Transportation Analysis

Atlanta Braves Stadium and Mixed-Use Development

DRI #2381 Cobb County, Georgia

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TABLE OF CONTENTS

	Project Description	1
.1 .2 .3 .4 .5	Introduction Site Plan Review Site Access Bicycle and Pedestrian Facilities Transit Facilities	1 1 2 2 2
	Traffic Analyses Methodology and Assumptions	3
.1 .2 .3	Growth Rate Traffic Data Collection Detailed Intersection Analysis	3 3 4
	Study Network	5
.1 .2 .3 .4 .5	Gross Trip Generation Trip Distribution Level-of-Service Standards Study Network Determination Existing Facilities	5 6 6 8
	Trip Generation	9
	Trip Distribution and Assignment	10
	Traffic Analysis	11
.1 .2 .3	2012 Existing Conditions Projected 2017 No-Build Conditions Projected 2017 Build Conditions	11 13 17
	Ingress/Egress Analysis	23
	Identification of Programmed Projects	23
	Internal Circulation Analysis	25
	Compliance with Comprehensive Plan Analysis	25
	Non-Expedited Criteria	26
1.1 1.2 1.2.2 1.2.3 1.2.4 1.2.4 1.3	Vehicle Miles of Travel Transportation and Traffic Analysis Planned and Programmed Improvements Preserving Regional Mobility Safe and Efficient Operations Minimize Congestion Relationship of Existing Development and Infrastructure	26 26 26 27 27 27
	.1 .2 .3 .4 .5 .1 .2 .3 .1 .2 .3 .4 .5 .1 .2 .3 .4 .5 .1 .2 .3 .4 .5 .1 .2 .3 .4 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .1 .2 .3 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5	Project Description 1 1 1 1 1 1 1 1 1 2 2 3 3 4 Bicycle and Pedestrian Facilities 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 1 7 1 7 1 7 1 7 1 1 1 1 1 1 1 2 1 2 1 2 2

LIST OF TABLES

On Page

Table 1:	Proposed Land Uses	. 1
Table 2:	Peak Hour Summary	. 3
Table 3:	Gross New Trip Generation	. 6
Table 4:	Intersection Control Summary	. 7
Table 5:	Roadway Classification	. 9
Table 6:	Net New Trip Generation	10
Table 7:	2014 Existing Intersection Levels-of-Service	12
Table 8:	2019 No-Build Intersection Levels-of-Service	15
Table 9:	2019 No-Build Intersection Levels-of-Service IMPROVED	17
Table 10:	2019 Build Intersection Levels-of-Service	19
Table 11:	2019 Build Intersection Levels-of-Service IMPROVED	22
Table 12:	Programmed Improvement Projects	24
Table 13:	Vehicle Mile Reductions	26

LIST OF FIGURES

Figure 1:	Site Location
Figure 2A:	Aerial Project Site
Figure 2B:	Aerial Study Network
Figure 3:	DRI Site Plan
Figure 4:	Weekday Study Network with Figure Sections
Figure 5:	Saturday Study Network with Figure Sections
Figure 6:	Driveway Study Network with Figure Sections
Figure 7:	Stadium Parking Approximate Locations
Figure 8A-8G:	Weekday Trip Distribution & Assignment for Residential Trips
Figure 9A-9G:	Weekday Trip Distribution & Assignment for Hotel Trips
Figure 10A-10G:	Weekday Trip Distribution & Assignment for Office (Group 1) Trips
Figure 11A-11G:	Weekday Trip Distribution & Assignment for Office (Group 2) Trips
Figure 12A-12G:	Weekday Trip Distribution & Assignment for Retail Trips
Figure 13A-13G:	Weekday Trip Distribution & Assignment for Stadium Trips

Figure 14A-14G:	Weekday Project Trips
Figure 15A-15E:	Saturday Project Trips
Figure 16A-16D:	Existing 2014 Intersection Laneage
Figure 17A-17D:	Existing 2014 Weekday Volumes
Figure 18A-18B:	Existing 2014 Saturday Volumes
Figure 19A-19D:	Projected 2019 No-Build Weekday Volumes
Figure 20A-20B:	Projected 2019 No-Build Saturday Volumes
Figure 21A-21H:	Projected 2019 Build Intersection Laneage
Figure 22:	Projected 2019 No-Build DDI Weekday Volumes
Figure 23:	Projected 2019 No-Build DDI Saturday Volumes
Figure 24A-24G:	Projected 2019 Build Weekday Volumes
Figure 25A-25E:	Projected 2019 Build Saturday Volumes
Figure 26:	Projected 2019 Build DDI Weekday Volumes
Figure 27:	Projected 2019 Build DDI Saturday Volumes

APPENDIX

- Appendix A Land Use and Zoning Maps
- Appendix B Programmed Transportation Improvements Project Fact Sheets
- Appendix C Trip Generation Analyses
- Appendix D Intersection Volume Worksheets
- Appendix E Raw Traffic Counts
- Appendix F Capacity Analyses

EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts associated with the proposed Atlanta Braves stadium and associated mixed-use development located in unincorporated Cobb County, Georgia. As shown on the DRI site plan, this study is associated with multiple tracts of land with the primary site for the development anchoring the land acquisition. The primary site is approximately 57-acres and is generally bordered by Cobb Parkway (US 41) to the west, Windy Ridge Parkway to the north and Circle 75 Parkway to the east and south. Interstate access is from I-285 from the south and I-75 from the east. As shown on the DRI site plan, this study also includes two parcels located to the north of the primary site on the east side of Circle 75 Parkway and one parcel directly south of Circle 75 Parkway. The mixed-use project exceeds the 600,000 square foot threshold established by ARC for a Regional Center zone. Therefore, the proposed development is considered a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review. This document is being submitted under non-expedited review.

The development is scheduled to be completed by 2019, and this analysis will consider the full build-out of the proposed site in 2019. The proposed development will require a rezoning by Cobb County and is proposed to be changed to a Regional Retail Commercial (RRC) zoning classification. The property is currently zoned as Office and Institutional (O&I), Office High-Rise (OHR), and General Commercial (GC) classifications according to Cobb County's zoning. The applicant intends to develop a 44,676 person capacity baseball stadium including 41,676 seats and standing room only capacity for 3,000 persons, 600 residential dwelling units, 450 hotel rooms, 630,000 square feet of office, 500,000 square feet of retail space and a 100,000 square foot multi-use facility. According to ARC's PLAN 2040 Unified Growth Policy Map, the project site is proposed to be developed in a Regional Center zone. According to the Cobb County Future Land Use Map, the project site is proposed to be developed in a Regional Activity Center.

As stated, the proposed site will consist of the following land uses and densities:

Stadium:	44,676 person capacity (including standing room capacity)
Residential:	600 dwelling units
Hotel:	450 rooms
Office:	630,000 square-feet
Retail:	500,000 square-feet
Multi-use facility:	100,000 square-feet

The DRI analysis includes an estimation of the overall vehicle trips projected to be generated by the development, also known as gross trips. Reductions to gross trips are also considered including mixed use reductions, alternative transportation mode reductions, and pass-by trip reductions. The AM and Saturday midday peak hour analysis includes projected trips associated with the residential, office, hotel, and retail land-uses. The PM peak hour analysis includes trips associated with the previously mentioned land-uses as well as the stadium traffic that occurs during that time. Due to the fact that the majority of Braves games are in the evening, the stadium is not expected to generate traffic during the AM and Saturday midday peak hour. The following three modes of reductions have been recognized in the study.

Mixed use reductions occur when a site has a combination of different uses that interact with one another. For example, people living in a residential development may walk to restaurants or retail instead of driving off-site or to the site. This reduces the number of vehicle trips that will be made on the roadway, thus reducing traffic congestion. These types of interactions are expected at the Braves development site – including residents, workers, and hotel guests walking to the game or retail uses or Braves fans having dinner on-site before the game. Not only will these interactions reduce the overall number of vehicular trips coming to the site, but the presence of retail and restaurant establishments on-site will encourage game patrons to arrive early to the game for dinner or stay late after the game, reducing the impact of peak event flows.

Alternative mode reductions are taken when a site can be accessed by modes other than vehicles (walking, bicycling, transit, etc.). A 3% alternative mode reduction was taken given that there are residences and offices within walking/biking distance of the development and because the site is accessed by Cobb Community Transit. This is a conservative reduction in light of the future implementation of the Connect Cobb project which will include Bus Rapid Transit (BRT) access directly to the site via Cumberland Boulevard. When this project is implemented, it is anticipated that many more people will access the site on BRT, particularly those coming from the City of Atlanta and other MARTA-accessible destinations.

Pass-by reductions, the final of the three reductions, are typically taken for retail trips only. Traffic normally traveling along a roadway may choose to visit a retail establishment that is along the path. Trips going to that development were already on the road and would therefore only be new to the driveway. It is anticipated that many pass-by trips may occur along roadways such as Cobb Parkway and Windy Ridge Parkway, however, in order to be conservative, no pass-by reductions were taken for this analysis.

The design of the stadium and mixed use project provides many opportunities for interaction between uses and reduction of trips. Additionally, future transit plans that would connect to the site will provide increased propensity for non-vehicular access to the site.

The approved DRI study network includes thirty –seven (37) intersections and thirty (30) site driveways. The AM and PM peak hour capacity analyses were performed for the 2014 Existing conditions, projected 2019 No-Build conditions, and projected 2019 Build conditions at the thirty-seven (37) intersections within the study network, as well as the thirty (30) site driveway intersections. Saturday peak hour capacity analyses were performed for the 2014 Existing conditions, projected 2019 No-Build conditions, and projected 2019 No-Build conditions, and projected 2019 Build conditions at the fifteen (15) intersections within the Saturday study network, as well as the thirty (30) site driveway intersections. In summary, the study considered the following:

- 2014 Existing conditions represent traffic volumes that were collected in March 2014 by performing AM, PM and Saturday midday peak hour turning movement counts.
- Projected 2019 No-Build conditions represent the existing traffic volumes grown for five (5) years at 1.0% per year throughout the study network.
- Projected 2019 Build conditions represent the 2019 No-Build conditions with the addition of project trips that are anticipated to be generated by the proposed development.

The results of the detailed intersection analyses for the various conditions identified improvements that will be necessary in order to obtain the Level-of-Service standard within the study network. Per GRTA's Letter of Understanding guidelines, improvements were made to the intersections until the LOS was elevated to the appropriate range. The following improvements are recommended:

2019 No-Build recommended improvements (future conditions; i.e. <u>includes</u> background traffic growth and <u>excludes</u> the Atlanta Braves Stadium DRI project traffic):

Cobb County currently has a number of transportation projects funded and under design within the study area. Because these projects have not yet broken ground, they could not be included in the No-Build analysis; however, they were included in the No-Build Improved analysis. These Cobb County-led projects improve the operations of intersections along Windy Hill Road not only in the No-Build scenarios but also in the Build scenarios after the addition of the Braves development traffic. The projects include:

- Intersection 9: Cobb Parkway and Windy Hill Road
 - Per Cobb County Project E3030, construct dual left-turn lanes for all four approaches. Construct an eastbound right-turn lane and restripe the existing shared through/right-turn lane as an

exclusive eastbound through lane. Construct an additional northbound through lane and channelize the existing northbound right-turn lane.

- Intersection 11: Windy Hill Road and I-75 SB Off-Ramps/Circle 75 Parkway
 - Per Cobb County Project E4100, construct a Diverging Diamond Interchange. This improvement affects Intersections 11, 12, 13, and 14.
- Intersection 15: Windy Hill Road and Powers Ferry Road
 - Per Cobb County Project D4230, construct an additional westbound through lane.

Additional No-Build improvements, beyond existing Cobb County projects, include the following:

- Intersection 19: Cumberland Boulevard and Spring Road
 - Install a southbound right-turn overlap.
- Intersection 20: Cumberland Boulevard and Cumberland Parkway
 - Restripe the existing eastbound shared left-turn/through lane as an exclusive through lane. Remove the split-phasing traffic signal timing for the eastbound and westbound approaches by changing the westbound left-turn phasing to permissive-only and the eastbound left-turn phasing to protected-permissive. Preliminary investigation of the sight-distance at this intersection indicates that the split phasing can be removed. Coordination with the Cumberland CID proposed plans and the Connect Cobb project is recommended.
- Intersection 37: Powers Ferry Road and Akers Mill Road
 - Restripe the southbound approach as an exclusive left-turn lane and a shared through/right-turn lane. Remove the split phasing traffic signal timing for the northbound and southbound approaches and change the southbound left-turn phasing to protected-permissive. Preliminary investigation of the sight-distance at this intersection indicates that the split phasing can be removed.

For the projected 2019 Build conditions which <u>includes</u> background traffic growth and <u>includes</u> the Atlanta Braves Stadium DRI project traffic, after implementation of the improvements recommended in the 2019 No-Build conditions analysis, the following improvements are recommended for the 2019 Build conditions:

- Intersection 5: Cobb Parkway and I-285 Eastbound Ramps
 - Restripe the existing shoulder as a third eastbound right-turn lane.
- Intersection 6: Cobb Parkway and I-285 Westbound Ramps
 - Construct an additional westbound right-turn lane and an additional northbound receiving lane to allow free-flow right-turns from this lane into the site.
- Intersection 7: Cobb Parkway and Circle 75 Parkway
 - Restripe the existing eastbound shared left-turn/through lane to an exclusive through lane. Install an additional northbound left-turn lane. Construct an additional eastbound receiving lane and allow northbound free-flow right-turns. Extend the northbound right-turn lane to serve as the proposed additional northbound receiving lane at Cobb Parkway & I-285 EB Ramps (Intersection. 6). Construct the westbound approach as three left-turn lanes and a shared through/right-turn lane. Remove the eastbound and westbound split phasing traffic signal timing. Preliminary investigation of the sight-distance at this intersection indicates that the split phasing can be removed.

- Intersection 8: Cobb Parkway and Windy Ridge Parkway
 - Install an eastbound right-turn overlap. Restripe the inside southbound through lane to an exclusive left-turn lane with storage, creating dual left-turn lanes.
- Intersection 17: Interstate N Parkway and Windy Ridge Parkway
 - Change the southbound left-turn traffic signal phasing to permissive-only.
- Intersection 32: Northside Drive and New Northside Drive/Interstate North Parkway
 - Restripe Northside Drive to allow a free-flow eastbound right-turn lane. Install southbound and westbound right-turn overlaps.

In addition to the infrastructure improvements listed above, it is possible to reduce traffic congestion by reducing demand trying to access the site. The Braves are proactively considering Transportation Demand Management (TDM) measures that can reduce the number of vehicles accessing the site during the peak periods on game days. For example, incentives may encourage game attendees to take transit, arrive early for a meal/game ticket combo or to carpool.

The Braves organization is planning a robust wayfinding and guidance system to assist patrons with planning their trip, accessing the site, finding parking and exiting the site. One possible measure being considered is a smartphone application that allows drivers to prepay for parking and download directions directly to their parking facility allowing traffic patterns to be better controlled and provide more efficient access to parking destinations on and around the site.

These additional measures being considered by the Braves are over and above the infrastructure improvements discussed in the DRI analysis. Over the next three years, the measures will be vetted more fully to create a robust transportation plan for the new stadium and mixed use development. The proposed site plan and program when compared with the 1984 Approved Zoning for the Circle 75 Office Park and Mixed-Use Development is less density and has an increase in mixed-use components that supports a reduction in trip generation and additional opportunities to integrate multiple modes of transportation.

The study concludes that the implementation of the improvements described above will provide the transportation infrastructure network necessary for the Braves stadium and mixed use project to operate at the acceptable Level of Service (LOS) specified by ARC and GRTA.

1.0 PROJECT DESCRIPTION

1.1 Introduction

This report presents the analysis of the anticipated traffic impacts associated with the proposed Atlanta Braves stadium and mixed-use development site located in Cobb County, Georgia. This report is being prepared in conjunction with a submittal requesting a rezoning with Cobb County to Regional Retail Commercial (RRC). The mixed-use project exceeds the 600,000 square foot threshold established by ARC for a Regional Center zone. Therefore, the proposed development is considered a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review. This document is being submitted under non-expedited review. The scope of this Transportation Analysis is consistent with the meetings held at GRTA's office on March 14, 2014 and March 25, 2014 and GRTA's Letter of Understanding dated March 28, 2014.

The proposed development will consist of a 44,676 capacity baseball stadium, 600 apartment units, 450 hotel rooms, 630,000 square feet of general office space, 500,000 square feet of retail space, and a 100,000 square foot multi-use space. The multi-use space is considered for evening and pre-game functions. Full build-out of the project is expected by 2019. A summary of the proposed land uses and densities is provided below in **Table 1**.

Table 1 Atlanta Braves Stadium DRI Proposed Land Uses					
Stadium	44,676 seat (including standing room capacity)				
Residential	600 dwelling units				
Hotel	450 rooms				
Office	630,000 square feet				
Retail	500,000 square feet				
Multi-Use Facility	100,000 square feet				

Figure 1 provides a location map. Figures 2A and 2B provide aerial photographs of the site.

1.2 Site Plan Review

The proposed development is a mixed-use development comprised of residential, hotel, office, and retail land uses along with a major league baseball stadium, on the primary 57-acre site describe above located in Cobb County, Georgia. According to ARC's PLAN 2040 Unified Growth Policy Map, the project site is proposed to be developed in a Regional Center zone. According to the Cobb County Future Land Use Map, the project site is proposed to be developed in a Regional Activity Center. The proposed development will require a rezoning with Cobb County and is proposed to be changed to Regional Retail Commercial (RRC).

Figure 3 is a small-scale copy of the DRI site plan. A full-size site plan consistent with the GRTA Site Plan Guidelines is also being submitted as part of the DRI Review Package. ARC's PLAN 2040 Unified Growth Policy Map and Cobb County's Future Land Use Map are provided in **Appendix A**.

1.3 Site Access

Vehicular access to the Atlanta Braves Stadium development site will be served by up to thirty (30) driveways. The driveway on Cobb Parkway (Driveway 1) is a right-in/right-out driveway. Circle 75 Parkway will be realigned as shown in the site plan. Driveways 2, 3, 8, 9, 10, 11, 12, 13, 22, 23, 24, 25, 26, 27, 28, 29, and 30 are located along Circle 75 Parkway. Driveways 4, 5, 6, and 7 are located along Circle 75 South and Driveway 19 and 20 are located along Circle 75 North. Driveways 14, 15, 16, 17, and 18 are located along Windy Ridge Parkway. In addition to Driveway 1, Driveways 14 and 17 are proposed to be right-in/right-out access. All other driveways are proposed to be full-movement. The site plan is still in the refinement stage so the number and location of driveways may change.

The site driveways mentioned above provide access to the entire development. Internal roadways throughout the site provide access to all land uses. The site plan depicts a visual representation of the driveway locations described above as well as access throughout the proposed development.

The site driveways mentioned above, in conjunction with internal roadways, provide access to all parking on the site. Parking for the mixed-use developments will be provided on-site. Stadium parking will be located both on-site and off-site. The off-site parking will utilize available existing parking decks when practical and new parking decks if warranted. Approximately 45% of the stadium parking is expected to be located on the main parcel and 15% of the parking is expected to be located on a parcel to the north of site on Circle 75 Parkway. Approximately 35% of stadium parking will be located south of the primary 57-acre site and the remaining 5% of the stadium parking is expected to be located east of I-75.

The overall parking plan is still being refined so the number and location of parking facilities may vary.

1.4 Bicycle and Pedestrian Facilities

Pedestrian facilities (sidewalks) currently exist along both sides of Circle 75 Parkway and along both sides of Windy Ridge Parkway in the vicinity of the site. The sidewalks which exist along the property frontage provide direct access to the proposed development by connecting to on-site sidewalks. Sidewalks widths and cross walks will be designed in detail at a later date to support the projected pedestrian population and circulation for gameday. Separate bicycle facilities do not currently exist along Circle 75 Parkway or Windy Ridge Parkway in the vicinity of the site. Further, the design of the project will be pedestrian-oriented and include safe and aesthetically pleasing connections between different uses, greenspace, and multi-use facilities.

1.5 Transit Facilities

Currently, the site is located near the existing MARTA Bus Route 12, which serves Cumberland Boulevard from Cumberland Mall to the Midtown MARTA Station. The Cumberland Transfer Center, located adjacent to the intersection of Cumberland Boulevard and Cumberland Parkway, serves MARTA Route 12 and Cobb County Transit Routes 10, 10A, 10B, 20, and 50. In addition Cobb County Transit (CCT) has the following routes that support the site:

- Route 10: Service between the Marietta Transfer Center and the MARTA Arts Center Station via the Cumberland Transfer Center and Cobb Parkway (U.S. 41)
- Route 10A: Service between downtown Atlanta and Delk Road via the Cumberland Transfer Center, Cobb Parkway (U.S. 41), and Terrell Mill Road
- Route 10B: Service between downtown Atlanta and Windy Hill Road via the Cumberland Transfer Center and Interstate North Parkway
- Route 20: Service between the Marietta Transfer Center and the Cumberland Transfer Center via South Cobb Drive and Spring Road
- Route 50: Service between the Marietta Transfer Center and the Cumberland Transfer Center via Cobb Parkway (U.S. 41) and Powers Ferry Road

2.0 TRAFFIC ANALYSES METHODOLOGY AND ASSUMPTIONS

2.1 Growth Rate

Background traffic is defined as expected traffic on the roadway network in future year(s) absent the construction and opening of the proposed project. Historical traffic count data from GDOT was reviewed for the area surrounding the proposed development and growth rates were discussed during the Methodology meeting with GRTA, ARC, and GDOT staff. The background growth rate used for this analysis was 1.0% per year for five (5) years on all adjacent roadways.

2.2 Traffic Data Collection

Weekday peak hour turning movement counts were collected at the thirty-seven (37) intersections within the study network during the AM and PM peak periods in March 2014. Saturday midday peak hour turning movement counts were collected at the fifteen (15) intersections within the study network in March 2014. The morning and afternoon, and Saturday midday peak hours varied between the intersections and are shown in **Table 2**.

Table 2 Atlanta Braves Stadium DRI Peak Hour Summary					
Intersection	<u>AM Peak</u> <u>Hour</u>	PM Peak Hour	<u>SAT MD</u> <u>Peak Hour</u>		
1. Cobb Parkway & Cumberland Boulevard	8:00 - 9:00	5:00 - 6:00	12:30 - 1:30		
2. Cobb Parkway & Akers Mill Road	8:00 - 9:00	5:00 - 6:00	12:15 – 1:15		
3. Cobb Parkway & Galleria Parkway	8:00 - 9:00	4:45 - 5:45	n/a		
4. Cobb Parkway & Professional Parkway	7:30 - 8:30	4:45 - 5:45	n/a		
5. Cobb Parkway & I-285 EB Ramps	7:30 - 8:30	5:30 - 6:30	1:00 - 2:00		
6. Cobb Parkway & I-285 WB Ramps	7:30 - 8:30	5:00 - 6:00	1:00 - 2:00		
7. Cobb Parkway & Circle 75 Parkway/Spring Road	7:45 - 8:45	5:15 - 6:15	1:30 - 2:30		
8. Cobb Parkway & Windy Ridge Parkway/Cumberland Boulevard	7:45 - 8:45	5:15 - 6:15	1:30 - 2:30		
9. Cobb Parkway & Windy Hill Road	7:30 - 8:30	5:00 - 6:00	n/a		
10. Cobb Parkway & Terrell Mill Road	7:45 - 8:45	5:00 - 6:00	n/a		
11. Windy Hill Road & I-75 SB Off-Ramps/Circle 75 Parkway	7:45 - 8:45	5:00 - 6:00	12:45 – 1:45		
12. Windy Hill Road & I-75 SB On-Ramps	7:30 - 8:30	5:00 - 6:00	12:45 – 1:45		
13. Windy Hill Road & I-75 NB Ramps	7:30 - 8:30	5:00 - 6:00	12:30 - 1:30		
14. Windy Hill Road & W Interstate Hwy North Parkway/Leland Drive	7:45 - 8:45	5:00 - 6:00	n/a		
15. Windy Hill Road & Powers Ferry Rd	7:45 - 8:45	4:45 - 5:45	n/a		
Table 2 Continued on Next Page					

Table 2 Atlanta Braves Stadium DRI Peak Hour Summary					
Intersection	AM Peak Hour	PM Peak Hour	<u>SAT MD</u> Peak Hour		
16. Windy Ridge Parkway & Circle 75 Parkway	7:45 - 8:45	5:00 - 6:00	12:45 - 1:45		
17. Windy Ridge Parkway & Interstate N Parkway	7:45 - 8:45	5:00 - 6:00	1:15 – 2:15		
18. Windy Ridge Parkway & Powers Ferry Road	7:30 - 8:30	5:00 - 6:00	n/a		
19. Cumberland Boulevard & Spring Road	7:30 - 8:30	5:00 - 6:00	1:30 - 2:30		
20. Cumberland Boulevard & Cumberland Parkway	7:45 - 8:45	5:15 - 6:15	1:15 – 2:15		
21. Cumberland Boulevard & Cobb Galleria Parkway	8:00 - 9:00	5:15 - 6:15	n/a		
22. Cumberland Boulevard & I-75 SB Ramps	8:00 - 9:00	5:00 - 6:00	1:30 - 2:30		
23. Cumberland Boulevard & I-75 NB Ramps	8:00 - 9:00	5:00 - 6:00	1:30 - 2:30		
24. Cumberland Boulevard & Akers Mill Road	7:45 - 8:45	5:00 - 6:00	n/a		
25. Cumberland Boulevard & Interstate N Parkway	7:45 - 8:45	5:00 - 6:00	n/a		
26. Akers Mill Road & Galleria Drive	7:45 - 8:45	5:00 - 6:00	n/a		
27. Akers Mill Road & Cobb Galleria Parkway	8:00 - 9:00	5:00 - 6:00	n/a		
28. Akers Mill Road & I-75 Ramps	8:15 - 9:15	4:45 - 5:45	n/a		
29. Powers Ferry Road & Interstate N Parkway	7:30 - 8:30	4:45 - 5:45	n/a		
30. I-285 WB Ramp & New Northside Drive	7:45 - 8:45	5:15 - 6:15	n/a		
31. I-285 WB Ramp & Northside Drive	8:00 - 9:00	5:00 - 6:00	n/a		
32. New Northside Drive & Northside Drive	8:15 - 9:15	5:00 - 6:00	n/a		
33. I-285 EB Ramp & Northside Drive	8:15 - 9:15	5:00 - 6:00	n/a		
34. I-285 EB Ramp & New Northside Drive	7:45 - 8:45	4:45 - 5:45	n/a		
35. Powers Ferry Road & Northside Drive	8:00 - 9:00	5:15 - 6:15	n/a		
36. New Northside Drive & Powers Ferry Road	7:45 - 8:45	5:15 - 6:15	n/a		
37. Powers Ferry Road & Akers Mill Road	8:15 - 9:15	5:15 - 6:15	n/a		

2.3 Detailed Intersection Analysis

Level-of-Service (LOS) is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions within a traffic stream. The *Highway Capacity Manual* defines six Levels-of-Service, LOS A through LOS F, with A being the best and F being the worst. Level-of-Service analyses were conducted at all intersections within the study network using *Synchro Professional, Version 8.0*.

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

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

3.0 Study Network

3.1 Gross Trip Generation

Traffic for the proposed land use and density was calculated using equations contained in the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Ninth Edition, 2012.* Average rates were used only when equations were not provided. The *Trip Generation Manual* does not provide data regarding stadium land-uses. Consistent with the Methodology meeting, the stadium trip generation was derived from an assumed vehicle occupancy of 2.8 patrons per vehicle, consistent with the Federal Highway Administration's range of vehicle occupancies observed at Major League Baseball stadiums, and 2,200 stadium employees (with a vehicle occupancy of 1 person per vehicle).

Weekday evening Braves games typically begin after 7:00 PM and the PM peak hour of adjacent street traffic is generally considered to be between 5:00 and 6:00 PM. It was assumed that 25% of the entering stadium trips and 13% of stadium employees would arrive during the PM peak hour. The percentage of trips arriving during the PM peak hour was derived from current Turner Field operations data. The percentage of patrons entering the turnstiles during the PM peak hour was determined. This percentage was increased for the study to capture the patrons that are expected to arrive during the peak hour but not enter the stadium until closer to game time. The stadium is not expected to generate any trips during the AM or Saturday midday peak hour. Saturday games are typically in the evening with negligible impact during the Saturday midday peak hour.

Similar to the stadium land use, the *Trip Generation Manual* does not have a land use specific to the multi-use land use. The gross daily and PM peak hour trip generation was determined using the same methodology as the stadium trip generation. The multi-use facility was assumed to have a capacity of 5,000 with an average vehicle occupancy of 2.8 patrons per vehicle and 25% arriving during the PM peak hour. The primary purpose of the multi-use facility is for functions on non-game days. However, these functions will likely be oriented to evenings and are not expected to significantly impact traffic during the other study periods (morning peak hour and Saturday midday). On game days, the facility will accommodate pre-game functions for fans attending the game. Because it is not anticipated to generate additional traffic during stadium events, a 100% trip reduction is applied. Gross trips generated are displayed in **Table 3**.

Table 3 Atlanta Braves Stadium DRI Gross New Trip Generation									
Land Use	ITE Code	Daily Traffic		AM Peak Hour		PM Peak Hour		SAT MD Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
600 Residential Dwelling Units	220	1,880	1,880	60	238	226	122	156	156
450 Hotel Rooms	310	1,827	1,827	141	98	138	132	176	139
330,000 SF General Office	710	1,627	1,626	437	60	76	372	77	65
300,000 SF General Office	710	1,513	1,513	406	55	70	344	70	59
500,000 SF Shopping Center	820	9,666	9,666	258	158	845	916	1,294	1,195
44,676 Seat Stadium	n/a	18,155	18,156	0	0	4,275	64	0	0
100,000 SF Multi-Use	n/a	1,786	1,786	0	0	447	7	0	0
Total Gross Trips	36,454	36,454	1,302	609	6,077	1,957	1,703	1,555	

3.2 Trip Distribution

The directional distribution and assignment of new project trips was based on the project land use, a review of the land use densities and road facilities in the area, and methodology discussions with project stakeholders. More information on Trip Distribution is provided in section 5.0 Trip Distribution and Assignment.

3.3 Level-of-Service Standards

For the purposes of this traffic analysis, a Level-of-Service standard of D was assumed for all intersections and segments within the study network. If, however, an intersection or segment currently operates at LOS E or LOS F during an existing peak period, the LOS standard for that peak period for projected 2019 analyses becomes LOS E, consistent with the GRTA Letter of Understanding.

3.4 Study Network Determination

A general study area was determined using the GRTA 7% rule. This rule recommends that all intersections and segments be analyzed which are impacted to the extent that the traffic from the proposed site is 7% or more of the service volume of the facility (at a previously established LOS standard, typically LOS D) be considered for analysis. The study area was agreed upon during methodology discussions with stakeholders, and includes the thirty-seven (37) intersections listed in **Table 4**, as well as the thirty (30) proposed site driveways accessing the Atlanta Braves Stadium development. A smaller study network of fifteen (15) intersections and the thirty (30) site driveways was used for the Saturday midday analysis. **Figures 4**, **5**, and **6** illustrate the weekday study network, Saturday midday study network, and the site driveways, respectively.

Table 4 Atlanta Braves Stadium DRI Intersection Control Summary					
Intersection	<u>Control</u>				
1. Cobb Parkway & Cumberland Boulevard	Signalized				
2. Cobb Parkway & Akers Mill Road	Signalized				
3. Cobb Parkway & Galleria Parkway	Signalized				
4. Cobb Parkway & Professional Parkway	Signalized				
5. Cobb Parkway & I-285 EB Ramps	Signalized				
6. Cobb Parkway & I-285 WB Ramps	Signalized				
7. Cobb Parkway & Circle 75 Parkway/Spring Road	Signalized				
8. Cobb Parkway & Windy Ridge Parkway/Cumberland Boulevard	Signalized				
9. Cobb Parkway & Windy Hill Road	Signalized				
10. Cobb Parkway & Terrell Mill Road	Signalized				
11. Windy Hill Road & I-75 SB Off-Ramps/Circle 75 Parkway	Signalized				
12. Windy Hill Road & I-75 SB On-Ramps	Unsignalized				
13. Windy Hill Road & I-75 NB Ramps	Signalized				
14. Windy Hill Road & W Interstate Hwy North Parkway/Leland Drive	Signalized				
15. Windy Hill Road & Powers Ferry Rd	Signalized				
16. Windy Ridge Parkway & Circle 75 Parkway	Signalized				
17. Windy Ridge Parkway & Interstate N Parkway	Signalized				
18. Windy Ridge Parkway & Powers Ferry Road	Signalized				
19. Cumberland Boulevard & Spring Road	Signalized				
20. Cumberland Boulevard & Cumberland Parkway	Signalized				
21. Cumberland Boulevard & Cobb Galleria Parkway	Signalized				
22. Cumberland Boulevard & I-75 SB Ramps	Signalized				
23. Cumberland Boulevard & I-75 NB Ramps	Signalized				
24. Cumberland Boulevard & Akers Mill Road	Signalized				
25. Cumberland Boulevard & Interstate N Parkway Signalized					
Table 4 Continued on Next Page					

Table 4Atlanta Braves Stadium DRIIntersection Control Summary				
Intersection	<u>Control</u>			
26. Akers Mill Road & Galleria Drive	Signalized			
27. Akers Mill Road & Cobb Galleria Parkway	Signalized			
28. Akers Mill Road & I-75 Ramps	Signalized			
29. Powers Ferry Road & Interstate N Parkway	Signalized			
30. I-285 WB Ramp & New Northside Drive	Signalized			
31. I-285 WB Ramp & Northside Drive	Signalized			
32. New Northside Drive & Northside Drive	Signalized			
33. I-285 EB Ramp & Northside Drive	Signalized			
34. I-285 EB Ramp & New Northside Drive	Signalized			
35. Powers Ferry Road & Northside Drive	Signalized			
36. New Northside Drive & Powers Ferry Road	Signalized			
37. Powers Ferry Road & Akers Mill Road	Signalized			

Each of the above listed intersections was analyzed for the 2014 Existing conditions, the projected 2019 No-Build conditions, and the projected 2019 Build conditions. The projected 2019 No-Build conditions represent the existing traffic volumes grown for five (5) years at 1.0% growth per year throughout the study network. The projected 2019 Build conditions add the project trips associated with the Atlanta Braves Stadium development to the projected 2019 No-Build conditions.

3.5 Existing Facilities

Roadway classification descriptions for the study area are provided in **Table 5** (bolded roadways run adjacent to the site).

Table 5 Atlanta Braves Stadium DRI Roadway Classification							
Roadway	No. of Lanes	Posted Speed Limit (MPH)	Cobb County Functional Classification	GDOT Functional Classification			
Circle 75 Parkway	4	30	Arterial	Urban Local Road			
Windy Ridge Parkway	4	35	Arterial	Urban Minor Arterial			
Cobb Parkway	4-8	45	Arterial (State Route)	Urban Principal Arterial			
Interstate N Parkway	2-4	35	Major	Urban Minor Arterial			
Windy Hill Road	4-6	35	Arterial	Urban Minor Arterial/Collector			
Powers Ferry Road	3-6	45/35	Arterial	Urban Minor Arterial/Collector			
Akers Mill Road	3-4	35/30	Arterial	Urban Minor Arterial			
Cobb Galleria Parkway	4	35	Major	Urban Local Road			
Cumberland Boulevard	4-6	30	Arterial	Urban Minor Collector			
Spring Road	4	30	n/a	Urban Minor Arterial			
Terrell Mill Road	4	45	Arterial	Urban Minor Collector			

4.0 **TRIP GENERATION**

As stated earlier, trips associated with the proposed development were estimated using the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Ninth Edition, 2012*, using equations where available. Trip generation for this proposed development is calculated based upon the following land uses: apartment dwelling units (ITE Code 220), hotel (ITE Code 310), general office building (ITE Code 710), shopping center (ITE Code 820), and stadium (no associated ITE Code). As stated previously, the multi-use entertainment center is expected to be utilized by stadium attendees during the PM peak hour, therefore a 100% trip reduction was applied during the PM peak hour. The multi-use entertainment center is not expected to generate any traffic during the AM or Saturday midday peak hours.

Mixed-use vehicle trip reductions were calculated according to the *ITE Trip Generation Handbook, an ITE Proposed Recommended Practice, Second Edition, June 2004.* Total internal capture and vehicle trip reduction between all the land uses is expected to be 22% for the daily trips, 21% for the PM peak hour, and approximately 16% for the Saturday midday peak hour as a result of the anticipated interaction between the varying land uses within the proposed development.

Due to the adjacent land uses in the area, an alternative transportation mode (walking, bicycle, and transit) reduction was applied for the projected Atlanta Braves Stadium project trips. An alternative transportation mode reduction of 3%, consistent with GRTA's Letter of Understanding, was applied to all land uses for this study. The alternative transportation mode reduction was taken to account for the interaction between the site and the adjacent existing land uses.

Pass-by trip reductions were not applied for this project. Pass-by trips are trips made by drivers who are already passing by the site. This is most commonly seen with retail land uses. While pass-by trips may occur, they were not accounted for, which provides a more conservative analysis.

The total (net) trips generated and analyzed in this report are listed in **Table 6**. Appendix C provides more detailed trip generation analyses, and Appendix D provides intersection volume worksheets for all intersections and driveways within the study network.

Table 6 Atlanta Braves Stadium DRI Net New Trip Generation								
	Daily Traffic AM Peak Hour P		PM Pea	PM Peak Hour		SAT MD Peak Hour		
	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Gross New Project Trips	36,454	36,454	1,302	609	6,077	1,957	1,703	1,555
Mixed-Use Reduction	-7,541	-7,541	-0	-0	-1,991	-965	-265	-265
Alternative Mode Reduction	-506	-506	-0	-0	-108	-2	-0	-0
Pass-By Reduction	-0	-0	- 0	- 0	-0	-0	-0	-0
Net New Project Trips	28,407	28,407	1,302	609	3,978	990	1,508	1,349

5.0 TRIP DISTRIBUTION AND ASSIGNMENT

New trips were distributed onto the roadway network using the percentages agreed to during methodology discussions with project stakeholders.

Stadium Distributions

Stadium distributions were developed using existing Braves ticket-holder zip code information from the 2013 season. Five different groups of tickets were considered including season tickets, group tickets, flex packages, mini packages, and single tickets. The number of tickets was aggregated by zip code and mapped to provide an understanding of the possible origins of those attending games. This information was extremely valuable when developing the stadium distributions, but it is important to note some caveats with the data as well. Some of the season and group ticket packages were purchased by companies, and some tickets were mailed to PO Boxes or work locations. Additionally, many individuals traveled to evening games directly from work instead of going home first. Small modifications were made to distributions coming from downtown Atlanta to account for some of this. It is likely that in some cases, the mailing address associated with the ticket purchase did not match the actual location of trip origin; however, the zip code information for the baseball games far surpasses the amount and quality of data that is usually available for this type of study and is therefore considered to be valid for use in this DRI.

Four primary parking areas will be used for stadium traffic. The allocation of trips to each of the four areas was based on the estimated available capacity of each; however, allotments were made in each area to provide for circulation and substantial parking for existing users. The Central parking area is located on the main site between Windy Ridge Parkway on the north and I-285 on the south. Forty-five percent (45%) of the stadium traffic was assumed to use this group of parking facilities. The North parking area is located along the east side of Circle 75 Parkway to the north of Windy Ridge Parkway and is part of the overall 82-acres included in the development.

Fifteen percent (15%) of the stadium traffic was assumed to park at this location. The East parking area is located to the east of I-75 and to the north of I-285. A total of 5% of the stadium traffic was allocated to the East parking area. The South parking area is located south of the primary 57 acre site and to the east of Cobb Parkway and to the north of Akers Mill Road. The remaining 35% of the stadium traffic was assumed to park in the South parking area. The approximate parking locations are shown in **Figure 7**.

Mixed Use Distributions

Four distributions were developed for the mixed use portion of the site: residential, hotel, retail, and office. The development of the residential and office distributions was based partially on Census data. Hotel distributions were similar to residential distributions. Many of the hotel guests are expected to travel to nearby offices and retail locations and stay onsite for Braves games and associated events. Their trips will be concentrated to nearby destinations unlike some of the traditional residential trips. A mix of retailers will attract a combination of nearby residents on non-game days and those traveling from neighboring communities on game days. On game days, it is expected that a majority of the retail trips will be generated by those attending the game. All mixed use development traffic will park on the main Braves development site (unlike the stadium traffic).

Figures 8A-8G, 9A-9G, 10A-10G, 11A-11G, 12A-12G, and 13A-13G display the expected weekday trip percentages for the residential, hotel, office (group 1), office (group 2), retail, and stadium project trips of the development throughout the roadway network. These percentages were applied to the new trips generated by the development, and the volumes were assigned to the roadway network. The expected weekday and Saturday midday peak hour turning movement volumes (project trips) generated by the proposed Atlanta Braves stadium development are shown in Figures 14A-14G and 15A-15E, respectively.

6.0 TRAFFIC ANALYSIS

The signalized intersections included in this study are maintained by Cobb County, the City of Smyrna, the City of Marietta, and the City of Sandy Springs. The signals maintained by Cobb County run on the Sydney Coordinated Adaptive Traffic System (SCATS). SCATS is an adaptive system that evaluates signal timings in real-time and manages the dynamic timing of the signal phases. Due to the limitations of *Synchro*, the network could not be fully modeled to represent true conditions in SCATS. Therefore, to best replicate true conditions, a uniform cycle length was optimized across all the intersections in the SCATS network and the traffic signal splits and offsets were optimized for each intersection.

6.1 2014 Existing Conditions

The observed existing peak hour traffic volumes were entered into *Synchro*, and capacity analyses were performed for the AM, PM, and Saturday peak hours. The intersection laneage for the 2014 Existing conditions are shown in **Figures 16A-16D**. The traffic volumes for the 2014 weekday and Saturday Existing conditions are shown in **Figures 17A-17D** and **18A-18B**, respectively.

Based on the 2014 Existing conditions, five (5) intersections within the study network currently operate below the acceptable Level-of-Service standard (LOS D) during the AM peak hour, PM peak hour, and/or SAT peak hour. These intersections' No-Build and Build Peak Hour LOS standard, therefore, is LOS E per GRTA guidelines.

The 2014 Existing Levels-of-Service with existing geometry are displayed in Table 7.

	Table 7 Atlanta Braves Stadium DRI 2014 Existing Intersection Levels-of-Service (delay in seconds)								
	Intersection	Control	LOS Std. (AM/PM/Sat)	AM Peak Hour	PM Peak Hour	SAT MD Peak Hour			
1	Cobb Parkway & Cumberland Boulevard	Signal	(D/D/D)	C (33.2)	D (42.4)	C (25.3)			
2	Cobb Parkway & Akers Mill Road	Signal	(D/D/D)	C (34.6)	D (36.6)	D (36.9)			
3	Cobb Parkway & Galleria Parkway	Signal	(D/D)	B (13.9)	C (20.1)	n/a			
4	Cobb Parkway & Professional Parkway	Signal	(D/D)	B (17.5)	C (23.6)	n/a			
5	Cobb Parkway & I-285 EB Ramps	Signal	(D/D/D)	C (27.9)	C (30.7)	D (38.9)			
6	Cobb Parkway & I-285 WB Ramps	Signal	(D/D/D)	C (26.1)	C (34.9)	C (28.3)			
7	Cobb Parkway & Circle 75 Parkway/Spring Road	Signal	(D/D/D)	D (47.6)	D (45.8)	C (33.2)			
8	Cobb Parkway & Windy Ridge Parkway/Cumberland Boulevard	Signal	(D/D/D)	C (31.5)	D (44.2)	D (37.8)			
9	Cobb Parkway & Windy Hill Road	Signal	(E/E)	F (80.5)	F (119.7)	n/a			
10	Cobb Parkway & Terrell Mill Road	Signal	(D/D)	C (22.0)	C (26.3)	n/a			
11	Windy Hill Road & I-75 SB Off- Ramps/Circle 75 Parkway	Signal	(D/E/D)	D (38.0)	E (73.7)	D (49.0)			
12	Windy Hill Road & I-75 SB On- Ramps	Unsignalized	n/a*	A (0.0)	A (0.0)	A (0.0)			
13	Windy Hill Road & I-75 NB Ramps	Signal	(D/D/D)	C (30.6)	C (34.3)	C (32.9)			
14	Windy Hill Road & W Interstate Hwy North Parkway/Leland Drive	Signal	(D/D)	C (23.3)	D (40.5)	n/a			
15	Windy Hill Road & Powers Ferry Rd	Signal	(D/E)	D (39.0)	E (59.8)	n/a			
16	Windy Ridge Parkway & Circle 75 Parkway	Signal	(D/D/D)	C (28.1)	C (29.5)	C (22.2)			
17	Windy Ridge Parkway & Interstate N Parkway	Signal	(D/D/D)	C (21.1)	D (36.2)	C (27.8)			
18	Windy Ridge Parkway & Powers Ferry Road	Signal	(D/D)	B (18.0)	D (36.7)	n/a			
19	Cumberland Boulevard & Spring Road	Signal	(D/E/D)	C (34.0)	E (74.1)	D (39.2)			
20	Cumberland Boulevard & Cumberland Parkway	Signal	(D/D/D)	D (41.2)	D (52.7)	D (51.0)			
	Та	uble 7 Continued	on Next Page						

	Table 7 Atlanta Braves Stadium DRI 2014 Existing Intersection Levels-of-Service (delay in seconds)									
	Intersection Control LOS Std. AM Peak PM Peak SAT MD (AM/PM/Sat) Hour Hour Peak Hour									
21	Cumberland Boulevard & Cobb Galleria Parkway	Signal	(D/D)	A (3.2)	B (14.3)	n/a				
22	Cumberland Boulevard & I-75 SB Ramps	Signal	(D/D/D)	D (35.2)	C (20.7)	C (25.2)				
23	Cumberland Boulevard & I-75 NB Ramps	Signal	(D/D/D)	C (24.3)	C (21.3)	C (34.0)				
24a	Cumberland Boulevard & Akers Mill Road	Signal	(D/D)	B (19.2)	B (14.2)	n/a				
24b	Cumberland Boulevard & Akers Mill Road	Signal	(D/D)	C (20.4)	C (26.9)	n/a				
25	Cumberland Boulevard & Interstate N Parkway	Signal	(D/D)	A (7.7)	C (21.0)	n/a				
26	Akers Mill Road & Galleria Drive	Signal	(D/D)	B (10.6)	C (22.6)	n/a				
27	Akers Mill Road & Cobb Galleria Parkway	Signal	(D/D)	C (27.4)	C (23.9)	n/a				
28	Akers Mill Road & I-75 Ramps	Signal	(D/D)	A (4.6)	B (15.5)	n/a				
29	Powers Ferry Road & Interstate N Parkway	Signal	(D/D)	B (18.9)	C (25.8)	n/a				
30	I-285 WB Ramp & New Northside Drive	Signal	(D/D)	C (22.0)	C (20.7)	n/a				
31	I-285 WB Ramp & Northside Drive	Signal	(D/D)	B (17.5)	B (16.0)	n/a				
32	New Northside Drive & Northside Drive	Signal	(D/D)	C (22.4)	C (30.9)	n/a				
33	I-285 EB Ramp & Northside Drive	Signal	(D/D)	B (11.5)	B (16.6)	n/a				
34	I-285 EB Ramp & New Northside Drive	Signal	(D/D)	B (16.8)	B (14.5)	n/a				
35	Powers Ferry Road & Northside Drive	Signal	(D/D)	C (27.4)	C (25.6)	n/a				
36	New Northside Drive & Powers Ferry Road	Signal	(D/D)	D (47.3)	C (32.1)	n/a				
37	Powers Ferry Road & Akers Mill Road	Signal	(D/E)	D (40.7)	E (64.2)	n/a				

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

6.2 Projected 2019 No-Build Conditions

To account for growth in the vicinity of the proposed development, the existing traffic volumes were increased for five (5) years at 1.0% growth per year throughout the study network. These volumes were then entered into *Synchro 8.0* with existing roadway geometry, and capacity analyses were performed. The traffic volumes for the weekday and Saturday projected 2019 No-Build conditions are shown in **Figures 19A-19D and 20A-20B**, respectively.

Per GRTA guidelines, only roadway projects currently under construction can be included in the No-Build and Build conditions. The only construction project considered in this study is a widening of Cobb Parkway from Akers Mill Road to Paces Mill Road which is currently under construction. This widening project impacts the laneage at Intersections 1 and 2. The laneage at these intersections is shown in **Figures 21A-21H**.

Based on the projected 2019 No-Build conditions, six (6) intersections within the study network are projected to operate below the acceptable Level-of-Service standard during the AM, PM, and/or SAT peak hour. Following implementation of the improvements recommended, none of the intersections are projected to operate below their acceptable Level-of-Service standard.

Based on the 2019 No-Build conditions, the following improvements result in the following intersections operating at the required Level-of-Service standard or better:

- Intersection 9: Cobb Parkway and Windy Hill Road
 - Per Cobb County Project E3030, construct dual left-turn lanes for all four approaches. Construct an eastbound right-turn lane and restripe the existing shared through/right-turn lane as an exclusive eastbound through lane. Construct an additional northbound through lane and channelize the existing northbound right-turn lane.
- Intersection 11: Windy Hill Road and I-75 SB Off-Ramps/Circle 75 Parkway
 - Per Cobb County Project E4100, construct a Diverging Diamond Interchange. This improvement affects Intersections 11, 12, 13, and 14.
- Intersection 15: Windy Hill Road and Powers Ferry Road
 - Per Cobb County Project D4230, construct an additional westbound through lane.

Additional No-Build improvements, beyond existing Cobb County projects, include the following:

- Intersection 19: Cumberland Boulevard and Spring Road
 - Install a southbound right-turn overlap.
- Intersection 20: Cumberland Boulevard and Cumberland Parkway
 - Restripe the existing eastbound shared left-turn/through lane as an exclusive through lane. Remove the split-phasing for the eastbound and westbound approaches by changing the westbound left-turn phasing to permissive-only and the eastbound left-turn phasing to protected-permissive. Preliminary investigation of the sight-distance at this intersection indicates that the split phasing can be removed. Coordination recommended between Cumberland CID proposed plans and Cobb County proposed Bus Rapid Transit (BRT).
- Intersection 37: Powers Ferry Road and Akers Mill Road
 - Restripe the southbound approach as an exclusive left-turn lane and a shared through/right-turn lane. Remove the split phasing for the northbound and southbound approaches and change the southbound left-turn phasing to protected-permissive. Preliminary investigation of the sight-distance at this intersection indicates that the split phasing can be removed.

The projected 2019 No-Build Levels-of-Service with existing geometry are displayed in **Table 8**; the Levels-of-Service with the recommended improvements are shown in **Table 9**. The laneage for the No-Build Improved recommendations is shown in **Figures 21A-21H**. The No-Build weekday and Saturday midday volumes associated with the proposed Diverging Diamond Interchange on Windy Hill Road are shown in **Figures 22** and **23**, respectively.

	Table 8 Atlanta Braves Stadium DRI 2019 No-Build Intersection Levels-of-Service (delay in seconds)								
	Intersection	Control	LOS Std. (AM/PM/Sat)	AM Peak Hour	PM Peak Hour	SAT MD Peak Hour			
1	Cobb Parkway & Cumberland Boulevard	Signal	(D/D/D)	C (23.1)	C (32.2)	C (24.2)			
2	Cobb Parkway & Akers Mill Road	Signal	(D/D/D)	C (26.5)	D (41.3)	D (36.7)			
3	Cobb Parkway & Galleria Parkway	Signal	(D/D)	B (14.7)	C (21.6)	n/a			
4	Cobb Parkway & Professional Parkway	Signal	(D/D)	B (17.8)	C (24.5)	n/a			
5	Cobb Parkway & I-285 EB Ramps	Signal	(D/D/D)	C (29.5)	C (31.1)	D (47.0)			
6	Cobb Parkway & I-285 WB Ramps	Signal	(D/D/D)	C (27.2)	D (37.2)	C (29.5)			
7	Cobb Parkway & Circle 75 Parkway/Spring Road	Signal	(D/D/D)	D (53.6)	D (49.9)	D (35.2)			
8	Cobb Parkway & Windy Ridge Parkway/Cumberland Boulevard	Signal	(D/D/D)	C (32.4)	D (46.8)	D (39.2)			
9	Cobb Parkway & Windy Hill Road	Signal	(E/E)	F (89.3)	F (135.3)	n/a			
10	Cobb Parkway & Terrell Mill Road	Signal	(D/D)	C (23.5)	C (28.5)	n/a			
11	Windy Hill Road & I-75 SB Off- Ramps/Circle 75 Parkway	Signal	(D/E/D)	D (39.7)	F (85.6)	D (55.0)			
12	Windy Hill Road & I-75 SB On- Ramps	Unsignalized	n/a*	A (0.0)	A (0.0)	A (0.0)			
13	Windy Hill Road & I-75 NB Ramps	Signal	(D/D/D)	C (31.4)	D (35.6)	C (33.6)			
14	Windy Hill Road & W Interstate Hwy North Parkway/Leland Drive	Signal	(D/D)	C (23.2)	D (42.3)	n/a			
15	Windy Hill Road & Powers Ferry Rd	Signal	(D/E)	D (42.1)	E (70.8)	n/a			
16	Windy Ridge Parkway & Circle 75 Parkway	Signal	(D/D/D)	C (28.6)	C (28.2)	C (22.0)			
17	Windy Ridge Parkway & Interstate N Parkway	Signal	(D/D/D)	C (21.7)	D (38.0)	C (27.0)			
	Ta	uble 8 Continued	on Next Page						

	Table 8 Atlanta Braves Stadium DRI 2019 No-Build Intersection Levels-of-Service (delay in seconds)								
	Intersection	Control	LOS Std. (AM/PM/Sat)	AM Peak Hour	PM Peak Hour	SAT MD Peak Hour			
18	Windy Ridge Parkway & Powers Ferry Road	Signal	(D/D)	B (18.5)	D (36.2)	n/a			
19	Cumberland Boulevard & Spring Road	Signal	(D/E/D)	C (34.4)	F (85.2)	D (41.8)			
20	Cumberland Boulevard & Cumberland Parkway	Signal	(D/D/D)	D (42.5)	E (57.5)	D (53.3)			
21	Cumberland Boulevard & Cobb Galleria Parkway	Signal	(D/D)	A (3.6)	B (15.6)	n/a			
22	Cumberland Boulevard & I-75 SB Ramps	Signal	(D/D/D)	D (45.6)	C (22.1)	C (25.3)			
23	Cumberland Boulevard & I-75 NB Ramps	Signal	(D/D/D)	C (24.8)	C (21.5)	D (34.9)			
24a	Cumberland Boulevard & Akers Mill Road	Signal	(D/D)	B (16.0)	B (14.8)	n/a			
24b	Cumberland Boulevard & Akers Mill Road	Signal	(D/D)	C (21.0)	C (28.3)	n/a			
25	Cumberland Boulevard & Interstate N Parkway	Signal	(D/D)	A (8.4)	C (21.8)	n/a			
26	Akers Mill Road & Galleria Drive	Signal	(D/D)	B (10.9)	C (23.3)	n/a			
27	Akers Mill Road & Cobb Galleria Parkway	Signal	(D/D)	C (31.2)	C (23.9)	n/a			
28	Akers Mill Road & I-75 Ramps	Signal	(D/D)	A (5.1)	B (15.8)	n/a			
29	Powers Ferry Road & Interstate N Parkway	Signal	(D/D)	C (22.6)	C (29.0)	n/a			
30	I-285 WB Ramp & New Northside Drive	Signal	(D/D)	C (22.4)	C (20.3)	n/a			
31	I-285 WB Ramp & Northside Drive	Signal	(D/D)	B (17.1)	B (16.6)	n/a			
32	New Northside Drive & Northside Drive	Signal	(D/D)	C (25.7)	D (33.5)	n/a			
33	I-285 EB Ramp & Northside Drive	Signal	(D/D)	B (12.0)	B (17.1)	n/a			
34	I-285 EB Ramp & New Northside Drive	Signal	(D/D)	B (16.9)	B (15.3)	n/a			
35	Powers Ferry Road & Northside Drive	Signal	(D/D)	C (28.1)	C (28.8)	n/a			
36	New Northside Drive & Powers Ferry Road	Signal	(D/D)	D (47.6)	C (33.8)	n/a			
	Ta	ble 8 Continued	on Next Page						

	Table 8 Atlanta Braves Stadium DRI 2019 No-Build Intersection Levels-of-Service (delay in seconds)						
	Intersection	Control	LOS Std. (AM/PM/Sat)	AM Peak Hour	PM Peak Hour	SAT MD Peak Hour	
37	Powers Ferry Road & Akers Mill Road	Signal	(D/E)	D (47.6)	E (75.8)	n/a	

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

	Table 9 Atlanta Braves Stadium DRI 2019 No-Build Intersection Levels-of-Service IMPROVED (with improved laneage) (delay in seconds)								
	Intersection	Control	LOS Std. (AM/PM)	AM Peak Hour	PM Peak Hour	SAT MD Peak Hour			
9	Cobb Parkway & Windy Hill Road	Signal	(E/E)	E (63.8)	E (63.0)	n/a			
11	Windy Hill Road & I-75 SB Off- Ramps/Circle 75 Parkway	Signal	(D/E/D)	C (32.9)	D (39.3)	C (29.6)			
12	Windy Hill Road & I-75 SB On-Ramps	Signal (DDI)	(D/D/D)	B (11.4)	C (22.1)	B (13.4)			
13	Windy Hill Road & I-75 NB Ramps	Signal (DDI)	(D/D/D)	B (14.4)	C (17.4)	B (14.0)			
14	Windy Hill Road & W Interstate Hwy North Parkway/Leland Drive	n/a*	(D/D)	A (0.0)	A (0.0)	n/a			
15	Windy Hill Road & Powers Ferry Road	Signalized	(D/E)	D (43.4)	E (59.5)	n/a			
19	Cumberland Boulevard & Spring Road	Signal	(D/E/D)	C (33.8)	E (71.4)	D (46.4)			
20	Cumberland Boulevard & Cumberland Parkway	Signal	(D/D/D)	C (34.9)	D (50.8)	D (47.8)			
37	Powers Ferry Road & Akers Mill Road	Signal	(D/E)	D (42.9)	E (56.6)	n/a			

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

6.3 Projected 2019 Build Conditions

The traffic associated with the proposed development was added to the projected 2019 No-Build volumes. These volumes were then entered into *Synchro 8.0* with existing roadway geometry, and capacity analyses were performed. The weekday and Saturday midday traffic volumes for the projected 2019 Build conditions are shown in **Figure 24A-24G** and **Figure 25A-25E**, respectively.

Based on the projected 2019 Build conditions, nine (9) intersections within the study network are projected to operate below their acceptable Level-of-Service standard during the AM, PM, and/or SAT Peak Hour. Following implementation of the improvements recommended in the 2019 No-Build conditions analysis and the following recommendations, none of the intersections are projected to operate below their acceptable Level-of-Service standard.

Based on the 2019 Build conditions, the following improvements are recommended:

- Intersection 5: Cobb Parkway and I-285 Eastbound Ramps
 - Restripe the existing shoulder as a third eastbound right-turn lane.
- Intersection 6: Cobb Parkway and I-285 Westbound Ramps
 - Construct an additional westbound right-turn lane and an additional northbound receiving lane to allow free-flow right-turns from this lane.
- Intersection 7: Cobb Parkway and Circle 75 Parkway
 - Restripe the existing eastbound shared left-turn/through lane to an exclusive through lane. Install an additional northbound left-turn lane. Construct an additional eastbound receiving lane and allow northbound free-flow right-turns. Extend the northbound right-turn lane to serve as the proposed additional northbound receiving lane at Cobb Parkway & I-285 EB Ramps (Int. 6). Construct the westbound approach as three left-turn lanes and a shared through/right-turn lane. Remove the eastbound and westbound split phasing. Preliminary investigation of the sight-distance at this intersection indicates that the split phasing can be removed.
- Intersection 8: Cobb Parkway and Windy Ridge Parkway
 - Install an eastbound right-turn overlap. Restripe the inside southbound through lane to an exclusive left-turn lane with storage, creating dual left-turn lanes.
- Intersection 17: Interstate N Parkway and Windy Ridge Parkway
 - Change the southbound left-turn phasing to permissive-only.
- Intersection 32: Northside Drive and New Northside Drive/Interstate N Parkway
 - Restripe Northside Drive to allow a free-flow eastbound right-turn. Install southbound and westbound right-turn overlaps.

The laneage for the Build improvements is shown in **Figures 21A-21H**. The weekday and Saturday volumes associated with the proposed Diverging Diamond Interchange on Windy Hill Road are shown in **Figures 26** and **27**, respectively. The projected 2019 Build Levels-of-Service with existing geometry are displayed in **Table 10**; the Levels-of-Service with the 2019 No-Build improvements and additional Build improvements are shown in **Table 10**.

	Table 10 Atlanta Braves Stadium DRI 2019 Build Intersection Levels-of-Service (delay in seconds)								
	Intersection	Control	LOS Std. (AM/PM/SAT)	AM Peak Hour	PM Peak Hour	SAT MD Peak Hour			
1	Cobb Parkway & Cumberland Boulevard	Signal	(D/D/D)	C (32.6)	C (33.7)	C (23.7)			
2	Cobb Parkway & Akers Mill Road	Signal	(D/D/D)	D (35.2)	D (43.5)	D (35.5)			
3	Cobb Parkway & Galleria Parkway	Signal	(D/D)	B (13.4)	C (24.6)	n/a			
4	Cobb Parkway & Professional Parkway	Signal	(D/D)	B (17.8)	C (20.9)	n/a			
5	Cobb Parkway & I-285 EB Ramps	Signal	(D/D/D)	D (35.3)	E (69.4)	E (69.8)			
6	Cobb Parkway & I-285 WB Ramps	Signal	(D/D/D)	C (34.8)	F (98.7)	D (47.0)			
7	Cobb Parkway & Circle 75 Parkway/Spring Road	Signal	(D/D/D)	F (159.0)	F (92.3)	E (74.3)			
8	Cobb Parkway & Windy Ridge Parkway/Cumberland Boulevard	Signal	(D/D/D)	D (36.7)	E (60.6)	E (56.6)			
9	Cobb Parkway & Windy Hill Road	Signal	(E/E)	F (115.6)	F (163.8)	n/a			
10	Cobb Parkway & Terrell Mill Road	Signal	(D/D)	C (22.2)	C (28.0)	n/a			
11	Windy Hill Road & I-75 SB Off- Ramps/Circle 75 Parkway	Signal	(D/E/D)	D (41.7)	F (384.6)	E (56.1)			
12	Windy Hill Road & I-75 SB On- Ramps	Unsignalized	n/a*	A (0.0)	A (0.0)	A (.0)			
13	Windy Hill Road & I-75 NB Ramps	Signal	(D/D/D)	C (32.3)	D (46.1)	C (34.0)			
14	Windy Hill Road & W Interstate Hwy North Parkway/Leland Drive	Signal	(D/D)	C (24.0)	D (44.2)	n/a			
15	Windy Hill Road & Powers Ferry Rd	Signal	(D/E)	D (44.4)	E (74.0)	n/a			
16	Windy Ridge Parkway & Circle 75 Parkway	Signal	(D/D/D)	D (45.6)	D (39.2)	C (29.8)			
17	Windy Ridge Parkway & Interstate N Parkway	Signal	(D/D/D)	C (28.5)	E (61.9)	D (35.9)			
18	Windy Ridge Parkway & Powers Ferry Road	Signal	(D/D)	C (20.3)	D (48.0)	n/a			
19	Cumberland Boulevard & Spring Road	Signal	(D/E/D)	D (35.0)	F (96.8)	D (46.6)			
20	Cumberland Boulevard & Cumberland Parkway	Signal	(D/D/D)	D (42.7)	E (58.2)	D (54.8)			
		Table 10 Contin	ued on Next Page						

DRI #2381 Transportation Analysis

21	Cumberland Boulevard & Cobb Galleria Parkway	Signal	(D/D)	A (3.4)	B (13.7)	n/a
22	Cumberland Boulevard & I-75 SB Ramps	Signal	(D/D/D)	D (39.3)	D (36.4)	C (25.0)
23	Cumberland Boulevard & I-75 NB Ramps	Signal	(D/D/D)	C (25.5)	C (23.4)	C (34.8)
24a	Cumberland Boulevard & Akers Mill Road	Signal	(D/D)	B (19.4)	C (20.1)	n/a
24b	Cumberland Boulevard & Akers Mill Road	Signal	(D/D)	C (21.4)	C (33.1)	n/a
25	Cumberland Boulevard & Interstate N Parkway	Signal	(D/D)	A (7.8)	C (27.2)	n/a
26	Akers Mill Road & Galleria Drive	Signal	(D/D)	B (10.8)	C (20.7)	n/a
27	Akers Mill Road & Cobb Galleria Parkway	Signal	(D/D)	C (27.0)	C (30.3)	n/a
28	Akers Mill Road & I-75 Ramps	Signal	(D/D)	A (5.2)	C (23.5)	n/a
29	Powers Ferry Road & Interstate N Parkway	Signal	(D/D)	C (26.5)	D (42.2)	n/a
30	I-285 WB Ramp & New Northside Drive	Signal	(D/D)	C (22.5)	C (20.6)	n/a
31	I-285 WB Ramp & Northside Drive	Signal	(D/D)	B (17.4)	B (18.8)	n/a
32	New Northside Drive & Northside Drive	Signal	(D/D)	C (27.9)	F (96.2)	n/a
33	I-285 EB Ramp & Northside Drive	Signal	(D/D)	B (11.9)	B (17.6)	n/a
34	I-285 EB Ramp & New Northside Drive	Signal	(D/D)	B (16.9)	B (16.8)	n/a
35	Powers Ferry Road & Northside Drive	Signal	(D/D)	C (28.3)	D (36.1)	n/a
36	New Northside Drive & Powers Ferry Road	Signal	(D/D)	D (52.4)	C (34.5)	n/a
37	Powers Ferry Road & Akers Mill Road	Signal	(D/E)	D (46.0)	F (88.7)	n/a
38	Circle 75 Pkwy & Circle 75 South	NB Approach	n/a*	A (0.0)	A (0.0)	A (0.0)
39	Circle 75 Pkwy & Driveway 2/Driveway 3	NB Approach SB Approach EB Left WB Left	n/a*	F (90.9) C (16.0) A (2.0) A (1.0)	F (437.9) F (Err) D (28.0) A (1.3)	F (Err) F (Err) A (9.4) A (2.0)
40	Circle 75 Pkwy/Driveway 21 & Circle 75 Pkwy/Circle 75 North	Signal	n/a*	D (38.7)	D (48.6)	D (47.0)
41	Circle 75 South & Driveway 4	SB Approach EB Left	n/a*	A (0.0) A (0.2)	A (0.0) A (1.4)	A (0.0) A (2.6)
		Table 10 Continu	ued on Next Page			

DRI #2381 Transportation Analysis

		NB Approach		B (14 3)	B (13 0)	A(90)					
	Circle 75 South & Driveway	SB Approach		A(0,0)	A(0,0)	A(0,0)					
42	5/Driveway 6	FR Left	n/a*	$\Delta (0,0)$	$\begin{array}{c} \Lambda (0.0) \\ \Lambda (0.7) \end{array}$	$\mathbf{A} (0,0)$					
	S/Dilloway o	WB Left		A (9.7)	A(8.2)	A(7.5)					
		NB Approach		B(12.5)	C(15.7)	$\frac{A(9.0)}{A(9.0)}$					
43	Circle 75 South & Driveway 7	FR Left	n/a*	A(0,0)	A(0,0)	A(0,0)					
75	Chele 75 Bouth & Diffeway 7	WB Left	11/ u	$\Delta (4.8)$	$\Delta (4 4)$	$\frac{\Lambda(0.0)}{\Lambda(3.8)}$					
		FR Approach		F(220.1)	F(148.4)	C(15.8)					
	Circle 75 South/Driveway 8 &	WB Approach		F(Err)	F(312.2)	B(10.3)					
44	Circle 75 Pkwy	NB Left	n/a*	$\Delta (5.1)$	$\Delta (0.4)$	$\Delta (0.8)$					
	Chele 75 T Kwy	SB Left		$\Delta (1.2)$	$\Delta (1.2)$	$\Delta (3.2)$					
		SB Approach		R(112)	R(1.2)	$\frac{\Lambda(9.2)}{\Delta(9.7)}$					
45	Circle 75 Pkwy & Driveway 9	FR Left	n/a*	$\Delta (15)$	$\Delta(2.6)$	A(2.7) A(4.5)					
		SB Approach		R(1.3)	C(15.3)	Λ (9.4)					
46	Circle 75 Pkwy & Driveway 10	ER L oft	n/a*	D(11.3)	C(13.3)	A(9.4)					
		NR Approach		C(16.7)	D(27.7)	A(0.0)					
		SP Approach		C(10.7)	D(27.7)	A(0.0)					
47	Circle 75 Pkwy & Driveway 11	SD Approach	n/a*	A(0.0)	A(0.0)	A(0.0)					
		WB L off		A(0.0)	A(1.3)	A(0.0)					
		NP Approach		A(2.0)	A(0.3)	$\frac{A(0.0)}{A(0.0)}$					
		ND Approach		C(13.7)	D(30.7)	A(0.0)					
48	Circle 75 Pkwy & Driveway 12	SD Approach	n/a*	A(0.0)	A(0.0)	A(0.0)					
		ED Leit WP L off		A(0.0)	A(1.6)	A(0.0)					
		ED Approach		$\frac{A(1.0)}{E(Em)}$	A(0.3)	A(0.0)					
		WP Approach		Γ (EII) E (Err)	C(13.8)	$\mathbf{D}(10.0)$					
49	Circle 75 Pkwy & Driveway 13	ND L off	n/a*	Γ (EII) Γ (22.6)	D(32.0)	A(0.0)					
	, , , , , , , , , , , , , , , , , , ,	ND Leit		C(23.0)	A(0.0)	A(7.7)					
	Windy Didge Divers & Driversey	SD Leit		D (13.2)	A (9.3)	A (0.0)					
50	14	NB Approach	n/a*	A (0.0)	A (0.0)	A (0.0)					
51	Windy Ridge Pkwy & Driveway	NB Approach	n/o*	A (0.0)	A (0.0)	Λ (0,0)					
51	15	WB Left	11/ a ·	A (0.0)	A (9.3)	A (0.0)					
50	Windy Ridge Pkwy & Driveway	NB Approach	n/o*	A (0.0)	A (0.0)	A (0.0)					
32	16	WB Left	11/a ·	A (0.0)	A (9.4)	A (0.0)					
53	Windy Ridge Pkwy & Driveway	NB Approach	n/a*	A (0.0)	A (0.0)	A (0.0)					
	Windy Ridge Pkwy & Driveway	NB Approach		A (9.4)	A (9.6)	B (117)					
54	18	WB Left	n/a*	A (8.5)	A (9.1)	A (9.6)					
55	Windy Ridge Pkwy & Circle 75	Signalized	n/a*	D (47.6)	C (32.0)	D (53.3)					
	North										
56	Circle 75 North & Driveway 19	WB Approach SB Left	n/a*	B (11.0) A (2.6)	B (12.4) A (2.7)	C (17.6) A (4.2)					
		WB Approach		B(10.3)	R(11.4)	R(14.0)					
57	Circle 75 North & Driveway 20	SB Left	n/a*	A (3.2)	A (3.0)	A (3.8)					
58	Cobb Pkwy & Driveway 1	WB Approach	n/a*	A (8.7)**	B (10.2)**	A (9.2)**					
59	Circle 75 Pkwy & Driveway 22	WB Approach SB Left	n/a*	n/a	A (0.0) A (1.7)	n/a					
		Table 10 Con	SB Len A (1.7) Table 10 Continued Below								

60	Circle 75 Pkwy & Driveway 23	WB Approach SB Left	n/a*	n/a	A (0.0) A (1.7)	n/a
61	Circle 75 Pkwy & Driveway 24	WB Approach SB Left	n/a*	n/a	A (0.0) A (1.8)	n/a
62	Circle 75 Pkwy & Driveway 25	WB Approach SB Left	n/a*	n/a	A (0.0) A (1.9)	n/a
63	Circle 75 Pkwy & Driveway 26/Herodian Way	EB Approach WB Approach NB Left SB Left	n/a*	n/a	F (85.3) A (0.0) A (0.0) A (1.7)	n/a
64	Circle 75 Pkwy & Driveway 27	WB Approach SB Left	n/a*	n/a	A (0.0) A (1.9)	n/a
65	Circle 75 Pkwy & Driveway 28	WB Approach SB Left	n/a*	n/a	A (0.0) A (2.0)	n/a
66	Circle 75 Pkwy & Driveway 29	WB Approach SB Left	n/a*	n/a	A (0.0) A (1.8)	n/a
67	Circle 75 Pkwy & Driveway 30	WB Approach SB Left	n/a*	n/a	A (0.0) A (1.9)	n/a

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

**Note: Highway Capacity Manual methodology will not report an unsignalized delay for this intersection due to the number of through lanes on Cobb Parkway. This intersection was modeled with only three through lanes in each direction and the appropriate proportion of the volumes.

	Table 11 Atlanta Braves Stadium DRI 2019 Build Intersection Levels-of-Service IMPROVED (with improved laneage) (delay in seconds)							
	Intersection Control LOS Std. (AM Peak Hour SAT MD Peak Hour)							
5	Cobb Parkway & I-285 EB Ramps	Signal	(D/D/D)	D (38.8)	D (50.6)	D (45.4)		
6	Cobb Parkway & I-285 WB Ramps	Signal	(D/D/D)	C (27.8)	D (42.0)	D (46.2)		
7	Cobb Parkway & Circle 75 Parkway/Spring Road	Signal	(D/D/D)	D (41.1)	D (47.5)	D (46.3)		
8	Cobb Parkway & Windy Ridge Parkway/Cumberland Boulevard	Signal	(D/D/D)	D (37.4)	D (49.5)	D (52.7)		
9	Cobb Parkway & Windy Hill Road	Signal	(E/E)	E (70.6)	E (71.4)	n/a		
11	Windy Hill Road & I-75 SB Off- Ramps/Circle 75 Parkway	Signal	(D/E/D)	D (35.0)	E (64.9)	C (31.1)		
12	Windy Hill Road & I-75 SB On-Ramps	Signal (DDI)	(D/D/D)	C (21.9)	C (27.8)	B (11.5)		
	Table	11 Continu	ued on Next Page					

DRI #2381 Transportation Analysis

13	Windy Hill Road & I-75 NB Ramps	Signal (DDI)	(D/D/D)	B (19.2)	B (15.7)	C (13.8)
15	Windy Hill Road & Powers Ferry Road	Signal	(D/E)	D (42.9)	E (57.2)	n/a
17	Interstate N Parkway & Windy Ridge Parkway	Signal	(D/D/D)	C (28.6)	D (53.3)	C (29.1)
19	Cumberland Boulevard & Spring Road	Signal	(D/E/D)	C (34.4)	E (75.2)	D (46.6)
20	Cumberland Boulevard & Cumberland Parkway	Signal	(D/D/D)	C (34.5)	D (54.9)	D (47.9)
32	New Northside Drive & Northside Drive	Signal	(D/D)	C (25.6)	D (54.0)	n/a
37	Powers Ferry Road & Akers Mill Road	Signal	(D/E)	D (37.5)	E (69.6)	n/a

7.0 INGRESS/EGRESS ANALYSIS

Vehicular access to the Atlanta Braves Stadium development site will be served by up to thirty (30) proposed driveways. The driveway on Cobb Parkway (Driveway 1) is a right-in/right-out driveway. Circle 75 Parkway will be realigned as shown in the site plan. Driveways 2, 3, 8, 9, 10, 11, 12, 13, 22, 23, 24, 25, 26, 27, 28, 29, and 30 are located along Circle 75 Parkway. Driveways 4, 5, 6, and 7 are located along Circle 75 South and Driveway 19 and 20 are located along Circle 75 North. Driveways 14, 15, 16, 17, and 18 are located along Windy Ridge Parkway. In addition to Driveway 1, Driveways 14 and 17 are proposed to be right-in/right-out access. All other driveways are proposed to be full-movement. The number and locations of driveways may change as the site plan continues to be refined.

The site driveways mentioned above provide access to the entire development. Internal roadways throughout the site provide access to all land uses.

Capacity analyses were performed for the site driveways for the projected 2019 Build conditions; the intersection laneage (geometry) is shown in **Figures 21E-21G.** The weekday and Saturday driveway traffic volumes for the site driveway intersections are shown in **Figures 24E-24G and 25C-25E**, respectively.

The Levels-of-Service for the site driveways with their proposed geometry for the projected 2019 Build conditions are shown in **Table 10**.

8.0 IDENTIFICATION OF PROGRAMMED PROJECTS

The ARC's Transportation Improvement Plan (TIP), GDOT Statewide TIP (STIP), *Plan 2040* Regional Transportation Plan (RTP), GDOT's Construction Work Program, and Cobb County's Comprehensive Transportation Plan were researched for currently programmed transportation projects within the vicinity of the proposed development. Research focused on determining the open-to-traffic dates, sponsors, costs of projects, funding sources, and logical termini of all projects in the study network. Several projects are programmed for the area surrounding the study network. The identified projects are listed in **Table 12**, and a map summarizing the project locations is shown in **Appendix B**. The projects that are expected to be completed by the 2019 build-out year are shown in bold.

Table 12 Atlanta Braves Stadium DRI Programmed Improvement Projects								
#	Completion Date	Project ID	Project Description					
1	TBD	ASP-AR-ML 210	I-285 West Managed Lanes from I-20 West to I-75 North					
2	2040	CO-436	I-285 West Collector/Distributor lanes from I-75 North to Paces Ferry Road					
3	TBD	ASP-ML-200	I-285 North Managed Lanes and collector/distributor improvements from I-75 North to I-85 North					
4	2030	AR-409A	Right-of-way acquisition for the I-285 North Corridor high capacity rail service					
5	TBD	ASP-AR-415	Northwest Corridor high capacity rail service from the Beltline Corridor to the Cumberland/Galleria area					
6	2020	AR-ML-900	I-75 North Managed Lanes from the Brookwood interchange to I-285 North					
7	2020	AR-ML-930	Northwest Corridor Managed Lanes at Akers Mill Road to Hickory Grove Road on I-75					
8	2030	CO-AR-238	Ten-lane collector/distributor system along I-75 from I-285 North to Delk Road; part of the reconstruction of the Windy Hill Road interchange					
9	2030	CO-041	Widening of Cobb Parkway from four to six lanes between Windy Ridge Parkway and SR 120.					
10	TBD	ASP-AR-416	Northwest Corridor transit service from Cumberland/Galleria area to Southern Polytechnic Institute					
11	TBD	ASP-CO-428	Widening of Windy Hill Road from Austell Road to I-75 North					
12	2015	CO-382	Widening of Windy Hill Road westbound from two to three lanes from Powers Ferry Road to Spectrum Circle					
13	2015	CO-381	Widening of Powers Ferry Road northbound from three to four lanes between Wildwood Parkway and Terrell Mill Road					
14	Current	D11E0	Cobb Parkway bridge replacement over Chattahoochee River					
15	2016	E3030	Intersection improvements – Cobb Parkway at Windy Hill Road					
16	2016	E4030	Windy Hill Road safety and traffic improvements between I- 75 and Cobb Parkway – installation of a raised median and one additional through lane in each direction					
17	2016	E4020	Windy Hill Road safety and traffic improvements between I- 75 and Powers Ferry Road – installation of a raised median and one additional through lane in each direction					
18	2017	E4100	Installation of a Diverging Diamond Interchange (DDI) at I- 75 and Windy Hill Road					

9.0 INTERNAL CIRCULATION ANALYSIS

Internal roadways throughout the site provide access to all land uses and parking on the site. A more detailed layout of the internal roadways is shown in **Figure 3**.

Mixed-use vehicle trip reductions were calculated according to the *ITE Trip Generation Handbook, an ITE Proposed Recommended Practice, Second Edition, June 2004.* Total internal capture and vehicle trip reduction between the mixed-use land uses is expected to be 22% for a 24-hour period, 21% for the PM peak hour and approximately 16% for the Saturday peak hour as a result of the anticipated interaction between the varying land uses within the proposed development.

10.0 COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The proposed development is mixed-use, comprised of residential, hotel, office, and retail land uses adjacent to a baseball stadium. Currently, the Atlanta Braves Stadium site is undeveloped. According to ARC's PLAN 2040 Unified Growth Policy Map, the project site is proposed to be developed in a Regional Center zone.

The Cobb County 2030 Comprehensive Plan designates the development site within the "Urban Center" character area. The Comprehensive Plan details urban centers as areas intended to contain a concentration of high intensity uses including high-density retail and office and the incorporation of higher-density housing. The Comprehensive Plan states "it is common in the "UC" areas to have a low degree of internal open space, a high floor area ratio, and development occurring on large tracts of land as a campus or unified development." Further, "design of all new construction in an urban center should be pedestrian-oriented that would include safe and aesthetically pleasing connections between different uses, greenspace, and multi-use facilities."

The subject site is also located within 1 of 2 regional activity centers as designated by the County's Future Land Use Map. The Comprehensive Plan specifically calls for "urban style growth in regional activity centers" (Policy 1.9) and encourages "nodal development at appropriate major intersections" (Policy 1.15). As the County envisions "the best of urban, suburban, and rural life," the County's two regional activity centers have been identified as the locations within Cobb County for higher intensity, mixed-use, urban development. The proposed development will require rezoning by Cobb County. Current zoning designations on the property include general commercial, office mid-rise, community retail commercial, and regional retail commercial. To facilitate a unified development, a request has been made to rezone the assembled site to regional retail commercial (RRC).

The County's planning document references and incorporates Blueprint Cumberland as the designated Master Plan for the regional activity center and encourages the development of "codes and ordinances to encourage urban style, higher density residential development in the county's two regional activity centers in accordance with approved Livable Centers Initiative Master Plans." Blueprint Cumberland II (May 2007) specifically identifies the development site as the Circle 75 mixed use site, recommending anchor retail along the Cobb Parkway frontage and mixed use development throughout the remainder of the site.

Finally, the proposed development in this location supports additional goals and policies of the Cobb County 2030 Comprehensive Plan including Cobb County's goal to serve as a regional leader and supportive partner in making the Atlanta Region a great place to live, learn, work, and play (Goal #2) and supports Cobb County's business development and cultural/recreation activities goals (Comprehensive Plan goals 3 and 4):

- Location of major recreation and cultural facilities with good access to major roadways and public transit routes (Policy 2.2),
- Promotion of mixed-use developments in appropriate areas (Policy 2.14),
- Promotion of community gathering spaces (Policy 2.15),
- Continued development of major business districts to support employment growth, provide retail services, and serve as a hub for the community (Policy 3.10), and
- Maximizing pubic land and facilities for recreation and cultural affairs (Policy 4.3), among others.

11.0 NON-EXPEDITED CRITERIA

11.1 Reduction of Vehicle Miles Traveled

Table 13 displays the reduction in traffic generation due to internal capture, alternative mode, and pass-by reductions.

Table 13 Atlanta Braves Stadium DRI Vehicle Trip Reductions					
	Weekday				
Daily Gross New Trip Generation:	72,908				
(-)Mixed-use reductions (internal capture)	-15,082				
(-)Alternative modes	-1,012				
(-)Pass-by trips	-0				
Daily Net New Trips:	56,814				

11.2 Transportation and Traffic Analysis

11.2.1 Planned and Programmed Improvements

The proposed project is not anticipated to preclude any transportation infrastructure improvement projects as identified by Cobb County.

It should be noted that the four Cobb County Projects (See *Table 13*, Projects #15 through #18) are currently in the design phase, with construction expected to begin in Fall 2014. Many of the projects previously planned by Cobb County support the intended land use and density and enhance the transportation system supporting the project.

11.2.2 Preserving Regional Mobility

The western portion of the proposed development is proximate to Cobb Parkway, an urban principal arterial that provides direct access to I-285 to the south. The site is also accessible by I-75 at two interchanges, Windy Hill Road to the north and Cumberland Boulevard to the south.

11.2.3 Safe and Efficient Operations

Pedestrians and bicyclists were taken into consideration when formulating and testing recommended improvements as outlined in this report. The results of this traffic study represent a list of recommendations that not only address transportation enhancements for vehicular traffic, but also for pedestrians and bicyclists. The recommendations are intended to provide solutions that are context sensitive and create safe conditions and aim at balancing the mobility needs of all modes. As the design develops the traffic management plan will focus on the following for both game-day and non-game day.

- Separation of event traffic and pedestrians to create a safe walkable environment
- Appropriate safe pedestrian facilities to accommodate the anticipated pedestrian populations
- Efficient and safe ingress and egress from the site and the supporting off-site parking facilities
- Multiple options for site ingress and egress to distribute traffic across the surrounding roadway grid
- Collaboration and coordination with stakeholders and local agencies to develop a unified, regional traffic management plan

11.2.4 Minimize Congestion

The recommendations as described in this report are targeted at reducing vehicular congestion to standards as described earlier in this report and as documented in the Letter of Understanding. Recommendations reflect the goal of vehicular congestion mitigation for the mixed-use development and the Braves stadium.

11.3 Relationship of Existing Development and Infrastructure

The proposed project is located in a developed area with well-established commercial, office, and residential land uses. Cobb County, Cumberland CID, Georgia DOT and other stakeholders and agencies have made significant investments in the transportation infrastructure in this area in anticipation of future growth consistent with the Future Land Use goals of the region. The proposed project when compared with the 1984 Approved Zoning for the Circle 75 Office Park and Mixed-Use Development has less density and an increase in mixed-use components that supports a reduction in trip generation and additional opportunities to integrate multiple modes of transportation while creating an "Urban Center" consistent with the Cobb County 2030 Comprehensive Plan and ARC's Regional Center zone.