GRTA DRI REVIEW PACKAGE, DRI No. 1263

for

VILLAGE AT CHOSEWOOD PARK Mixed-Use Site

CITY OF ATLANTA, GEORGIA

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

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This report presents a variety of analyses and documentation for submittal as the major portion of the GRTA DRI Review Package. This study presents an analysis of the traffic impact expected to result from the re-development of an abandoned site into a proposed mixed-use site, called Village at Chosewood Park.

The subject site is located in the City of Atlanta, approximately 3 miles southeast from downtown Atlanta. The site is bounded by McDonough Boulevard (SR 42 Spur) on the north, Sawtell Avenue (SR 54 Connector) on the east, and Southern Railroad line on the southwest. The site is proposed to consist of approximately 1,300 residential units and 25,000 square feet of neighborhood style retail. Of the 1,300 residential units, 700 units will be apartments and 600 units will be townhomes/condos.

Village at Chosewood Park is planned to have four (4) access points on McDonough Boulevard, and three (3) access points on Sawtell Avenue. One of the access points on Sawtell Avenue will strictly serve a parking garage.

The Site Plan is shown in Figure 2-3.

Name and Number of DRI	Village at Chosewood Park (DRI #1263)
Jurisdiction	City of Atlanta
Local Approval Sought	MRC-3
Location	Bounded by McDonough Boulevard (SR 42 Spur) on the north, Sawtell Avenue (SR 54 Connector) on the east, and Southern Railroad line on the southwest
Uses and Intensities of Use	700 Apartments, 600 Townhomes/Condos, and 25,000 Square Feet of Neighborhood Style Retail
Project Phasing and Build-Out Schedule	Build-Out Year 2013
Gross Trip Generation (Daily/AM Peak/PM Peak)	7,249 / 558 / 654

Project Summary Table



The Site is expected to generate approximately 8,408 new vehicle trips per day, but after internal capture, transit mode reductions, and pass-by trips are considered, it will generate approximately 7,249 new external trips (to/from the site) per day. Approximately 558 new external trips (115 in and 443 out) will be generated during the AM peak hour and approximately 654 new external trips (422 in and 232 out) will be generated during the PM peak hour.

The trip distributions (agreed upon with GRTA and City of Atlanta) developed for the Site are shown in Figure 3-1.

The Site is located within an Area of Influence with employment opportunities such that approximately 62% of the persons who are reasonably anticipated to live in the Site will have an opportunity to find work within the Area of Influence.

The existing zoning of the site is I-2, Heavy Industrial. The proposed new zoning is MRC-3, mixed residential and commercial.

The subject site is NOT located in an area where the anticipated level of development and availability of infrastructure within the study network is such that the Site is reasonably anticipated to result in unplanned and poorly served development. As shown in the traffic impact analysis, the intersections serving the Site can be reasonably expected to operate at adequate Levels of Service, and/or may be mitigated and improved readily so that they will operate at adequate LOS.

Based on the data and information presented in this study, it is concluded that the site layout for Village at Chosewood Park coincides with the air quality guidelines set out by the ARC. A comprehensive system of residential and retail linkages throughout the site are expected to substantially reduce the overall VMT for the site and accelerate air quality improvements. Furthermore, the non-vehicular connectivity proposed with the extensive on-site sidewalk/bike/moped system will serve as an incentive for alternative modes of travel for local residents. VMT Credits for Village at Chosewood Park are at least 18% (a minimum of 15% is desired).

For **Existing conditions**, all study intersections operate at or better than <u>Level of Service</u> <u>standard "D".</u>

For **Future No-build conditions**, the installation of an eastbound right turn at the intersection of Jonesboro Road at Claire Drive/Sawtell Avenue is required to improve peak hour traffic operations up to the <u>Calculated Level of Service Standards</u> (based on GRTA's requirements).

For **Future Build conditions**, no improvements beyond that which is prescribed to support Future No-Build conditions (without the site) is required.



Summary of Required Transportation Improvements

Almost all study intersections operate (or will operate) with adequate Levels of Service. The installation of an eastbound right turn lane at the intersection of Jonesboro Road at Claire Drive/Sawtell Avenue during Future No-Build and Future Build conditions is required. It should be noted that no additional improvements are needed to serve the subject site beyond that which is required to support Future No-Build conditions without the subject site assumed in place.



General Introduction

This report presents a variety of analyses and documentation for submittal as the major portion of the GRTA DRI Review Package. It focuses on the major elements that the Georgia Regional Transportation Authority (GRTA) requires as part of their Development of Regional Impact (DRI) Review Package. This report is composed of the following primary elements and/or documents: (1) Site Plan Elements; (2) a Traffic Impact Analysis; (3) a Facility Needs Assessment; (4) an Area of Influence Analysis; (5) an Air Quality Benchmark Statement; and, (6) a Summary of the DRI Review Criteria. There are other elements that are submitted with this report, including the GRTA Review Package Checklist, and electronic copies of these and other documentation are part of the total GRTA DRI Review Package.

Due to the size and characteristics of the Site, it qualifies for a Development of Regional Impact (DRI) level of review and analysis per rules and guidelines established by GRTA, the Atlanta Regional Commission (ARC), and the Georgia Department of Community Affairs (DCA). This is a rigorous, multi-step process, involving close coordination with GRTA, ARC, and the City of Atlanta. The Applicant has elicited to undertake the GRTA review via the Non-Expedited Review Process.

The Site Plan Elements, in both text and drawing form (in both hard copy and electronic format), are a description of the locations, types, characteristics, and amounts of land uses on the Site, and their inter-relationships. The Site Plan Elements also include a description of all access points (for both motorized and non-motorized users), including location, character, lane use, and traffic control. Site circulation characteristics, and the inter-relationships of the various pods, sections, or phases are also a required part of the Site Plan Elements. Another required feature of the Site Plan are the numbers, locations, and types of parking spaces provided, and their inter-relationship with the proposed land uses and access points. All of these items are discussed and/or analyzed below.

The Traffic Impact Analysis (Sections 3 through 5) presents an analysis of the traffic impact expected to result from the Site. This analysis establishes the existing traffic conditions in the vicinity of the Site, determines the effects of background traffic growth upon the study area, and assesses the impacts of the Site upon the vicinity intersections. The analysis of traffic operations is described for Existing conditions, Future No-build conditions, and Future Build conditions. If negative impacts are identified, appropriate mitigation is identified. This analysis is a requirement of GRTA, and is performed to GRTA study standards.

The Facility Needs Assessment (Section 6) is essentially a summary of the traffic impact analysis, providing in text and tabular form all of the required improvements under the various study scenarios, both with and without the Site. Thus it includes required improvements for Existing conditions, Future No-Build conditions, and Future Build conditions.



The Area of Influence Analysis (Section 7) involves an analysis of the opportunities for the residents from the site to find work within the Area of Influence. It is an effort intended to confirm that the site is so well designed and located as to reduce overall Vehicle Miles of Travel to less than typical developments of its size and type. This analysis is also a requirement of GRTA, and is also prepared according to GRTA study standards.

The Air Quality Benchmark Statement (Section 8) is a requirement of ARC. This evaluation also attempts to establish, following a different approach than GRTA, that the site is so well designed and located as to reduce overall Vehicle Miles of Travel to less than typical developments of its size and type, and thus benefit regional air quality.

The GRTA DRI Review Criteria for Non-Expedited Review are contained in Sections 3-101 and 3-103(A) of the <u>Procedures and Principles for GRTA Development of Regional Impact</u> <u>Review</u>, January 14, 2002. Section 9 of the report focuses on Section 3-103(A), and addresses each criterion specifically, even though many of the criteria are also addressed elsewhere in the report.

Introduction to the Study Process

This study includes the following steps to determine the various impacts and needs of the Site:

- Attendance at one Methodology Meeting with the Georgia Regional Transportation Authority (GRTA), Atlanta Regional Commission (ARC), and the City of Atlanta;
- Attendance at one Pre-Application Conference with ARC, GRTA, and the City of Atlanta;
- Inventory of the existing roadway network;
- Collection of existing traffic data;
- Identification of planned improvements to the road network;
- Identification of a background growth rate which will contribute traffic to the road network;
- Identification of other approved developments in the area which will contribute traffic to the road network;
- Detailed Site definition, including type, size and location of each land use, location and configuration of all external access points (both vehicular and pedestrian), location and configuration of all internal intersections and driveways (and pedestrian crossing points), internal circulation characteristics, parking requirements and number and location of parking spaces provided, transit interface, if any, etc.;
- Determination of the number of trips generated by the site;
- Distribution and assignment of the new traffic onto the roadway network;
- Analysis of conditions of the road network for Existing conditions, Future No-build conditions, and Future Build conditions
- Acquisition of various socio-economic information about both the site and the Area of Influence;



- Definition of population and employment characteristics of both the site and the Area of Influence, and comparison with GRTA's criteria;
- > Identification of Site elements that address ARC's air quality assessment;
- Reporting of results and conclusions, along with recommendations to mitigate any identified deficiencies; and,
- > Summarization of the data and information that address GRTA's DRI Review Criteria.

In the following sections, the analysis of traffic operations is described for Existing conditions, Future No-build conditions, and Future Build conditions. The Area of Influence analysis is described, including study parameters, and site and area analyses. ARC's air quality issues are addressed in relation to how the site helps achieve ARC's regional goals. Finally, findings, conclusions, and recommendations are presented.



Site Description

This study presents an analysis of the traffic impact expected to result from the redevelopment of a deteriorating site into a mixed-use site known as the Village at Chosewood Park. Figure 2-1 a shows the Area Map. Figure 2-1 b shows a more detailed Site Location Map. Figure 2-2 shows an aerial photograph of the Site.

Types and Amounts of Development

The Village at Chosewood Park site is located in the City of Atlanta, approximately 3 miles southeast from downtown Atlanta. The site is bounded by McDonough Boulevard (SR 42 Spur) on the north, Sawtell Avenue (SR 54 Connector) on the east, and Southern Railroad line on the southwest. The site is proposed to consist of approximately 1,300 residential units and 25,000 square feet of neighborhood style retail. Of the 1,300 residential units, 700 units will be apartments and 600 units will be townhomes/condos. The site is planned to have four (4) access points on McDonough Boulevard, and three (3) access points on Sawtell Avenue. One of the access points on Sawtell Avenue will strictly serve a parking garage.

Site Parking Requirements

According City of Atlanta's off-street parking requirements, Section 16-07.010 states that for attached dwellings (i.e. Townhomes), one parking space shall be provided for each dwelling unit. Given these requirements, a minimum of 600 parking spaces need to be provided on-site for the townhomes/condos.

According City of Atlanta's off-street parking requirements, Section 16-07.010 states that for multi-family dwellings (i.e. Apartments), one parking space shall be provided for each dwelling unit less than 750 square feet and an extra parking space for each bedroom beyond a 3 bedroom dwelling unit. Give these requirements, a minimum of 700 parking spaces need to be provided on-site for the apartments.

According City of Atlanta's off-street parking requirements, Section 16-11.010 states that for general commercial retail, one parking space shall be provided for each 300 square feet of retail. Give these requirements, a minimum of 85 parking spaces need to be provided on-site for the retail.



Site Access Points and Driveways

GDOT is the permitting agency for driveway access. According to some maps, McDonough Boulevard is also known as "SR 42 Spur", and Sawtell Avenue is known as "SR 54 Connector." The site is planned to have four (4) access points on McDonough Boulevard, and three (3) access points on Sawtell Avenue. One of the access points on Sawtell Avenue will strictly serve a parking garage. The following bullet list describes the proposed access points in more detail:

- Access Driveway A is the westernmost driveway on McDonough Boulevard and is proposed to be a full-movement driveway. It will be aligned with Grant Street on the other side of McDonough Boulevard.
- Access Driveway B is east of Access Driveway A on McDonough Boulevard and is proposed to be a full-movement driveway. It will be aligned with Miller Reed Avenue on the other side of McDonough Boulevard.
- Access Driveway C is east of Access Driveway B on McDonough Boulevard and is proposed to be a full-movement driveway. This access driveway is proposed to be the main driveway serving the site on McDonough Boulevard. It will be aligned with Eric Street on the other side of McDonough Boulevard.
- Access Driveway D is east of Access Driveway C on McDonough Boulevard and is proposed to be a full-movement driveway.
- Access Driveway E is the northernmost driveway on Sawtell Avenue and is proposed to be a right-in/right-out driveway for an on-site parking garage.
- Access Driveway F is south of Access Driveway E on Sawtell Avenue and is proposed to be a full-movement driveway.
- Access Driveway G is south of Access Driveway F on Sawtell Avenue and is proposed to be a full-movement driveway. This access driveway is proposed to be the main driveway serving the site on Sawtell Avenue.



Figure 2-1a. Site Area Map







Figure 2-1b. Site Location Map

Source: www.mapquest.com





Figure 2-2. Site Aerial



Figure 2-3. Site Plan





Local Plan Summary

The site is currently located on land that supports for industrial / warehouse use. A southern railroad line is the southwestern boundary of the site. McDonough Boulevard bounds the site on the north, and Sawtell Avenue bounds the site on the east. Immediately east of the site is a U.S. Penitentiary. Immediately north of the site there are low-density residential homes. Immediately southwest of the site there is more industrial / warehouse use.

According to the Existing City of Atlanta Zoning Map, the existing zoning for the site is "Industrial." According to the 2019 City of Atlanta Land Use Map, the site and adjacent land uses are planned to be of the same nature as what currently exists.

See Figure 2-4, Excerpt from City of Atlanta's Existing Land Use Map, and Figure 2-5, Excerpt from City of Atlanta's (Year 2019) Land Use Map.

Pedestrian and Transit Facilities

External to the Site, there are existing sidewalks within the vicinity of the subject site. The developer is proposing to implement a series of sidewalks bordering the site that will tie into the extensive on-site sidewalk system.

Various MARTA (Metropolitan Atlanta Rapid Transit Authority) bus routes are available within the vicinity of the site. Bus routes include:

- Route 4 McDonough /Grady Hospital;
- Route 17 Inman Park/Lakewood;
- Route 48 Thomasville/Inman Park;
- Route 49 McDonough; and
- > Route 55 Orchard Knob.

Site Plan Elements

As can be seen on the Site Plan (Figure 2-3), there are a number of enhancements that were included to provide for more efficient vehicle movements. These include (but are not limited to):

Provision of seven (7) access driveways serving the site to separate and distribute traffic to the different buildings and parking facilities more efficiently;



- An efficient on-site/parking deck circulation system that provides multiple vehicular paths to all access points, and to all blocks and sections of the Site;
- An on-site street network to significantly reduce unnecessary off-site movements and to provide options for ingress to/egress from the Site; and
- Design of access points, in combination with parcel design, to minimize queuing problems for on-site intersections.

The Site Plan also shows a number of enhancements to provide for more efficient pedestrian movements. These include (but are not limited to):

- > An on-site pedestrian system that connects every block and section within the Site;
- > Pedestrian facilities concurrent with all vehicular access points to the Site;
- > Crosswalks at all vehicular/pedestrian crossing points;
- Connection of the on-site pedestrian system, as directly as is practical, to the off-site pedestrian systems of adjacent roadways and developments;
- > Connections of the on-site pedestrian system to the off-site sidewalks;
- Street furniture along McDonough Boulevard; and
- > On-site bike/moped parking along Sawtell Avenue.





Figure 2-4. Excerpt from City of Atlanta's Existing Land Use Map





Figure 2-5. Excerpt from City of Atlanta's (Year 2019) Land Use Map



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Trip Generation

As noted above, Village at Chosewood Park will consist of: 700 apartments, 600 townhomes/condos, and 25,000 square feet of neighborhood style shopping center/retail.

The number of vehicle trips expected from the site was estimated. The trip generation was based on the Site Plan and information provided by the developer's site civil engineer and land planner.

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

Internal capture rates, published in ITE's <u>Trip Generation Handbook</u>, June 2004, between the residential and retail land uses were used to reduce trips based on the mixed-use nature of the Site.

Pass-by trips were also reduced from the trip generation for the retail component of the Village at Chosewood Park. The pass-by rate was calculated using ITE's <u>Trip Generation Handbook</u>, June 2004. The pass-by rate was found to be 58%. GRTA caps pass-by trips at 10% of the average daily traffic (ADT) on the adjacent roadway. The limits test was performed to determine whether the pass-by trips that would be expected based on the rates given in ITE's <u>Trip Generation Handbook</u> would be more than 10% of the ADT for the adjacent roadway. It was determined that the pass-by trips will be less than 10% of the Year 2013 projected ADT for the adjacent roadways. Thus, pass-by trips did NOT have to be adjusted.

A 5% alternative mode reduction was assumed in the trip generation per the discussion held on the topic during the Methodology Meeting/Pre-Application Conference.

Trip Generation has been determined for build-out for the site, estimated to occur in the Year 2013. The results are shown in Table 3-1.



l and like (ITE Code)	Intonsity		Daily	AM Pe	ak Hour	PM Peak Hour	
Land Use (ITE Code)	Inten	intensity		In	Out	In	Out
Apartments (220)	700	Units	4,357	69	278	262	141
Townhomes/Condos (230)	600	Units	2,944	37	179	175	86
Total Residential Trips	1,300	Units	7,301	106	457	437	227
Internal Capture Trips			111	1	1	5	3
Gross Trips minus Internal			7,190	105	456	432	224
Alt Mode Reduction	5%	Rate	360	5	23	22	11
Net Residential Tr	ips		6,831	100	433	410	213
Specialty Retail (814)	25	KSF	1,107	16	11	36	45
Internal Capture T	rips		111	1	1	3	5
Gross Trips minus Internal			996	15	10	33	40
Pass-by Trips	58%	Rate	578	0	0	21	21
Net Specialty Retail	418	15	10	12	19		
Net Site Trips	7,249	115	443	422	232		

Table 3-1. Trip Generation

Sources: (1) ITE Trip Generation, 7th Edition, 2003 (2) ITE Trip Generation Handbook, June 2004

Distribution and Assignment

The distribution of the trips generated by a development is determined by both the distribution of population (and residences, that is where people live) within the area, for employment and retail types of development, and the distribution of employment locations within the area for residential types of development. The distribution of the trips is to a lesser extent determined by the surrounding road system (which more directly affects traffic assignment). For the purposes of developing trip distribution, a radius of fifteen miles was used for the residential component of the site (with the assumption that the vast majority of home to work trips will be satisfied within that fifteen mile radius). A radius of two miles was used for the retail component of the site.

Census data with the GIS software *Maptitude* was used to develop the trip distribution for the Site. Employment data within a 15-mile radius was used to determine the spatial distribution of residential trips coming to and from the Site. Population data within a 2-mile radius was used to determine the spatial distribution of retail trips coming to and from the site.

The trip distributions developed for the site (and agreed upon at the GRTA Methodology Meeting) are shown in Figure 3-1.

The appropriate distribution percentages as shown in Figure 3-1 were applied to the trips generated by the Site. The weekday AM and weekday PM peak hour turning volumes expected at the study intersections from the Site are shown in Figure 3-2.



Figure 3-1. Site Trip Distribution







Figure 3-2. Site Traffic Volumes



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Identification of the Study Network

An early step in the development of a study and report for the GRTA DRI Non-Expedited Review Process is the determination of the Study Network utilizing the 7% Rule. The 7% Rule requires study of each roadway segment that is impacted to determine if traffic from the Site consumes 7% or more of the Service Volume (volume at a specific Level of Service (LOS), usually "D") of that roadway segment. The LOS Standards are intended to be established by each jurisdiction, although many have not yet officially done so, thus LOS D is generally used as a default value (and LOS C may be used as a default in more rural areas). The LOS standard for City of Atlanta is assumed to be LOS D.

This effort, to determine how much of the Service Volume on all roadway segments within several miles of the Site is consumed by the Site, requires a potentially extensive roadway and traffic control inventory. The inventory provides information for each roadway segment within a reasonable distance from the Site. This information is presented to GRTA at the Methodology Meeting on either a map and/or a spreadsheet. The information that GRTA wishes to see includes: the portion of the gross 24-hour two-way Site traffic assigned to each roadway segment (this requires that trip generation, trip distribution and traffic assignment be performed in advance); a description of each roadway segment (numbers of lanes, existence of a median, amount and types of traffic control, existence of left turn lanes, functional classification of the roadway, jurisdictional control of the roadway (State or Non-state), etc.); the Level of Service standard for each roadway segment; the Service Volume threshold for each roadway segment; the number of trips and percent of total trip generation from the Site assigned to each roadway segment; and the percent of Service Volume consumed by the Site on each roadway segment.

The generalized Annual Average Daily Traffic volumes adopted by GRTA are used for the roadway service volumes. Where the daily trips generated by the Site exceed 7% of the two-way daily roadway service volumes at the appropriate Level of Service standard, the roadway segment is included in the Study Network. In addition to specific roadway segments being identified, the level of analysis (detailed level or planning level) is also established. Finally, the study intersections to be analyzed are also identified.

Figure 3-3 presents a graphic of the overall Study Area identified by the 7% Rule. Table 3-2 shows the roadway segments that were assessed and presented for the GRTA Methodology Meeting.





Figure 3-3. Study Area Identified by the 7% Rule

_STREET ==== === SMARTs

	Roadway Segment		No. of	Adjusted LOS	Daily	Dailv Retail	Total Daily	% of Project Trips with	Are the project trips are ater than 7% of the
Roadway Segment	Start	End	Lanes*	"D" Daily Capacity	Residential Trips	Trips	Projec† Trips**	respect to the adjusted LOS "D" daily capacity	adjusted LOS "D" daily capacity?
McDonough Blvd	Site	Sawtell Ave	4	30,875	1,607	465	2,072	6.7%	No
McDonough Blvd	Sawtell Ave	Boulevard SE	3	22,515	1,285	443	1,728	7.7%	Yes
McDonough Blvd	Boulevard SE	Moreland Dr	2	11,920	643	277	920	7.7%	Yes
McDonough Blvd	Moreland Dr	Moreland Ave/US23	4	30,875	643	166	809	2.6%	No
Moreland Ave/US 23	McDonough Blvd	Hillcrest Dr	5	38,665	321	89	410	1.1%	No
Moreland Ave/US 23	McDonough Blvd	Custer Ave	5	38,665	321	77	398	1.0%	No
McDonough Blvd	Site	Milton Ave	4	30,875	2,892	387	3,279	10.6%	Yes
McDonough Blvd	Milton Ave	Hank Aaron Dr	2	11,920	2,249	111	2,360	19.8%	Yes
University Ave	McDonough Blvd	Pryor St	4	30,115	1,928	55	1,983	6.6%	No
University Ave	Pryor St	I-85/75 NB	4	30,115	1,928	55	1,983	6.6%	No
University Ave	I-85 NB	I-85/75 SB	4	30,115	1,093	55	1,148	3.8%	No
University Ave	I-85 SB	Metropolitan Pkwy/US 91/41	3	17,363	321	55	376	2.2%	No
Ridge Ave	Hank Aaron Dr	Pryor St	3	17,363	321	55	376	2.2%	No
Hank Aaron Dr	McDonough Blvd	Atlanta Ave	4	30,115	643	55	698	2.3%	No
Boulevard	McDonough Blvd	Custer Ave	4	30,115	643	111	754	2.5%	No
Milton Ave	Lakewood Ave	Hank Aaron Dr	3	17,363	643	111	754	4.3%	No
Milton Ave	Lakewood Ave	McDonough Blvd	2	11,680	643	111	754	6.5%	No
Sawtell Ave	Site	Jonesboro Rd	2	11,920	2,249	255	2,504	21.0%	Yes
Sawtell Ave	Jonesboro Rd	Claire Dr	2	11,920	1,928	89	2,017	16.9%	Yes
Lakewood Ave	Claire Dr	Lake wood Way	5	38,665	1,928	55	1,983	5.1%	No
Langford Pkwy	Lakewood Way	I-85/I-75	4	30,875	1,928	22	1,950	6.3%	No
Jonesboro Rd	Sawtell Ave	Constitution Rd	2	11,920	321	55	376	3.2%	No

Table 3-2. Study Segment Evaluation Presented at the Methodology Meeting

*For segments containing heterogenous lane quantities, the lower number was used to be conservative.

**Note, these estimated trips do not include internal capture or pass-by trips



After consultation with GRTA and the City of Atlanta, the following intersections were agreed upon for investigation as part of the Traffic Impact Analysis.

- Access Driveways A through G;
- McDonough Blvd at Sawtell Ave;
- McDonough Blvd at Boulevard SE;
- Sawtell Ave at Jonesboro Rd;
- Sawtell Ave at Lakewood Ave;
- McDonough Blvd at University Ave at Ridge Ave at Hank Aaron Dr;
- McDonough Blvd at Jonesboro Rd;
- McDonough Blvd at Lakewood Ave; and,
- McDonough Blvd at Milton Ave.

After consultation with GRTA and the City of Atlanta, it was agreed that no roadway segments would be analyzed.

Figure 3-4 shows the location of the study intersections, and their existing traffic controls and lane configurations.





Figure 3-4. Existing Traffic Controls and Lane Configurations



LEGEND

1

Existing Traffic Signal Control Existing Lane Configuration

Existing Roadway Facilities

To determine existing traffic conditions of the identified study roadway segments and study intersections in the area, an inventory was made of the major roads surrounding the Site. For the purposes of this study, McDonough Boulevard was assumed to run east-west and Sawtell Avenue was assumed to run north-south. The physical and traffic control elements of each of the roadways, as well as other important elements for the study roadways, follows:

- McDonough Boulevard (SR 42 Spur) is primarily an east-west roadway that runs from Hank Aaron Drive/Capital Avenue to Moreland Avenue (SR 42) (US 23). McDonough Boulevard is a two-lane undivided roadway between Hank Aaron Drive/Capital Avenue and Hill Street, a four-lane undivided roadway between Hill Street and Sawtell Avenue, a three-lane undivided roadway between Sawtell Avenue and Boulevard, a two-lane undivided roadway between Boulevard and New Town Circle, a four-lane undivided roadway between New Town Circle and Henry Thomas Drive, and a five-lane undivided roadway between Henry Thomas Drive and Moreland Avenue. The posted speed limit on McDonough Boulevard within the study area is 35 mph. The land uses along McDonough Boulevard include residential, retail, a federal penitentiary, and abandoned property.
- Sawtell Avenue (SR 54 Connector) a primarily a north-south roadway that runs from McDonough Boulevard to Jonesboro Road. Sawtell Avenue is a four-lane undivided roadway from McDonough Boulevard to railroad tracks. South of the railroad tracks, Sawtell Avenue becomes a two-lane roadway. The posted speed limit on Sawtell Avenue is 35 mph. The land uses along Sawtell Avenue include residential, retail, a federal penitentiary, and abandoned property.
- Boulevard is a four-lane undivided north-south roadway that runs from McDonough Boulevard to the south to north of North Avenue. The posted speed limit on Boulevard is 35 mph. The lane uses along Boulevard include residential, retail, a federal penitentiary, and abandoned property.
- Lakewood Avenue is a local roadway that extends from Interstate 75 to the east, and curves north up to Milton Avenue. Lakewood Avenue is a four-lane divided roadway from Interstate 75 to Pecan Drive, a six-lane undivided roadway from Macon Terrace to Macon Terrace, a five-lane undivided roadway from Terrace Way to Jonesboro Road, and a two-lane undivided roadway from Jonesboro Road to Milton Avenue. The posted speed limit on Lakewood Avenue within the study area is 35 mph. The land uses along Lakewood Avenue include residential, retail, and abandoned property.



- Claire Dr is a local two-lane undivided east-west roadway that runs from South Pryor Street to Lakewood Avenue. The posted speed limit on Claire Dr is 35 mph. The land uses along Claire Drive include residential, retail, and abandoned property.
- Jonesboro Road (SR 54) is a two-lane undivided northeast-southwest roadway that runs from McDonough Boulevard to south of Interstate 285. Jonesboro Road becomes a three-lane undivided roadway just north of Macedonia Road and then becomes a five-lane undivided roadway just south of Macedonia Road. The posted speed limit on Jonesboro Road in the study area is 35mph. The lane uses along Jonesboro Road include residential, retail, and abandoned property.
- Hank Aaron Drive is a four-lane undivided north-south roadway that runs from Fulton Street to McDonough Boulevard/University Avenue. Hank Aaron Drive becomes a five-lane roadway just north of Ormond Street. The posted speed limit on Hank Aaron Drive is 35 mph. The land uses along Hank Aaron Drive include residential, retail, and abandoned property.
- University Avenue is a four-lane undivided east-west roadway that runs from Metropolitan Parkway to Hank Aaron Drive/Capital Avenue. University Avenue becomes a three-lane undivided roadway just west of Interstate 75. The posted speed limit on University Avenue is 35 mph. The land uses along University Avenue include residential, retail, and abandoned property.
- Capital Avenue is a two-lane undivided north-south roadway that runs from McDonough Boulevard/University Avenue to the north and dead ends into the George Washington Carver High School. The posted speed limit on Capital Avenue is 25 mph.
- Ridge Avenue is a three-lane undivided northwest-southeast roadway that runs from Pryor Street to the intersection of Hank Aaron Drive/Capital Avenue and McDonough Boulevard/University Avenue. The posted speed limit on Ridge Avenue is 35 mph. The land uses along Ridge Avenue include residential, retail, and abandoned property.
- Milton Avenue is a local-two lane undivided roadway that runs from Hank Aaron Drive to McDonough Boulevard. West of Hank Aaron Drive, the road changes names to Weyman Avenue. The posted speed limit on Milton Avenue is 30 mph. The land uses along Milton Avenue include residential, retail, and abandoned property.



Existing Traffic Volumes

After consultation with GRTA, ARC, and the City of Atlanta, it was determined that capacity analyses would be performed for the weekday AM peak hour and the weekday PM peak hour. For these two peak periods, turning movement counts were collected on December 6, 2006 (Wednesday) at the following intersections:

- McDonough Blvd at Sawtell Ave (signalized);
- McDonough Blvd at Boulevard SE (signalized);
- Sawtell Ave at Jonesboro Rd (signalized);
- Sawtell Ave at Lakewood Ave (signalized);
- McDonough Blvd at University Ave at Ridge Ave at Hank Aaron Dr (signalized);
- McDonough Blvd at Jonesboro Rd (signalized);
- McDonough Blvd at Lakewood Ave (signalized); and,
- McDonough Blvd at Milton Ave (signalized).

Figure 4-1 shows the existing volumes at the study intersections for the weekday AM and PM peak hours.

Programmed Improvements

The local Transportation Improvement Program, the State Transportation Improvement Program, the Regional Transportation Plan, and the Georgia Department of Transportation's Construction Work Program have been researched to determine if there are any proposed transportation improvements, either programmed or planned, that would impact the Site. For identified projects, the opening-to-traffic dates, sponsors, costs of projects, funding sources, and logical termini are usually also identified.

In conjunction with local governments, such as the City of Atlanta, ARC manages the program of regional transportation improvements in the Atlanta area. Transportation improvements in the vicinity of the site are shown in Figures 4-2 to 4-9.





Figure 4-1. Traffic Volumes: Existing



LEGEND



Village at Chosewood Park GRTA DRI Report City of Atlanta, GA

AR-450A	Atlanta Re PROJEC	egion - CT FA	Mobility2030	Transporta	tion Plan					
Short Title	BELT LINE MUL OTHER AR-450	LTI-USE P.) and ar-	ATH - PHASE 1 [SEE 451 SERIES LINE IT	: ALSO EMS]	Atlanta	rgh Center				
GDOT Project No.	0006841						Decatur			
Federal ID No.	CSSTP-0006-00)(841)			Thankheat T and the second					
Status	Programmed				10.00	ي 🤛 🥵	Inman Park			
Detailed Description and Justification	This project wil of way for a mu line as well as t along the align of Atlanta.	his project will provide funds for the purchase of right f way for a multi-use trail and a fixed guideway transit ne as well as the construction of the multi-use trail long the alignment in the northeast quadrant of the City f Atlanta.								
					Bartony	horokee Foryti				
Service Type	Bicycle/Pedestr	ian Facilit	y		- 2	5 20 6				
Sponsor	City of Atlanta				Barrow					
Jurisdiction	City of Atlanta				Paulding	Swi	nnett			
Existing Thru Lane	N/A	(applicab	le for road projects (only)	1-29	Dekalb	Walton			
Planned Thru Lane	N/A	(applicab	le for road projects (only)	Fultor	A Roc				
Corridor Length	6.2	miles <i>(no</i>	t applicable for all p	roject types)	3	Henry	Newton -			
Network Year	2015	(required	if modeled for confe	ormity)	Couvera	vette	\sim			
Completion Date	2011				1 dime					
Analysis Level	Exempt from A	ir Quality	Analysis (40 CFR 93)			5 10 15 20 25 Miles			
Dhase Status & Euriding		ETECAL		PREAKDOW			DING SOURCE			
Information for 06-11 TI	P	YEAR	COST	FEDERAL	STATE	BONDS	LOCAL/OTHER			
PE STP - Urban (>200K) (ARC)		2007	\$1,000,000	\$800,000	\$0,000	\$0,000	\$200,000			
ROW STP - Urban (>200K) (ARC)		2007	\$17,000,000	\$4,200,000	\$0,000	\$0,000	\$12,800,000			
CST STP - Urban (>200K) (ARC)		2008	\$3,000,000	\$2,000,000	\$0,000	\$0,000	\$1,000,000			
				\$7,000,000	\$0,000	\$0,000	\$14,000,000			
PE: Preliminary Engine	ering / Design / Study	,	ROW: Right-of-way Acqu	iistion	CST: Construction / Impler	mentation				
? For additional information a	bout this project, pl	ease visit th	e Atlanta Regional Comn	nission at www.atla	intaregional.com or call (4	04) 463-3100.	A: C			
Report Generated: 9/21	/2006									

Figure 4-2. AR-450A (Beltline Multi-Use Path – Phase 1)

STREET

AR-450B	Atlanta R PROJE	tegion - CT FA	Mobility2030	Transportat	ion Plan				
Short Title	BELT LINE MU OTHER AR-45	JLTI-USE P 60 AND AR-	ATH - PHASE 2 [SEI 451 SERIES LINE IT	e also Tems]	Cindbe Atlanta 73	irgh Center	KALB		
GDOT Project No.	0007683						Decatur		
Federal ID No.	CSSTP-0007-0	00(683)			Rankhear P		Jost		
Status	Programmed					2 💷 🖉	nman Park		
Detailed Description and Justification	This project w of way for a r line as well as along the alig of Atlanta.	his project will provide funds for the purchase of right way for a multi-use trail and a fixed guideway transit he as well as the construction of the multi-use trail ong the alignment in the southeast quadrant of the City Atlanta.							
Service Type	Bicycle/Pedes	trian Facilit	у		Bartoy	brokee Fortyth	Ä		
Sponsor	City of Atlanta	3				- 7 - 7			
Jurisdiction	City of Atlanta	3			Paulding	Gwin	nett		
Existing Thru Lane	N/A	(applicab	le for road projects	only)	1-20	Dekalb	Walton		
Planned Thru Lane	N/A	(applicab	le for road projects	only)	Douglas Fulto	AF	120		
Corridor Length	6.5	miles <i>(no</i>	t applicable for all p	project types)	3	Henry	Newton		
Network Year	2015	(required	if modeled for cont	formity)	Couvera	ayette	\mathcal{N}		
Completion Date	2012				1 den	Spalding			
Analysis Level	Exempt from	Air Quality	Analysis (40 CFR 93	3)	ŭ	ů l	5 10 15 20 25 Miles		
Bhase Status & Funding		EISCAL		REAKDOW					
Information for 06-11 T	IP	YEAR	COST	FEDERAL	STATE	BONDS	LOCAL/OTHER		
PE Local Jurisdiction/Municipalit	y Funds	2006	\$2,000,000	\$0,000	\$0,000	\$0,000	\$2,000,000		
ROW STP - Urban (>200K) (ARC)		2008	\$5,000,000	\$3,000,000	\$0,000	\$0,000	\$2,000,000		
ROW STP - Urban (>200K) (ARC)		2009	\$4,500,000	\$3,000,000	\$0,000	\$0,000	\$1,500,000		
CST_STP - Urban (>200K) (ARC)		2010	\$4,500,000	\$2,000,000	\$0,000	\$0,000	\$1,000,000		
			+0,000,000	\$11,000,000	\$0,000	\$0,000	\$8,000,000		
PE: Preliminary Engine	DE- Drelininary Engineering / Design / Shufy DOW: Dight-of-way Advision CST- Construction / Implamentation								
? For additional information a	Por additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.								
Report Generated: 9/21	1/2006								

Figure 4-3. AR-450B (Beltline Multi-Use Path – Phase 2)

_STREET SMARTs
AR-450C	Atlanta R PROJE	egion -	Mobility2030	Transporta	ation Plan		
Short Title	BELTLINE MU OTHER AR-45	ILTI-USE PA 60 AND AR-	ATH - PHASE 3 [SEE 451 SERIES LINE IT	ALSO EMS]	Lindber Atlanta 23	rgh Center	MALE -
GDOT Project No.	N/A						Decatur
Federal ID No.					Annes 7		of the second
Status	Long Range					<u>کې کې ک</u>	Inman Park
Detailed Description and Justification	None						20 1 2 Miles
						2	3 N
Service Type	Bicycle/Pedes	trian Facilit	у		Bartow	herokee Forsytt	A
Sponsor	City of Atlanta	3				- 7 -> 7	17mm
Jurisdiction	City of Atlanta	3			Paulding	Gwi	nnett
Existing Thru Lane	N/A	(applicab	le for road projects	only)	1-29	Dekalb	Walton
Planned Thru Lane	N/A	(applicab	le for road projects	only)	Douglas Fulton	AFT	120
Corridor Length	3.4	miles <i>(nc</i>	ot applicable for all p	roject types)	31	Henry	Newton
Network Year	2020	(required	if modeled for conf	ormity)	Courta Fa	yette	\mathcal{N}
Completion Date	2020	i			L.		
Analysis Level	Exempt from	Air Quality	Analysis (40 CFR 93)			5 10 15 20 25 Miles
Phase Status & Funding	P	FISCAL	TOTAL PHASE COST	BREAKDO	WN OF TOTAL PHAS	E COST BY FUN BONDS	IDING SOURCE
CST Local Jurisdiction/Municipality	/ Funds	LR 2012-	\$15,000,000	\$0,000	\$0,000	\$0,000	\$15,000,000
		2020		\$0,000	\$0,000	\$0,000	\$15,000,000
PE: Preliminary Engine	ering / Design / Stu	dy	ROW: Right-of-way Acq	uistion	CST: Construction / Impler	nentation	
? For additional information a	bout this project,	please visit th	e Atlanta Regional Comr	nission at www.atl	antaregional.com or call (40	04) 463-3100.	A:C

Figure 4-4. AR-450C (Beltline Multi-Use Path – Phase 3)



Short Title E	BELTLINE MU OTHER AR-45	LTI-USE PA 0 AND AR-4	TH - PHASE 4 [SEE 451 SERIES LINE IT	ALSO	1		
				EMS]	Atlanta 3	igh Center	
GDOT Project No.	N/A						Decatur
Federal ID No.					Chankheat Cha		lo tot
Status	Long Range					299	Inman Park
Detailed Description [↑] and Justification	None						
						2 1	
Service Type	Bicycle/Pedest	trian Facilit	ý			Fortyth	
Sponsor	City of Atlanta	1					Barrow
Jurisdiction	City of Atlanta	1			Paulding	Gwi	nnett
Existing Thru Lane	N/A	(applicabl	le for road projects	only)	1-20	Dekalb	Walton
Planned Thru Lane	N/A	(applicabl	le for road projects	only)	Douglas / Fulton	AFT	1-20
Corridor Length	6.3	miles <i>(no</i>	t applicable for all p	roject types)	3	Henry	Newton .
Network Year	2020	(required	if modeled for confi	ormity)	Courta E	vette	\sim
Completion Date	2020				t at me		
Analysis Level	Exempt from <i>J</i>	Air Quality	Analysis (40 CFR 93)			5 10 15 20 25 Miles
Phase Status & Funding Information for 06-11 TIP	,	FISCAL YEAR	TOTAL PHASE COST	BREAKDO FEDERAL	WN OF TOTAL PHAS	E COST BY FUN BONDS	IDING SOURCE
CST Local Jurisdiction/Municipality F	Funds	LR 2012- 2020	\$20,000,000	\$0,000	\$0,000	\$0,000	\$20,000,000
				\$0,000	\$0,000	\$0,000	\$20,000,000
PE: Preliminary Engineeri	ing / Design / Stuc	ty	ROW: Right-of-way Acqu	iistion	CST: Construction / Implen	nentation	
Por additional information abo	out this project, p	please visit th	e Atlanta Regional Comn	nission at www.atl	lantaregional.com or call (40)4) 463-3100.	A:C

Figure 4-5. AR-450D (Beltline Multi-Use Path – Phase 4)

STREET SMARTS



Figure 4-6. AR-451B1 (Inner Core Transportation Corridor – Phase 2)

STREET

AR-451B2 Atlanta Region - Mobility2030 Transportation Plan PROJECT FACT SHEET Short Title INNER CORE TRANSPORTATION CORRIDOR - PHASE 2, SEGMENT 2 - TRANSIT SERVICE IN THE SOUTHEAST QUADRANT [SEE ALSO OTHER AR-450 AND AR-451 75/85 Simpson St SERIES LINE ITEMS] Edg ood Ave Oglethorpe Ave Memorial Dr 20 GDOT Project No. N/A Atlanta Federal ID No. Long Range Status Detailed Description None and Justification Lee St Service Type Fixed Guideway Transit Capital MARTA Sponsor Ban City of Atlanta Jurisdiction Walton Existing Thru Lane N/A (applicable for road projects only) I-20 Doug (applicable for road projects only) Planned Thru Lane N/A I-20 Corridor Length 6.3 miles (not applicable for all project types) Network Year 2025 (required if modeled for conformity) Completion Date 2025 0 5 10 15 20 25 Mik Analysis Level In the Region's Air Quality Conformity Analysis FISCAL TOTAL PHASE BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE Phase Status & Funding Information for 06-11 TIP YEAR COST FEDERAL BONDS LOCAL/OTHER STATE CST Bus - New (80/20) \$4,899,000 LR 2021-\$4,899,000 \$0,000 \$0,000 \$0,000 2030 \$4,899,000 \$0,000 \$0,000 \$0,000 PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation **A:C** For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100. **Report Generated:** 9/21/2006

Figure 4-7. AR-451B2 (Inner Core Transportation Corridor – Phase 2)



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Figure 4-8. AT-175 (University Avenue)

STREET SMART

AT-AR-BP098	Atlanta Re	gion - CT FA	Mobility2030	Transporta	tion Plan		
Short Title	WEST END RAIL ROAD TO PRYO	- MULTI-I R STREE	USE TRAIL FROM SI T	MPSON		Singson St	anta
GDOT Project No.	762562-						
Federal ID No.	STP-00BK(73)					ISTAR	
Status	Programmed				TO BY		
Detailed Description and Justification	Construction of Simpson Road to	a multi-u o Pryor R	ise trail in West End load.	from		65	T5/85 Pryor Rd
Service Type	Multi-Use Bike/P	Ped Facilit	tv		Bartow	herokee Fortyth	Å
Sponsor	City of Atlanta		-,			- 7 - 3	2 Am
Jurisdiction	City of Atlanta				Paulding Cobb	A Charles	Barrow
Existing Thru Long	N/A	(annlicah	le for road projects	on/v)			Walton
Existing Thru Lane	N/A (applicabl	le for road projects (antu)	Douglas		ocktale
	N/A (applicabl	le loi load projects o	<i>((())</i>	Fulto	Clayner	Newton
Corridor Length	0.9	nies (<i>no</i>	t applicable for all p	roject types)		wette	2
Network Year	2010 ((required	if modeled for confe	ormity)	Coweta		\sim
Completion Date	2008				- den	- Spatiging 0	5 10 15 20 25 Miles
Analysis Level	Exempt from Air	r Quality	Analysis (40 CFR 93)		L	
Phase Status & Funding	F	FISCAL	TOTAL PHASE	BREAKDOV	WN OF TOTAL PHAS	E COST BY FUN	DING SOURCE
Information for 06-11 T	(P	YEAR	COST	FEDERAL	STATE	BONDS	LOCAL/OTHER
PE STP - Urban (>200K) (ARC)		2003	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000
ROW STP - Urban (>200K) (ARC)		2003	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000
CST STP - Urban (>200K) (ARC)		2007	\$1,197,000	\$957,600	\$0,000	\$0,000	\$239,400
PE: Preliminary Engine	ering / Design / Study		ROW: Right-of-way Acqu	istion	CST: Construction / Impler	mentation	
For additional information a Report Generated: 9/21	about this project, ple	ase visit th	e Atlanta Regional Comn	ission at www.atk	antaregional.com or call (4	04) 463-3100.	1: 5

Figure 4-9. AT-AR-BP098 (West End Rail Multi-Use Trail)

STREET

It is important at this juncture to distinguish between "required" improvements, and "programmed" improvements. "Required" improvements are those that are necessary to support the Existing or Future conditions. That is, they are improvements required to improve the projected Level of Service back to (or better than) the LOS Standard. "Programmed" improvements are those improvements that have been proposed, planned for, and programmed for implementation (most often by a governmental agency). "Programmed" improvements generally already have an identified sponsoring agency, a funding source, a programmed amount of funds for implementation, and a scheduled or projected date for construction and opening to traffic. "Required" improvements and "programmed" improvements may be very similar, or very different.

Capacity Analysis Methodology

Level of Service Standards

Operating conditions at intersections are evaluated in terms of Levels of Service (LOS).

Levels of Service A through E are generally considered to be adequate peak hour operations. LOS F is generally considered an inadequate peak hour condition. However, for the GRTA DRI process, City of Atlanta's LOS Standards for the roadways in the Study Area are assumed to be LOS D. That is, LOS D is the Standard for Arterial Thoroughfares, Major and Minor Thoroughfares, and Collectors (this is an unofficial standard, or default standard, as City of Atlanta has not yet officially adopted LOS Standards for the GRTA Review Process). This Standard means that it is desirable, after new development has been put in place, that no less than a LOS D be maintained. However, GRTA accepts exceptions to this guideline. For example, if the LOS at a specific location degrades to LOS E when existing traffic is considered, then GRTA finds as acceptable, after background traffic, and again after the Site's traffic has also been added to the specific location, a return to LOS E.

Intersection Capacity Analysis Methodology

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

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



Traffic conditions at <u>unsignalized</u> intersections, with stop sign control on the minor street only, are evaluated for the minor street approach(es) and for the left turns from the major street. This is because the major street traffic is assumed to have no delay since there is no control (no stop sign). Inadequate Levels of Service for minor street approaches to unsignalized intersections are not uncommon, as the continuous flow traffic will always get the priority.

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

The <u>Highway Capacity Manual</u> Level of Service criteria for signalized and unsignalized intersections are shown in Table 4-1A.

	Control Delay (see	conds per vehicle)
Level of Service	Signalized Intersection	Unsignalized Intersection
Α	≤ 10	≤ 10
В	>10 and ≤20	>10 and ≤15
С	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	> 80	> 50

 Table 4-1A. Highway Capacity Manual Intersection LOS Criteria

Source: Highway Capacity Manual, Millennium Edition.

For two-way stop controlled intersections, the <u>Highway Capacity Manual</u> does not calculate a composite Level of Service for the entire intersection. For this reason, the Intersection Capacity Utilization (ICU) method was used to show the intersection LOS. The ICU output is analogous to the intersection volume to capacity ratio. This is different from the methodology used for HCM LOS. The ICU LOS provides a valuable measure of the difference in LOS expected under different traffic volume and lane configuration scenarios for the entire intersection under unsignalized conditions. The ICU LOS criteria for the overall intersection for two-way stop controlled intersections are shown in Table 4-1B.



Level of Service	Intersection Capacity Utilization
Α	0% to 55%
В	>55% to 64%
С	>64% to 73%
D	>73% to 82%
E	>82% to 91%
F	>91%

Table 4-1B. Intersection Capacity Utilization LOS Criteria

Source: based upon Synchro 6.

The Intersection Capacity Utilization Level of Service was reported for only the overall intersection LOS for two-way stop controlled intersections. The <u>Highway Capacity Manual</u> LOS is reported for the individual movements for two-way stop controlled intersections. All other LOS reported in this study are the HCM LOS.

Intersection Capacity Analysis – Existing Conditions

Using the methodologies previously described, intersection Levels of Service were determined for the study intersections for Existing conditions. It should be noted that the following parameters were incorporated into the analysis, where applicable: existing signal timings; peak hour factors; heavy vehicle percentages; approach grade; bus blockages; pedestrian traffic; and, lane widths.

Existing Traffic Controls & Lane Configurations

Table 4-2 presents the results of the intersection capacity analysis for Existing conditions. Printouts of these analyses are included in the Appendix.

As can be seen from Table 4-2, all of the movements and overall intersection operations function at adequate Levels of Service of "D" or better for Existing conditions.

Calculated Level of Service Standards

Based upon the results of the analysis of the Existing conditions, Table 4-3 presents the calculated Level of Service Standards, per GRTA requirements, for intersections that must be met when considering Future No-Build and Future Build conditions.



ID	Intersection	Control	Improvement	Movement	AM LOS	PM LOS
					(Approach Delay)	(Approach Delay)
				NB	B (10.3)	B (11.9)
1	Sawtell Avenue at McDonough	Traffic	n/a	EB	C (25.5)	C (27.4)
l '	Blvd	Signal	n/u	WB	B (17.3)	B (19.7)
				Composite	В	С
				NB	B (16.6)	B (13.0)
	Boulevard/Federal Bureau of	Traffic		SB	B (19.2)	B (17.6)
2	Prisons Dwy at McDonough Blyd	Signal	n/a	EB	C (28.8)	B (18.6)
	This is bwy at mebonoogh biva	Signal		WB	C (33.3)	C (27.3)
				Composite	С	С
				NB	C (22.1)	B (19.9)
	lonesboro Rd at Claire	Traffic		SB	C (25.4)	E (65.8)
3		Signal	n/a	EB	C (28.3)	D (37.5)
	DI/Suviei Ave	Signal		WB	B (19.7)	B (17.7)
				Composite	С	D
				NB	A (9.9)	B (13.0)
		Traffic	n/a	SB	A (5.7)	B (16.2)
4	Lakewood Ave at Claire Dr	Signal		EB	C (27.9)	B (18.3)
		Jigha		WB	E (73.6)	C (26.4)
				Composite	С	В
				NB	B (19.9)	B (19.9)
	Capital Ava at Hank Aaron Dr. at			SB	C (23.0)	C (27.1)
50	University Ave at McDonough	Traffic	n/a	EB	B (11.7)	B (19.4)
Ju	Blyd at Pidge Ave	Signal		WB	A (8.4)	B (18.1)
	biva al Ridge Ave			SEB	B (17.1)	C (25.4)
				Composite	В	С
			Remove	NB	C (20.5)	A (9.8)
	Capitol Ave at Hank Aaron Dr at	Traffic	Ridge Ave	SB	C (23.1)	B (19.4)
5b	University Ave at McDonough	Signal	(per NOD for GRTA DRI	EB	A (4.2)	A (9.9)
	Blvd	Signal		WB	A (4.0)	A (9.9)
			#981)	Composite	A	В
				NB	D (37.5)	B (16.6)
	loneshoro Rd/Private Dww at	Traffic		SB	A (0.00)	B (12.8)
6	McDonough Blyd	Signal	n/a	EB	B (10.7)	A (8.7)
	Mebeneogri biva	Signal		WB	B (13.9)	A (9.2)
				Composite	С	В
1				NB	C (31.8)	B (18.3)
	Lakewood Ave at McDonough	Traffic		SB	B (15.5)	C (20.5)
7	Blud	Signal	n/a	EB	B (10.1)	A (4.9)
	biva	Signal		WB	B (11.0)	A (5.0)
				Composite	С	В
				NB	A (7.3)	A (7.0)
	Harriet St/Milton Ave at	Traffic		SB	A (8.0)	A (9.2)
8	McDonough Blyd	Signal	n/a	EB	A (8.3)	A (9.4)
1	Mebonoogn biva	Jighu		WB	A (8.1)	A (9.2)
				Composite	А	А

Table 4-2. Existing Levels of Service



ID	Intersection	Control	Improvement	Movement	AM LOS	PM LOS
1	Sawtell Avenue at McDonough Blvd	Traffic Signal	n/a	Composite	D	D
2	Boulevard/Federal Bureau of Prisons Dwy at McDonough Blvd	Traffic Signal	n/a	Composite	D	D
3	Jonesboro Rd at Claire Dr/Sawtell Ave	Traffic Signal	n/a	Composite	D	D
4	Lakewood Ave at Claire Dr	Traffic Signal	n/a	Composite	D	D
5a	Capitol Ave at Hank Aaron Dr at University Ave at McDonough Blvd at Ridge Ave	Traffic Signal	n/a	Composite	D	D
5b	Capitol Ave at Hank Aaron Dr at University Ave at McDonough Blvd	Traffic Signal	Remove Ridge Ave (per NOD for GRTA DRI #981)	Composite	D	D
6	Jonesboro Rd/Private Dwy at McDonough Blvd	Traffic Signal	n/a	Composite	D	D
7	Lakewood Ave at McDonough Blvd	Traffic Signal	n/a	Composite	D	D
8	Harriet St/Milton Ave at McDonough Blvd	Traffic Signal	n/a	Composite	D	D

Table 4-3. Calculated Intersection LOS Standards



Year 2013 Future No-build

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

- (a) growth close to the Site due to specific, identified developments already in the "pipeline" (that is, actual nearby developments already approved, or further along in the approval process, that can reasonably be expected to be built before or at the same time as the Site), sometimes called "background development"; and
- (b) general traffic growth along major roadways due to the expanding nature of the region, and to other non-specific development further from the Site, often simply referred to as "background growth".

One background development was identified during the GRTA Methodology Meeting and Pre-Application Conference, which is to be established five years before the Site. East Medinah Village is a proposed mixed-use site that will be located in the southeast quadrant of the intersection of Hank Aaron Drive at Milton Avenue. The proposed development will consist of 772 condominiums, 97,400 square feet of retail, and 90,700 square feet of office space. The proposed build out year of the East Medinah Village 2008. The estimated trips from the East Medinah Village were added as background trips to develop Future No-Build volumes.

Traffic volumes are expected to increase due to other developments that are not in the immediate vicinity, but that will contribute traffic to the road network ("background growth"). Growth of this nature can generally be determined by examining historic trends in the vicinity of the Site, and by applying those trends to the appropriate roadways.

Historical traffic volume trends on the study network were taken into account. Where available, the last six years (1999 – 2004) of historical Annual Average Daily Traffic (AADT) collected by GDOT and City of Atlanta was used to help develop traffic volume trends on the study area roadways.

Based upon this historical data, there are two different methodologies for projecting future year traffic volumes (either directly for roadways with the historical data, or indirectly for similar types of roadways in the study area). The first methodology is to calculate the



average annual growth, and apply that growth, including compounding as appropriate, to project traffic volumes.

The second methodology is to use linear regression, and the "Forecast" tool within MS Excel, to smooth out the annual rises and dips and project future growth. The "Forecast" tool calculates, or predicts, a future value by using existing values. The predicted value is a y-value for a given x-value. The known values are existing y-values (the traffic volumes for the years 1999 through 2004) and the known x-values (the years 1999 through 2004). Linear regression, using the "Forecast" tool within MS Excel, was used in this analysis. Table 5-1 shows the historical data, as well as the future projections based upon the linear regression methodology.

Table	5-1.	Percentage	Growth of Study	Network Segments
-------	------	------------	------------------------	-------------------------

GDOT Station	Location of Count	1999	2000	2001	2002	2003	2004	2005	2006*	Forecast Year 2013	Annual Growth
5228	Sawtell Ave, south of McDonough Blvd	6,777	6,086	6,004	6,089	5,247	5,232	5,390	6,448	3,229	-7.1%
6310	McDonough Blvd, west of Sawtell Ave	11,440	8,402	8,700	8,851	8,523	8,673	8,760	9,423	6,035	-5.1%
6312	McDonough Blvd, east of Sawtell Ave	7,395	6,500	10,644	10,623	16,305	12,470	12,590	n/a	23,970	11.3%
	Count										

Non-GDOT Count

Based on the historical traffic volumes collected in the vicinity of the site and after discussions with GRTA and City of Atlanta staff, a 2% annual traffic growth percentage was used.

The Year 2013 Future No-build traffic volumes were developed by adding the East Medinah Village background traffic and the background growth out to the Year 2013 to existing traffic. The Year 2013 Future No-build traffic volumes are shown in Figure 5-1.





Figure 5-1. Traffic Volumes: Year 2013 Future No-build



LEGEND

AM (PM) TMV XX (YY) Turning Movements

Village at Chosewood Park GRTA DRI Report City of Atlanta, GA

Intersection Capacity Analysis

Existing Traffic Controls and Lane Configurations

Using the methodologies previously described, intersection Levels of Service were determined for the study intersections for Year 2013 Future No-build conditions. It should be noted that the following parameters were incorporated into the analysis where applicable: existing signal timings; peak hour factors; heavy vehicle percentages; approach grade; bus blockages; pedestrian traffic; and lane widths.

Table 5-2 presents the results of the intersection capacity analyses for Year 2013 Future Nobuild traffic conditions, but with existing traffic controls and land configurations.

As can be seen from Table 5-2, all of the movements, and all of the overall intersection operations, are expected to function at or better than the calculated Levels of Services standards for Year 2013 Future No-build conditions, except at the intersection of Jonesboro Road at Claire Drive/Sawtell Avenue.

Required Improvements

Table 5-2 identifies deficiencies that are expected to exist at the study intersections for Year 2013 Future No-build conditions. Improvements have been identified that would be expected to correct the Year 2013 Future No-build deficiencies. Their impacts on the Year 2013 Future No-build deficiencies are also shown in Table 5-2.

As can be seen from Table 5-2, the addition of an eastbound right turn lane at the intersection of Jonesboro Road at Claire Drive/Sawtell Avenue would be expected to bring the intersection back into adequacy for Year 2013 Future No-build conditions.

Figure 5-2 shows the lane configurations and traffic control that would be required to mitigate the Year 2013 Future No-build deficiencies.



ID	Intersection	Control	Improvement	Movement	AM LOS	PM LOS
					(Approach Delay)	(Approach Delay)
				NB	B (10.8)	B (13.3)
1	Sawtell Avenue at McDonough	Traffic	n/a	EB	C (26.0)	C (28.3)
Ľ	Blvd	Signal		WB	B (19.6)	C (30.0)
				Composite	В	С
				NB	B (17.1)	B (14.4)
	Boulevard/Federal Bureau of	Traffic		SB	C (20.2)	C (21.8)
2	Prisons Dwy at McDonough Blyd	Signal	n/a	EB	D (50.6)	C (20.6)
	This is bwy at mebonologit biva	Signal		WB	D (51.5)	C (27.4)
				Composite	D	С
				NB	C (20.5)	B (14.7)
	Ionesboro Rd at Claire	Traffic	Add separate	SB	C (23.4)	D (340.2)
3	Jonesboro Rd at Claire Dr/Sawtell Ave	Signal	FBR turn lane	EB	D (35.7)	D (40.8)
	Divodivicity (ve	orginar		WB	C (23.5)	C (23.9)
				Composite	С	С
				NB	B (13.2)	A (9.5)
		Traffic		SB	A (6.6)	B (12.0)
4	Lakewood Ave at Claire Dr	Signal	n/a	EB	C (26.5)	C (24.2)
		Signal		WB	F (81.6)	F (112.4)
				Composite	С	D
				NB	B (19.1)	C (23.0)
	Capital Ave at Hank Aaron Dr. at		n/a	SB	C (22.5)	D (39.1)
50	University Ave at McDonough	Traffic		EB	C (32.2)	D (50.2)
Ju	Blyd at Pidge Ave	Signal		WB	B (15.4)	C (20.2)
	biva ar kiage / we			SEB	C (24.7)	C (29.1)
				Composite	С	D
			Remove	NB	B (17.7)	B (11.0)
	Capitol Ave at Hank Aaron Dr at	Traffic	Ridge Ave	SB	B (19.5)	C (34.9)
5b	University Ave at McDonough	Signal	(per NOD for	EB	A (5.3)	B (12.7)
	Blvd	Signal	GRTA DRI	WB	A (4.8)	B (10.5)
			#981)	Composite	A	В
				NB	D (35.1)	B (17.8)
	Ionesboro Rd/Private Dwy at	Traffic		SB	A (0.0)	B (12.8)
6	McDonough Blyd	Signal	n/a	EB	B (14.0)	A (9.0)
	Mebonoogn biva	Signal		WB	C (21.8)	A (9.8)
				Composite	С	В
				NB	C (33.6)	B (18.3)
	Lakewood Ave at McDonough	Traffic		SB	B (15.0)	C (21.2)
7	Blvd	Signal	n/a	EB	B (12.7)	A (5.4)
	biva	Signal		WB	B (14.0)	A (5.5)
				Composite	С	В
				NB	A (7.6)	A (7.0)
	Harriet St/Milton Ave at	Traffic		SB	A (8.7)	B (11.3)
8	McDonough Blyd	Signal	n/a	EB	A (9.1)	B (10.9)
	Mebonoogn biva	Jigilai		WB	A (8.4)	B (10.6)
				Composite	А	В

Table 5-2. Intersection LOS: Year 2013 Future No-Build





Figure 5-2. Required Improvements: Year 2013 Future No-build



LEGEND



Existing Traffic Signal Control Existing Lane Configuration

Lane Configurations per NOD for GRTA DRI #981

Year 2013 Future Build

The projected volumes for the Site were added to the Year 2013 Future No-build traffic volumes to represent the total traffic expected in the area when the Site is complete. The Year 2013 Future Build traffic volumes are shown in Figure 5-3.

Intersection Capacity Analysis

Using the methodologies previously described, intersection Levels of Service were determined for the study intersections for Year 2013 Future Build conditions.

Existing Traffic Controls and Lane Configurations

Table 5-3 presents the results of the intersection capacity analysis for Year 2013 Future Build conditions, but still assuming existing traffic controls and lane configurations. It should be noted that the following parameters were incorporated into the analysis where applicable: existing signal timings; peak hour factors; heavy vehicle percentages; approach grade; bus blockages; pedestrian traffic; and, lane widths.

As can be seen from Table 5-3, all of the movements, and all of the overall intersection operations are expected to function at or better than the Calculated Levels of Service for Year 2013 Future Build conditions, except at the intersection of Jonesboro Road at Claire Drive/Sawtell Avenue.

Required Improvements

Table 5-3 identifies deficiencies that are expected to exist at the study intersections for Year 2013 Future Build conditions. Improvements have been identified that would be expected to correct the Year 2013 Future Build deficiencies. Their impacts on the Year 2013 Future Build deficiencies are also shown in Table 5-3.

As can be seen from Tables 5-3, the addition of an eastbound right turn lane at the intersection of Jonesboro Road at Claire Drive/Sawtell Avenue would be expected to bring the intersection back into adequacy for Year 2013 Future Build conditions.

Figure 5-4 shows the lane configurations and traffic control that would be required to support the Year 2013 Future Build conditions.



Figure 5-3. Traffic Volumes: Year 2013 Future Build





Village at Chosewood Park GRTA DRI Report City of Atlanta, GA

ID	Intersection	Control	Improvement	Movement	AM LOS	PM LOS
					(Approach Delay)	(Approach Delay)
				NB	B (12.4)	B (16.4)
1	Sawtell Avenue at McDonough	Traffic	n/a	EB	C (27.6)	C (29.5)
'	Blvd	Signal	n, a	WB	C (25.8)	E (64.6)
				Composite	C	D
				NB	B (17.1)	B (15.4)
	Boulevard/Federal Bureau of	Traffic		SB	C (20.2)	C (23.9)
	Prisons Dwy at McDonougn	Signal	n/a	EB	E (74.6)	C(22.2)
	Biva			Composito	E (30.0)	C (27.0)
				NB	C (25.4)	C(20.9)
				SB	C (236.3)	E (96.8)
3	Jonesboro Rd at Claire	Traffic	Add separate	EB	C (30.7)	D (38.3)
	Dr/Sawtell Ave	Signal	EBR furn lane	WB	C (24.5)	B (19.6)
				Composite	С	D
				NB	D(15.4)	B(17.2)
		Traffic		SB	B (15.4)	C (22.2)
4	Lakewood Ave at Claire Dr	Signal	n/a	EB	B (15.6)	B (15.2)
		orginal		WB	D (49.2)	C (30.3)
				Composite	D	C
				NB	C (23.5)	C (29.3)
	Capitol Ave at Hank Aaron Dr	Traffia		2R 2R	C(28.3)	F (116.0)
5a	at University Ave at	Signal	n/a		D (48.3)	
	McDonough Blvd at Ridge Ave	Signal		SEB	D(17.7)	C(20.4)
				Composite	C (20.4)	D
			Remove	NB	B (17.0)	B (12.8)
	Capitol Ave at Hank Aaron Dr		Ridge Ave	SB	B (18.9)	F (99.7)
5b	at University Ave at	Irattic	(per NOD for	EB	A (7.5)	B (15.3)
	McDonough Blvd	signal	GRTA DRI	WB	A (7.2)	B (10.9)
			#981)	Composite	А	С
				NB	D (51.7)	B (17.9)
	Jonesboro Rd/Private Dwy at	Traffic		SB	A (0.0)	B (12.9)
6	McDonough Blvd	Signal	n/a	EB	B (14.3)	A (9.9)
		Ũ		WB	D (44./)	B (10.9)
						B (197)
		Traffic Signal	n/a		C (34.0) R (15.3)	D(10.0)
7	Lakewood Ave at McDonough			FR	B (13.2)	A (6.6)
ľ	Blvd			WB	B (19.5)	A (6.2)
				Composite	C	В
				NB	B (10.2)	A (9.3)
	Harriat St/Milton Ava at	Traffic		SB	B (11.8)	B (16.6)
8	McDopough Blyd	Signal	n/a	EB	B (11.2)	B (15.7)
	Mebenoogn bive	Signal		WB	B (10.3)	B (10.9)
				Composite	В	B
				NB	D (34.2)	E (37.0)
0	Access Dwy A @ McDonough	Stop	n / a	28	E (43.1)	E (4/.0)
7	Blvd	Sign	n/a		A (1.4)	A (1.0)
				Composite	R*	A (1.0) B*
				NB	D (30.5)	D (32 0)
				SB	E (35.6)	B (25.8)
10	Access Dwy B @ McDonough	Stop	n/a	EB	A (0.0)	A (0.2)
	BIVQ	Sign		WB	A (0.2)	A (1.1)
				Composite	B*	B*
				NB	D (32.6)	D (33.1)
	Access Dwy C @ McDonough	Stop	_	SB	E (35.4)	D (29.6)
11	Blvd	Sign	n/a	EB	A (0.1)	A (0.2)
				WB	A (0.2)	A (1.1)
┣—					E (E (O)	
		Stor				
12	Rivd	Sign	n/a	ED W/R		Δ (1.3)
	biva	Jigit		Composite	R*	<u> </u>
 		ļ		NR	A (0 2)	A (0 7)
1.0		Stop		SB	A (0.0)	A (0.0)
13	Access Dwy E @ Sawtell Ave	Sign	n/a	EB	C (17.2)	C (21.3)
				Composite	A*	B*
				NB	A (0.2)	<u>A (0.</u> 7)
11	Access Diany F @ Soundall Aug	Stop	n/a	SB	A (0.0)	A (0.0)
¹⁴		Sign	170	EB	C (16.7)	C (20.1)
				Composite	A*	B*
				NB	A (0.2)	A (0.5)
15	Access Dwy G @ Sawtell Ave	Stop	n/a	SB	A (0.0)	A (0.0)
		Sign	., .	EB	C (16.0)	C (17.9)
				Composite	A*	A*

Table 5-3. Intersection LOS: Year 2013 Future Bu
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*ICU Level of Service



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Village at Chosewood Park GRTA DRI Report City of Atlanta, GA



Figure 5-4. Required Improvements: Year 2013 Future Build



Introduction

This section of the study presents a summary of the findings of the foregoing traffic impact analyses. The findings that are summarized include the various scenarios studied: Existing conditions), Future No-build conditions, and Future Build conditions. A summary is also provided of the <u>required</u> transportation improvements, for each traffic scenario studied. A summary of all <u>programmed</u> transportation improvements that affect the Site is also provided for informational purposes.

Programmed Improvements

The local Transportation Improvement Program, the State Transportation Improvement Program, the Regional Transportation Plan, and the Georgia Department of Transportation's Construction Work Program have been researched to determine if there are any proposed transportation improvements, either programmed or planned, that would impact the Site. For identified projects, the opening-to-traffic dates, sponsors, costs of projects, funding sources, and logical termini are usually also identified.

In conjunction with local governments, such as the City of Atlanta, ARC manages the program of regional transportation improvements in the Atlanta area. Transportation improvements in the vicinity of the site are shown in Figures 4-2 to 4-9.

Existing Conditions Needs

No additional improvements are required for existing conditions.

Future Conditions Needs

Year 2013 Future No-build

The installation of an eastbound right turn lane at the intersection of Jonesboro Road at Claire Drive/Sawtell Avenue would be expected to bring the intersection back into adequacy for Year 2013 Future No-build conditions. The estimated cost for this improvement is \$60,000. GDOT and City of Atlanta are the responsible agencies.

Year 2013 Future Build

No improvements beyond that required for Future No-Build are required in Future Build conditions.



Introduction

This section of the study presents an analysis of the opportunities for the residents of the subject site to find employment in the Area of Influence (AOI). This section will describe the study parameters and methodologies, the sources of data used for the analysis, information concerning the demographics and economic conditions in the site area and the Area of Influence, and the estimate of the number of workers residing in the DRI who will have an opportunity to find employment in the AOI. The following sections of the report will address Criterion 7c of Section 3-103 of GRTA's Development of Regional Impact requirements. Criterion 7c states:

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

The following sections will more fully describe:

- The demographics, housing characteristics, and employment opportunities within the project's AOI;
- > The wage levels of the jobs found in the project's AOI;
- > Types and costs of DRI housing choices;
- > Housing affordability within the DRI; and,
- > Findings related to meeting GRTA's Evaluation Criterion.

Study Parameters and Methodology

This analysis required the identification of an Area of Influence for the project. The project's AOI was determined using Caliper Corporation's *TransCAD* software to map six road miles from the site. *TransCAD* uses the TIGER road files developed by the U.S. Bureau of the Census. The intersection centrally located to the site was identified (McDonough Boulevard at Sawtell Avenue). *TransCAD* was used to measure six road miles from the intersection of McDonough Boulevard and Sawtell Avenue in all directions to obtain the AOI boundaries. A map of the AOI is provided in Figure 7-1.





Figure 7-1. Area of Influence Boundary



In order to identify the employment, population, housing, household and other data for the AOI, the boundaries were created in a GIS format and were placed over a GIS layer of the census tracts containing the applicable data from the 2000 U.S. Decennial Census. Census tracts located within or intersecting with the AOI were identified from the region's total census tracts. Where U.S. Census data were not available, the analysis incorporated data from other sources, including the Atlanta Regional Commission (ARC), U.S. Bureau of Labor Statistics, Ginnie Mae, and ESRI. The sources and methodologies for obtaining data for various elements of the AOI analysis have been referenced throughout this section.

Site Characteristics

Within the proposed project, there are planned to be a total of 600 new owner-occupied townhome/condo units and 700 new rental housing units. The number of site households was assumed to be 1,300 based on one household being established for each housing unit. The distribution of site households by the number of workers in each was calculated using 2000 U.S. Census data for the City of Atlanta. Table 7-1 illustrates the households and workers per household for the City of Atlanta and the site.

Workers Per Family Household	City of A	Atlanta	Site		
	Number of Family Households	% Households Calculated	Number of Units	Number of Workers	
No workers	12615	15%	195	0	
1 worker	32920	39%	507	507	
2 workers	31675	37%	481	962	
3 or more workers	7269	9%	117	351	
Total	84479	100%	1,300	1820	

Table 7-1. Site Households and Workers

Source: American Fact Finder, U.S. Census Bureau, Census 2000

Table 7-2 below shows the site housing types and price ranges.

Table 7-2. Site Housing Types and Price Ranges

Housing Type	Price Range	Units Available	
Townhomes/Condos	\$170-400K Annual	600	
Apartments	\$960-1320/month	/00	

Source: BHC Property Group



The number of site housing units that would be reasonably available to each of the household types was estimated. Table 7-3 applies the distribution percentages of the workers per household in the AOI to the number of housing units in each price range to demonstrate the distribution of workers per household in each. Households with three or more workers were included as two-workers households based on the assumption that a third worker would not likely contribute to housing costs.

Workers per	Number of	Types		
Household	Units	Townhomes	Apartments	
No workers	195	90	105	
1 worker	507	234	273	
2 or more workers	598	276	322	
Total	1300	600	700	

 Table 7-3. Distribution of Site Housing Types by Workers per Household

An industry standard used for identifying the minimum incomes to assess an individual's or family's ability to afford an owner-occupied unit is the Ginnie Mae Affordability Calculator. The Government National Mortgage Association (Ginnie Mae) uses this tool to help potential homebuyers determine their potential monthly housing costs depending on the cost of the home, its geographic location, and the market rates for mortgage loans.

The Ginnie Mae Affordability Calculator together with the recommended ratio of housing costs to total household income (1:3) were used to identify the household incomes necessary to purchase the residential units in the project. Table 7-4 illustrates the household income required to purchase and rent site housing based on these assumptions.

Residential Type	Price Range	Minimum Annual Household Income	Maximum Annual Household Income	
Townhomes/Condos	\$170-400K Annual	\$39,000	\$100,000	
Apartments	\$960-1320/month	\$34,560	\$47,520	

Table 7-4. Household Income Requirements to Afford Site Housing

Source: Government National Mortgage Association

To provide a conservative analysis of the split in income contributions to housing costs, an analysis was conducted to determine how a one- or two-worker household would split the housing costs and meet the income requirements under various conditions. The first condition demonstrates the housing affordability for a single-income household. The second condition is where two workers contribute equally to meeting the income requirements (a 50%/50% split). The third condition assumes that in a two-worker household, one worker in the household earns substantially more income than the second



worker (a 65%/35% split). The splits of income contributions to meet the income requirements under these situations are shown in Table 7-5. For households with three or more workers, it was assumed that a third worker would not likely contribute to housing costs.

Price Range	Income Split	Minimum Annual Income	Maximum Annual Income	
	100%	\$39,000	\$100,000	
\$170-400K	50%	\$19,500	\$50,000	
Annual	65%	\$12,675	\$32,500	
	35%	\$4,436	\$11,375	
	100%	\$34,560	\$47,520	
\$940 1320/month	50%	\$17,280	\$23,760	
\$700-1320/1101111	65%	\$11,232	\$15,444	
	35%	\$3,931	\$5,405	

Area of Influence Characteristics

Table 7-6 is a summary of the characteristics of the Area of Influence.

Characteristic	Year 2006	Year 2011	
Size (acres)	50,864		
Jurisdiction	City of Atlanta		
Population	308,492	339,599	
Number of Housing Units	136,924	153,986	
Rental / Owner	60% /	40%	

Table 7-6. Summary of AOI Characteristics

Source: ESRI

Employment information for the AOI was obtained for the purpose of estimating the availability of jobs and associated average annual pay in the AOI. A review of this data indicates there are approximately 263,362 persons currently employed in the AOI. Average annual pays in the City of Atlanta was obtained from the Bureau of Labor Statistics. Table 7-7 presents employment and annual pay data for the AOI.



Business Type	Number of Businesses	Number of Employees	City of Atlanta Average Annual Pay
Agriculture & Mining	134	463	\$29,000
Construction	655	4,837	\$32,000
Manufacturing	378	14,095	\$29,000
Transportation	375	35,579	\$36,000
Communication	133	10,890	\$59,000
Electric, Gas, Water, Sanitary Services	17	2,100	\$45,702
Wholesale Trade	667	6,281	\$72,000
Retail Trade Summary			
Home Improvement	79	799	\$34,126
General Merchandise Store	66	485	\$22,853
Food Stores	319	3,368	\$23,610
Auto Dealers, Gas Stations, Auto Aftermarket	213	1,750	\$54,324
Apparel & Accessory Stores	286	882	\$20,035
Furniture & Home Furnishings	213	1,307	\$24,659
Eating & Drinking Places	905	13,878	\$23,610
Miscellaneous Retail	590	5,145	\$27,813
Finance, Insurance, Real Estate Summary			
Banks, Savings & Lending Institutions	281	4,830	\$71,985
Securities Brokers	113	1,610	\$153,820
Insurance Carriers & Agents	131	1,721	\$80,583
Real Estate, Holding, Other Investment Offices	700	5,000	\$59,455
Services Summary			
Hotels & Lodging	86	7,735	\$26,727
Automotive Services	430	2,785	\$31,886
Motion Pictures & Amusements	318	5,170	\$51,118
Health Services	674	13,664	\$48,439
Legal Services	915	10,164	\$78,968
Education Institutions & Libraries	259	18,287	\$39,921
Other Services	3665	38,775	\$21,429
Government	965	51,486	\$43,587
Other	296	281	\$60,249
TOTAL	13,863	263,367	

Table 7-7. AOI Businesses, Employees, and Average Annual Pay

Source: ESRI and the Bureau of Labor Statistics

Evaluation

Based on the housing costs in the proposed DRI, the distribution of jobs and their associated incomes in the AOI, and the expected number of workers per household in the DRI, the number of individuals with opportunity to live in the DRI and work in the AOI has been estimated.



The income requirements, based on the percentage of contribution towards housing costs, were compared to the incomes associated with AOI jobs. The jobs were then assigned to the appropriate income ranges to estimate the number of employment positions in the AOI suitable to meet the costs of site housing. Table 7-8 demonstrates the conclusion that at least 62% of the residents in the DRI who are expected to work will have an opportunity to work in the AOI. Only 25% is required by the Criterion 7c. Thus, Village at Chosewood Park meets GRTA's evaluation Criterion 7c.

Table 7-8. Opportunity of Workers Residing in DRI To Find Employment in AOI

Lot Size	Number of Units	Price Range	Income Split	Minimum Annual Income	Maximum Annual Income	Number of Units in Income Range	Number of Workers from DRI in Income Range	Number of Jobs in AOI in Income Range	Lesser of # of Workers or # of Jobs
		\$170-400K Annual	100%	\$39,000	\$100,000	200	200	281	200
Townhomes/	400		50%	\$19,500	\$50,000	200	400	655	400
Condos	000		65%	\$12,675	\$32,500	200	400	430	0
			35%	\$4,436	\$11,375			0	0
		\$960-1320/month	100%	\$34,560	\$47,520	234	234	965	234
Apartmonts	700		50%	\$17,280	\$23,760	233	466	286	286
Apariments	700		65%	\$11,232	\$15,444	233	466	0	0
			35%	\$3,931	\$5,405			0	0
Total Workers from DRI Who Have an Opportunity To Be Employed in AOI								1120	
Total Workers in DRI Households								1820	
Percent of Workers from DRI Who Have an Opportunity To Be Employed in AOI								62%	



Introduction

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

ARC Specifications

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

Village at Chosewood Park is a mixed use site, consisting of four (4) distinctive different types of land uses: residential condos, townhomes, apartments, and neighborhood retail. The Residential components are the predominant use. The Benchmark criteria used in this assessment were No. 1B, No. 4, and No. 6E. These criteria are described as follows:

- 1. Projects that meet the relevant density target levels will receive the following VMT credits:
 - B. For projects where Residential is the dominant use:
 Between 10 and 15 dwelling units/acre (-4%)
 Greater than 15 dwelling units/acre (-6%)
- Proximity to Public Transportation
 For all project types:
 If the project is located within 1/4 mile of a bus stop (MARTA, CCT, Other) (-3%)
- 6. Projects that contain bicycle or pedestrian facilities within the site receive the following VMT credits*:

(Select one of A through E)

E. Bike/ped networks in developments that meet one Density or Mixed



Use 'target' and connect to adjoining uses (-5)

Evaluation

<u>Benchmark 1</u> requires that certain density thresholds be met to qualify for VMT credits. For sites that are predominantly residential in nature, one density threshold is met if the dwelling units per acre achieve between 10 and 15, and a second threshold is met if the dwelling units per acre exceed 15. Over 30 units per acre will be provided on-site. **Thus, Village at Chosewood Park qualifies for a (-10%) reduction.**

<u>Benchmark 4</u> requires that certain proximity to public transit thresholds be met for VMT credits. If the project is located within 1/4 mile of a bus stop, the threshold is met. MARTA bus stops are located within 1/4 of the site. **Therefore**, **Village at Chosewood Park qualifies for a** (-3%) reduction.

<u>Benchmark 6</u> requires that certain bicycle and/or pedestrian amenities be provided to not only achieve VMT credits here, but are a secondary requirement to receive VMT credits for Benchmark 2. If bicycle and/or pedestrian facilities connect all internal uses, and connect to adjoining uses (with facilities along the border of the property or off-site), and if at least one density threshold is met, then VMT credits are achieved. The subject site will have an extensive internal bicycle/moped system and pedestrian system on-site. **Therefore, Village at Chosewood Park qualifies for a (-5%) reduction.**

Conclusion

Based on the data and information presented in this study, it is concluded that the site layout for Village at Chosewood Park coincides with the air quality guidelines set out by the ARC. The residential linkages from the proposed residential areas to the proposed on-site retail are expected to substantially reduce the overall VMT for the site and accelerate air quality improvements. Furthermore, the non-vehicular connectivity proposed with the extensive on-site sidewalk and bike/moped parking system will serve as an incentive for alternate travel modes for local residents. VMT Credits for Village at Chosewood Park are at least 18% (a minimum of 15% is desired).



Introduction

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

Section 3-103(A) Review Criteria

- 1. Indicate whether or not the proposed DRI is likely to promote improved regional mobility in terms of the quality, character, convenience and flexibility of transportation options. The Site will promote improved regional mobility in terms of the quality, character, convenience, and flexibility of transportation options that exist at this time. The Site is located in an area where there are some practical transportation options other than the personal vehicle at this time. Multiple MARTA bus routes are available within the vicinity of the site. Further, the Site is proposed to have an extensive internal sidewalk system, with external connections provided by the developer to provide effective pedestrian mobility off of and onto the Site. The Site will also provide on-site bike and moped parking along Sawtell Avenue.
- 2. Indicate whether or not the proposed DRI is likely to promote improved regional mobility by reducing Vehicle Miles of Travel. The Site is likely to promote improved regional mobility by reducing Vehicle Miles of Travel (VMT) because 62% of the persons who are reasonably anticipated to live in the Site have an opportunity to find work within the Area of Influence, thus potentially reducing the VMT for work related trips. In addition, due to the mixed-use nature of the Site, there will be external trip reductions due to internal capture. MARTA bus stops and routes are located in the vicinity of the site. Village at Chosewood Park will feature a comprehensive pedestrian/bike/moped system on-site and will connect to the existing facilities external to the site.
- 3. Indicate whether or not the proposed DRI is likely to promote improved regional mobility because it is located in an urban core, town center, an activity center previously designated by an RDC, a rail/transit station development or is part of a publicly sponsored redevelopment or infill initiative. The Site is not located in an urban core, town center, or an activity center designated by ARC, nor is the site located near a transit station/hub nor is the site a publicly sponsored redevelopment.



- 4. Indicate whether or not the proposed DRI is located sufficiently close to existing or planned transit facilities to indicate a likelihood of significant use of transit by residents, employees and visitors of the proposed DRI. There are currently existing transit facilities and bus routes within 1/2 mile of the Site. A 5% ATM reduction for transit was taken per the LOU.
- 5. Indicate whether or not the proposed DRI is located within an established Transportation Management Area which creates a likelihood that the proposed DRI is reasonably anticipated to result in improved regional mobility as a result of the Transportation Management Area. The Site is not located within an established Transportation Management Area per se (at least not yet).
- 6. Indicate whether or not off-site trip generation from the proposed DRI is reduced by at least fifteen percent (15%), or, in the event that a proposed DRI is unable to satisfy the trip reduction standard established in this subsection because of other conditions which are beyond the control of the developer or the affected local government, the proposed DRI implements all available trip reduction techniques which are reasonably practical. Off-site trip production from the Site is not reduced by at least 15%, (see Table 3-1).
- 7. Indicate whether or not the proposed DRI:
 - (a) Contains a mix of uses which are reasonably anticipated to contribute to a balancing of land uses such that it would be affordable for at least ten percent (10%) of the persons who are reasonably anticipated to be employed in the proposed DRI are reasonably anticipated to have an opportunity reside within the DRI; or,
 - (b) Is located in an Area of Influence where the proposed DRI is reasonably anticipated to contribute to a balancing of land uses within the Area of Influence such that twenty-five percent (25%) of the persons who are reasonably anticipated to be employed in the proposed DRI have the opportunity to live within the Area of Influence; or,
 - (c) Is located in an Area of Influence with employment opportunities which are such that at least twenty-five percent (25%) of the persons who are reasonably anticipated to live in the proposed DRI and are reasonably expected to be employed will have an opportunity to find employment appropriate to such persons' qualifications and experience within the Area of Influence.

The Site is located within an Area of Influence with employment opportunities such that approximately 62% of the persons who are reasonably anticipated to live in the Site will have an opportunity to find work within the Area of Influence.



8. Indicate whether or not the proposed DRI is located in an area where the existing level of development and availability of infrastructure within the Area of Influence of the proposed DRI is such that the proposed DRI is reasonably anticipated to result in unplanned and poorly served development which would not otherwise occur until well-planned growth and development and adequate public facilities are available. The Site is NOT located in an area where the anticipated level of development and availability of infrastructure within the study network is such that the Site is reasonably anticipated to result in unplanned and poorly served development. As shown in the traffic impact analysis, the intersections serving the Site can be reasonably expected to operate at adequate Levels of Service, and/or may be mitigated and improved readily so that they will operate at adequate LOS.



Site Description

This study presents an analysis of the traffic impact expected to result from the redevelopment of a deteriorating site into a mixed-use site known as the Village at Chosewood Park. Figure 2-1 a shows the Area Map. Figure 2-1 b shows a more detailed Site Location Map. Figure 2-2 shows an aerial photograph of the Site.

Types and Amounts of Development

The Village at Chosewood Park site is located in the City of Atlanta, approximately 3 miles southeast from downtown Atlanta. The site is bounded by McDonough Boulevard (SR 42 Spur) on the north, Sawtell Avenue (SR 54 Connector) on the east, and Southern Railroad line on the southwest. The site is proposed to consist of approximately 1,300 residential units and 25,000 square feet of neighborhood style retail. Of the 1,300 residential units, 700 units will be apartments and 600 units will be townhomes/condos. The site is planned to have four (4) access points on McDonough Boulevard, and three (3) access points on Sawtell Avenue. One of the access points on Sawtell Avenue will strictly serve a parking garage.

The Site is expected to generate approximately 8,408 new vehicle trips per day, but after internal capture, transit mode reductions, and pass-by trips are considered, it will generate approximately 7,249 new external trips (to/from the site) per day. Approximately 558 new external trips (115 in and 443 out) will be generated during the AM peak hour and approximately 654 new external trips (422 in and 232 out) will be generated during the PM peak hour.

The agreed upon trip distributions developed for the Site are shown in Figure 3-1.

The existing zoning of the site is I-1, Light Industrial. The proposed new zoning MRC-3, mixed residential and commercial, with maximum floor area ratio of 7.2.

After consultation with GRTA and City of Atlanta, the following intersections were agreed upon for investigation as part of the Traffic Impact Analysis:

- McDonough Blvd at Sawtell Ave (signalized);
- McDonough Blvd at Boulevard SE (signalized);
- Sawtell Ave at Jonesboro Rd (signalized);
- Sawtell Ave at Lakewood Ave (signalized);
- McDonough Blvd at University Ave at Ridge Ave at Hank Aaron Dr (signalized);
- McDonough Blvd at Jonesboro Rd (signalized);
- McDonough Blvd at Lakewood Ave (signalized); and,
- McDonough Blvd at Milton Ave (signalized).



After consultation with GRTA and City of Atlanta, it was agreed that no roadway segments would be analyzed.

Intersection Capacity Analysis

The study intersections are expected to operate at a wide range of Levels of Service for Existing, Future No-build, and Future Build conditions. Table 10-1 summarizes the expected LOS for the study intersections. The required transportation improvements have been summarized previously, in Section 6.

Area of Influence Analysis

The Site is located within an Area of Influence with employment opportunities such that approximately 62% of the persons who are reasonably anticipated to live in the Site will have an opportunity to find work within the Area of Influence.

Air Quality Benchmark Statement

Based on the data and information presented in this study, it is concluded that the site layout for Village at Chosewood Park coincides with the air quality guidelines set out by the ARC. A comprehensive system of residential and retail linkages throughout the site are expected to substantially reduce the overall VMT for the site and accelerate air quality improvements. Furthermore, the non-vehicular connectivity proposed with the extensive on-site sidewalk/bike/moped system will serve as an incentive for alternative modes of travel for local residents. VMT Credits for Village at Chosewood Park are at least 18% (a minimum of 15% is desired).

Conclusion

In summary, traffic operations in the vicinity of the Site are expected to operate at adequate Levels of Service during all three study scenarios (Existing, Future No-Build, Future Build). Only one improvement has been identified, and identified as required in the Future No-Build scenario. The intersection of Jonesboro Road at Claire Drive/Sawtell Avenue during the Future No-Build Scenario (Year 2013) requires the installation of an eastbound right turn lane. This scenario does not assume the subject site is in place. With the subject site in place (Future Build conditions), no other improvements beyond that which is required in the Future No-Build scenario will be required to support the forecasted demand on the local transportation system.


	Internetien		Existing		Existing		Future No-Build		Future No-Build		Future Build		Future Build	
שו	Intersection	Movement	AM LOS	PM LOS	AM LOS	PM LOS	AM LOS	PM LOS	AM LOS	PM LOS	AM LOS	PM LOS	AM LOS	PM LOS
1	Sawtell Avenue at McDonough Blvd	Composite	В	С			В	С			С	D		
2	Boulevard/Federal Bureau of Prisons Dwy at McDonough Blvd	Composite	С	С			D	С			D	С		
3	Jonesboro Rd at Claire Dr/Sawtell Ave	Composite	С	D			С	С	С	С	С	D	С	D
4	Lakewood Ave at Claire Dr	Composite	С	В			С	D			D	С		
5a	Capitol Ave at Hank Aaron Dr at University Ave at McDonough Blvd at Ridge Ave	Composite	В	С			С	D			С	D		
5b	Capitol Ave at Hank Aaron Dr at University Ave at McDonough Blvd	Composite	А	В			А	В			A	С		
6	Jonesboro Rd/Private Dwy at McDonough Blvd	Composite	С	В			С	В			D	В		
7	Lakewood Ave at McDonough Blvd	Composite	С	В			С	В			С	В		
8	Harriet St/Milton Ave at McDonough Blvd	Composite	А	А			А	В			В	В		
9	Access Dwy A @ McDonough Blvd	Composite									B*	B*		
10	Access Dwy B @ McDonough Blvd	Composite									В*	B*		
11	Access Dwy C @ McDonough Blvd	Composite									В*	C*		
12	Access Dwy D @ McDonough Blvd	Composite									B*	C*		
13	Access Dwy E @ Sawtell Ave	Composite									A*	B*		
14	Access Dwy F @ Sawtell Ave	Composite									A*	B*		
15	Access Dwy G @ Sawtell Ave	Composite									A*	A*		

Table 10-1. Intersection LOS: Summary

*ICU Level of Service



TRIP GENERATION WORK SHEETS

and

INTERNAL CAPTURE WORK SHEETS

and

INTERSECTION CAPACITY ANALYSIS WORK SHEETS

and

TURNING MOVEMENT COUNTS

