Analysis*, two driveways along Englewood Avenue will provide access for the proposed development. Driveway 1 will provide access to the western building that proposes 300 residential units and 15,000 SF of retail. Driveway 2 will provide additional access to the retail use and to the eastern building that proposes an additional 300 residential units.

Mixed-use reductions were calculated according to the *ITE Trip Generation Handbook, 2004*. Approximately 6.90% of the gross daily trips are expected to be internal, and approximately 7.21% of the gross PM peak hour trips are expected to be internal. This is the interaction between the residential and retail land uses.

10.0 COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The proposed development is mixed-use with high-density residential and a retail component. The City of Atlanta NPU-Y 2004-2019 Future Land Use Plan identifies the proposed site as High Density Residential.

11.0 NON-EXPEDITED CRITERIA

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

The proposed development is located along a MARTA bus routes. Route 49 (McDonough) travels between the Forsyth Street/Alabama Street intersection (near Five Points MARTA station) and the Constitution Road/Forrest Park Road intersection. Along this route, there are approximately seven (7) bus stops along Englewood Avenue between Hill Street and Boulevard. This bus route provides transit access to the Five Points MARTA station.

Twenty different MARTA bus routes access Five Points rail station, and all four of the MARTA rail lines leave from Five Points station. These rail routes include: the East-West Rail Line, the North-South Rail Line, the Northeast-South Rail Line, and the Proctor Creek Rail Line.

Pedestrian facilities (sidewalks) currently exist along Englewood Avenue. Sidewalks are located along the northern side of Englewood Avenue between Hill Street and Mailing Avenue, and along the southern side of Englewood Avenue between Mailing Avenue at Boulevard. Near Mailing Avenue, there is a crosswalk for pedestrians to cross Englewood Avenue. The proposed development will install sidewalks along the site frontage.

Fifty (50) bicycle parking spaces are proposed with the proposed site. Walking trails are proposed that would connect to the future Beltline.

11.2 Vehicle Miles Traveled

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

	Build-out Total
Daily Gross Trip Generation:	**5,735**
(-)Mixed-use reductions (internal capture)	*- 396*
(-)Alternative modes	*- 178*
(-)Pass-by trips	*- 606*
Net Trips:	**4,555**

11.3 Relationship Between Location of Proposed DRI and Regional Mobility

The proposed development is located in City of Atlanta near Grant Park. Residents and retail patrons will have access to MARTA bus with connecting rail service as well as an existing and to-be improved pedestrian network. The site is located directly south of the Beltline and in proximity to major city streets with access to I-75/85, providing north-south connectivity, and I-20, providing east-west connectivity.

11.4 Relationship Between Proposed DRI and Existing or Planned Transit Facilities

The proposed development is served by bus via MARTA Route 49 which provides direct access to the MARTA Five Points station. Additionally, the proposed Beltline is planned directly to the north of the project site. Walking trails are proposed that would connect to the future Beltline. Pedestrian facilities (sidewalks) currently exist along Englewood Avenue. Sidewalks are located along the northern side of Englewood Avenue between Hill Street and Mailing Avenue, and along the southern side of Englewood Avenue between Mailing Avenue at Boulevard. Near Mailing Avenue, there is a crosswalk for pedestrians to cross Englewood Avenue. The proposed development will install sidewalks along the site frontage. Fifty (50) bicycle parking spaces are proposed with the proposed site.

11.5 Transportation Management Area Designation

The proposed development is not located within an established TMA.

11.6 Offsite Trip Reduction and Trip Reduction Techniques

Mixed-use and pass-by trip reductions were taken according to the *ITE Trip Generation Handbook, 2003*. Approximately 6.90% of the gross daily trips will be internal and approximately 7.21% of the gross PM peak hour trips will be internal. A 5% alternative mode reduction (those using transportation modes such as walking, bicycling, transit, etc.) was taken for the residential uses only. Additionally, for the projected new daily and PM peak hour trips, a 34% daily and PM peak pass-by reduction was used for the proposed retail portion of the development.

11.7 Balance of Land Uses – Jobs/Housing Balance

Please refer to the Area of Influence Analysis, located in *Section 12.0* of this report.

11.8 Relationship Between Proposed DRI and Existing Development and Infrastructure

The development is located in an area where the existing infrastructure is adequate to serve the needs of the development upon build-out (2010).

12.0 AREA OF INFLUENCE

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

12.1 Criteria

As part of the non-expedited review process for a DRI, an Area of Influence Analysis must be performed to determine the impact of the proposed development on the balance of housing and jobs within the immediate area surrounding the proposed development. For this proposed development expansion, the non-expedited review criterion is as follows:

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

7. The proposed DRI:
   (c) Is located in an area of influence with employment opportunities which are such that at least twenty-five percent (25%) of the persons that 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.

12.2 Study Area Determination and Characteristics

The Area of Influence is comprised of the area within six road-miles of the proposed development. To determine the AOI, *TransCAD* was used to measure six road miles from the nearest intersection to the project (Englewood Avenue at Grant Street). The population and housing statistics for the AOI were determined by taking the area outlined in *TransCAD*, creating a boundary in GIS format, and overlaying the boundary with a GIS layer containing census tract information. The Area of Influence (located within Fulton and DeKalb Counties) can be seen in **Figure 11**. Information obtained from the census tracts can be seen in **Table 9**.

Table 9
Census Tract Information

Total Households	90,613
Population in Households	210,019
Average household size	2.32
Workers per Household	1.08
Owner Occupied	42.18%
Rental Occupied	57.82%

As can be seen from the table above, the total population within the Area of Influence is 210,019 residing within 90,613 households (an average of 2.32 people per household). The AOI area totals 48,125 acres.

Using the above calculated average of 2.32 persons per household, it can be anticipated that the proposed DRI will house approximately 1,392 people (600 proposed dwelling units multiplied by 2.32). Based on information obtained from the Census Tracts, it is estimated that approximately 648 of these expected 1,392 residents would be workers. The remainder of this section will demonstrate the availability of jobs for these expected workers within the development at or above the necessary income level to afford housing within the DRI.

12.3 Development Housing Analysis

The development plan provides for apartments for rent in three price ranges within the proposed development. **Table 10**, below, displays the number of units for rent, the average rent price for those units, and the number of workers expected to reside in the homes.

Table 10
Estimated Workers per Household

Tier	Description	Number of Units	Average Price	Number of Workers
A1	One Bedroom Apartment	270	$950/month	291
A2	Two Bedroom Apartment	270	$1,250/month	291
A3	Three Bedroom Apartment	60	$1,750/month	65

In order to determine the number of jobs available within the AOI that would provide adequate income, information about the types of jobs within the AOI and the average salaries for these positions was collected first. Information about the types of jobs available within the AOI was obtained from Claritas, a data solutions company. A map with the boundary of the AOI was sent to Claritas, and a report containing the types of employment opportunities and number of each type of job was compiled. The Claritas report is included in the Appendix of this report. Next, the Georgia Department of Labor website was researched to obtain average salary information for the positions available within the AOI. Average salary information for jobs in Fulton and DeKalb counties was matched to the jobs existing within the AOI. This information (also available in the Appendix), along with the information provided by Claritas, is included in the **Table 11**, on the following page.

Table 11
AOI Jobs and Average Salaries

Industry / Business Type	# Businesses	# Employees	Average Salary
Retail Trade	2,981	36,664	$27,908
Building Materials and Garden Supply	105	3,122	-
General Merchandise Stores	76	1,545	-
Food Stores	297	3,949	-
Auto Dealers and Gas Stations	211	1,528	-
Apparel and Accessory Stores	316	1,603	-
Home Furniture, Furnishings, and Equipment	294	2,033	-
Eating and Drinking Places	994	17,161	-
Miscellaneous Retail Stores	688	5,723	-
Finance	1,509	19,598	$58,646
Banks, Savings and Lending Institutions	318	4,913	-
Securities and Commodity Brokers	146	2,486	-
Insurance Carriers and Agencies	151	2,129	-
Real Estate Trusts, Holdings, and Other Investments	894	10,070	-
Services	9,355	148,881	-
Hotels and Other Lodging	83	8,664	$17,759
Personal Services	1,430	6,587	-
Business Services	2,000	35,791	$69,386
Motion Picture and Amusement	406	8,967	$40,978
Health Services	889	23,964	$42,639
Legal Services	1,636	14,710	$69,386
Education Services	305	21,248	$39,549
Social Services	454	5,853	$42,639
Miscellaneous, Membership Organizations and Nonclassified	2,152	23,097	-
Agriculture	255	1,670	$5,175
Mining	5	41	$19,627
Construction	1055	8,576	$47,721
Manufacturing	546	15,947	$56,489
Transportation, Communication/Public Utilities	579	26,420	$93,855
Wholesale Trade	596	7,686	$62,207
Public Administration	1,077	50,847	$44,958
Total	17,958	316,330	-

12.4 Affordable Housing Analysis

Various mortgage calculators are available online to aid in determining affordable housing based on given incomes and income ranges. These calculators were used to determine the minimum income necessary to afford housing within the proposed Morningside development. It was assumed that no more than one third of an individual's income would be used for mortgage costs (principal + interest), that a 5.75% interest rate on a 30-year conventional loan could be obtained, and that a 10% down payment would be made. The income required to purchase a home at the approximate price range was calculated and is displayed in **Table 12**. Because there is an average of 1.08 workers expected per household, the required income was divided by 1.08 to determine the average salary each worker within the development would be expected to earn in order to provide their "fair share" of the housing costs. This methodology assumes an equal burden on all workers within the development, and is considered to be a conservative approach since it eliminates the lower paying positions within the AOI from consideration in the analysis. **Table 12** also displays the number of workers expected in each price range, as well as the number of jobs available at the necessary average income level to afford housing within that price range. As can be seen in the table, there are more than enough positions available within the AOI for expected workers within the proposed development to find employment at the required income level for all levels of pricing within the development, thus satisfying the GRTA requirement of 25%.

Table 12
Expected Workers

	Average Rent Price	Necessary Income per Expected Worker	Expected Worker per Price Range	Jobs at or above Necessary Income
A1	$950/month	$31,775	291	239,607
A2	$1,250/month	$41,809	291	209,392
A3	$1,750/month	$58,533	65	104,205
Percent of expected workers likely to find necessary employment within the AOI				**100%**

13.0 ARC'S AIR QUALITY BENCHMARK

The proposed 10.32-acre development is mixed-use, containing a total of approximately 600 mid-rise apartment units and 15,000 SF of retail. Because residential is the dominant use and the residential density is approximately 58.12 units per acre, the development meets the ARC criterion (1.B) for a 6% reduction.

There are bus stops along Englewood Avenue that are within ¼ mile of the proposed development. The proximity to transit allows for a 3% reduction.

Additionally, the proposed development will connect with the existing sidewalks along Englewood Avenue and to the Beltline. Residents and other pedestrians will also be able to access the retail uses within the proposed development. This pedestrian network (combined with the development exceeding a density threshold) meets the ARC criteria for a 4% reduction.

The proposed development meets the ARC criteria for a total 13% VMT reduction. These reductions are displayed below in **Table 13**.

Table 13
ARC VMT Reductions

Mixed-Use Projects where Residential is the dominant use	
Greater than 15 dwelling units per acre	-6%
Project is located within ¼ mile of a bus stop	-3%
Bike/Ped network that meets density 'target' and connects to adjacent uses	-4%
Total Reductions	**13%**