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# **EXECUTIVE SUMMARY**

This report presents the analysis of the anticipated traffic impacts of the proposed Huff Road Assemblage, an approximate 42.679-acre mixed-use development located in the City of Atlanta, Georgia. This report is being prepared as part of a submittal requesting a rezoning from I-1 and I-2 (Light Industrial / Heavy Industrial) to PDMU (Planned Mixed-Use Development) and an additional Comprehensive Development Plan (CDP) application with the City of Atlanta. Because the project will contain over 400,000 square feet of mixed-use floor area, 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. The site is currently zoned I-1 and I-2 and occupied by approximately 20,000 square feet of office space, 150,000 square feet of industrial warehouses, and 13 residential units. All land uses currently located on the site will be demolished upon build-out of the Huff Road Assemblage development.

The proposed development is a mixed-use development that will consist of 1,450 residential units (approximately 1,410 attached condominium / townhome units and 40 detached single family units) and 150,000 square feet of retail space. The development is expected to be completed in one phase by year 2012, and is analyzed as such in this report.

The results of the detailed intersection analysis for the 2012 No-Build (including background traffic growth but excluding traffic associated with the Huff Road Assemblage) and 2012 Build conditions (including traffic associated with the Huff Road Assemblage) identified improvements that will be necessary in order to maintain the Level of Service standard (LOS D or E) within the study network. Per GRTA's Letter of Understanding guidelines, improvements were made to the intersections until the Level of Service was elevated to an appropriate range. These improvements are listed below:

2012 No-Build improvements (includes background growth but does not include the Huff Road Assemblage DRI project traffic):

- Marietta Boulevard at Elaine Avenue (Intersection #3)
  - Install a traffic signal.
  - Add a westbound right-turn lane along Elaine Avenue, creating exclusive westbound left- and right-turn lanes.
- Howell Mill Road at Bishop Street (Intersection #5)
  - Install a traffic signal.
  - Add a westbound right-turn lane along Bishop Street, creating exclusive westbound left- and right-turn lanes.

2012 Build recommended improvement (adds the Huff Road Assemblage DRI project traffic to the 2012 No-Build traffic):

- Huff Road at Fairmont Avenue (Intersection #7)
  - Install a traffic signal.
  - Construct an eastbound left-turn lane along Huff Road
  - Construct a westbound right-turn lane along Huff Road
  - Add a southbound right-turn lane along Fairmont Avenue, creating exclusive left- and right-turn lanes.

The following intersection geometry and improvements are recommended at the project site driveway along the proposed New Parkway:

- New Parkway at Ellsworth Industrial Boulevard (Driveway #11)
  - Construct a left turn lane along the New Parkway. This will create a shared through / right-turn lane and an exclusive left-turn lane exiting the site.

In addition to the driveway laneage listed above, Elaine Avenue should be realigned in order to create a more perpendicular approach to Ellsworth Industrial Boulevard at the proposed location of the New Parkway.

# **1.0 PROJECT DESCRIPTION**

### 1.1 Introduction

This report presents the analysis of the anticipated traffic impacts of the proposed Huff Road Assemblage, an approximate 42.679-acre development located in the City of Atlanta, Georgia. Because the project will contain over 400,000 square feet of mixed-use floor area, 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. The site is currently zoned I-1 and I-2 (Light Industrial / Heavy Industrial) and occupied by approximately 20,000 square feet of office space, 150,000 square feet of industrial warehouses, and 13 residential units. All land uses currently located on the site will be demolished upon build out of the Huff Road Assemblage.

The proposed development is a mixed use development that will consist of 1,450 residential units (1,410 attached condominium / townhome units and 40 detached single-family units) and 150,000 square feet of retail space. The development is expected to be completed in one phase by year 2012 and is analyzed as such in this report.

The City of Atlanta NPU-D Future Land Use Plan identifies this area as Mixed Use, Industrial, and Very High Density Residential. The proposed development is within the Upper Westside LCI.

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

Table 1 Proposed New Land Uses			
Pacidential	Attached Condominium / Townhome Units	1,410 residential units	
Residentia	Detached Single- Family Units	40 residential units	
Non-Residential	Neighborhood Retail	150,000 square feet	

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

### *1.2 Site Plan Review*

The development master plan consists of 1,450 residential units (1,410 attached condominium / townhome units and 40 detached single-family units) and 150,000 square feet of retail space. The site plan is divided into Blocks A - N, with a description of the land use, parking, and square footage of each block listed in the Development Summary. Parking is planned underground below some of the proposed buildings. At-grade parking will be provided in the areas indicated on the site plan. Additionally, on-street parking will be provided along roadways within the network.

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

### 1.3 Site Access

Vehicular access to the development is proposed at five locations. The existing Boyd Avenue is expected to provide a full-access entrance to the proposed development from Huff Road. Boyd Avenue is located approximately 410 feet east of English Street.

The existing English Street is proposed to provide a full access entrance to the proposed development from Huff Road. English Street is located approximately 225 feet east of Booth Avenue.

The existing Booth Avenue is proposed to provide a full access entrance to the proposed development from Huff Road. Booth Avenue is located approximately 220 feet east of Fairmont Avenue, and is unusable in its current state. Although Booth Avenue provides access to the site, it was agreed upon in the methodology meeting that the intersection of Booth Avenue at Huff Road would not be analyzed.

The existing Fairmont Avenue is proposed to provide a full access entrance to the proposed development from Huff Road. Fairmont Avenue is located approximately 1,290 feet east of Ellsworth Industrial Boulevard. Fairmont Avenue will serve as the primary access into the development.

A full-movement access point is proposed along Ellsworth Industrial Boulevard at the New Parkway, approximately 1,390 feet north of Huff Road. This proposed driveway is located along the location of the proposed Beltline transit and multi-use trail. The right-of-way required for the Beltline project is incorporated into the Huff Road Assemblage New Parkway Plan and is indicated on the site plan.

### *1.4 Bicycle and Pedestrian Facilities*

Pedestrian facilities (sidewalks) currently exist along the south side of Huff Road and along the north side of Elaine Avenue. Sidewalks are proposed throughout the Huff Road Assemblage, as indicated on the site plan. The proposed Beltline multi-use trail is expected to pass directly through the site, providing bicycle and pedestrian facilities within the site. The Upper Westside LCI also plans for pedestrian facilities along adjacent roadways.

### 1.5 Transit Facilities

The proposed development is located along MARTA bus route 1 – Coronet Way, which has 15-20 minute headways. Route 1 begins at the Georgia State MARTA station, traveling along Huff Road and Ellsworth Industrial Boulevard, circling at its northernmost point along Moores Mill Road. The site plan is designed to accommodate future MARTA service, thereby increasing its availability to residential areas.

The proposed Beltline transit system is also expected to pass directly through the site, providing alternate modes of transportation to and from the Huff Road Assemblage. Also, the Beltline is expected to intersect with five MARTA rail stations.

# 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 along all roadways was agreed upon during the methodology meeting with GRTA staff.

### 2.2 Traffic Data Collection

Existing weekday peak hour turning movement counts were conducted on September 19, 2006 at three signalized intersections during the weekday AM and PM peak periods for a prior Kimley-horn project. Since the intersections were recently counted in 2006, the observed volumes for the intersections listed below were grown

at a rate of 0.5% for one year to obtain existing 2007 volumes. The intersections that were counted, along with their respective AM and PM peak hours, are listed on the following page.

- Marietta Boulevard at West Marietta Street (AM Peak 7:45 8:45; PM Peak 5:00 6:00)
- Marietta Boulevard at Huff Road (AM Peak 7:30 8:30; PM Peak 4:45 5:45)
- Howell Mill Road at Huff Road (AM Peak 7:45 8:45; PM Peak 4:45 5:45)

The remainder of the weekday peak hour turning movement counts was conducted on January 9, 2007 at one signalized and seven unsignalized intersections during the weekday AM and PM peak periods. The intersections that were counted, along with their respective AM and PM peak hours, are listed below:

- Elaine Avenue at Marietta Boulevard (AM Peak 8:00 9:00; PM Peak 4:45 5:45)
- Chattahoochee Avenue at Ellsworth Industrial Boulevard (AM Peak 7:45 8:45; PM Peak 5:00 6:00)
- Howell Mill Road at Bishop Street (AM Peak 8:00 9:00; PM Peak 5:00 6:00)
- Ellsworth Industrial Boulevard at Huff Road (AM Peak 8:00 9:00; PM Peak 5:00 6:00)
- Huff Road at Fairmont Avenue (AM Peak 8:00 9:00; PM Peak 5:00 6:00)
- Huff Road at English Street (AM Peak 8:00 9:00; PM Peak 5:00 6:00)
- Huff Road at Boyd Avenue (AM Peak 8:00 9:00; PM Peak 5:00 6:00)
- Ellsworth Industrial Boulevard at Elaine Avenue (AM Peak 8:00 9:00; PM Peak 5:00 6:00)

All raw count data is included in the Appendix.

Additionally, truck traffic was counted during the peak hours. During the AM peak hour, between 1% and 36% of the traffic in the study network is trucks. During the PM peak hour, between 1% and 35% were trucks.

#### 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 new development is expected to consist of approximately 1,450 residential units and 150,000 square feet (SF) of retail space. The residential portion is assumed to be divided into approximately 40 detached single-family dwelling units (DU) and 1,410 attached condominium / townhome dwelling units.

Traffic for the research and development land use was calculated using equations contained in the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Seventh Edition, 2003.* Gross trips generated are displayed below in **Table 2**.

Table 2   Huff Road Assemblage DRI   Gross Trip Generation							
		Daily	Traffic	AM Pea	ak Hour	PM Pea	k Hour
Land Use	ITE Code	Enter	Exit	Enter	Exit	Enter	Exit
	В	uild-Out (Y	'ear 2012)				
Single-Family Detached (Approximately 40 Residential Units)	210	224	224	9	28	30	17
Residential Condominium/Townhouse (Approximately 1,410 of Residential Units)	230	3,042	3,042	73	356	352	174
Neighborhood Retail	820	4,420	4,420	122	78	393	425
Total		8,198	8,198	228	519	845	660

# 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, engineering judgment, and discussions with GRTA staff at the methodology meeting.

# 3.3 Level of Service Standards

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

### 3.4 Study Network Determination

A general study area was determined using the 7% rule. This rule recommends that all intersections and segments be analyzed which are impacted to the extent that the traffic from the proposed site is 7% or more of the Service Volume of the facility (at a previously established LOS standard) be considered for analysis. This general study area was agreed upon during the pre-application meeting, and includes the following intersections:

- Intersection #1 Marietta Boulevard at West Marietta Street (Signalized)
- Intersection #2 Marietta Boulevard at Huff Road (Signalized)
- Intersection #3 Marietta Boulevard at Elaine Avenue (Unsignalized)
- o Intersection #4 Chattahoochee Avenue at Ellsworth Industrial Boulevard (Signalized)
- o Intersection #5 Howell Mill Road at Bishop Street (Unsignalized)
- Intersection #6 Ellsworth Industrial Boulevard at Huff Road (Unsignalized)
- o Intersection #7 Huff Road at Fairmont Avenue (Unsignalized)
- Intersection #8 Huff Road at English Street (Unsignalized)

- Intersection #9 Huff Road at Boyd Avenue (Unsignalized)
- Intersection #10 Howell Mill Road at Huff Road (Signalized)
- Intersection #11 Ellsworth Industrial Boulevard at Elaine Avenue (Unsignalized)

The above listed intersections were analyzed for the Existing 2007 Conditions, the 2012 No-Build Conditions, and the 2012 Build Conditions. The 2012 No-Build Conditions represents the existing traffic volumes grown at 2% per year for five years. The 2012 Build Conditions adds the project trips associated with the Huff Road assemblage development to the 2012 No-Build Conditions.

The additional proposed westbound approach along the proposed New Parkway, which creates the fourth leg of the Elaine Avenue / Ellsworth Industrial Boulevard intersection, was only analyzed for the 2012 Build Condition. The westbound approach to the Elaine Avenue / Ellsworth Industrial Boulevard / New Parkway intersection was analyzed for future build conditions for the AM and PM peak periods.

#### 3.5 Existing Facilities

#### Huff Road

 Huff Road is an east-west oriented roadway extending from Marietta Boulevard to Howell Mill Road in northwest Atlanta. Huff Road is a two-lane undivided roadway. According to GDOT, Huff Road is classified as an Urban Collector Street. The posted speed limit along Huff Road in this area is 35 MPH.

#### Marietta Boulevard

 Marietta Boulevard is a north-south oriented roadway extending from Bolton Road / Moores Mill Road to Highway 78 in northwest Atlanta. Marietta Boulevard is a four-lane undivided roadway classified as an Urban Minor Arterial. The posted speed limit along Marietta Boulevard in this area is 45 MPH.

#### West Marietta Street

 West Marietta Street is an east-west oriented roadway extending from Marietta Road / Johnson Road to Highway 41 in northwest Atlanta. Marietta Boulevard is a four-lane undivided roadway classified as an Urban Minor Arterial east of Marietta Boulevard and as a Collector Street west of Marietta Boulevard. The posted speed limit along West Marietta Street in this area is 35 MPH.

#### Howell Mill Road

 Howell Mill Road is a north-south oriented roadway extending from West Wesley Road to Highway 41 in northwest Atlanta. Howell Mill Road is a four-lane undivided roadway classified as an Urban Minor Arterial south of Interstate 75 and as a Collector Street north of Interstate 75. The posted speed limit along Howell Mill Road in this area is 35 MPH.

#### Chattahoochee Avenue

 Chattahoochee Avenue is an east-west oriented roadway extending from Marietta Boulevard to Howell Mill Road in northwest Atlanta. Chattahoochee Avenue is a four-lane undivided roadway classified as a Collector Street. The posted speed limit along Chattahoochee Avenue in this area is 40 MPH.

**Bishop Street** 



 Bishop Street is an east-west oriented roadway extending from Mecaslin Street to Howell Mill Road in northwest Atlanta. This roadway provides direct access to Atlantic Station from west of Highway 41. Bishop Street is a two-lane undivided roadway classified as a Collector Street. The posted speed limit along Bishop Street in this area is 30 MPH.

#### Fairmont Avenue

 Fairmont Avenue is a north-south roadway extending north from Huff Road in northwest Atlanta. Fairmont Avenue is a two-lane undivided roadway that is not classified by GDOT. The posted speed limit along Fairmont Avenue is 25 MPH. Fairmont Avenue is located approximately 1,290 feet east of the intersection of Ellsworth Avenue at Huff Road.

#### English Street

 English Street is a north-south roadway extending north from Huff Road in northwest Atlanta. English Street is a two-lane undivided roadway that is not classified by GDOT. The posted speed limit along English Street is 25 MPH. English Street is located approximately 225 feet east of the intersection of Booth Avenue at Huff Road.

#### Boyd Avenue

 Boyd Avenue is a north-south roadway extending north from Huff Road in northwest Atlanta. Boyd Avenue is a two-lane undivided roadway that is not classified by GDOT. The posted speed limit along Boyd Avenue is 25 MPH. Boyd Avenue is located approximately 410 feet east of the intersection of English Street at Huff Road.

#### Booth Avenue

 Booth Avenue is a small north-south roadway in poor condition extending north from Huff Road in northwest Atlanta. Booth Avenue is a one-lane undivided roadway that is not classified by GDOT. If utilized in the future, Booth Avenue would need to be improved. Booth Avenue is located approximately 220 feet east of the intersection of Fairmont Avenue at Huff Road. Booth Avenue will not be analyzed in this report per discussions at the methodology meeting.

### 3.6 Planned Facilities

#### New Parkway

• A new two-lane *divided* roadway is proposed by the developer to extend west from English Street to intersect with Ellsworth Industrial Boulevard approximately 1,390 feet north of Huff Road. The right-of-way along this roadway will be wide enough to accommodate the proposed Beltline, which is expected to pass through the median of the New Parkway.

#### The Beltline

• The Beltline envisions a transit corridor and linear park through the city on existing railroad rights-of-way connecting MARTA stations and numerous neighborhoods. It is proposed that the Beltline will provide increased connectivity by intersecting with five MARTA rail stations. The Beltline project will route through northwest Atlanta, passing directly through the proposed Huff Road Assemblage development and continuing to the east / northeast. Preliminary designs for the New Parkway call for a 30-foot median to accommodate the proposed transit and multi-use path associated with the Beltline. The Beltline project

will connect existing neighborhoods with activity centers, provide new development opportunities, and create new walking and bicycling paths.

# 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 land uses is expected to be 10.78%, whereas total PM peak hour internal capture is 11.43%.

Alternative transportation (walking, bicycle, and transit) mode reductions were taken at 2% for the residential and non-residential portions of the proposed development, as agreed during the methodology meeting with GRTA staff. Pass-by vehicle trip reductions were limited by the GRTA 10% rule.

The total (net) trips generated and analyzed in the report are listed in Table 3.

Table 3 Huff Road Assemblage DRI Net Trip Generation						
	Daily <sup>·</sup>	Traffic	AM Pea	ık Hour	PM Pea	k Hour
Land Use	Enter	Exit	Enter	Exit	Enter	Exit
Build-Out (Year 2012)						
Gross Trips	7,686	7,686	204	462	775	616
Internal Capture	-884	-884	0	0	-86	-86
Alternative Mode Reduction	-146	-146	-4	-11	-15	-11
Driveway Volumes	6,666	6,666	200	452	609	454
Pass-by Trips	-818	-818	0	0	-66	-66
Net New Trips	5,848	5,848	200	452	543	388

# 5.0 TRIP DISTRIBUTION AND ASSIGNMENT

New trips were distributed onto the roadway network using the percentages agreed to during the methodology meeting. **Figure 4** displays the expected trip percentages for the residential portions of the development, and **Figure 5** displays the expected non-residential trip percentages throughout the roadway network. These percentages were applied to the new trips generated by the development (see Table 3, above), and the volumes were assigned to the roadway network. The expected peak hour turning movements generated by the proposed development are shown in **Figure 6A** and **6B**.

# 6.0 TRAFFIC ANALYSIS

# 6.1 Existing Traffic

The existing 2007 traffic volumes are shown in **Figures 7A** and **7B**. It should be noted that the existing weekday peak hour turning movement counts were conducted on September 19, 2006 at three signalized intersections during the weekday AM and PM peak periods for a prior Kimley-horn project at Intersections #1, #2, and #10. The observed volumes at these three intersections were grown at 0.5% for one year to account for background traffic that occurred in the three months that elapsed between the two traffic count dates. The existing 2007 volumes were input in *Synchro 6.0*, along with the existing signal cycle lengths, splits, and offsets, and an Existing Conditions analysis was performed. The results are displayed below in **Table 4**.

Table 4 Huff Road Assemblage DRI Existing 2007 Intersection Levels of Service (delay in seconds)					
	Intersection Control LOS AM Peak PM Peak Standard Hour Hour				
1	Marietta Boulevard @ W. Marietta Street	Signalized	D	C (28.4)	C (22.4)
2	Marietta Boulevard @ Huff Road	Signalized	D	A (7.0)	B (12.9)
3	Marietta Boulevard @ Elaine Avenue	Side-Street Stop Control	D AM E PM	C (17.8)	F (87.8)
4	Chattahoochee Avenue @ Ellsworth Industrial Boulevard	Signalized	D	A (6.6)	A (8.8)
5	Howell Mill Road @ Bishop Street	Side-Street Stop Control	Е	F*	F*
6	Huff Road @ Ellsworth Industrial Boulevard	Side-Street Stop Control	D	C (18.2)	C (18.9)
7	Huff Road @ Fairmont Avenue	Side-Street Stop Control	D	B (11.1)	B (13.9)
8	Huff Road @ English Street	Side-Street Stop Control	D	B (12.5)	B (12.5)
9	Huff Road @ Boyd Avenue	Side-Street Stop Control	D	C (15.3)	B (14.9)
10	Howell Mill Road @ Huff Road	Signalized	D	B (19.9)	C (20.7)
11	Ellsworth Industrial Boulevard @ Elaine Avenue	Side-Street Stop Control	D	B (10.5)	B (11.6)

\* = Indicates delay is greater than 100 seconds

The intersection of Marietta Boulevard at Elaine Avenue currently operates at a level of service F during the PM Peak hour. Similarly, the intersection of Howell Mill Road at Bishop Street currently operates at a level of service F during both the AM and PM peak hours. Therefore, the level of service standard will be set at LOS E for the failing peak hours.

All other intersections currently operate at or above the acceptable Level of Service standard (LOS D) during the AM and PM peak hours. These intersections will be analyzed against a level of service standard D.

# 6.2 2012 No-Build Traffic

The existing 2007 traffic volumes were grown at 2% per year, for five years, along all roadway links within the study network. No traffic associated with other proposed developments in the area will be added to the no-build volumes, per the GRTA methodology meeting.

These volumes were input into *Synchro 6.0* and analyses of the projected 2012No-Build Conditions were performed. The results are displayed below in **Table 5**.

	Table 5 Huff Road Assemblage DRI 2012 No-Build Intersection Levels of Service (delay in seconds)				
	Intersection	Control	LOS Standard	AM Peak Hour	PM Peak Hour
1	Marietta Boulevard @ W. Marietta Street	Signalized	D	C (32.7)	C (25.2)
2	Marietta Boulevard @ Huff Road	Signalized	D	A (7.7)	B (16.1)
3	Marietta Boulevard @ Elaine Avenue	Side-Street Stop Control	D AM E PM	C (20.3)	F*
4	Chattahoochee Avenue @ Ellsworth Industrial Boulevard	Signalized	D	A (7.5)	A (8.4)
5	Howell Mill Road @ Bishop Street	Side-Street Stop Control	Е	F*	F*
6	Huff Road @ Ellsworth Industrial Boulevard	Side-Street Stop Control	D	C (21.3)	C (23.2)
7	Huff Road @ Fairmont Avenue	Side-Street Stop Control	D	B (11.3)	B (14.9)
8	Huff Road @ English Street	Side-Street Stop Control	D	B (13.4)	B (13.3)
9	Huff Road @ Boyd Avenue	Side-Street Stop Control	D	C (16.5)	C (16.1)
10	Howell Mill Road @ Huff Road	Signalized	D	C (21.8)	C (23.3)
11	Ellsworth Industrial Boulevard @ Elaine Avenue	Side-Street Stop Control	D	B (10.9)	B (12.0)

\* = Indicates delay is greater than 100 seconds

Two of the intersections failed to meet acceptable Level of Service standards for the year 2012 No-Build condition. Per GRTA's Letter of Understanding guidelines, improvements were made to the intersection until the Level of Service was elevated to an appropriate range. The 2012 No-Build with Improvement intersection analysis improved Levels of Service are displayed below in **Table 6**.

Table 6 Huff Road Assemblage DRI 2012 No-Build <u>with Improvements I</u> ntersection Levels of Service (delay in seconds)					
Intersection		Control	LOS Standard	AM Peak Hour	PM Peak Hour
3	Marietta Boulevard @ Elaine Avenue	Signalized*	D AM E PM	A (3.5)	A (5.8)
5	Howell Mill Road @ Bishop Street	Signalized*	Е	A (7.0)	B (9.7)

\* = Proposed new traffic signal

The 2012 No-Build improvements made to the intersections are shown in Figure 8, and are listed below by intersection (Note: With the installation of a new traffic signal, it is desirable for every approach to consist of a minimum of 2 lanes.):

- Marietta Boulevard at Elaine Avenue (Intersection #3)
  - Install a traffic signal.
  - Add a westbound right-turn lane along Elaine Avenue, creating exclusive left- and right-turn lanes.
- Howell Mill Road at Bishop Street (Intersection #5)
  - Install a traffic signal.
  - Add a westbound right-turn lane along Bishop Street, creating exclusive left- and right-turn lanes.

The no-build intersection improvements for the year 2012 No-Build Conditions are illustrated in Figures 8A and 8B.

### 6.3 2012 Build Traffic

The traffic associated with the proposed development was added to the 2012 No-Build volumes. The 2012 Build volumes were then analyzed.

The 2012 build volumes, truck percentages, peak hour factor adjustments, and driveway laneage were then input into *Synchro 6.0*. The results of the analyses are displayed in **Table 7**.



	Table 7 Huff Road Assemblage DRI 2012 Build Intersection Levels of Service (delay in seconds)				
	Intersection	Control	LOS Standard	AM Peak Hour	PM Peak Hour
1	Marietta Boulevard @ W. Marietta Street	Signalized	D	D (41.3)	D (43.5)
2	Marietta Boulevard @ Huff Road	Signalized	D	B (17.0)	C (32.6)
3	Marietta Boulevard @ Elaine Avenue	Signalized	D AM E PM	A (5.6)	A (7.1)
4	Chattahoochee Avenue @ Ellsworth Industrial Boulevard	Signalized	D	A (7.9)	A (10.0)
5	Howell Mill Road @ Bishop Street	Signalized	Е	A (8.3)	B (15.6)
6	Huff Road @ Ellsworth Industrial Boulevard	Side-Street Stop Control	D	D (30.5)	D (33.0)
7	Huff Road @ Fairmont Avenue	Side-Street Stop Control	D	C (19.5)	F (75.5)
8	Huff Road @ English Street	Side-Street Stop Control	D	C (18.4)	C (24.5)
9	Huff Road @ Boyd Avenue	Side-Street Stop Control	D	C (21.2)	D (28.7)
10	Howell Mill Road @ Huff Road	Signalized	D	C (31.5)	D (37.1)
11	Ellsworth Industrial Boulevard @	Eastbound Side-Street Stop Control	D	B (14.2)	C (19.5)
11	Elaine Avenue	Westbound Side- Street Stop Control	D	B (12.2)	C (15.7)

The intersection of Huff Road at Fairmont Avenue (Intersection #7) fails to meet acceptable Level of Service standards for the year 2012 PM peak hour Build condition. Improvements were made to this intersection until the Level of Service was elevated to an appropriate range. The 2012 Build with Improvement intersection analysis improved Level of Service is displayed below in **Table 8**.

Table 8 Huff Road Assemblage DRI 2012 Build <u>with Improvement</u> Intersection Level of Service (delay in seconds)					
	Intersection	Control	LOS Standard	AM Peak Hour	PM Peak Hour
7	Huff Road @ Fairmont Avenue	Side-Street Stop Control	D	A (6.4)	A (6.6)

The 2012 Build improvements made to the intersections are shown in Figures 9A and 9B, and are listed below by intersection:

- Huff Road at Fairmont Avenue (Intersection #7)
  - Install a traffic signal.
  - Construct an eastbound left-turn lane along Huff Road
  - Construct a westbound right-turn lane along Huff Road
  - Add a southbound right-turn lane along Fairmont Avenue, creating exclusive left- and right-turn lanes.

Additionally, the following driveway laneage was used along the proposed New Parkway:

- New Parkway at Ellsworth Industrial Boulevard (Driveway #11)
  - Construct a left-turn lane along the New Parkway. This will create a shared through / right-turn lane and an exclusive left-turn lane exiting the site.

In addition to the driveway laneage listed above, Elaine Avenue should be realigned in order to create a more perpendicular approach to Ellsworth Industrial Boulevard at the proposed location of the New Parkway.

# 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. Several projects are programmed for the area surrounding the study network. Information on the projects, including a map of the programmed improvements, is included in the Appendix.

1.AR-450A, B, C and D GDOT # 0006841, #0007693	Belt Line Multi-Use Path right of way acquisition and construction of multi-use trail along the alignment in the northeast quadrant.
ARC RTP. STIP.	Completion Date: 2011
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Pages 1, 2, 3, 4, 12, 13
2.AR-451D1, AR-451D2 GDOT # N/A	Inner Core Transportation Corridor to provide transit service in the northwest quadrant.
	Completion Date: Long term
	Pages 5, 6
3.AR-909 B GDOT # N/A	Northwest corridor arterial bus rapid transit (BRT) to provide service companion to the I-75 BRT project. The actual alignment Is yet to be determined, but the project will likely serve US 41 and Marietta Boulevard.
	Completion Date: 2016
	Pages 7
4.AT-026 GDOT # 751560-	Project will upgrade Howell Mill Road from Chattahoochee Avenue to Bellemeade Avenue by widening narrow lanes. The project will improve truck traffic serving the Chatahoochee Industrial Area. The project will include sidewalks and bicycle lanes.
	Completion Date: 2008
	Pages 8, 10, 11
5. AT-AR-BP303 GDOT # 0004493 ARC RTP, ARC TIP, STIP, GDOT CWP	Improvements to the streetscape along Marietta Street from West Marietta Street to the Atlanta city limits. It will repair sidewalks where needed and add sidewalks where none exist. It will also add "Share the Road" signage for bicyclists.
	Completion Date: 2010
	Pages 9, 12, 13

In addition, the Upper Westside LCI Study (2005) and discussions with the City of Atlanta were used to compile the list of other recommended future roadway and pedestrian improvements in the immediate vicinity of the proposed development. Several improvements were identified and are listed below:

Upper Westside LCI Study:

• Increase the capacity of Huff Road through widening. Additionally, "to minimize conflicts with the emerging mixed use pattern of the corridor, the plan recommends that trucks adhere to designated state truck routes and seek feasible alternatives to east-west movement along Huff Road, such as Hollowell Parkway to Marietta Boulevard." This improvement, if approved, will



detract trucks from using Huff Road as and east-west connection from Marietta Boulevard to Howell Mill Road.

- Intersection improvements at Bishop Street and Howell Mill Road
- Intersection improvements at Marietta Boulevard and Marietta Street
- Construct a new east-west link between Fairmont Avenue and Huber Street
- Construct a new east-west link between Marietta Boulevard and Ellsworth Industrial Boulevard
- Construct a new Knight Park Huff Road connector
- Extend Menlo Drive into a loop with Huff Road

### 8.0 INGRESS/EGRESS ANALYSIS

Vehicular access to the development is proposed at five locations. The existing Boyd Avenue is expected to provide a full-access entrance to the proposed development from Huff Road. Boyd Avenue is located approximately 410 feet east of English Street.

The existing English Street is proposed to provide a full access entrance to the proposed development from Huff Road. English Street is located approximately 225 feet east of Booth Avenue.

The existing Booth Avenue is proposed to provide a full access entrance to the proposed development from Huff Road. Booth Avenue is located approximately 220 feet east of Fairmont Avenue, and is unusable current state. Although Booth Avenue provides access to the site, it was agreed upon in the methodology meeting that the intersection of Booth Avenue at Huff Road would not be analyzed.

The existing Fairmont Avenue is proposed to provide a full access entrance to the proposed development from Huff Road. Fairmont Avenue is located approximately 1,290 feet east of Ellsworth Industrial Boulevard. Fairmont Avenue will serve as the primary access into the development.

A full-movement access point is proposed along Ellsworth Industrial Boulevard at the New Parkway, approximately 1,390 feet north of Huff Road. This proposed driveway is located along the location of the proposed Beltline transit and multi-use trail. The right-of-way required for the Beltline project is incorporated into the Huff Road Assemblage site plan.

### 9.0 INTERNAL CIRCULATION ANALYSIS

The proposed master site plan consists of five site driveways which allow for multiple vehicular and pedestrian ingress and egress options. Pedestrian sidewalks and multi-use paths will allow for pedestrian connectivity between the onsite buildings.

### **10.0** COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The City of Atlanta 2015 Future Land Use Plan identifies this area as Mixed Use, Industrial, and Very High Density Residential.

# **11.0 NON-EXPEDITED CRITERIA**

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

The proposed development is located along MARTA bus route 1 – Coronet Way, which has 15-20 minute headways. Route 1 begins at the Georgia State MARTA station, traveling along Huff Road and Ellsworth Industrial Boulevard, circling at its northernmost point along Moores Mill Road. The site plan is designed to accommodate future MARTA service, thereby increasing its availability to residential areas.

Pedestrian facilities are proposed in both the Upper Westside LCI and the Beltline Project, both of which are in the direct vicinity of the project.

# 11.2 Vehicle Miles Traveled

The following table displays the reduction in traffic generation expected due to alternative mode reductions.

	Build-out Total
Daily Gross Trip Generation:	15,372
(-)Mixed-use reductions (internal capture)	-1,768
(-)Pass-by trips	-1,635
(-)Alternative modes	-159
Net Trips:	11,697

# 11.3 Relationship Between Location of Proposed DRI and Regional Mobility

The proposed development is located along MARTA bus route 1 - Coronet Way, which has 15-20 minute headways. Route 1 begins at the Georgia State MARTA station, traveling along Huff Road and Ellsworth Industrial Boulevard, circling at its northernmost point along Moores Mill Road. The site plan is designed to accommodate future MARTA service, thereby increasing its availability to residential areas.

The proposed Beltline transit system is also expected to pass directly through the site, providing alternate modes of transportation to and from the Huff Road Assemblage. The Beltline is expected to intersect with five MARTA stations, providing access to other parts of the city.

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

The proposed development is located along MARTA bus route 1, beginning at the Georgia State MARTA station, traveling along Huff Road and Ellsworth Industrial Boulevard, and circling at its northernmost point along Moores Mill Road. The site plan is designed to accommodate future MARTA service, thereby increasing its availability to residential areas.

# 11.5 Transportation Management Area Designation

The proposed development is not located within a Transportation Management Area.

# 11.6 Offsite Trip Reduction and Trip Reduction Techniques

Pedestrian facilities are proposed in both the Upper Westside LCI and the Beltline Project, both of which are in the direct vicinity of the project. Given the transit and pedestrian opportunities available in the vicinity of the project, an alternate mode reduction was applied to both residential and non-residential uses as agreed upon during the methodology meeting.

### 11.7 Balance of Land Uses – Jobs/Housing Balance

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 expected to be adequate to serve the needs of the development upon build-out (2012).

### **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 or rent 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:

#### 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 (Huff Road at Fairmont Avenue). The population and housing statistics for the AOI were determined by taking the area outlined in *TransCAD*, creating a boundary in GIS format, and overlaying the boundary with a GIS layer containing Census tract information. The Area of Influence (located within Fulton, DeKalb, and Cobb Counties) can be seen in **Figure 10**. Information obtained from the census tracts can be seen in **Table 9**.

Table 9 Area of Influence Census Tract Information		
Total Households	190,872	
Population in Households	494,563	
Average household size	2.59	
Total Workers	268,659	
Workers per Household	1.41	
Owner Occupied	64.75%	
Renter Occupied	35.25%	

As can be seen from the table above, the total population within the Area of Influence is 190,872, residing within 494,563 households (an average of 2.59 people per household). The AOI area totals 47,070 acres.

Using the above calculated average of 2.59 persons per household, it can be anticipated that the proposed DRI will house approximately 3,756 people (1,450 proposed dwelling units multiplied by 2.59). Based on information obtained from the Census tracts, it is estimated that approximately 2,044 of these expected 3,756 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.

The Atlanta Journal-Constitution website was researched to find current listings of condos/townhouses for sale and apartments for rent in the vicinity of the proposed development (30318 Zip Code). At the time of this report, approximately 57 condo/townhouses and 274 single family homes were listed in the area, ranging in price from \$69,000 - \$347,900 (purchase price) and \$50,000 - \$1,350,000 (purchase price), respectively.

# 12.3 Development Housing Analysis

Approximately four different price ranges will be available within the proposed development. **Table 10**, below, displays the number of units for purchase, the average sales price for those units, and the number of workers expected to reside in homes at each price range.

Table 10			
Estimated Workers per Household (Purchase)			
	Number of	Average	
	Units	Price	Number of Workers
Α	352 Townhome Units	\$300,000	496
В	706 Townhome Units	\$350,000	996
С	352 Townhome Units	\$400,000	496
D	10 Single Family Units	\$480,000	14
Е	20 Single Family Units	\$530,000	28
F	10 Single Family Units	\$580,000	14
	1,450 total units	-	2,043 total workers

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, DeKalb, and Cobb 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 Area of Influence Jobs and Average Salaries			
Industry / Business Type	# Businesses	# Employees	Average Salary
Retail Trade	3,790	49,242	\$28,744
Building Materials and Garden Supply	129	3,426	-
General Merchandise Stores	63	1,476	-
Food Stores	291	3,939	-
Auto Dealers and Gas Stations	194	1,717	-
Apparel and Accessory Stores	445	2,569	-
Home Furniture, Furnishings, and Equipment	469	4,311	-
Eating and Drinking Places	1,202	22,784	-
Miscellaneous Retail Stores	996	9,021	-
Finance	1,923	24,413	\$61,671
Banks, Savings and Lending Institutions	395	7,198	-
Securities and Commodity Brokers	244	4,225	-
Insurance Carriers and Agencies	195	2,690	-
Real Estate	1 080	10 300	
Trusts, Holdings, and Other Investments	1,009	10,300	-
Services	9,169	138,147	-
Hotels and Other Lodging	108	8,558	\$18,977
Personal Services	1,656	8,334	-
Business Services	2,707	39,600	\$72,271
Motion Picture and Amusement	459	7,137	\$45,612
Health Services	1,138	26,890	\$44,932
Legal Services	1,256	13,128	\$72,271
Education Services	259	17,280	\$36,203
Social Services	464	17,280	\$44,932
Miscellaneous, Membership	1 1 2 2	0.255	
Organizations and Nonclassified	1,122	9,200	-
Agriculture	242	2,321	\$1,948
Mining	11	79	\$4,273
Construction	998	9,493	\$49,308
Manufacturing	773	20,946	\$59,607
Transportation, Communication/Public Utilities	637	27,560	\$88,545
Wholesale Trade	814	17,916	\$63,607
Public Administration	1,047	55,149	\$44,113
Total	34,285	566,384	-

# 12.4 Affordable Housing Analysis

In order to calculate the number of expected workers likely to find appropriate employment within the AOI, it was necessary to first estimate the yearly cost of each tier. The monthly mortgage equation was used to determine the minimum income necessary to afford purchased housing within the proposed development. It was assumed that no more than one-third of an individual's income would be used for mortgage costs, that a 7.0% interest rate on a 30-year conventional loan could be obtained, and that a 10% down payment would be made. Because there is an average of 1.41 workers expected per household, the required income for each range was divided by 1.41 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 can be seen in the table, there are more than enough positions available within the AOI for expected workers within the grouposed development at the required minimum income level for both levels of pricing within the development, thus satisfying the GRTA requirement of 25%.

Table 12 Expected Workers				
	Number of Units	Necessary Income per Expected Worker (Yearly)	Expected Worker per Price Range	Jobs at or above Necessary Income
Α	352 Townhome Units	\$45,863	496	153,056
В	706 Townhome Units	\$53,507	996	143,563
С	352 Townhome Units	\$61,151	496	122,617
D	10 Single Family Units	\$73,381	14	27,560
Е	20 Single Family Units	\$81,025	28	27,560
F	10 Single Family Units	\$88,669	14	0
Percent of expected workers likely to find necessary employment within the AOI			99.3%	

# **13.0** ARC'S AIR QUALITY BENCHMARK

The development is a mixed-use development, containing 1,450 residential units (1,410 attached townhome / condominium units and 40 detached single family units), and 150,000 square feet of retail space on approximately 42.679 acres. Because residential is the dominant use and the number of units per acre is greater than 15 (34), the development meets the ARC criteria for a 6% reduction.

The MARTA Bus Route #1 (Coronet Way) travels along Huff Road and Ellsworth Industrial Boulevard in front of the site. This transit access allows for a 3% reduction.

Additionally, the proposed development will connect with the existing sidewalks along Huff Road. Pedestrians will also be able to access other uses within the proposed development. The Beltline mixed use path is also expected to pass directly through the development, providing access to MARTA stations and uses external to the site. The pedestrian network in a mixed use development meets the ARC criteria for a 5% reduction.

The proposed development meets the ARC criteria for a total 14% VMT reduction. These reductions are summarized in Table 13.

Table 13 ARC VMT Reductions	
Mixed-Use Projects where Residential is the dominant use	
Greater than 15 dwelling units	-6%
Project is located within <sup>1</sup> / <sub>4</sub> mile of a bus stop	-3%
Bike/ped networks in development that meet one density 'target' and connect to adjoining uses	-5%
Total Reductions	14%

























