PEACHTREE CORNERS CIRCLE AT MEDLOCK BRIDGE ROAD

INTERSECTION IMPROVEMENT: CONCEPT REPORT

FINAL | MAY 2016

POND

Architects ▪ Engineers ▪ Planners

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Pond Project # 1160354
Peachtree City Project #15-11

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INTRODUCTION

The "T" intersection of Peachtree Corners Circle and Medlock Bridge Road is controlled by a stop sign on the minor street (Peachtree Corners Circle). The north-south major street (Medlock Bridge Road) is free-flowing. Currently, the eastbound direction on the minor street experiences extensive queuing during peak hours, specifically the PM peak, because of the inability of drivers to find adequate gaps in the northbound and southbound traffic on Medlock Bridge Road.

A two-way center left turn lane divides Medlock Bridge Road and helps reduce overall delay by creating a two-stage left turn bay for side-street left turns. However, this same two-way left turn lane is also used by northbound left turns from Medlock Bridge Road onto Peachtree Corners Circle, and this movement is in direct conflict with the side-street left turn because the vehicle paths cross and both must use the same gaps in southbound traffic. In the hierarchy of turning movements at a stop-controlled intersection, the major-street left turn is always given a precedence over the minor-street movements, and therefore the number of gaps in traffic that a side-street vehicle can use is decreased.

The City of Peachtree Corners has plans to develop the tract of land to the northwest of the intersection. This site will become the city's Town Center and will include office space, retail, residences, a park, and other entertainment space. The site is projected to open in 2017. Due to the proximity to this Town Center site, any improvements should incorporate landscaping and other design elements to develop a gateway aesthetic.

Pedestrian facilities at the intersection include two crosswalks, sidewalk, and a multi-use trail. The crosswalks span the western leg and the southern leg. Notably, the crosswalk across the southern leg crosses free-flowing, high-volume traffic without any aid other than pedestrian signs in the shoulder. Sidewalk is present on the east side of Medlock Bridge Road and a 10' multi-use trail is located on the west side. Peachtree Corners Circle does not have any existing pedestrian facilities.

The City has requested a study to develop a concept for an improvement to the intersection with specific goals of:

- reducing queues and delay on Peachtree Corners Circle
- improving the intersection for pedestrians in anticipation of the completion of the Town Center

Figure 1 is a site map of the intersection and surrounding area.

Site data was collected through field observations on Tuesday, December 15th 2015. The collected data consisted of peak hour turning movement counts, daily vehicular volume counts, vehicle classification counts and a speed study. This data is documented in the following section, and can be found in the Appendix A of this report.

FIGURE 1
PROJECT LOCATION MAP

STUDY DATA

As an intersection improvement project, the traffic data collected includes peak hour and daily traffic volumes with the intent of using this information to anticipate and forecast future peak hour turning movements in a base year and a design year scenario.

TRAFFIC COUNTS

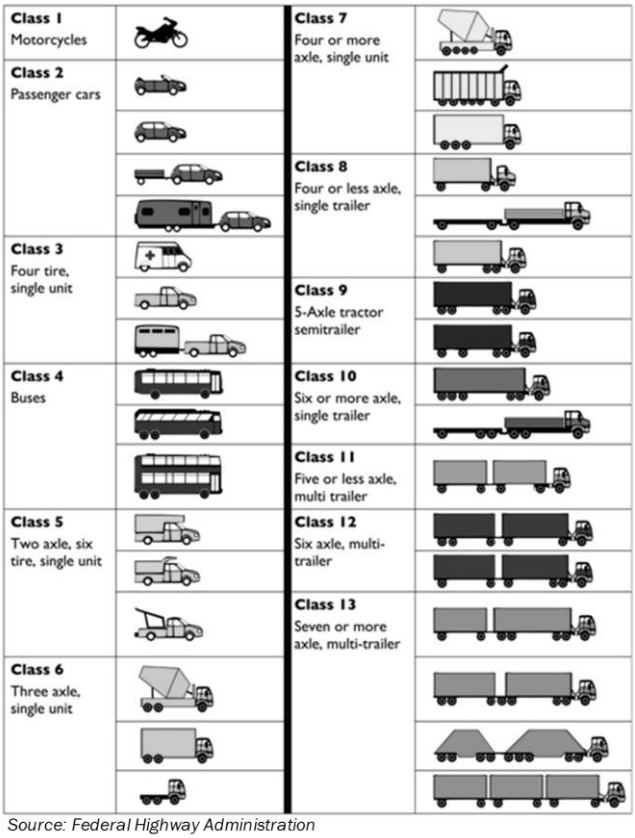
Traffic counts were conducted at the site and included the following:

1. AM and PM Peak Hour Turning Movement Count (TMC) at Peachtree Corners Circle at Medlock Bridge Road
2. 24-hour bi-directional volume count on Peachtree Corners Circle
3. 24-hour bi-directional volume, classification, and speed count on Medlock Bridge Road, south of the intersection

These counts were conducted on Tuesday December 15th, 2015 during a typical week when nearby schools were in session. The resulting volumes can be seen in **Figure 2**.

The speed and classification counts are described below:

- Speed: The 85th percentile speed represents the speed at or under which 85 percent of drivers are driving and is considered to be the safest level at which to set a speed limit (typically within 5 miles per hour). The posted speed limit on Medlock Bridge Road is 40 miles per hour (mph). As shown in **Table 1**, vehicles in both directions on free-flowing Medlock Bridge Road are traveling at speeds greater than 5 miles per hour over the posted speed limit in both directions. This contributes to difficulty that drivers on Peachtree Corners Circle experience when trying to make left turn onto Medlock Bridge Road and could potentially lead to a safety concern for drivers and pedestrians in the crosswalk.
- Vehicle classifications (depicted in the graphic to the right) are a uniform numeric system developed by the Federal Highway Administration and are used to characterize the traffic composition. ADT counts taken at the site indicate that 91.7% of vehicles are single-occupancy personal vehicles (Class 1-3), 3.7% are buses (Class 4), and 4.6% (Class 5-13) are other heavy vehicles.

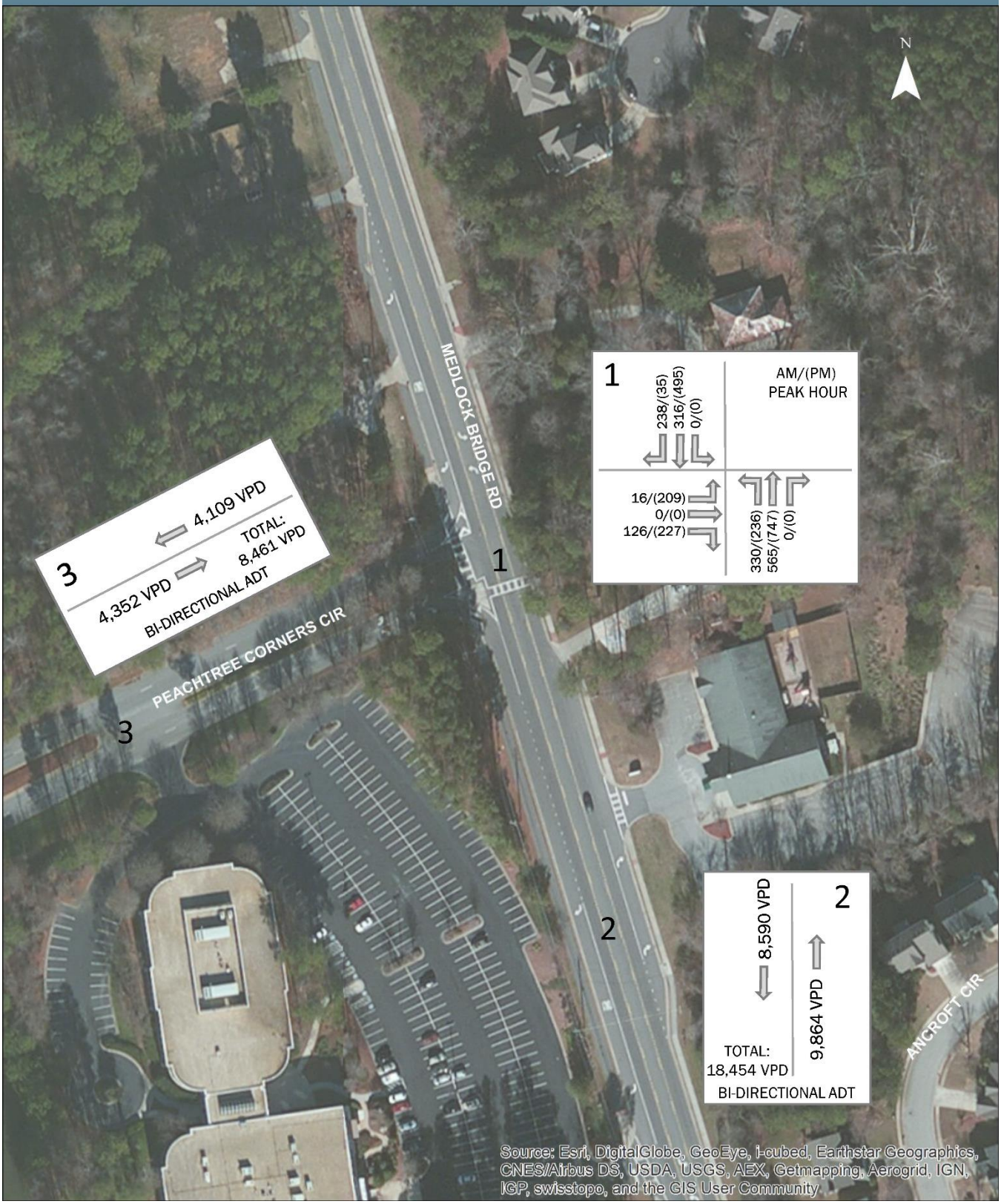


Source: Federal Highway Administration

TABLE 1
85TH PERCENTILE SPEED

LOCATION	85TH PERCENTILE SPEED (MILES PER HOUR) DIRECTION OF TRAVEL		POSTED SPEED
	SB	NB	
MEDLOCK BRIDGE ROAD AT PEACHTREE CORNERS CIRCLE	45.1	48.0	40

FIGURE 2
EXISTING PEAK HOUR TURNING MOVEMENT COUNTS AND ADT



STUDY DATA

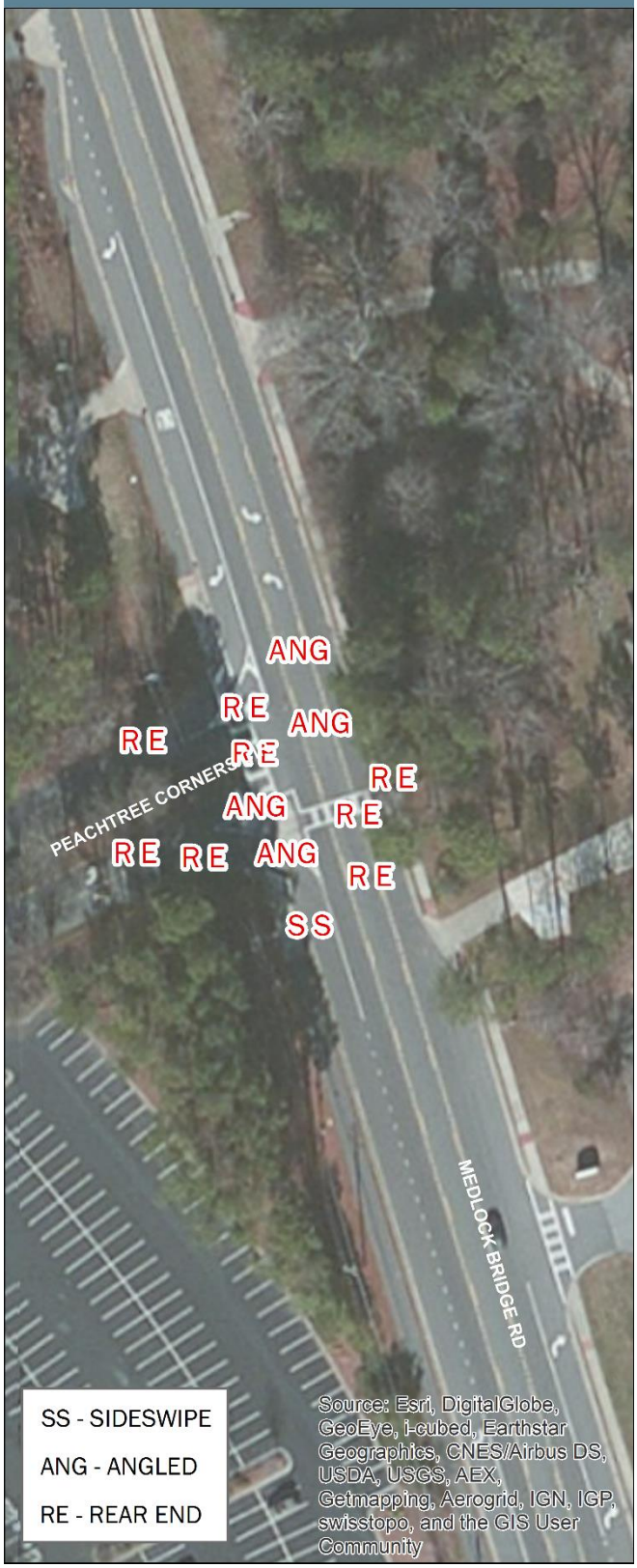
CRASH DATA

Crash data at the intersection for calendar years 2013, 2014, and 2015 have been obtained from the Georgia Department of Transportation (GDOT) database interface, called GeoTRAQS. The data suggests that crashes at the site are predominantly rear end collisions and take place between eastbound traffic on Peachtree Corners Circle, southbound right turns on Medlock Bridge Road, and northbound traffic on Medlock Bridge Road. Angled collisions make up the second most frequent crash type and the data suggests that these angled collisions involve eastbound left turns. Within the range of data, no pedestrians have been involved, and 5 injuries have been reported, which is approximately one injury for every 2.6 crashes. A summary of the reported crash data is provided in **Table 2**. A crash diagram of the 13 reported incidents is shown in **Figure 3**.

TABLE 2
PEACHTREE CORNERS CIRCLE AT MEDLOCK BRIDGE ROAD CRASH SUMMARY (2013-2015)

CRASH TYPE	2013	2014	2015	TOTAL
HEAD ON	0	0	0	0
REAR END	5	2	1	8
SIDESWIPE	0	1	0	1
STRUCK FIXED OBJECT	0	0	0	0
PEDESTRIAN	0	0	0	0
ANGLED	1	3	0	4
TOTAL	6	6	1	13
OTHER CRASH CHARACTERISTICS				
PROPERTY DAMAGE ONLY	2	6	0	8
INJURY CRASHES	4	0	1	5
FATALITY CRASHES	0	0	0	0

FIGURE 3
CRASH LOCATION AND TYPE (2013-2015)



OTHER FIELD OBSERVATIONS

Existing utilities in proximity to the intersection includes overhead power lines on both sides of Medlock Bridge Road. In some instances, poles are adjacent to sidewalks and potentially would need to be relocated if the edge of pavement changed.

Overhead power lines located in close proximity to existing road and sidewalk on southwest quadrant

Several residential driveways access Medlock Bridge Road near the proposed project site and could present challenges depending on the preferred concept design. For instance, driveways near roundabouts would need to be relocated to avoid entering into the circulating portion of the roundabout. Driveways located on an approach to a roundabout may be restricted to right-in/right-out access if they are blocked by splitter islands.

Nearby driveway located on northwest quadrant of intersection

Nearby driveway located on eastern side of Medlock Bridge Road

The desired design life of the proposed improvement is 20 years. To establish a design year set of turning movements, a background growth rate was developed using two sources:

- Georgia Department of Transportation (GDOT) traffic count stations
- Atlanta Regional Commission (ARC) travel demand model for Plan2040

In addition to the background growth rate, an additional increase in traffic generated by the completion of the Town Center site was included in traffic projections.

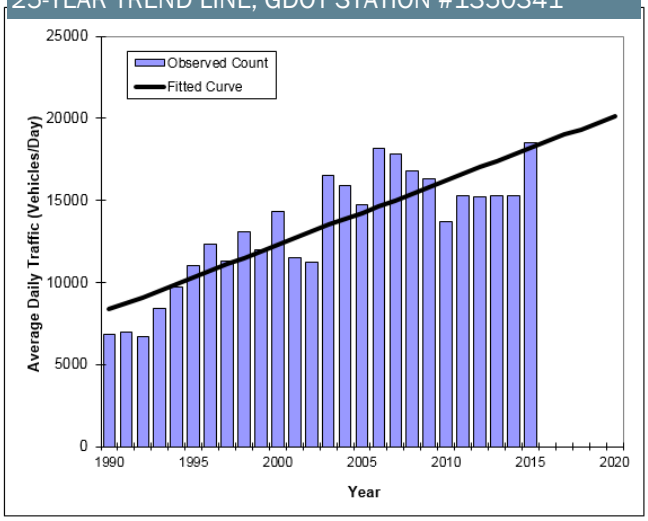
TRAFFIC PROJECTION METHODOLOGY

The proposed improvement is expected to be completed with an opening year of 2017 and a design year of 2037. Traffic demand for years 2017 and 2037 were forecasted linearly by applying an annual background growth rate of 1% to the existing traffic counts, along with a one-time surcharge in 2017 to correspond to the expected completion date of the Town Center site.

GDOT Historical Traffic Counts

This 1% background growth rate is developed from observing historical trends at the GDOT count station on Medlock Bridge Road south of Bankside Way, #1350341, and projected growth in the ARC travel demand model. Ideally, long term growth trends should be based on historical traffic counts and the corresponding trend line should have a high correlation coefficient (R^2) of 75% or greater. A 25-year growth trend line using data from 1990-2015 yields a future projected growth rate of 2.15% with a correlation coefficient value of 72.5%. See **Figure 4** for the 25-year trend line.

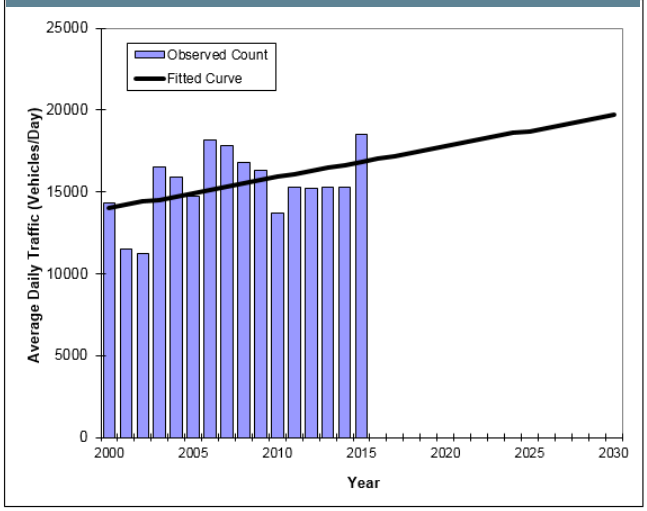
FIGURE 4
25-YEAR TREND LINE, GDOT STATION #1350341



** Annual Trend Increase:	392
Trend R-squared:	72.5%
Trend Annual Historic Growth Rate:	4.67%
Trend Growth Rate (2015 to Design Year):	2.15%
Printed:	20-Jan-16
Straight Line Growth Option	

A yearly growth rate of 2.15% is most likely not sustainable for an indefinite amount of time, and therefore a more recent 15-year trend was also developed. The 15-year trend line results in a linear growth rate of 1.14% per year with a correlation coefficient of 19.1%. See **Figure 5** for the 15-year trend line.

FIGURE 5
15-YEAR TREND LINE, GDOT STATION #1350341



** Annual Trend Increase:	191
Trend R-squared:	19.1%
Trend Annual Historic Growth Rate:	1.33%
Trend Growth Rate (2015 to Design Year):	1.14%
Printed:	20-Jan-16
Straight Line Growth Option	

Review of the 25-year historical counts suggest that in the early 90's, traffic on Medlock Bridge Road was 6,000-7,000 vehicles per day (vpd). That volume has almost tripled in the last 25 years to the current observed ADT of 18,500 vpd (**see Figure 2**). The surrounding area is reaching a built-out condition, and while regional traffic that uses Medlock Bridge Road as a route may still see a yearly increase, it is not likely to grow at as strong a rate as it has in the past. For the purposes of this forecast, the 15-year growth rate of 1.14% was rounded up to 1.15% and used to forecast background traffic.

ARC Travel Demand Model

The Atlanta Regional Commission (ARC) maintains a regional travel demand model for planning purposes that can be used as a tool for estimating projected traffic growth. The model takes input in the form of population totals, household income, employment type and density, and roadway characteristics and establishes a complex network of trips that begin and end at nodes within the model. These trips are then assigned to the road network in such a way that takes into consideration the shortest path, travel time, relative congestion, and other factors. Once the model is

calibrated to existing conditions, the modeled volume on any particular road can be queried by time of day.

For the purposes of this concept report, the daily model volumes were used. The available models produced by ARC are a base year model calibrated to 2015 estimates, and a future year model that is calibrated to expected 2040 conditions. A yearly growth rate can be established between the two points. A summary of this growth rate calculation can be seen in **Table 3**.

TABLE 3
ARC TRAVEL DEMAND MODEL GROWTH; 2015 TO 2040

LOCATION	2015 ADT (VPD)	2040 ADT (VPD)	LINEAR GROWTH (%/YR)
MEDLOCK BRIDGE ROAD SOUTH OF PEACHTREE CORNERS CIRCLE	24,512	28,676	0.68
MEDLOCK BRIDGE ROAD NORTH OF PEACHTREE CORNERS CIRCLE	18,240	19,035	0.17
PEACHTREE CORNERS CIRCLE	8,271	13,926	2.73
PROJECT SITE	51,023	61,637	0.83

The results in **Table 3** suggest a reasonable degree of calibration when compared to actual ADT counts. The model results predict a much slower future growth trend for Medlock Bridge Road, which is indicative of the built-out condition that is seen on the corridor today. Traffic on Peachtree Corners Circle may grow at a stronger rate, suggesting that in the future it could carry some of the additional traffic to the Town Center site, and could also serve the function of an east-west corridor as congestion on Peachtree Parkway and Peachtree Industrial Boulevard increases. In the immediate area near the project site, the cumulative average annual growth is 0.83% per year.

As a conservative estimate, and also considering that Medlock Bridge Road may continue to serve growing traffic demands as a north-south connector between Jimmy Carter Boulevard and Peachtree Parkway, the stronger growth rate of 1.15% per year developed from the historical counts supplied by GDOT is used for traffic projection in this concept report.

Trip Generation for Town Center

On top of this background growth, an additional surcharge of traffic generated by the concentrated mixed-use development at the Town Center site was estimated using the Institute of Transportation Engineers (ITE) trip generation method found in its *Trip Generation Manual, 9th Edition*. This method uses empirical data to predict trend lines for trips based on several different variables, including building floor area, number of employees, number of dwelling units, etc. Using a known variable such as floor space, an estimate of the AM, PM and daily trip ends can be made. The summarized trip generation results are shown in **Table 4.**

TABLE 4
TRIP GENERATION FOR TOWN CENTER SITE

LAND USE	UNIT	# OF UNIT	AM TRIPS	PM TRIPS
RETAIL/SHOPPING CENTER	1000 SF	46.8	98	383
OFFICE	1000 SF	10.8	32	91
THEATER	1000 SF	57	0	120
TRAIL/PARK SPACE	ACRES	4.2	0	2
RESIDENTIAL/TOWNHOMES	UNITS	70	40	45

Using existing daily ADT from Peachtree Parkway and Medlock Bridge Road, a reasonable assumption can be made for the traffic distribution patterns to and from the Town Center site. For instance, daily traffic counts on Peachtree Parkway are approximately 41,900 vpd while daily traffic on Medlock Bridge Road is 18,500 vpd. Using this knowledge, it can be assumed that 30% of all of the traffic coming to and going from Town Center will use Medlock Bridge Road while 70% will use Peachtree Parkway. The AM and PM trips reported in **Table 4** are factored down by 30% to arrive at the total number of entering and exiting trips that would use Medlock Bridge Road. After this reduction, the entering and exiting factors for each land use can be applied and a total number of trips passing through the project site, along with the direction of travel, can be determined. A summary of the AM and PM trips, by land use, that are expected to use Medlock Bridge Road is shown in **Table 5**.

TABLE 5
AM AND PM TRIP DISTRIBUTION FOR TOWN CENTER SITE; MEDLOCK BRIDGE ROAD

LAND USE	AM TRIPS	USING MEDLOCK BR. RD.	ENTER	EXIT
RETAIL/SHOPPING CENTER	98	29	18	11
OFFICE	32	10	9	1
THEATER	0	0	0	0
TRAIL/ PARK SPACE	0	0	0	0
RESIDENTIAL/ TOWNHOMES	40	12	2	10
LAND USE	**PM TRIPS**	**USING MEDLOCK BR. RD.**	**ENTER**	**EXIT**
RETAIL/SHOPPING CENTER	383	115	56	59
OFFICE	91	27	5	22
THEATER	120	36	23	13
TRAIL/ PARK SPACE	2	1	1	0
RESIDENTIAL/ TOWNHOMES	45	14	9	5

As a mixed-use development, internal capture rates can be used to account for trips generated by each of these land uses that do not use the road network because they begin and end within the development. Several methods have been developed, specifically by ITE and Florida Department of Transportation (FDOT), to estimate internal capture rates for those trips that remain internal to the mixed-use site. A

reduction to the entering and exiting volumes in **Table 5** is applied based on these internal capture rates. The resulting turning movement counts generated by the Town Center site during the AM and PM peak can be seen below in the summary in **Table 6**.

Existing AM and PM peak hour turning movement counts have been used to estimate turns at the intersection of Peachtree Corners Circle and Medlock Bridge Road. The resulting total volume (background growth + generated by Town Center) for the opening and design year is summarized by movement in **Table 6**.

TABLE 6
2015, 2017, & 2037 AM & PM TURNING MOVEMENTS;
PEACHTREE CORNERS CIR. AT MEDLOCK BRIDGE RD.

AM PEAK HOUR	NBL	NBT	SBT	SBR	EBL	EBR
2015 EXISTING VOLUME	330	565	316	238	16	126
2017 BACKGROUND GROWTH (2015-2017)	8	13	8	6	1	3
2017 BACKGROUND VOLUME	338	578	324	244	17	129
TOWN CENTER GENERATED VOLUME	0	25	11	8	1	0
2017 TOTAL VOLUME	**338**	**603**	**335**	**252**	**18**	**129**
2037 BACKGROUND GROWTH (2015-2037)	84	143	80	61	5	32
2037 TOTAL VOLUME	**414**	**733**	**407**	**307**	**22**	**158**

PM PEAK HOUR	NBL	NBT	SBT	SBR	EBL	EBR
2015 EXISTING VOLUME	236	747	495	35	209	227
2017 BACKGROUND GROWTH (2015-2017)	6	18	12	1	5	6
2017 BACKGROUND VOLUME	242	765	507	36	214	233
TOWN CENTER GENERATED VOLUME	0	59	78	5	17	0
2017 TOTAL VOLUME	**242**	**824**	**585**	**41**	**231**	**233**
2037 BACKGROUND GROWTH (2015-2037)	60	189	126	9	53	58
2037 TOTAL VOLUME	**296**	**995**	**699**	**49**	**279**	**285**

ANALYSIS METHODOLOGY

The standard approach to defining traffic congestion is the use of Level of Service (LOS), a quantifiable measure of congestion that is correlated to the delay experienced by the average vehicle. LOS is measured on a letter grade scale from A to F, with LOS A indicating free-flow conditions and LOS F indicating long delay times and congestion as shown in the graphic below. Typically, LOS D or better is considered satisfactory, with LOS E or F considered failing.

The *Highway Capacity Manual* (HCM) defines LOS at signalized intersections in terms of average control delay per vehicle, which is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Unsignalized intersection LOS is defined in similar terms, but with lower delay thresholds.

The HCM 2010 states that unsignalized intersections are associated with more uncertainty for users, as delays are less predictable than they are at signals, which can reduce a user's tolerance to delay. Unfortunately, limitations in the methodology also assume uniform gaps in traffic on major streets which often results in the analysis showing a significantly more conservative delay result for side street stop approaches.

Roundabouts share similar basic control delay formulation with two-way and all-way stop-controlled intersections, and as a result they share the same LOS thresholds as unsignalized intersections. **Table 7** presents LOS thresholds for all three intersection types.

TABLE 7
LEVEL OF SERVICE CRITERIA

LEVEL OF SERVICE	SIGNALIZED AVERAGE DELAY (SEC/VEH)	UNSIGNALIZED/ROUNDABOUT AVERAGE DELAY (SEC/VEH)
A	≤10.0	≤10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

SIDRA Standard Capacity Model

An alternative capacity analysis tool that is utilized in this study is the SIDRA Standard Capacity model. This method is used as a second means of measuring expected vehicle delay and LOS. The SIDRA method differs from the HCM 2010 method in that it utilizes "gap acceptance theory", which is a predictive method that quantifies driver behavior when faced with a decision to enter a traffic stream or wait for larger gaps, to estimate approach capacity. In addition to this difference, the SIDRA Standard method estimates other key parameters used in determining capacity and average delay by taking into consideration actual geometric conditions like approach speed, angle of approach, and inscribed diameter. HCM 2010 uses empirical models and holds these values constant. The resulting analysis can offer an alternative way of studying the capacity of a roundabout that considers its own unique design. The SIDRA Standard model used in this study reports Level of Service using the same average delay thresholds for unsignalized intersections found in **Table 7,** which creates a consistent measure of comparison between the two methods.

CAPACITY ANALYSIS RESULTS

Analysis of the existing conditions at the unsignalized intersection was conducted with Synchro 9.0, utilizing HCM 2010 methodology. Roundabout analysis was conducted utilizing the Georgia Department of Transportation (GDOT) Roundabout Analysis Tool v2.1 which makes use of a modified HCM 2010 methodology that is calibrated to reflect a relative familiarity for roundabouts among road users, and the SIDRA Standard model where indicated. **Tables 8** and **9** present the Level of Service and Control Delay (average delay in seconds per vehicle) for the 2015 existing traffic and for 2037 No-Build conditions (if no improvements are made). All Synchro, GDOT Roundabout Tool, and SIDRA output can be found in Appendix B.

TABLE 8
2015 EXISTING DELAY AND LEVEL OF SERVICE

INTERSECTION APROACH	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
EASTBOUND APPROACH	EB STOP	D	34.7	F	>300
NORTHBOUND LEFT TURN	NBL YIELD	A	9.1	A	9.5

TABLE 9
2037 "NO-BUILD" DELAY AND LEVEL OF SERVICE

INTERSECTION APPROACH	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
EASTBOUND APPROACH	EB STOP	F	73.6	F	>900
NORTHBOUND LEFT TURN	NBL YIELD	B	10.2	B	10.8

The capacity analysis of the intersection's stop-controlled and yield-controlled approaches reveals a similar result that was found in a previous study conducted by Georgia Tech students that investigated the feasibility of a roundabout as a viable alternative to traffic control at several locations throughout the city. At the intersection, the PM peak time is a period in which the side street traffic does not have enough gaps in major street traffic to complete a left turn onto Medlock Bridge Road. Average delay during the PM peak can exceed 300 seconds per vehicle.

A roundabout has been proposed as a feasible alternative to the existing eastbound stop control. Roundabouts can be effective solutions at locations where sustained levels of high traffic are not maintained over multiple hours of the day. Minimal maintenance costs (i.e., landscaping) at roundabouts can be another advantageous element to local governments in comparison with signalized intersections that require a continuous power source, monitoring, and electrical equipment repair. Modern roundabouts do have some disadvantages, however. One primary disadvantage is related to the overall footprint needed to meet current design criteria. Roundabout approaches often need to be deflected to meet minimum entry and exit angles, which can lead to larger surface areas when compared to more traditional signalized intersections. Right turn bypass lanes are also an efficient way to improve operations, and all analysis in **Tables 10 – 17** assumes that a SBR and an EBR bypass lane is used.

An opening year and a design year single-lane roundabout analysis using the GDOT Roundabout Tool was conducted to determine the appropriate design needed to adequately serve the projected demand in 2037. Opening year analysis assumes that the roundabout project will be completed at the same time as the Town Center, and Town Center traffic will be using the roundabout by 2017. The Average Delay (seconds/vehicle) and Level of Service results can be found in **Table 10** and **Table 11**. Note that the results in **Table 11** make use of the calibrated HCM 2010 model, which assumes a higher driver familiarity with roundabouts.

TABLE 10
2017 OPENING YEAR HCM 2010 DELAY AND LOS; SINGLE-LANE ROUNDABOUT

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	C	24.9	F	92.0
EB APPROACH	EB YIELD	A	6.7	B	13.3
NB APPROACH	NB YIELD	E	39.0	F	174.0
SB APPROACH	SB YIELD	A	6.2	C	16.4

TABLE 11
2037 DESIGN YEAR HCM 2010 DELAY AND LOS; SINGLE-LANE ROUNDABOUT

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	D	30.0	F	101.7
EB APPROACH	EB YIELD	A	7.9	C	16.3
NB APPROACH	NB YIELD	E	48.0	F	193.0
SB APPROACH	SB YIELD	A	5.7	C	15.0

Clearly, a single lane roundabout at this location will not operate at desired efficiency levels. The intersection failure is a result of the high volume of northbound traffic.

Review of the traffic distribution on Medlock Bridge Road suggests that the northbound direction experiences the highest volume of traffic in both peak times. A multi-lane roundabout that provides additional northbound capacity was analyzed to determine if an additional northbound through (NBT) lane would generate enough additional capacity to meet the vehicular demand. The results from this analysis can be found in **Table 12** and **Table 13**.

TABLE 12
2017 OPENING YEAR HCM 2010 DELAY AND LOS;
MULTI-LANE ROUNDABOUT WITH 2 NBT LANES

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	A	7.4	B	14.1
EB APPROACH	EB YIELD	A	6.7	B	11.7
NB APPROACH	NB YIELD	A	8.9	C	15.6
SB APPROACH	SB YIELD	A	5.2	B	13.4

TABLE 13
2037 DESIGN YEAR HCM 2010 DELAY AND LOS;
MULTI-LANE ROUNDABOUT WITH 2 NBT LANES

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	A	6.3	B	13.0
EB APPROACH	EB YIELD	A	7.8	C	15.4
NB APPROACH	NB YIELD	A	7.2	B	13.7
SB APPROACH	SB YIELD	A	4.2	A	9.6

The results in **Table 12** and **Table 13** indicate that a second northbound through lane will achieve desired LOS at the intersection, and will prevent approach failure through the design year.

A third alternative, which calls for a northbound left turn-only lane and a northbound through-only lane was studied to identify if this lane configuration would achieve desired design year levels of service. A roundabout with this configuration could potentially be smaller, and would allow for the northbound receiving approach to remain a single lane approach. The results from this analysis can be found in **Table 14** and **Table 15**.

TABLE 14
2017 OPENING YEAR HCM 2010 DELAY AND LOS;
MULTI-LANE ROUNDABOUT WITH 1 NBL AND 1 NBT LANE

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	A	8.0	D	29.0
EB APPROACH	EB YIELD	A	6.7	B	11.7
NB APPROACH	NB YIELD	A	9.9	E	46.6
SB APPROACH	SB YIELD	A	5.2	B	13.4

TABLE 15
2037 DESIGN YEAR HCM 2010 DELAY AND LOS;
MULTI-LANE ROUNDABOUT WITH 1 NBL AND 1 NBT LANE

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	A	6.8	D	27.2
EB APPROACH	EB YIELD	A	7.8	C	15.4
NB APPROACH	NB YIELD	A	8.0	E	43.3
SB APPROACH	SB YIELD	A	4.2	A	9.6

As seen in **Table 14** and **Table 15**, the northbound approach does approach LOS E during the PM peak hour, and the overall intersection LOS reaches D in the design year PM peak. As an intersection, the operational analysis indicates that overall delay incurred by traffic through a roundabout of this configuration would meet desired LOS criteria, and the eastbound side street operations are dramatically improved, with an LOS C in the design year.

A second method of analyzing roundabout capacity known as the SIDRA Standard Capacity model can be utilized to gain additional insight into the operations of a roundabout at this location. This method is described in greater detail in the Analysis Methodology section of this document. Results from a build year/design year analysis of a multi-lane roundabout with 1 NB left turn-only lane and 1 NB through-only lane is provided in **Table 16** and **Table 17**.

TABLE 16
2017 OPENING YEAR **SIDRA METHOD** DELAY AND LOS;
MULTI-LANE ROUNDABOUT WITH 1 NBL AND 1 NBT LANE

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	A	4.4	A	6.8
EB APPROACH	EB YIELD	A	4.1	A	8.2
NB APPROACH	NB YIELD	A	4.7	A	7.6
SB APPROACH	SB YIELD	A	3.8	A	4.3

TABLE 17
2037 DESIGN YEAR **SIDRA METHOD** DELAY AND LOS;
MULTI-LANE ROUNDABOUT WITH 1 NBL AND 1 NBT LANE

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	A	4.5	A	9.7
EB APPROACH	EB YIELD	A	4.4	A	9.2
NB APPROACH	NB YIELD	A	4.8	B	12.4
SB APPROACH	SB YIELD	A	4.1	A	5.6

Very clearly, the SIDRA Standard Capacity model estimates a more favorable LOS in both the opening and design years for the afternoon peak. The method that SIDRA uses to estimate approach capacity based on roundabout geometry predicts a higher capacity than the GDOT Roundabout Tool's Calibrated Model. The northbound approach is the one leg of the roundabout that has the most potential to fail because it sees the highest volume. Roundabout capacity

can be tied to the volume of traffic attempting to enter and the volume of traffic already circulating within the roundabout. When entering traffic is unable to find adequate gaps in circulating traffic, a queue can build if the arrival rate is higher than the entry rate. The SIDRA model is based on identifying capacity through "gap acceptance", which is essentially a way to quantify driver behavior when faced with the decision to enter the roundabout or wait for a larger gap in traffic. In this particular instance, northbound through traffic would only be conflicting with westbound left turn traffic, which is estimated at 324 vph. Assuming a consistent arrival pattern, that results in a range of 5-6 westbound left turns per minute, or one car every 10-12 seconds. SIDRA predicts that on average, a driver would not have problems entering the roundabout with gaps of 10-12 seconds between vehicles. This is a reasonable assumption. One consideration of this design is that a westbound right-turn bypass lane is recommended because it removes the right turns from the circulating lanes where they may be confusing to northbound through drivers who are attempting to gauge traffic gaps.

The range of results obtained by these two analysis methods suggests that the multi-lane roundabout with 1 northbound left turn lane and 1 northbound through lane is a feasible option and should be compared to other alternatives when choosing a preferred concept.

Right Turn Bypass Lanes

The typical section on Peachtree Corners Circle is a four-lane divided road. This typical section makes the use of right-turn bypass lanes ideal because there is already a lane built that can either receive the southbound right turns in a free-flow manner or provide eastbound right turns a storage lane much longer than would ever be required. Bypass lanes are excellent opportunities to improve intersection operations but they can be costly additions and require larger footprints. An analysis of each alternative without bypass lanes was conducted to determine if they are necessary to achieve desired operations. The results from an opening year/design year analysis of a roundabout with 2 NBT lanes without a SBR and an EBR bypass lane is provided in **Table 18** and **Table 19**.

TABLE 18
2017 OPENING YEAR HCM 2010 DELAY AND LOS;
MULTI-LANE ROUNDABOUT WITH 2 NBT LANES, NO BYPASS

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	B	11.3	C	17.3
EB APPROACH	EB YIELD	A	6.4	C	22.4
NB APPROACH	NB YIELD	A	8.9	C	15.6
SB APPROACH	SB YIELD	C	17.0	C	16.1

TABLE 19
2037 DESIGN YEAR HCM 2010 DELAY AND LOS;
MULTI-LANE ROUNDABOUT WITH 2 NBT LANES, NO BYPASS

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	A	9.2	C	15.3
EB APPROACH	EB YIELD	A	5.2	C	23.0
NB APPROACH	NB YIELD	A	7.2	B	13.7
SB APPROACH	SB YIELD	B	13.9	B	11.4

In comparison to the same roundabout with bypass lanes in the southbound and eastbound directions, the results suggest that the SBR bypass is responsible for a delay reduction of approximately 10 seconds/vehicle for the SB approach in the design year AM peak and approximately 2 seconds/vehicle in the design year PM peak. The EBR bypass is responsible for a delay reduction of approximately 8 seconds/vehicle in the design year PM peak, and no reduction in the design year AM peak. These results indicate that, as an alternative, the bypass lanes could be omitted in the concept, and the intersection would still operate within the desired LOS range.

The results from an opening year/design year analysis of a roundabout with 1 NBL lane and 1 NBT lane without a SBR and an EBR bypass lane is provided in **Table 20** and **Table 21**. The method used in this analysis is the calibrated HCM 2010 method.

TABLE 20
2017 OPENING YEAR HCM 2010 DELAY AND LOS;
MULTI-LANE ROUNDABOUT WITH 1 NBL AND 1 NBT LANE, NO BYPASS

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	B	11.8	D	32.2
EB APPROACH	EB YIELD	A	6.4	C	22.4
NB APPROACH	NB YIELD	A	9.9	E	46.6
SB APPROACH	SB YIELD	C	17.0	C	16.1

TABLE 21
2037 DESIGN YEAR HCM 2010 DELAY AND LOS;
MULTI-LANE ROUNDABOUT WITH 1 NBL AND 1 NBT LANE, NO BYPASS

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	A	9.6	D	29.6
EB APPROACH	EB YIELD	A	5.2	C	23.0
NB APPROACH	NB YIELD	A	8.0	E	43.3
SB APPROACH	SB YIELD	B	13.9	B	11.4

The removal of bypass lanes from the analysis of a multi-lane roundabout with 1NBL lane and 1 NBT lane has a similar effect on SB and EB operations and yields intersection LOS of D or better during both opening and design year peaks. This option was also analyzed using the

SIDRA Standard model to determine net effects. Those results are summarized below in **Table 22** and **Table 23**.

TABLE 22
2017 OPENING YEAR **SIDRA METHOD** DELAY AND LOS; MULTI-LANE ROUNDABOUT WITH 1 NBL AND 1 NBT LANE, NO BYPASS

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	A	6.2	B	11.3
EB APPROACH	EB YIELD	A	4.9	C	23.3
NB APPROACH	NB YIELD	A	4.7	A	7.7
SB APPROACH	SB YIELD	A	9.3	A	7.4

TABLE 23
2037 DESIGN YEAR **SIDRA METHOD** DELAY AND LOS; MULTI-LANE ROUNDABOUT WITH 1 NBL AND 1 NBT LANE, NO BYPASS

INTERSECTION	TRAFFIC CONTROL	AM PEAK		PM PEAK	
		LOS	DELAY	LOS	DELAY
INTERSECTION	ROUNDABOUT	A	8.5	D	33.9
EB APPROACH	EB YIELD	A	5.3	F	108.9
NB APPROACH	NB YIELD	A	4.8	A	9.9
SB APPROACH	SB YIELD	C	16.1	B	12.2

The SIDRA Standard model is significantly influenced by the presence of an eastbound right turn bypass lane. The EB approach fails in the PM peak when the bypass lane is removed. Note that this configuration also assumes that left turns and right turns occur from one eastbound lane. The single southbound circulating lane limits the EB approach lane geometry to a single lane, if the bypass is removed. Based on the information in **Table 22** and **Table 23**, at a minimum, the EB bypass lane should be constructed to prevent side street operational failure.

In general, the high volume of eastbound traffic on Peachtree Corners Circle and the typical section consisting of two eastbound lanes lead to the conclusion that an eastbound right turn bypass lane is recommended with any alternative. A southbound right turn bypass lane can be an optional design element.

OTHER DESIGN CONSIDERATIONS

Daily traffic on Medlock Bridge Road was counted in December 2015 and was observed to reach 18,450 vpd. A planning-level capacity estimate for a two lane road with traffic signals and auxiliary turn lanes is nearly 20,000 vpd to maintain a Level of Service D (*source: Florida DOT Generalized Annual Average Daily Volumes*). It should be noted that this estimate is planning-level only, and is largely based on the capacity of traffic signals along a corridor, among other variables. This information suggests that the volume of traffic on Medlock Bridge Road may reach this threshold before the design year of 2037. If background traffic growth on Medlock Bridge Road sustains the expected growth rate, the road could become a candidate for a widening in the future. One consideration that should be given to the design of this roundabout is its ability to fit into a corridor widening project, should the need arise. To avoid having to reconstruct major portions of the roundabout to meet a four-lane typical section in the future, the intended area could be acquired now, paved, and striped out as shoulder space to reserve it for later use. It should be noted that at this time, there are no known plans, fiscally constrained or otherwise, to widen Medlock Bridge Road, making any preparation for a four-lane section in the future potentially unnecessary.

As part of the concept phase, signalization of the intersection was considered. From peak hour turning movement volumes spanning 2-hour blocks during the AM and PM peaks, a signal warrant study suggests that the intersection volumes will not meet the Manual on Uniform Traffic Control Devices (MUTCD) 8-hour warrant criteria. The volumes did exhibit a potential to meet the 4-hour warrant criteria, meeting 3 hours during the 4 hours that were counted. If warrant studies of a site do not reveal a specific need for signalization (i.e., the 8-hour warrant) then it is a good practice to consider alternative means of traffic control to avoid the installation of an unnecessary signal. One alternative to the traditional signal is to make use of a "continuous green T" signal, sometimes referred to as a Florida T. A continuous green T signal would signalize the southbound and eastbound approaches, along with northbound lefts. The northbound through movement would be continuously free-flowing. One drawback to this approach is that pedestrians are not provided the necessary means to cross the continuously flowing lanes. A pedestrian crosswalk, pushbuttons, and signal heads can be installed across continuous flow lanes, but measures to stop vehicles will need to be installed to avoid a conflict with pedestrians. Due to the proximity of this site to the Town Center area and The Forum on SR 141, pedestrian crossings of Medlock Bridge Road should be part of the overall improvement's design.

ALTERNATIVE #1

Alternative #1 presents a roundabout concept that includes:

- A southbound through lane
- An eastbound left turn lane
- An inside northbound left-through lane
- An outside northbound through lane
- Right-turn bypass lane on the eastbound approach

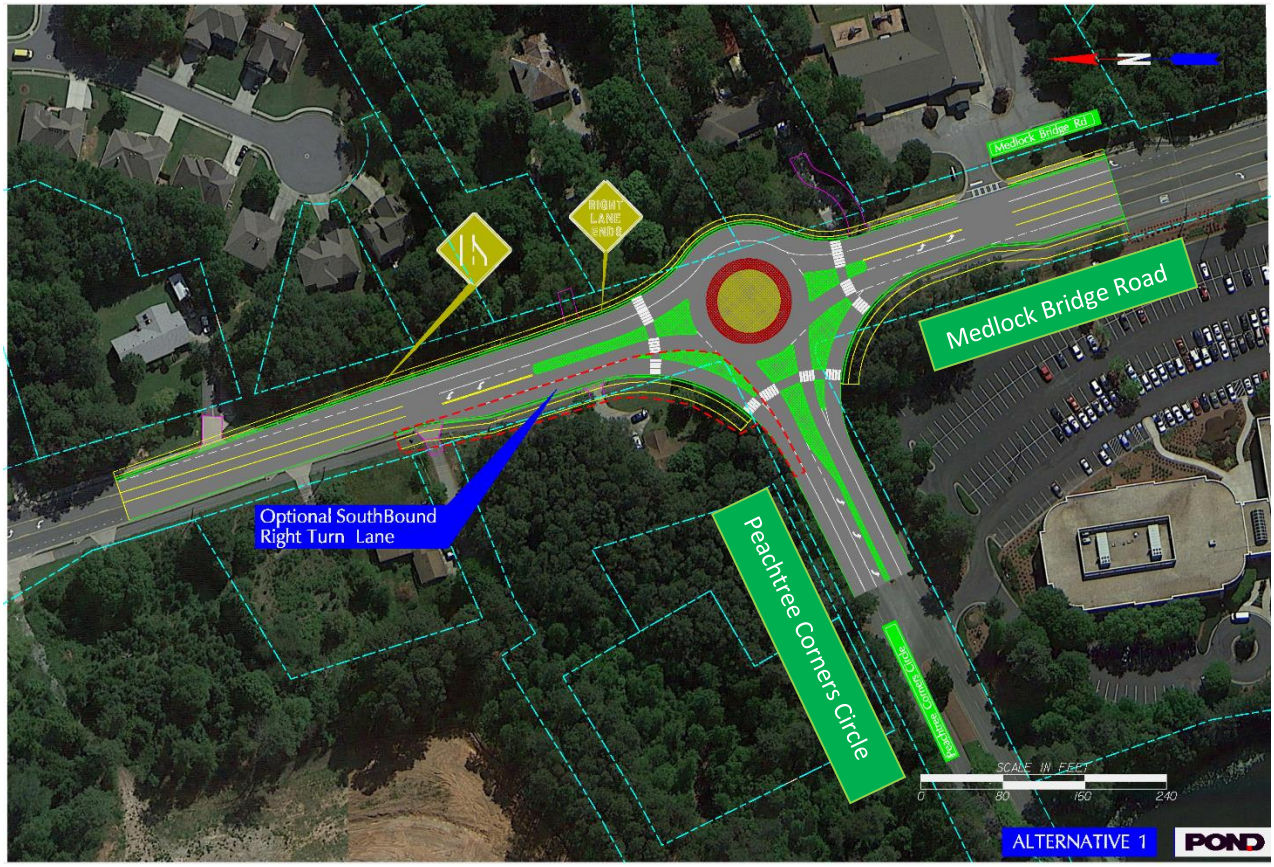
To preserve the existing two-lane typical section of Medlock Bridge Road, a merge point to the north would be constructed and would require traffic in the right-hand lane to merge into traffic in the left-hand lane. This configuration will help distribute northbound through traffic more evenly between the two lanes and will make the most of the capacity of a dual-lane approach.

The driveway nearest to the proposed roundabout on the east side will need to be relocated to prevent access directly into the circulating area. Daily traffic volumes on Medlock Bridge Road exceed 18,000 vpd and present a potential safety hazard if a personal driveway were to be introduced as a fourth leg that is rarely used. Driver expectations will be that the driveway does not see much traffic, and the presence of an unexpected vehicle may lead to a collision.

Relocating the existing driveway on the east side of Medlock Bridge Road to tie into Medlock Bridge Road on the southern edge of the property and south of the yield bar on the approach leg would allow the entering and exiting traffic on the driveway to be made at a location where all traffic approaching the roundabout will be slowing down to yield.

The driveways on the east side of the roundabout, along with the driveway on the northwest quadrant of the intersection would need to be relegated to a right-in/right-out movement. A left turn out of the driveways could be accommodated by entering the roundabout's interior circulating lane and traversing to the intended exit leg. A left turn into the driveway would need to be made by making a U-turn downstream of the roundabout at the closest point that supports a U-turn movement. This is most likely the signals at Bush Road and at Spalding Drive, or at a side street with auxiliary lanes that can be used as "eyebrow" areas. An "eyebrow" is a paved bulb-out area that vehicles with wide turning paths can use to complete a U-turn.

The concept below is shown with an optional SB right turn bypass lane. As noted in the Analysis section of this report, the SB bypass lane will improve operations and make the southbound right turn a free-flowing, unrestricted movement, but it can be omitted from the design if the overall footprint of the roundabout becomes a challenge to design and construct.



ALTERNATIVE #2

Alternative #2 presents a roundabout concept that includes:

- A southbound through lane
- An eastbound left turn lane
- A northbound left-only lane
- A northbound through lane
- Right-turn bypass lane on the eastbound approach

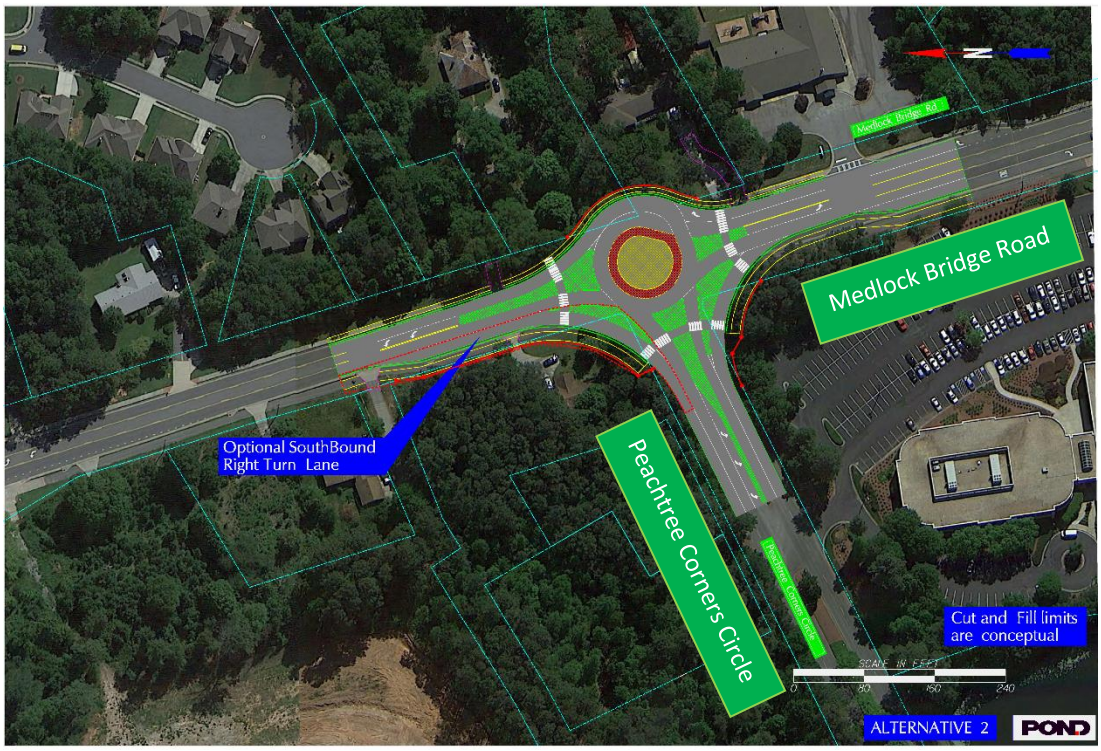
This concept provides a slightly simplified version of the roundabout of Alternative #1. Instead of NBT traffic having the option of choosing either approach lane to go through the roundabout, this configuration would require all northbound traffic to use the outside lane. This eliminates the merge point and potential bottleneck north of the roundabout that is needed if two through lanes are used. The shoulder work on the east side of the northern leg of Medlock Bridge Road is minimized with this concept as well. Pedestrian accommodations at crossings are improved, in that the crosswalk on the northern leg would only span one northbound lane instead of two. The operations of Alternative #2 are not expected to be as favorable as option #1, although the intersection LOS will meet the design target of D.

The driveway nearest to the proposed roundabout on the east side will need to be relocated to prevent access directly into the circulating area. Daily traffic volumes on Medlock Bridge Road exceed 18,000 vpd and present a potential safety hazard if a personal driveway were to be introduced as a fourth leg that is rarely used. Driver expectations will be that the driveway does not see much traffic, and the presence of an unexpected vehicle may lead to a collision.

Relocating the existing driveway on the east side of Medlock Bridge Road to tie into Medlock Bridge Road on the southern edge of the property and south of the yield bar on the approach leg would allow the entering and exiting traffic on the driveway to be made at a location where all traffic approaching the roundabout will be slowing down to yield.

The driveways on the east side of the roundabout, along with the driveway on the northwest quadrant of the intersection would need to be relegated to a right-in/right-out movement. A left turn out of the driveways could be accommodated by entering the roundabout's interior circulating lane and traversing to the intended exit leg. A left turn into the driveway would need to be made by making a U-turn downstream of the roundabout at the closest point that supports a U-turn movement. This is most likely the signals at Bush Road and at Spalding Drive, or at a side street with auxiliary lanes that can be used as "eyebrow" areas. An "eyebrow" is a paved bulb-out area that vehicles with wide turning paths can use to complete a U-turn.

The concept below is shown with an optional SB right turn bypass lane. As noted in the Analysis section of this report, the SB bypass lane will improve operations and make the southbound right turn a free-flowing, unrestricted movement, but it can be omitted from the design if the overall footprint of the roundabout becomes a challenge to design and construct.



ALTERNATIVE #3

Alternative #3 presents a roundabout concept that includes:

- Two southbound through lanes
- An eastbound left turn lane
- An inside northbound left-through lane
- An outside northbound through lane
- Right-turn bypass lane on the southbound and eastbound approaches

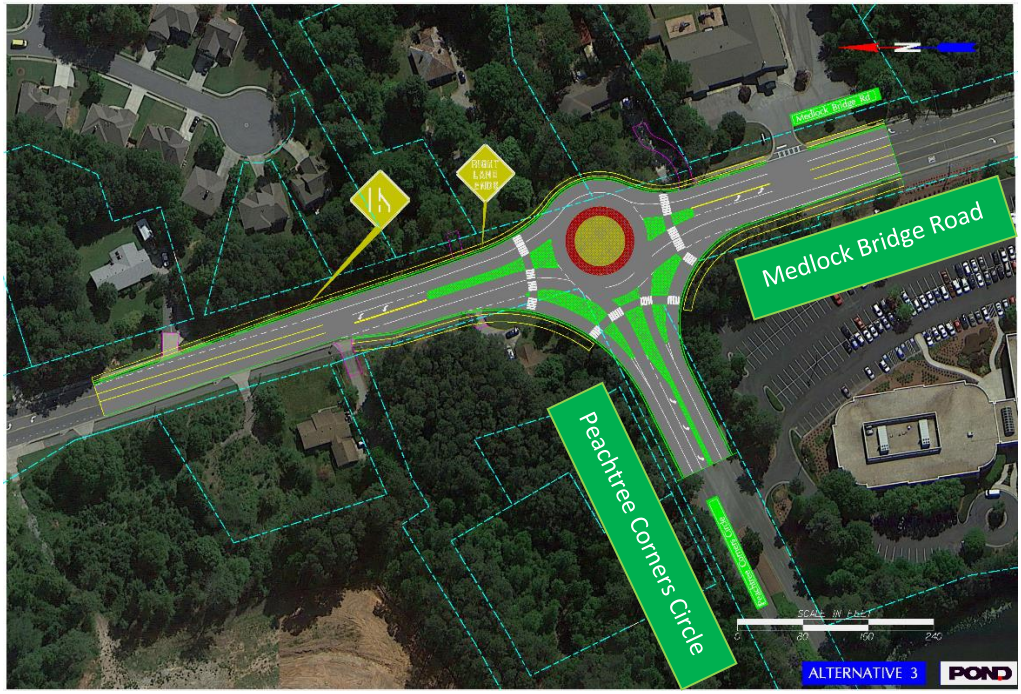
This alternative considers the potential growth in traffic on Medlock Bridge Road and the conceptual design reflects this in use of a southbound right turn bypass lane and two circulating lanes in both the northbound and southbound directions. The southbound right turn bypass lane is included to reduce overall delay for the intersection and to remove the movement from the circulating traffic to improve the eastbound traffic's ability to enter the roundabout. Although not directly correlated to a roundabout's approach capacity, the effect of exiting vehicles by right turn movement does influence a driver's decision to enter the circulating traffic stream (HCM 2010).

A second northbound and southbound through lane would be constructed to accommodate a potential future widening project on Medlock Bridge Road to bring the corridor up to a four-lane typical section. Without this paved area waiting in reserve, any future widening projects could significantly impact a single-lane roundabout and could even lead to a complete reconstruction. It should be noted that at this time, there is no identified plan, fiscally constrained or otherwise, to widen Medlock Bridge Road, but if the trend of growth continues as expected, the corridor may become a candidate for widening.

As in Alternative #1, to preserve the existing two-lane typical section of Medlock Bridge Road, a merge point to the north would be constructed and would require traffic in the right-hand lane to merge into traffic in the left-hand lane. In the southbound direction, the second through lane would circulate through the roundabout and tie into the left turn lane at the parking lot of the existing office building approximately 475' to the south.

A similar treatment from Alternative #1 and #2 should be applied at the driveway located on the east side of the roundabout. It will need to be relocated to prevent access directly into the circulating area. Relocating the existing driveway on the east side of Medlock Bridge Road to tie into Medlock Bridge Road on the southern edge of the property and south of the yield bar on the approach leg would allow the entering and exiting traffic on the driveway to be made at a location where all traffic approaching the roundabout will be slowing down to yield.

The driveways on the east side of the roundabout, along with the driveway on the northwest quadrant of the intersection would need to be relegated to a right-in/right-out movement. A left turn out of the driveways could be accommodated by entering the roundabout's interior circulating lane and traversing to the intended exit leg. A left turn into the driveway would need to be made by making a U-turn downstream of the roundabout at the closest point that supports a U-turn movement. This is most likely the signals at Bush Road and at Spalding Drive, or at a side street with auxiliary lanes that can be used as "eyebrow" areas. An "eyebrow" is a paved bulb-out area that vehicles with wide turning paths can use to complete a U-turn



COST ESTIMATES

Cost estimate summaries for each of the three alternatives can be found in **Table 24**. These estimates assume a 10% contingency value to construction costs. Utility costs were estimated to by 10% of roadway construction plus erosion control costs. Concept drawings with proposed construction limits that were used for the purposes of cost estimating can be found for each alternative in Appendix C of this report. Detailed cost estimates based on construction line items can be found in the Appendix D of this report.

Table 24 also indicates the costs for each alternative depending on whether the southbound right turn bypass lane were to be installed. As previously noted in the analysis within this document, the southbound right turn bypass lane can be omitted from the final design without reducing LOS and delay below design thresholds.

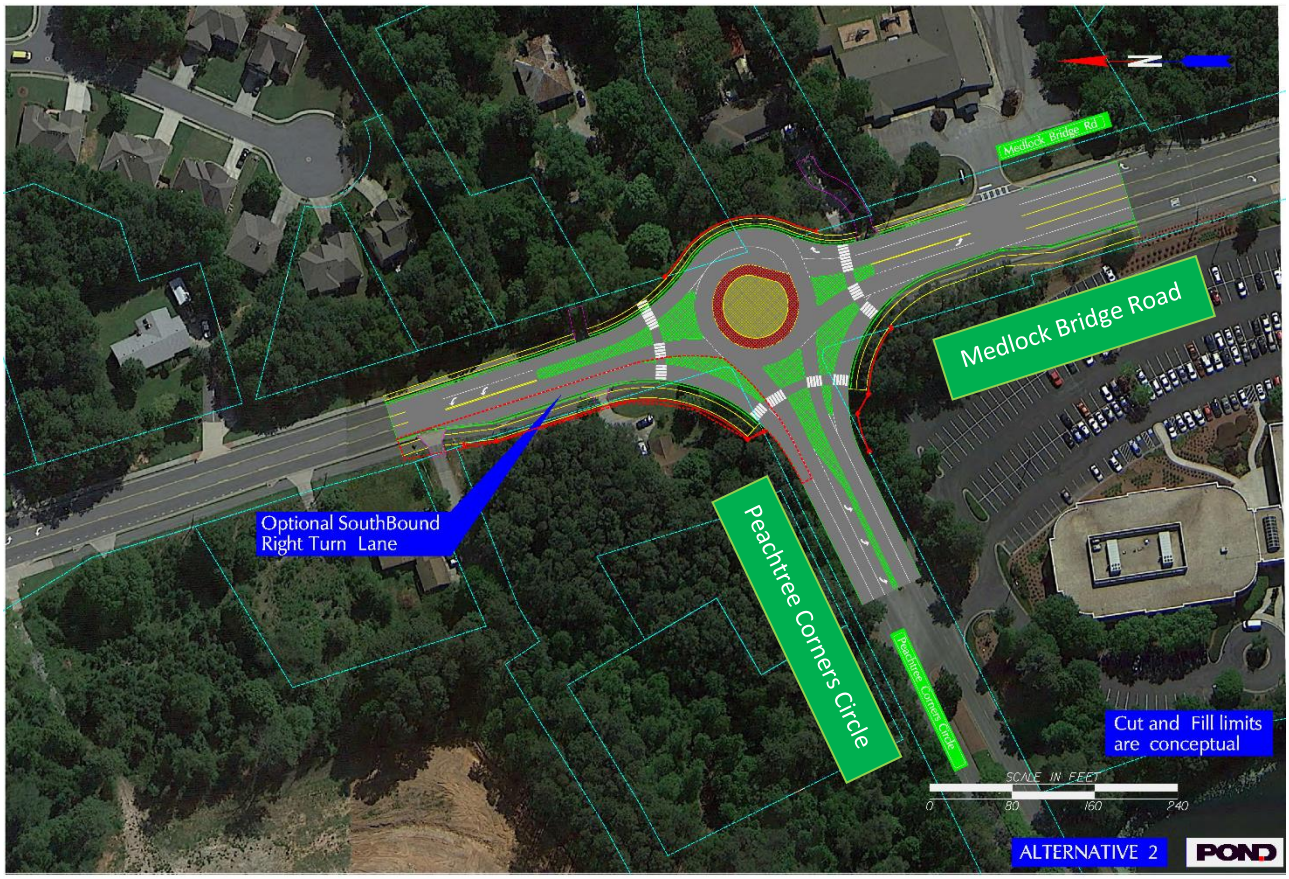
Table 24: Preliminary Cost Estimates by Alternative

Construction Cost Estimates					
Alternative	CST	UTL	ROW	TOTAL W/ OPTIONAL SB RT BYPASS	TOTAL W/OUT OPTIONAL SB RT BYPASS
#1) Two NB through lanes, one SB through lane, one EB left turn lane, one EB right turn bypass lane	$752,760.00	$67,200.00	$51,610.00	$871,570.00	$804,020.00
#2) One NB through lane, one NB left turn lane, one SB through lane, one EB left turn lane, one EB right turn bypass lane	$589,660.00	$52,400.00	$51,610.00	$693,670.00	$635,770.00
#3) Two NB through lanes, two SB through lanes, one SB right turn bypass lane, one EB left turn lane, one EB right turn bypass lane	$777,550.00	$69,500.00	$51,610.00	$898,660.00	$830,860.00

The preferred alternative, Alternative #2, has been selected based on the overall impacts to existing property owners and total construction cost. Alternative #2 is the most cost effective alternative and still meets design intersection LOS D in 2037.

Alternative #1 requires larger construction limits and also makes the crossing of the northern leg of the roundabout more difficult for pedestrians because they would need to cross 2 lanes of traffic. The need to merge back to one lane north of the roundabout in Alternative #1 is also less desirable than the single lane of Alternative #2.

Alternative #3 is expected to provide the best operations of the three concepts, and also to be the most costly to construct. Upon construction, the second SB through lane could either be striped for traffic at the opening date, or it could be striped as a large shoulder section that could be converted into the second lane at a later date, when needed. This alternative does incorporate potential traffic growth along Medlock Bridge Road in a better manner than either of the other two concepts by preparing the intersection for any future widening of the road. However, current plans for infrastructure improvements do identify Medlock Bridge Road as a candidate road for widening. Ultimately, the net difference in cost between Alternative #3 and Alternative #2, paired with the fact that there is no current plan for Medlock Bridge Road improvements, fiscally constrained or otherwise, makes Alternative #2 the preferred option at this location.



APPENDIX A

Traffic Counts

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TRAFFIC DATA SERVICES

Phone: (678) 687-8266 Fax: (404) 294-6122

24-HOUR ADT COUNT SUMMARY

CLIENT: POND AND COMPANY
PROJECT: PEACHTREE CORNERS CIRCLE TRAFFIC COUNT (#1B)
LOCATION: PEACHTREE CORNERS CIRCLE JUST WEST OF MEDLOCK BRIDGE
DATE: TUESDAY, DECEMBER 15TH 2015

DIRECTION:	EB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	0	5	5	3	13
1:00	0	4	1	1	6
2:00	0	1	0	1	2
3:00	0	1	0	3	4
4:00	1	0	2	2	5
5:00	8	6	3	9	26
6:00	6	8	27	35	76
7:00	47	38	40	47	172
8:00	52	46	34	40	172
9:00	62	60	38	38	198
10:00	34	44	37	35	150
11:00	27	42	43	54	166
12:00	76	56	73	66	271
13:00	83	84	69	70	306
14:00	58	100	85	58	301
15:00	78	82	75	84	319
16:00	119	120	154	110	503
17:00	178	154	124	120	576
18:00	136	110	117	82	445
19:00	76	60	48	62	246
20:00	52	43	41	22	158
21:00	45	37	28	26	136
22:00	23	13	23	16	75
23:00	10	8	5	3	26
				TOTAL	4352

AM PEAK HOUR	0845-0945
VOLUME	200
PM PEAK HOUR	1630-1730
VOLUME	596

DIRECTION:	WB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	2	1	0	1	4
1:00	1	0	1	0	2
2:00	1	0	1	0	2
3:00	2	1	2	4	9
4:00	1	1	4	14	20
5:00	8	6	7	13	34
6:00	17	29	41	76	163
7:00	92	148	156	173	569
8:00	140	120	133	132	525
9:00	103	80	58	70	311
10:00	47	41	43	41	172
11:00	50	49	62	52	213
12:00	52	71	76	72	271
13:00	66	60	55	65	246
14:00	49	62	59	58	228
15:00	44	60	61	70	235
16:00	74	59	48	69	250
17:00	63	78	68	88	297
18:00	73	69	58	46	246
19:00	29	47	34	41	151
20:00	23	23	24	16	86
21:00	16	10	9	9	44
22:00	9	4	10	2	25
23:00	3	1	0	2	6
				TOTAL	4109

AM PEAK HOUR	0715-0815
VOLUME	617
PM PEAK HOUR	1715-1815
VOLUME	307

TOTAL BI-DIRECTIONAL VOLUME	8461

TRAFFIC DATA SERVICES

Phone: (678) 687-8266 Fax: (404) 294-6122

24-HOUR ADT COUNT SUMMARY

CLIENT: POND AND COMPANY
PROJECT: PEACHTREE CORNERS CIRCLE TRAFFIC COUNT (#1A)
LOCATION: MEDLOCK BRIDGE ROAD JUST SOUTH OF PEACHTREE CORNERS CIRCLE
DATE: TUESDAY, DECEMBER 15TH 2015

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	6	7	10	6	29
1:00	4	6	4	3	17
2:00	3	2	1	1	7
3:00	2	3	8	11	24
4:00	6	6	13	19	44
5:00	22	22	44	54	142
6:00	58	93	121	175	447
7:00	189	217	232	236	874
8:00	192	168	211	203	774
9:00	194	121	159	161	635
10:00	123	115	130	129	497
11:00	122	125	164	155	566
12:00	161	152	146	140	599
13:00	149	156	142	143	590
14:00	114	161	175	167	617
15:00	152	158	193	168	671
16:00	167	138	170	201	676
17:00	202	211	218	240	871
18:00	200	218	162	143	723
19:00	93	103	104	111	411
20:00	91	72	75	61	299
21:00	68	30	48	30	176
22:00	42	30	33	16	121
23:00	18	12	12	12	54
				TOTAL	9864

AM PEAK HOUR	0715-0815
VOLUME	877
PM PEAK HOUR	1730-1830
VOLUME	876

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	9	7	10	8	34
1:00	3	6	5	0	14
2:00	1	1	1	1	4
3:00	1	3	2	5	11
4:00	2	3	2	7	14
5:00	10	12	17	19	58
6:00	38	53	89	118	298
7:00	104	103	130	95	432
8:00	97	135	97	93	422
9:00	108	125	100	111	444
10:00	81	101	82	92	356
11:00	76	98	101	101	376
12:00	106	144	142	165	557
13:00	146	151	161	151	609
14:00	142	155	151	143	591
15:00	162	157	137	153	609
16:00	159	200	196	172	727
17:00	191	179	148	136	654
18:00	189	172	190	180	731
19:00	155	138	153	160	606
20:00	114	109	105	83	411
21:00	92	84	79	74	329
22:00	39	56	55	45	195
23:00	28	30	33	17	108
				TOTAL	8590

AM PEAK HOUR	0730-0830
VOLUME	457
PM PEAK HOUR	1615-1715
VOLUME	759

TOTAL BI-DIRECTIONAL VOLUME	18454

TRAFFIC DATA SERVICES

Phone: (678) 687-8266 Fax: (404)

SPEED SURVEYS

CLIENT: POND AND COMPANY
PROJECT: PEACHTREE CORNERS CIRCLE TRAFFIC COUNT (#1A)
DATE: TUESDAY, DECEMBER 15TH 2015
LOCATION: MEDLOCK BRIDGE ROAD JUST SOUTH OF PEACHTREE CORNERS CIRCLE
DIRECTION: NB
POSTED SPEED LIMIT: 40 MPH

BEGIN TIME	TOTAL	0-15 MPH	15-20 MPH	20-25 MPH	25-30 MPH	30-35 MPH	35-40 MPH	40-45 MPH	45-50 MPH	50-55 MPH	55-60 MPH	60-65 MPH	65-70 MPH	70-200 MPH
0:00	29	0	0	0	0	0	0	5	18	5	1	0	0	0
1:00	17	0	0	0	0	0	0	3	5	4	3	1	1	0
2:00	7	0	0	0	0	0	1	2	2	1	1	0	0	0
3:00	24	0	0	0	0	0	3	4	9	7	0	1	0	0
4:00	44	0	0	1	0	1	3	9	16	11	3	0	0	0
5:00	142	0	0	0	0	1	5	36	61	23	10	5	1	0
6:00	447	4	2	0	5	17	40	159	161	49	8	2	0	0
7:00	874	15	10	9	2	31	269	363	153	17	4	1	0	0
8:00	774	31	16	19	9	36	188	304	140	26	2	1	1	1
9:00	635	21	8	7	4	19	97	225	206	41	6	1	0	0
10:00	497	8	3	5	3	1	57	171	191	50	7	0	1	0
11:00	566	8	1	3	8	8	48	177	224	78	11	0	0	0
12:00	599	17	11	4	2	8	59	183	266	40	8	1	0	0
13:00	590	13	7	8	7	11	49	211	212	56	14	1	0	1
14:00	617	20	11	10	9	13	81	259	169	32	11	1	0	1
15:00	671	18	10	10	2	18	113	247	201	45	4	2	0	1
16:00	676	31	10	11	16	9	106	237	199	44	9	2	0	2
17:00	871	45	19	9	18	39	195	352	168	19	2	2	1	2
18:00	723	32	13	11	14	41	215	273	106	12	3	0	0	3
19:00	411	8	3	2	4	7	72	165	121	25	1	1	0	2
20:00	299	5	4	3	1	5	39	120	98	16	8	0	0	0
21:00	176	3	0	0	2	3	11	41	88	24	2	2	0	0
22:00	121	1	0	0	1	1	10	39	41	20	8	0	0	0
23:00	54	0	0	0	0	0	1	14	24	8	6	0	1	0
DAILY TOTALS:	**9864**	**280**	**128**	**112**	**107**	**269**	**1662**	**3599**	**2879**	**653**	**132**	**24**	**6**	**13**
PERCENT TOTALS:		**2.8%**	**1.3%**	**1.1%**	**1.1%**	**2.7%**	**16.8%**	**36.5%**	**29.2%**	**6.6%**	**1.3%**	**0.2%**	**0.1%**	**0.1%**

PERECENTILE SPEEDS:	10%	15%	50%	85%	90%	Average Minimum

TRAFFIC DATA SERVICES

Phone: (678) 687-8266 Fax: (404) 294-6122

SPEED SURVEYS

CLIENT: POND AND COMPANY
PROJECT: PEACHTREE CORNERS CIRCLE TRAFFIC COUNT (#1A)
DATE: TUESDAY, DECEMBER 15TH 2015
LOCATION: MEDLOCK BRIDGE ROAD JUST SOUTH OF PEACHTREE CORNERS CIRCLE
DIRECTION: SB
POSTED SPEED LIMIT: 40 MPH

BEGIN TIME	TOTAL	0-15 MPH	15-20 MPH	20-25 MPH	25-30 MPH	30-35 MPH	35-40 MPH	40-45 MPH	45-50 MPH	50-55 MPH	55-60 MPH	60-65 MPH	65-70 MPH	70-200 MPH	AVG SPEED
0:00	34	0	0	0	1	4	6	7	15	1	0	0	0	0	42.5
1:00	14	0	0	0	1	2	3	1	6	0	1	0	0	0	45.2
2:00	4	0	0	0	0	1	2	1	0	0	0	0	0	0	38.2
3:00	11	0	0	0	0	1	2	2	3	3	0	0	0	0	44.2
4:00	14	0	0	0	0	0	2	6	2	4	0	0	0	0	45.4
5:00	58	0	0	0	1	4	8	16	10	16	3	0	0	0	45.1
6:00	298	7	2	4	12	17	74	91	67	19	2	3	0	0	40.9
7:00	432	23	17	15	19	45	112	118	65	11	4	2	0	1	37.5
8:00	422	27	10	7	19	52	148	99	42	13	2	0	1	2	36.9
9:00	444	23	14	8	17	64	105	106	80	21	4	1	1	0	38.1
10:00	356	9	2	6	5	26	77	132	67	26	5	0	0	1	41.2
11:00	376	9	2	4	6	29	59	133	112	17	4	1	0	0	41.6
12:00	557	17	9	10	17	49	164	173	88	21	3	0	1	5	39.5
13:00	609	18	5	7	23	70	162	186	115	18	3	0	1	1	39.4
14:00	591	22	15	8	12	65	214	175	58	13	4	1	2	2	38.3
15:00	609	27	5	14	35	110	192	159	54	6	3	1	1	2	37.1
16:00	727	49	19	22	47	130	261	147	38	10	2	1	0	1	35.1
17:00	654	58	26	25	51	154	203	97	27	7	1	1	2	2	33.4
18:00	731	43	19	21	48	195	256	94	40	5	3	2	1	4	34.7
19:00	606	13	8	13	18	110	260	145	35	4	0	0	0	0	36.9
20:00	411	3	7	1	7	31	150	153	45	10	2	2	0	0	39.8
21:00	329	3	0	1	4	38	104	101	64	12	1	1	0	0	40.6
22:00	195	1	0	0	4	12	50	67	44	15	1	0	1	0	42.2
23:00	108	0	0	0	1	6	16	32	38	12	2	1	0	0	44.5
DAILY TOTALS:	**8590**	**352**	**160**	**166**	**348**	**1215**	**2630**	**2241**	**1115**	**264**	**50**	**17**	**11**	**21**	**38.0**
PERCENT TOTALS:		**4.1%**	**1.9%**	**1.9%**	**4.1%**	**14.1%**	**30.6%**	**26.1%**	**13.0%**	**3.1%**	**0.6%**	**0.2%**	**0.1%**	**0.2%**	

PERECENTILE SPEEDS:	10%	15%	50%	85%	90%
	28.1	31.7	39.2	45.1	47.3

Average	38.0
Minimum	10.0
Maximum	87.6

SPEED EXCEEDED:	25 MPH	35 MPH	45 MPH	55 MPH	65 MPH	75 MPH
PERCENTAGE:	92.1%	73.9%	17.2%	1.2%	0.4%	0.2%
TOTALS:	7912	6349	1478	99	32	15

10 MPH PACE SPEED:	33.9-43.9
NUMBER IN PACE:	5039
% IN PACE:	58.7

TRAFFIC DATA SERVICES

Phone: (678) 687-8266 Fax: (404) 294-6122

AXLE CLASSIFICATION SURVEY

CLIENT: POND AND COMPANY
PROJECT: PEACHTREE CORNERS CIRCLE TRAFFIC COUNT (#1A)
DATE: TUESDAY, DECEMBER 15TH 2015
LOCATION: MEDLOCK BRIDGE ROAD JUST SOUTH OF PEACHTREE CORNERS CIRCLE
DIRECTION: NB

BEGIN TIME	TOTAL	1 BIKES	2 CARS & TLRS	3 2 AXLE LONG	4 BUSES	5 2 AXLE 6 TIRE	6 3 AXLE SINGLE	7 4 AXLE SINGLE	8 <5AXLE DOUBL	9 5 AXLE DOUBL	10 >6AXLE DOUBL	11 <6AXLE MULTI	12 6 AXLE MULTI	13 >6AXLE MULTI
0:00	29	0	28	1	0	0	0	0	0	0	0	0	0	0
1:00	17	0	15	1	0	0	0	0	0	1	0	0	0	0
2:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0
3:00	24	0	19	2	0	1	2	0	0	0	0	0	0	0
4:00	44	0	40	3	1	0	0	0	0	0	0	0	0	0
5:00	142	2	115	14	3	7	1	0	0	0	0	0	0	0
6:00	447	2	343	65	11	21	1	0	4	0	0	0	0	0
7:00	874	9	668	134	25	24	8	0	3	1	1	1	0	0
8:00	774	7	553	129	28	41	0	0	14	1	0	1	0	0
9:00	635	5	479	96	25	21	3	0	2	3	0	1	0	0
10:00	497	6	366	79	14	17	5	0	8	2	0	0	0	0
11:00	566	3	462	66	12	16	5	0	1	1	0	0	0	0
12:00	599	10	468	71	18	23	2	0	6	1	0	0	0	0
13:00	590	11	466	72	18	14	3	0	6	0	0	0	0	0
14:00	617	17	451	94	27	19	1	0	3	4	0	1	0	0
15:00	671	11	517	94	27	13	0	0	8	0	0	1	0	0
16:00	676	18	535	73	30	11	0	1	7	0	0	1	0	0
17:00	871	20	677	96	45	12	1	0	17	1	0	2	0	0
18:00	723	19	586	74	21	16	0	0	6	0	0	1	0	0
19:00	411	8	348	46	5	3	0	0	1	0	0	0	0	0
20:00	299	5	249	35	7	3	0	0	0	0	0	0	0	0
21:00	176	0	148	23	2	2	0	0	1	0	0	0	0	0
22:00	121	0	106	13	0	1	0	0	1	0	0	0	0	0
23:00	54	0	43	9	0	1	0	0	0	1	0	0	0	0
DAILY TOTALS:	**9864**	**153**	**7689**	**1290**	**319**	**266**	**32**	**1**	**88**	**16**	**1**	**9**	**0**	**0**
PERCENT TOTALS:		**1.6%**	**78.0%**	**13.1%**	**3.2%**	**2.7%**	**0.3%**	**0.0%**	**0.9%**	**0.2%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**

TRAFFIC DATA SERVICES

Phone: (678) 687-8266 Fax: (404) 294-6122

AXLE CLASSIFICATION SURVEY

CLIENT: POND AND COMPANY
PROJECT: PEACHTREE CORNERS CIRCLE TRAFFIC COUNT (#1A)
DATE: TUESDAY, DECEMBER 15TH 2015
LOCATION: MEDLOCK BRIDGE ROAD JUST SOUTH OF PEACHTREE CORNERS CIRCLE
DIRECTION: SB

BEGIN TIME	TOTAL	1 BIKES	2 CARS & TLRS	3 2 AXLE LONG	4 BUSES	5 2 AXLE 6 TIRE	6 3 AXLE SINGLE	7 4 AXLE SINGLE	8 <5AXLE DOUBL	9 5 AXLE DOUBL	10 >6AXLE DOUBL	11 <6AXLE MULTI	12 6 AXLE MULTI	13 >6AXLE MULTI
0:00	34	0	31	2	0	0	0	0	0	1	0	0	0	0
1:00	14	0	11	2	0	1	0	0	0	0	0	0	0	0
2:00	4	0	3	1	0	0	0	0	0	0	0	0	0	0
3:00	11	0	10	1	0	0	0	0	0	0	0	0	0	0
4:00	14	0	9	3	0	2	0	0	0	0	0	0	0	0
5:00	58	0	42	12	0	3	1	0	0	0	0	0	0	0
6:00	298	8	226	40	8	11	2	0	3	0	0	0	0	0
7:00	432	18	320	41	27	12	3	0	9	1	0	1	0	0
8:00	422	10	315	45	26	17	0	0	8	0	0	1	0	0
9:00	444	11	319	53	30	20	2	0	8	0	0	0	1	0
10:00	356	7	271	47	7	12	5	0	6	0	0	1	0	0
11:00	376	3	273	68	7	16	2	0	4	3	0	0	0	0
12:00	557	9	410	94	17	23	2	0	1	1	0	0	0	0
13:00	609	6	461	86	22	16	3	0	14	0	0	1	0	0
14:00	591	14	446	70	27	22	4	0	5	2	0	0	0	1
15:00	609	6	443	87	30	29	2	0	10	0	0	2	0	0
16:00	727	17	528	91	49	24	0	0	15	2	0	1	0	0
17:00	654	18	463	82	55	13	3	0	15	1	0	4	0	0
18:00	731	19	533	103	44	18	1	0	13	0	0	0	0	0
19:00	606	5	477	96	16	7	0	0	3	0	0	2	0	0
20:00	411	2	359	41	4	5	0	0	0	0	0	0	0	0
21:00	329	1	293	29	2	4	0	0	0	0	0	0	0	0
22:00	195	0	178	15	1	1	0	0	0	0	0	0	0	0
23:00	108	0	94	13	0	1	0	0	0	0	0	0	0	0
DAILY TOTALS:	**8590**	**154**	**6515**	**1122**	**372**	**257**	**30**	**0**	**114**	**11**	**0**	**13**	**1**	**1**
PERCENT TOTALS:		**1.8%**	**75.8%**	**13.1%**	**4.3%**	**3.0%**	**0.3%**	**0.0%**	**1.3%**	**0.1%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**

TRAFFIC DATA SERVICES

Phone: (678) 687-8266 Fax: (404) 294-6122

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: POND AND COMPANY
PROJECT: PEACHTREE CORNERS CIRCLE TRAFFIC COUNT (#1)
DATE: TUESDAY, DECEMBER 15TH 2015
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S MEDLOCK BRIDGE ROAD
E/W PEACHTREE CORNERS CIRCLE

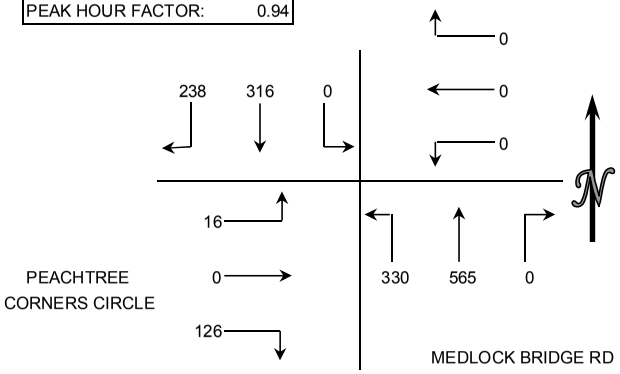
15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	27	93	0	0	0	0	0	152	67	33	0	3	375
715-730	57	80	0	0	0	0	0	177	73	34	0	4	425
730-745	60	80	0	0	0	0	0	142	84	26	0	4	396
745-800	69	68	0	0	0	0	0	120	82	21	0	6	366
800-815	52	88	0	0	0	0	0	126	91	45	0	2	404
815-830	58	98	0	0	0	0	0	112	67	35	0	1	371
830-845	62	94	0	0	0	0	0	144	64	27	0	1	392
845-900	42	79	0	0	0	0	0	132	84	22	0	7	366

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	213	321	0	0	0	0	0	591	306	114	0	17	1562
715-815	238	316	0	0	0	0	0	565	330	126	0	16	1591
730-830	239	334	0	0	0	0	0	500	324	127	0	13	1537
745-845	241	348	0	0	0	0	0	502	304	128	0	10	1533
800-900	214	359	0	0	0	0	0	514	306	129	0	11	1533

AM PEAK HOUR: 715-815
PEAK HOUR FACTOR: 0.94



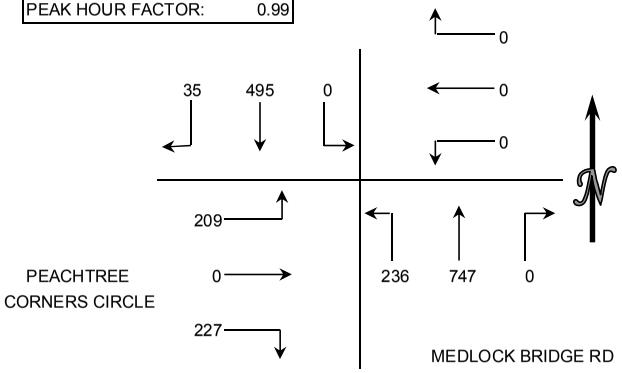
15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	10	106	0	0	0	0	0	121	60	79	0	33	409
415-430	7	133	0	0	0	0	0	106	53	72	0	28	399
430-445	8	116	0	0	0	0	0	186	33	80	0	39	462
445-500	8	130	0	0	0	0	0	147	58	51	0	35	429
500-515	10	122	0	0	0	0	0	184	49	71	0	52	488
515-530	11	115	0	0	0	0	0	180	61	62	0	65	494
530-545	8	126	0	0	0	0	0	199	60	52	0	45	490
545-600	6	132	0	0	0	0	0	184	66	42	0	47	477

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	33	485	0	0	0	0	0	560	204	282	0	135	1699
415-515	33	501	0	0	0	0	0	623	193	274	0	154	1778
430-530	37	483	0	0	0	0	0	697	201	264	0	191	1873
445-545	37	493	0	0	0	0	0	710	228	236	0	197	1901
500-600	35	495	0	0	0	0	0	747	236	227	0	209	1949

PM PEAK HOUR: 500-600
PEAK HOUR FACTOR: 0.99



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APPENDIX B

2015, 2017 and 2037 No-Build and Build Condition Synchro Reports, GDOT Roundabout Tool Reports, and SIDRA Solutions Reports

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Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	16	126	330	565	316	238
Future Vol, veh/h	16	126	330	565	316	238
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	0	150	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	90	90	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	166	367	628	319	240

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1680	-	319	0	-	0
Stage 1	319	-	-	-	-	-
Stage 2	1361	-	-	-	-	-
Critical Hdwy	6.42	-	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	2.218	-	-	-
Pot Cap-1 Maneuver	104	0	1241	-	-	0
Stage 1	737	0	-	-	-	0
Stage 2	238	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	73	-	1241	-	-	-
Mov Cap-2 Maneuver	142	-	-	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	168	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34.7	3.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1241	-	142	-	-
HCM Lane V/C Ratio	0.295	-	0.148	-	-
HCM Control Delay (s)	9.1	-	34.7	0	-
HCM Lane LOS	A	-	D	A	-
HCM 95th %tile Q(veh)	1.2	-	0.5	-	-

Intersection	
Int Delay, s/veh	44.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	209	227	236	747	495	35
Future Vol, veh/h	209	227	236	747	495	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	0	150	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	243	264	246	778	516	36

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1786	-	516	0	-	0
Stage 1	516	-	-	-	-	-
Stage 2	1270	-	-	-	-	-
Critical Hdwy	6.42	-	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	2.218	-	-	-
Pot Cap-1 Maneuver	~ 90	0	1050	-	-	0
Stage 1	599	0	-	-	-	0
Stage 2	264	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	~ 69	-	1050	-	-	-
Mov Cap-2 Maneuver	~ 160	-	-	-	-	-
Stage 1	599	-	-	-	-	-
Stage 2	~ 202	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 314.6	2.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1050	-	160	-	-
HCM Lane V/C Ratio	0.234	-	1.519	-	-
HCM Control Delay (s)	9.5	-	$ 314.6	0	-
HCM Lane LOS	A	-	F	A	-
HCM 95th %tile Q(veh)	0.9	-	16.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	22	158	414	733	407	307
Future Vol, veh/h	22	158	414	733	407	307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	0	150	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	90	90	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	208	460	814	411	310

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2145	-	411	0	-	0
Stage 1	411	-	-	-	-	-
Stage 2	1734	-	-	-	-	-
Critical Hdwy	6.42	-	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	2.218	-	-	-
Pot Cap-1 Maneuver	53	0	1148	-	-	0
Stage 1	669	0	-	-	-	0
Stage 2	156	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	32	-	1148	-	-	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	93	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	73.6	3.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1148	-	80	-	-
HCM Lane V/C Ratio	0.401	-	0.362	-	-
HCM Control Delay (s)	10.2	-	73.6	0	-
HCM Lane LOS	B	-	F	A	-
HCM 95th %tile Q(veh)	2	-	1.4	-	-

Intersection	
Int Delay, s/veh	131.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	263	267	277	935	659	47
Future Vol, veh/h	263	267	277	935	659	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	0	0	150	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	306	310	289	974	686	49

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2237	-	686	0	-	0
Stage 1	686	-	-	-	-	-
Stage 2	1551	-	-	-	-	-
Critical Hdwy	6.42	-	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	2.218	-	-	-
Pot Cap-1 Maneuver	~ 47	0	908	-	-	0
Stage 1	500	0	-	-	-	0
Stage 2	~ 192	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	~ 32	-	908	-	-	-
Mov Cap-2 Maneuver	~ 104	-	-	-	-	-
Stage 1	500	-	-	-	-	-
Stage 2	~ 131	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 962.5	2.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	908	-	104	-	-
HCM Lane V/C Ratio	0.318	-	2.941	-	-
HCM Control Delay (s)	10.8	-	$ 962.5	0	-
HCM Lane LOS	B	-	F	A	-
HCM 95th %tile Q(veh)	1.4	-	29.2	-	-

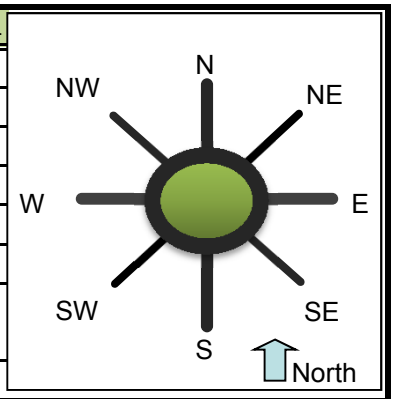
Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2017, Single Lane Roundabout, AM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection Name:	Peachtre Corners Circle at Medlock Bridge Road



Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
	N (1), vph					603		18	
Exit	NE (2), vph								
Legs	E (3), vph								
(TO)	SE (4), vph								
	S (5), vph	335							
	SW (6), vph								
	W (7), vph					338			
	NW (8), vph								
Output	Total Vehicles	335	0	0	0	941	0	18	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycle	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.99*	*0.92*	*0.92*	*0.92*	*0.90*	*0.92*	*0.76*	*0.92*
F_{HV}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	683	0	24	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	345	0	0	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	0	0	383	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	345	0	0	0	1066	0	24	0
Conflicting flow, pcu/h	383	0	0	0	24	0	345	0

Roundabout Type	Standard Single Lane or Urban Compact
Enter type here…	Standard Single Lane

Results: Approach Measures of Effectiveness

HCM 2010 Model (build)	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	755	NA	NA	NA	1081	NA	784	NA
Entry Flow Rates, vph	338	NA	NA	NA	1046	NA	24	NA
V/C ratio	**0.45**				**0.97**		**0.03**	
Control Delay, s/veh	**11**				**39**		**5**	
LOS	B				E		A	
95th % Queue (ft)	**59**				**451**		**2**	
Calibrated Model (future)	**N**	**NE**	**E**	**SE**	**S**	**SW**	**W**	**NW**
Entry Capacity, vph	962	NA	NA	NA	1282	NA	992	NA
Entry Flow Rates, vph	338	NA	NA	NA	1046	NA	24	NA
V/C ratio	**0.36**				**0.83**		**0.02**	
Control Delay, sec/pcu	**8**				**19**		**4**	
LOS	A				C		A	
95th % Queue (ft)	**42**				**271**		**2**	

Notes: v2.1

Unit Legend:
vph = vehicles per hour
PHF = peak hour factor
F_{HV} = heavy vehicle factor
pcu = passenger car unit

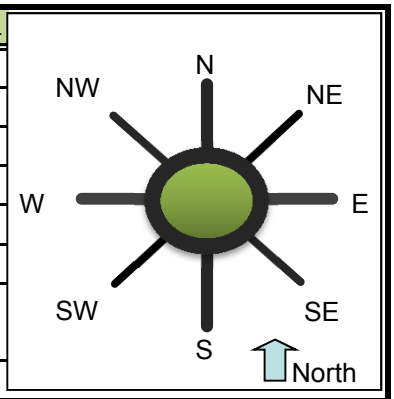
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	**N (1)**	**W (7)**				
Select Exit Leg for Bypass (TO)	**W (7)**	**S (5)**				
Does the bypass have a dedicated receiving lane?	**Yes**	**No**				
Volumes						
Right Turn Volume removed from Entry Leg	**252**	**129**				
Volume Characteristics (for entry leg)						
PHF	0.99	0.76				
F_{HV}	0.98	0.98				
F_{ped}	1.00	1.00				
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr	260	173				
Conflicting Flow, pcu/hr	0	345				
Bypass Lane Results (HCM 2010 Model)						
Entry Capacity of Bypass, vph	1108	784				
Flow Rates of Exiting Traffic, vph	255	170				
V/C ratio	**0.23**	**0.22**				
Control Delay, s/veh	**0.0**	**7.0**				
LOS	A	A				
95th % Queue (ft)	**23**	**21**				
Approach w/Bypass Delay, s/veh	***6.2***	***6.7***				
Approach w/Bypass LOS	*A*	*A*				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2017, Single Lane Roundabout, PM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection Name:	Peachtre Corners Circle at Medlock Bridge Road



Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
	N (1), vph					824		231	
Exit	NE (2), vph								
Legs	E (3), vph								
(TO)	SE (4), vph								
	S (5), vph	585							
	SW (6), vph								
	W (7), vph					242			
	NW (8), vph								
Output	Total Vehicles	585	0	0	0	1066	0	231	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycle	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.96*	*0.92*	*0.92*	*0.92*	*0.95*	*0.92*	*0.86*	*0.92*
F_{HV}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	885	0	274	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	622	0	0	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	0	0	260	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	622	0	0	0	1145	0	274	0
Conflicting flow, pcu/h	260	0	0	0	274	0	622	0

Roundabout Type	Standard Single Lane or Urban Compact
Enter type here…	Standard Single Lane

Results: Approach Measures of Effectiveness

HCM 2010 Model (build)	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	854	NA	NA	NA	842	NA	595	NA
Entry Flow Rates, vph	609	NA	NA	NA	1122	NA	269	NA
V/C ratio	**0.71**				**1.33**		**0.45**	
Control Delay, s/veh	**18**				**174**		**13**	
LOS	C				F		B	
95th % Queue (ft)	**158**				**1133**		**60**	
Calibrated Model (future)	**N**	**NE**	**E**	**SE**	**S**	**SW**	**W**	**NW**
Entry Capacity, vph	1062	NA	NA	NA	1050	NA	795	NA
Entry Flow Rates, vph	609	NA	NA	NA	1122	NA	269	NA
V/C ratio	**0.59**				**1.09**		**0.34**	
Control Delay, sec/pcu	**11**				**75**		**9**	
LOS	B				F		A	
95th % Queue (ft)	**101**				**701**		**39**	

Notes: v2.1

Unit Legend:
vph = vehicles per hour
PHF = peak hour factor
F_{HV} = heavy vehicle factor
pcu = passenger car unit

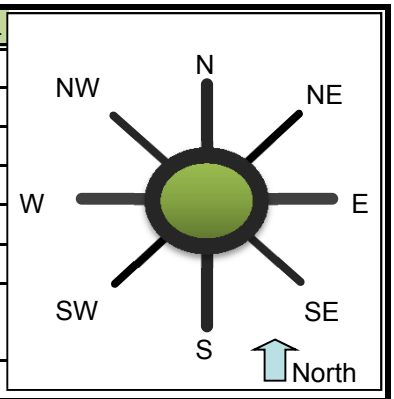
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	**N (1)**	**W (7)**				
Select Exit Leg for Bypass (TO)	**W (7)**	**S (5)**				
Does the bypass have a dedicated receiving lane?	**Yes**	**No**				
Volumes						
Right Turn Volume removed from Entry Leg	**41**	**233**				
Volume Characteristics (for entry leg)						
PHF	0.96	0.86				
F_{HV}	0.98	0.98				
F_{ped}	1.00	1.00				
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr	44	276				
Conflicting Flow, pcu/hr	0	622				
Bypass Lane Results (HCM 2010 Model)						
Entry Capacity of Bypass, vph	1108	595				
Flow Rates of Exiting Traffic, vph	43	271				
V/C ratio	**0.04**	**0.46**				
Control Delay, s/veh	**0.0**	**13.5**				
LOS	A	B				
95th % Queue (ft)	**3**	**62**				
Approach w/Bypass Delay, s/veh	***16.4***	***13.3***				
Approach w/Bypass LOS	*C*	*B*				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2037, Single Lane Roundabout, AM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection Name:	Peachtre Corners Circle at Medlock Bridge Road



Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
	N (1), vph					733		22	
Exit	NE (2), vph								
Legs	E (3), vph								
(TO)	SE (4), vph								
	S (5), vph	407							
	SW (6), vph								
	W (7), vph					414			
	NW (8), vph								
Output	Total Vehicles	407	0	0	0	1147	0	22	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycle	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.99*	*0.92*	*0.92*	*0.92*	*0.90*	*0.92*	*0.76*	*0.92*
F_{HV}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	831	0	30	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	419	0	0	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	0	0	469	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	419	0	0	0	1300	0	30	0
Conflicting flow, pcu/h	469	0	0	0	30	0	419	0

Roundabout Type	Standard Single Lane or Urban Compact
Enter type here…	Standard Single Lane

Results: Approach Measures of Effectiveness

HCM 2010 Model (build)	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	693	NA	NA	NA	1076	NA	728	NA
Entry Flow Rates, vph	411	NA	NA	NA	1274	NA	29	NA
V/C ratio	**0.59**				**1.18**		**0.04**	
Control Delay, s/veh	**15**				**109**		**5**	
LOS	C				F		A	
95th % Queue (ft)	**100**				**958**		**3**	
Calibrated Model (future)	**N**	**NE**	**E**	**SE**	**S**	**SW**	**W**	**NW**
Entry Capacity, vph	898	NA	NA	NA	1276	NA	934	NA
Entry Flow Rates, vph	411	NA	NA	NA	1274	NA	29	NA
V/C ratio	**0.47**				**1.02**		**0.03**	
Control Delay, sec/pcu	**10**				**48**		**4**	
LOS	A				E		A	
95th % Queue (ft)	**64**				**602**		**2**	

Notes: v2.1

Unit Legend:
vph = vehicles per hour
PHF = peak hour factor
F_{HV} = heavy vehicle factor
pcu = passenger car unit

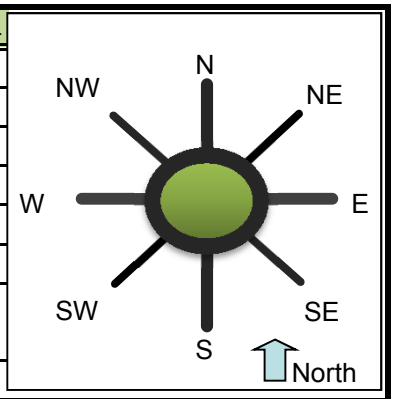
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	**N (1)**	**W (7)**				
Select Exit Leg for Bypass (TO)	**W (7)**	**S (5)**				
Does the bypass have a dedicated receiving lane?	**Yes**	**No**				
Volumes						
Right Turn Volume removed from Entry Leg	**307**	**158**				
Volume Characteristics (for entry leg)						
PHF	0.99	0.76				
F_{HV}	0.98	0.98				
F_{ped}	1.00	1.00				
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr	316	212				
Conflicting Flow, pcu/hr	0	419				
Bypass Lane Results (HCM 2010 Model)						
Entry Capacity of Bypass, vph	1108	728				
Flow Rates of Exiting Traffic, vph	310	208				
V/C ratio	**0.28**	**0.29**				
Control Delay, s/veh	**0.0**	**8.4**				
LOS	A	A				
95th % Queue (ft)	**29**	**31**				
Approach w/Bypass Delay, s/veh	***8.8***	***8.0***				
Approach w/Bypass LOS	*A*	*A*				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2037 Single Lane Roundabout, PM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection Name:	Peachtre Corners Circle at Medlock Bridge Road



Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit Legs (TO)	N (1), vph					995		279	
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph	699							
	SW (6), vph								
	W (7), vph					296			
	NW (8), vph								
Output	Total Vehicles	699	0	0	0	1291	0	279	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycle	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.96*	*0.92*	*0.92*	*0.92*	*0.95*	*0.92*	*0.86*	*0.92*
F_{HV}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	1068	0	331	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	743	0	0	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	0	0	318	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	743	0	0	0	1386	0	331	0
Conflicting flow, pcu/h	318	0	0	0	331	0	743	0

Roundabout Type	Standard Single Lane or Urban Compact
Enter type here…	Standard Single Lane

Results: Approach Measures of Effectiveness

HCM 2010 Model (build)	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	806	NA	NA	NA	796	NA	527	NA
Entry Flow Rates, vph	728	NA	NA	NA	1359	NA	324	NA
V/C ratio	**0.90**				**1.71**		**0.62**	
Control Delay, s/veh	**35**				**339**		**20**	
LOS	E				F		C	
95th % Queue (ft)	**315**				**1964**		**105**	
Calibrated Model (future)	**N**	**NE**	**E**	**SE**	**S**	**SW**	**W**	**NW**
Entry Capacity, vph	1013	NA	NA	NA	1003	NA	721	NA
Entry Flow Rates, vph	728	NA	NA	NA	1359	NA	324	NA
V/C ratio	**0.73**				**1.38**		**0.46**	
Control Delay, sec/pcu	**16**				**193**		**11**	
LOS	C				F		B	
95th % Queue (ft)	**175**				**1454**		**62**	

Notes: v2.1

Unit Legend:
vph = vehicles per hour
PHF = peak hour factor
F_{HV} = heavy vehicle factor
pcu = passenger car unit

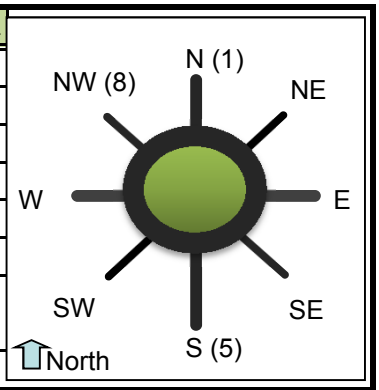
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	**N (1)**	**W (7)**				
Select Exit Leg for Bypass (TO)	**W (7)**	**S (5)**				
Does the bypass have a dedicated receiving lane?	**Yes**	**No**				
Volumes						
Right Turn Volume removed from Entry Leg	**49**	**285**				
Volume Characteristics (for entry leg)						
PHF	0.96	0.86				
F_{HV}	0.98	0.98				
F_{ped}	1.00	1.00				
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr	52	338				
Conflicting Flow, pcu/hr	0	743				
Bypass Lane Results (HCM 2010 Model)						
Entry Capacity of Bypass, vph	1108	527				
Flow Rates of Exiting Traffic, vph	51	331				
V/C ratio	**0.05**	**0.64**				
Control Delay, s/veh	**0.0**	**21.4**				
LOS	A	C				
95th % Queue (ft)	**4**	**115**				
Approach w/Bypass Delay, s/veh	***32.7***	***20.8***				
Approach w/Bypass LOS	*D*	*C*				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2017, Multi-Lane 1 NBL and 1 NBT Lane, AM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO)	N (1), vph								
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph	335							
	SW (6), vph								
	W (7), vph								
	NW (8), vph								
	Entry Volume, vph	335	0	0	0	0	0	0	0

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Left Only	Thru	SELECT	SELECT	Left Only	SELECT	SELECT	SELECT
	N (1), vph		603			18			
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph								
	SW (6), vph								
	W (7), vph	338							
	NW (8), vph								
	Entry Volume, vph	338	603	0	0	18	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.99*	*0.92*	*0.92*	*0.92*	*0.90*	*0.92*	*0.76*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	683	0	24	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	345	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	0	0	0	0	383	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	345	0	0	0	1066	0	24	0
	Entry flow Lane 1, pcu/h	345	0	0	0	383	0	24	0
	Entry flow Lane 2, pcu/h	0	0	0	0	683	0	0	0
	Conflicting flow, pcu/h	383	0	0	0	24	0	345	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	847	NA	NA	NA	1081	1081	870	NA
Entry Flow Rates, veh/h	338	NA	NA	NA	376	670	24	NA
V/C ratio	**0.40**	#VALUE!			**0.35**	**0.62**	**0.03**	
Control Delay, s/veh	**9.0**	#VALUE!			**6.8**	**11.7**	**4.4**	
LOS	A	#VALUE!			A	B	A	
95th % Queue (ft)	**49**	#VALUE!			**40**	**115**	**2**	
Approach Delay, LOS	5.2 sec, LOS A				9.9 sec, LOS A		6.7 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	1139	NA	NA	NA	1378	1378	1179	NA
Entry Flow Rates, veh/h	338	NA	NA	NA	376	670	24	NA
V/C ratio	**0.30**	#VALUE!			**0.27**	**0.49**	**0.02**	
Control Delay, s/veh	**6.0**	#VALUE!			**5.0**	**7.5**	**3.2**	
LOS	A	#VALUE!			A	A	A	
95th % Queue (ft)	**32**	#VALUE!			**28**	**70**	**2**	
Approach Delay, LOS	3.4 sec, LOS A				6.6 sec, LOS A		6.5 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	W (7)				
Select Exit Leg for Bypass (TO)	W (7)	S (5)				
Does the bypass have a dedicated receiving lane?	Yes	No				
# of Conflicting Exit Flow Lanes	1	1	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume	252	129				
Exit Leg: ***(Select Input Method)***	Default	Default				
*Lane Flow in Exit Leg****	256	345				
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)	0.99	0.76				
F_{HV} (Entry Leg)	0.98	0.98				
F_{ped}	1.00	1.00				
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A

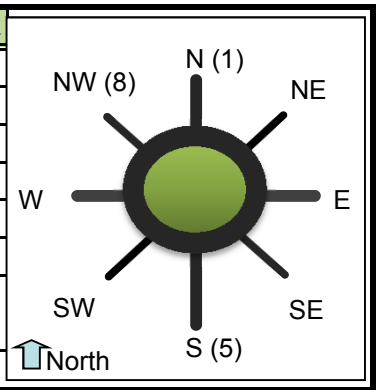
******Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.***

Entry/Conflicting Flows						
Entry Flow	260	173				
Conflicting Critical Flow	256	345				
Bypass Lane Results						
Entry Capacity of Bypass, veh/h	1200	784				
Flow Rates of Exiting Traffic, veh/h	255	170				
V/C ratio	0.21	0.22				
Control Delay, sec/pcu	0.0	7.0				
LOS	A	A				
95th % Queue (ft)	**20**	**21**				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2017, Multi-Lane, 1 NBL and 1 NBT Lane, PM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO)	N (1), vph								
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph	585							
	SW (6), vph								
	W (7), vph								
	NW (8), vph								
	Entry Volume, vph	585	0	0	0	0	0	0	0

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Left Only	Thru	SELECT	SELECT	Left Only	SELECT	SELECT	SELECT
	N (1), vph		824			231			
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph								
	SW (6), vph								
	W (7), vph	242							
	NW (8), vph								
	Entry Volume, vph	242	824	0	0	231	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.96*	*0.92*	*0.92*	*0.92*	*0.96*	*0.92*	*0.86*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	876	0	274	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	622	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	0	0	0	0	257	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	622	0	0	0	1133	0	274	0
	Entry flow Lane 1, pcu/h	622	0	0	0	257	0	274	0
	Entry flow Lane 2, pcu/h	0	0	0	0	876	0	0	0
	Conflicting flow, pcu/h	257	0	0	0	274	0	622	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	925	NA	NA	NA	842	842	717	NA
Entry Flow Rates, veh/h	609	NA	NA	NA	252	858	269	NA
V/C ratio	**0.66**	#VALUE!			**0.30**	**1.02**	**0.37**	
Control Delay, s/veh	**14.4**	#VALUE!			**7.6**	**58.0**	**9.9**	
LOS	B	#VALUE!			A	F	A	
95th % Queue (ft)	**131**	#VALUE!			**32**	**484**	**44**	
Approach Delay, LOS	13.4 sec, LOS B				46.6 sec, LOS E		11.7 sec, LOS B	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	1276	NA	NA	NA	1073	1073	919	NA
Entry Flow Rates, veh/h	609	NA	NA	NA	252	858	269	NA
V/C ratio	**0.48**	#VALUE!			**0.23**	**0.80**	**0.29**	
Control Delay, s/veh	**7.8**	#VALUE!			**5.6**	**19.2**	**7.0**	
LOS	A	#VALUE!			A	C	A	
95th % Queue (ft)	**68**	#VALUE!			**23**	**229**	**31**	
Approach Delay, LOS	7.3 sec, LOS A				16.1 sec, LOS C		10.3 sec, LOS B	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	W (7)				
Select Exit Leg for Bypass (TO)	W (7)	S (5)				
Does the bypass have a dedicated receiving lane?	Yes	No				
# of Conflicting Exit Flow Lanes	1	1	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume	41	233				
Exit Leg: ***(Select Input Method)***	Default	Default				
*Lane Flow in Exit Leg****	172	622				
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)	0.96	0.86				
F_{HV} (Entry Leg)	0.98	0.98				
F_{ped}	1.00	1.00				
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A

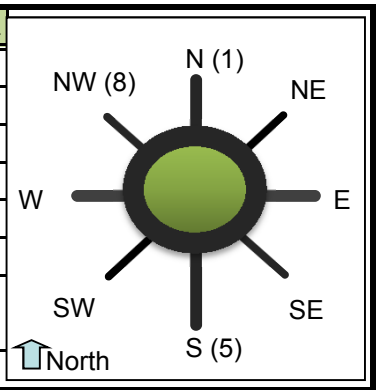
******Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.***

Entry/Conflicting Flows						
Entry Flow	44	276				
Conflicting Critical Flow	172	622				
Bypass Lane Results						
Entry Capacity of Bypass, veh/h	1200	595				
Flow Rates of Exiting Traffic, veh/h	43	271				
V/C ratio	0.04	0.46				
Control Delay, sec/pcu	0.0	13.5				
LOS	A	B				
95th % Queue (ft)	3	62				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2037, Multi-Lane 1 NBL and 1 NBT Lane, AM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO)	N (1), vph								
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph	407							
	SW (6), vph								
	W (7), vph								
	NW (8), vph								
	Entry Volume, vph	407	0	0	0	0	0	0	0

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Left Only	Thru	SELECT	SELECT	Left Only	SELECT	SELECT	SELECT
	N (1), vph		733			22			
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph								
	SW (6), vph								
	W (7), vph	414							
	NW (8), vph								
	Entry Volume, vph	414	733	0	0	22	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.99*	*0.92*	*0.92*	*0.92*	*0.90*	*0.92*	*0.76*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	831	0	30	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	419	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	0	0	0	0	469	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	419	0	0	0	1300	0	30	0
	Entry flow Lane 1, pcu/h	419	0	0	0	469	0	30	0
	Entry flow Lane 2, pcu/h	0	0	0	0	831	0	0	0
	Conflicting flow, pcu/h	469	0	0	0	30	0	419	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	798	NA	NA	NA	1076	1076	826	NA
Entry Flow Rates, veh/h	411	NA	NA	NA	460	814	29	NA
V/C ratio	**0.52**	#VALUE!			**0.43**	**0.76**	**0.04**	
Control Delay, s/veh	**11.8**	#VALUE!			**8.0**	**16.7**	**4.7**	
LOS	B	#VALUE!			A	C	A	
95th % Queue (ft)	**77**	#VALUE!			**56**	**194**	**3**	
Approach Delay, LOS	6.7 sec, LOS A				13.6 sec, LOS B		8 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	1054	NA	NA	NA	1371	1371	1102	NA
Entry Flow Rates, veh/h	411	NA	NA	NA	460	814	29	NA
V/C ratio	**0.39**	#VALUE!			**0.34**	**0.59**	**0.03**	
Control Delay, s/veh	**7.5**	#VALUE!			**5.6**	**9.4**	**3.5**	
LOS	A	#VALUE!			A	A	A	
95th % Queue (ft)	**48**	#VALUE!			**38**	**106**	**2**	
Approach Delay, LOS	4.3 sec, LOS A				8 sec, LOS A		7.8 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	W (7)				
Select Exit Leg for Bypass (TO)	W (7)	S (5)				
Does the bypass have a dedicated receiving lane?	Yes	No				
# of Conflicting Exit Flow Lanes	1	1	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume	307	158				
Exit Leg: ***(Select Input Method)***	Default	Default				
*Lane Flow in Exit Leg****	313	419				
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)	0.99	0.76				
F_{HV} (Entry Leg)	0.98	0.98				
F_{ped}	1.00	1.00				
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A

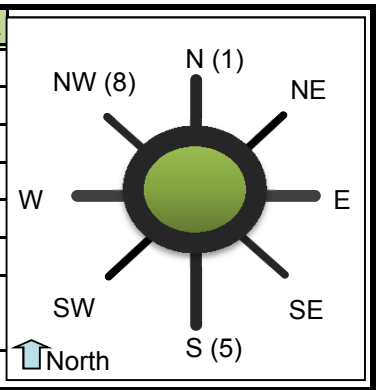
******Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.***

Entry/Conflicting Flows						
Entry Flow	316	212				
Conflicting Critical Flow	313	419				
Bypass Lane Results						
Entry Capacity of Bypass, veh/h	1200	728				
Flow Rates of Exiting Traffic, veh/h	310	208				
V/C ratio	0.26	0.29				
Control Delay, sec/pcu	0.0	8.4				
LOS	A	A				
95th % Queue (ft)	**26**	**31**				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2037 Multi-Lane 1 NBL and 1 NBT Lane, PM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation	Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
N (1), vph								
Exit NE (2), vph								
Legs E (3), vph								
(TO) SE (4), vph								
S (5), vph	699							
SW (6), vph								
W (7), vph								
NW (8), vph								
Entry Volume, vph	699	0	0	0	0	0	0	0

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Left Only	Thru	SELECT	SELECT	Left Only	SELECT	SELECT	SELECT
N (1), vph		995			279			
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph								
SW (6), vph								
W (7), vph	296							
NW (8), vph								
Entry Volume, vph	296	995	0	0	279	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.96*	*0.92*	*0.92*	*0.92*	*0.96*	*0.92*	*0.86*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	1057	0	331	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	743	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	0	0	0	0	315	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	743	0	0	0	1372	0	331	0
	Entry flow Lane 1, pcu/h	743	0	0	0	315	0	331	0
	Entry flow Lane 2, pcu/h	0	0	0	0	1057	0	0	0
	Conflicting flow, pcu/h	315	0	0	0	331	0	743	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	889	NA	NA	NA	796	796	659	NA
Entry Flow Rates, veh/h	728	NA	NA	NA	308	1036	324	NA
V/C ratio	**0.82**	#VALUE!			**0.39**	**1.30**	**0.49**	
Control Delay, s/veh	**23.6**	#VALUE!			**9.3**	**162.9**	**13.1**	
LOS	C	#VALUE!			A	F	B	
95th % Queue (ft)	**237**	#VALUE!			**47**	**1016**	**70**	
Approach Delay, LOS	22 sec, LOS C				127.7 sec, LOS F		17.3 sec, LOS C	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	1211	NA	NA	NA	1014	1014	824	NA
Entry Flow Rates, veh/h	728	NA	NA	NA	308	1036	324	NA
V/C ratio	**0.60**	#VALUE!			**0.30**	**1.02**	**0.39**	
Control Delay, s/veh	**10.3**	#VALUE!			**6.6**	**54.2**	**9.1**	
LOS	B	#VALUE!			A	F	A	
95th % Queue (ft)	**108**	#VALUE!			**33**	**540**	**48**	
Approach Delay, LOS	9.7 sec, LOS A				43.3 sec, LOS E		15.4 sec, LOS C	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	W (7)				
Select Exit Leg for Bypass (TO)	W (7)	S (5)				
Does the bypass have a dedicated receiving lane?	Yes	No				
# of Conflicting Exit Flow Lanes	1	1	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume	49	285				
Exit Leg: ***(Select Input Method)***	Default	Default				
*Lane Flow in Exit Leg****	210	743				
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)	0.96	0.86				
F_{HV} (Entry Leg)	0.98	0.98				
F_{ped}	1.00	1.00				
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A

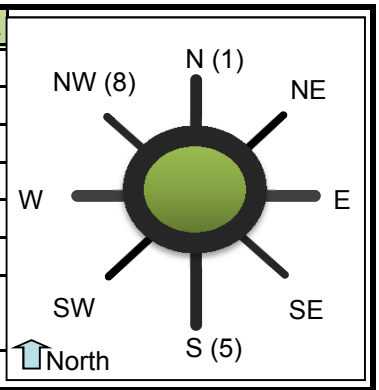
******Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.***

Entry/Conflicting Flows						
Entry Flow	52	338				
Conflicting Critical Flow	210	743				
Bypass Lane Results						
Entry Capacity of Bypass, veh/h	1200	527				
Flow Rates of Exiting Traffic, veh/h	51	331				
V/C ratio	0.04	0.64				
Control Delay, sec/pcu	0.0	21.4				
LOS	A	C				
95th % Queue (ft)	**3**	**115**				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2017, Multi-Lane w/ 2 NBT Lane, AM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation	Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
N (1), vph								
Exit NE (2), vph								
Legs E (3), vph								
(TO) SE (4), vph								
S (5), vph	**335**							
SW (6), vph								
W (7), vph								
NW (8), vph								
Entry Volume, vph	335	0	0	0	0	0	0	0

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Left-Thru	Thru	SELECT	SELECT	Left Only	SELECT	SELECT	SELECT
N (1), vph	**104**	**499**			**18**			
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph								
SW (6), vph								
W (7), vph	**338**							
NW (8), vph								
Entry Volume, vph	442	499	0	0	18	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	**1**	**2**	**2**	**2**	**1**	**2**	**1**	**2**

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.99*	*0.92*	*0.92*	*0.92*	*0.90*	*0.92*	*0.76*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	683	0	24	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	345	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	0	0	0	0	383	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	345	0	0	0	1066	0	24	0
	Entry flow Lane 1, pcu/h	345	0	0	0	501	0	24	0
	Entry flow Lane 2, pcu/h	0	0	0	0	566	0	0	0
	Conflicting flow, pcu/h	383	0	0	0	24	0	345	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	847	NA	NA	NA	1081	1081	870	NA
Entry Flow Rates, veh/h	338	NA	NA	NA	491	554	24	NA
V/C ratio	**0.40**	#VALUE!			**0.45**	**0.51**	**0.03**	
Control Delay, s/veh	**9.0**	#VALUE!			**8.3**	**9.3**	**4.4**	
LOS	A	#VALUE!			A	A	A	
95th % Queue (ft)	**49**	#VALUE!			**62**	**77**	**2**	
Approach Delay, LOS	5.2 sec, LOS A				8.9 sec, LOS A		6.7 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	1139	NA	NA	NA	1378	1378	1179	NA
Entry Flow Rates, veh/h	338	NA	NA	NA	491	554	24	NA
V/C ratio	**0.30**	#VALUE!			**0.36**	**0.40**	**0.02**	
Control Delay, s/veh	**6.0**	#VALUE!			**5.8**	**6.4**	**3.2**	
LOS	A	#VALUE!			A	A	A	
95th % Queue (ft)	**32**	#VALUE!			**42**	**51**	**2**	
Approach Delay, LOS	3.4 sec, LOS A				6.1 sec, LOS A		6.5 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	W (7)				
Select Exit Leg for Bypass (TO)	W (7)	S (5)				
Does the bypass have a dedicated receiving lane?	Yes	No				
# of Conflicting Exit Flow Lanes	1	1	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume	252	129				
Exit Leg: ***(Select Input Method)***	Default	Default				
*Lane Flow in Exit Leg****	256	345				
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)	0.99	0.76				
F_{HV} (Entry Leg)	0.98	0.98				
F_{ped}	1.00	1.00				
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A

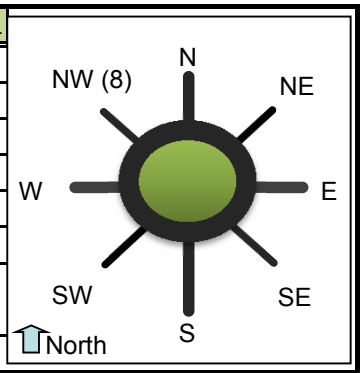
******Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.***

Entry/Conflicting Flows						
Entry Flow	260	173				
Conflicting Critical Flow	256	345				
Bypass Lane Results						
Entry Capacity of Bypass, veh/h	1200	784				
Flow Rates of Exiting Traffic, veh/h	255	170				
V/C ratio	0.21	0.22				
Control Delay, sec/pcu	0.0	7.0				
LOS	A	A				
95th % Queue (ft)	**20**	**21**				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2017, Multi-Lane, 2 NBT Lane, PM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation	Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO) N (1), vph								
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph	585							
SW (6), vph								
W (7), vph								
NW (8), vph								
Entry Volume, vph	585	0	0	0	0	0	0	0

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Left-Thru	Thru	SELECT	SELECT	Left Only	SELECT	SELECT	SELECT
N (1), vph	259	565			231			
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph								
SW (6), vph								
W (7), vph	242							
NW (8), vph								
Entry Volume, vph	501	565	0	0	231	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.96*	*0.92*	*0.92*	*0.92*	*0.96*	*0.92*	*0.86*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to N (1), pcu/h	0	0	0	0	876	0	274	0

Leg #									
	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	622	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	0	0	0	0	257	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	622	0	0	0	1133	0	274	0
	Entry flow Lane 1, pcu/h	622	0	0	0	532	0	274	0
	Entry flow Lane 2, pcu/h	0	0	0	0	600	0	0	0
	Conflicting flow, pcu/h	257	0	0	0	274	0	622	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	**N**		**E**		**S**		**W**	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	925	NA	NA	NA	842	842	717	NA
Entry Flow Rates, veh/h	609	NA	NA	NA	522	589	269	NA
V/C ratio	**0.66**	#VALUE!			**0.62**	**0.70**	**0.37**	
Control Delay, s/veh	**14.4**	#VALUE!			**14.1**	**17.0**	**9.9**	
LOS	B	#VALUE!			B	C	A	
95th % Queue (ft)	**131**	#VALUE!			**112**	**150**	**44**	
Approach Delay, LOS	13.4 sec, LOS B				15.6 sec, LOS C		11.7 sec, LOS B	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	**N**		**E**		**S**		**W**	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	1276	NA	NA	NA	1073	1073	919	NA
Entry Flow Rates, veh/h	609	NA	NA	NA	522	589	269	NA
V/C ratio	**0.48**	#VALUE!			**0.49**	**0.55**	**0.29**	
Control Delay, s/veh	**7.8**	#VALUE!			**8.9**	**10.1**	**7.0**	
LOS	A	#VALUE!			A	B	A	
95th % Queue (ft)	**68**	#VALUE!			**70**	**88**	**31**	
Approach Delay, LOS	7.3 sec, LOS A				9.5 sec, LOS A		10.3 sec, LOS B	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

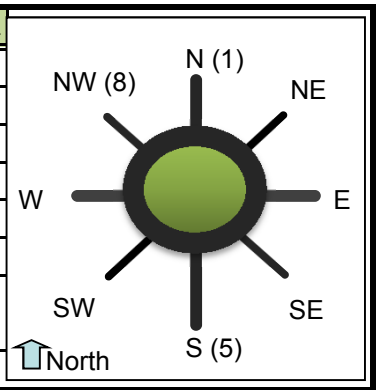
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	W (7)				
Select Exit Leg for Bypass (TO)	W (7)	S (5)				
Does the bypass have a dedicated receiving lane?	Yes	No				
# of Conflicting Exit Flow Lanes	1	1	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume	41	233				
Exit Leg: ***(Select Input Method)***	Default	Default				
*Lane Flow in Exit Leg****	172	622				
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)	0.96	0.86				
F_{HV} (Entry Leg)	0.98	0.98				
F_{ped}	1.00	1.00				
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
******Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.***						
Entry/Conflicting Flows						
Entry Flow	44	276				
Conflicting Critical Flow	172	622				
Bypass Lane Results						
Entry Capacity of Bypass, veh/h	1200	595				
Flow Rates of Exiting Traffic, veh/h	43	271				
V/C ratio	0.04	0.46				
Control Delay, sec/pcu	0.0	13.5				
LOS	A	B				
95th % Queue (ft)	3	62				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2037, Multi-Lane 2 NBT Lane, AM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation	Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO) N (1), vph								
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph	407							
SW (6), vph								
W (7), vph								
NW (8), vph								
Entry Volume, vph	407	0	0	0	0	0	0	0

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Left-Thru	Thru	SELECT	SELECT	Left Only	SELECT	SELECT	SELECT
N (1), vph	125	608			22			
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph								
SW (6), vph								
W (7), vph	414							
NW (8), vph								
Entry Volume, vph	539	608	0	0	22	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.99*	*0.92*	*0.92*	*0.92*	*0.90*	*0.92*	*0.76*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	831	0	30	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	419	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	0	0	0	0	469	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	419	0	0	0	1300	0	30	0
	Entry flow Lane 1, pcu/h	419	0	0	0	611	0	30	0
	Entry flow Lane 2, pcu/h	0	0	0	0	689	0	0	0
	Conflicting flow, pcu/h	469	0	0	0	30	0	419	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	798	NA	NA	NA	1076	1076	826	NA
Entry Flow Rates, veh/h	411	NA	NA	NA	599	676	29	NA
V/C ratio	**0.52**	#VALUE!			**0.56**	**0.63**	**0.04**	
Control Delay, s/veh	**11.8**	#VALUE!			**10.3**	**12.0**	**4.7**	
LOS	B	#VALUE!			B	B	A	
95th % Queue (ft)	**77**	#VALUE!			**91**	**118**	**3**	
Approach Delay, LOS	6.7 sec, LOS A				11.2 sec, LOS B		8 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	1054	NA	NA	NA	1371	1371	1102	NA
Entry Flow Rates, veh/h	411	NA	NA	NA	599	676	29	NA
V/C ratio	**0.39**	#VALUE!			**0.44**	**0.49**	**0.03**	
Control Delay, s/veh	**7.5**	#VALUE!			**6.8**	**7.6**	**3.5**	
LOS	A	#VALUE!			A	A	A	
95th % Queue (ft)	**48**	#VALUE!			**58**	**72**	**2**	
Approach Delay, LOS	4.3 sec, LOS A				7.2 sec, LOS A		7.8 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	W (7)				
Select Exit Leg for Bypass (TO)	W (7)	S (5)				
Does the bypass have a dedicated receiving lane?	Yes	No				
# of Conflicting Exit Flow Lanes	1	1	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume	307	158				
Exit Leg: ***(Select Input Method)***	Default	Default				
*Lane Flow in Exit Leg****	313	419				
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)	0.99	0.76				
F_{HV} (Entry Leg)	0.98	0.98				
F_{ped}	1.00	1.00				
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A

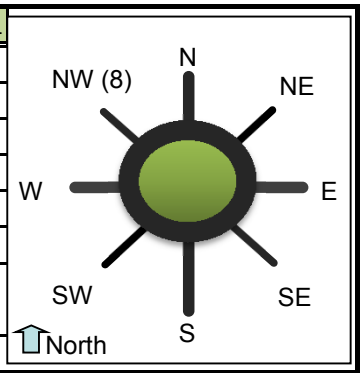
******Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.***

Entry/Conflicting Flows						
Entry Flow	316	212				
Conflicting Critical Flow	313	419				
Bypass Lane Results						
Entry Capacity of Bypass, veh/h	1200	728				
Flow Rates of Exiting Traffic, veh/h	310	208				
V/C ratio	0.26	0.29				
Control Delay, sec/pcu	0.0	8.4				
LOS	A	A				
95th % Queue (ft)	**26**	**31**				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2037 Multi-Lane 2 NBT Lane, PM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation	Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO) N (1), vph								
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph	699							
SW (6), vph								
W (7), vph								
NW (8), vph								
Entry Volume, vph	699	0	0	0	0	0	0	0

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Left-Thru	Thru	SELECT	SELECT	Left Only	SELECT	SELECT	SELECT
N (1), vph	311	684			279			
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph								
SW (6), vph								
W (7), vph	296							
NW (8), vph								
Entry Volume, vph	607	684	0	0	279	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.96*	*0.92*	*0.92*	*0.92*	*0.96*	*0.92*	*0.86*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to N (1), pcu/h	0	0	0	0	1057	0	331	0

Leg #								
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	743	0	0	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	0	0	315	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	743	0	0	0	1372	0	331	0
Entry flow Lane 1, pcu/h	743	0	0	0	645	0	331	0
Entry flow Lane 2, pcu/h	0	0	0	0	727	0	0	0
Conflicting flow, pcu/h	315	0	0	0	331	0	743	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	**N**		**E**		**S**		**W**	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	889	NA	NA	NA	796	796	659	NA
Entry Flow Rates, veh/h	728	NA	NA	NA	632	713	324	NA
V/C ratio	**0.82**	#VALUE!			**0.79**	**0.90**	**0.49**	
Control Delay, s/veh	**23.6**	#VALUE!			**23.5**	**34.2**	**13.1**	
LOS	C	#VALUE!			C	D	B	
95th % Queue (ft)	**237**	#VALUE!			**211**	**305**	**70**	
Approach Delay, LOS	22 sec, LOS C				29.2 sec, LOS D		17.3 sec, LOS C	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	**N**		**E**		**S**		**W**	
Lane Designations	*Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Left Only*	*Lane 2*
Entry Capacity, veh/h	1211	NA	NA	NA	1014	1014	824	NA
Entry Flow Rates, veh/h	728	NA	NA	NA	632	713	324	NA
V/C ratio	**0.60**	#VALUE!			**0.62**	**0.70**	**0.39**	
Control Delay, s/veh	**10.3**	#VALUE!			**12.4**	**15.0**	**9.1**	
LOS	B	#VALUE!			B	B	A	
95th % Queue (ft)	**108**	#VALUE!			**116**	**156**	**48**	
Approach Delay, LOS	9.7 sec, LOS A				13.7 sec, LOS B		15.4 sec, LOS C	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

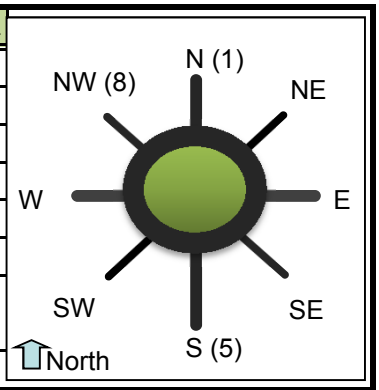
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)	W (7)				
Select Exit Leg for Bypass (TO)	W (7)	S (5)				
Does the bypass have a dedicated receiving lane?	Yes	No				
# of Conflicting Exit Flow Lanes	1	1	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume	49	285				
Exit Leg: ***(Select Input Method)***	Default	Default				
*Lane Flow in Exit Leg****	210	743				
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)	0.96	0.86				
F_{HV} (Entry Leg)	0.98	0.98				
F_{ped}	1.00	1.00				
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
******Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.***						
Entry/Conflicting Flows						
Entry Flow	52	338				
Conflicting Critical Flow	210	743				
Bypass Lane Results						
Entry Capacity of Bypass, veh/h	1200	527				
Flow Rates of Exiting Traffic, veh/h	51	331				
V/C ratio	0.04	0.64				
Control Delay, sec/pcu	0.0	21.4				
LOS	A	C				
95th % Queue (ft)	**3**	**115**				

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2017 Multi-Lane 1 NBL/1 NBT (No Bypass Lanes), AM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation	Right-Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO) N (1), vph								
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph	335							
SW (6), vph								
W (7), vph	252							
NW (8), vph								
Entry Volume, vph	587	0	0	0	0	0	0	0

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Left Only	Thru	SELECT	SELECT	Lf-Th-Rt	SELECT	SELECT	SELECT
N (1), vph		603			18			
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph					129			
SW (6), vph								
W (7), vph	338							
NW (8), vph								
Entry Volume, vph	338	603	0	0	147	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.99*	*0.92*	*0.92*	*0.92*	*0.90*	*0.92*	*0.76*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	683	0	24	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	345	0	0	0	0	0	173	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	260	0	0	0	383	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	605	0	0	0	1066	0	197	0
	Entry flow Lane 1, pcu/h	605	0	0	0	383	0	197	0
	Entry flow Lane 2, pcu/h	0	0	0	0	683	0	0	0
	Conflicting flow, pcu/h	383	0	0	0	24	0	345	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	847	NA	NA	NA	1081	1081	870	NA
Entry Flow Rates, veh/h	593	NA	NA	NA	376	670	193	NA
V/C ratio	**0.70**	#VALUE!			**0.35**	**0.62**	**0.22**	
Control Delay, s/veh	**17.0**	#VALUE!			**6.8**	**11.7**	**6.4**	
LOS	C	#VALUE!			A	B	A	
95th % Queue (ft)	**150**	#VALUE!			**40**	**115**	**22**	
Approach Delay, LOS	17 sec, LOS C				9.9 sec, LOS A		6.4 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	1139	NA	NA	NA	1378	1378	1179	NA
Entry Flow Rates, veh/h	593	NA	NA	NA	376	670	193	NA
V/C ratio	**0.52**	#VALUE!			**0.27**	**0.49**	**0.16**	
Control Delay, s/veh	**9.1**	#VALUE!			**5.0**	**7.5**	**4.5**	
LOS	A	#VALUE!			A	A	A	
95th % Queue (ft)	**79**	#VALUE!			**28**	**70**	**15**	
Approach Delay, LOS	9.1 sec, LOS A				6.6 sec, LOS A		4.5 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

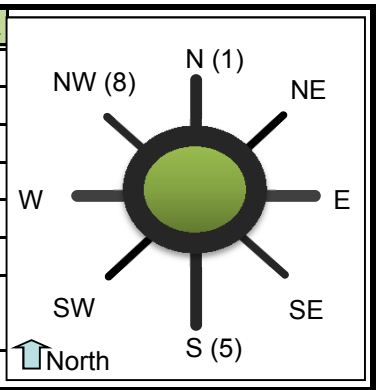
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	**1**	**1**	**2**	**2**	**2**	**2**
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: ***(Select Input Method)***						
*Lane Flow in Exit Leg****						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)						
F_{HV} (Entry Leg)						
F_{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2017, Multi-Lane 1 NBL/1NBT (No Bypass Lanes), PM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation	Right-Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO) N (1), vph								
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph	585							
SW (6), vph								
W (7), vph	41							
NW (8), vph								
Entry Volume, vph	626	0	0	0	0	0	0	0

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Left Only	Thru	SELECT	SELECT	Lf-Th-Rt	SELECT	SELECT	SELECT
N (1), vph		824			231			
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph					233			
SW (6), vph								
W (7), vph	242							
NW (8), vph								
Entry Volume, vph	242	824	0	0	464	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.96*	*0.92*	*0.92*	*0.92*	*0.96*	*0.92*	*0.86*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	876	0	274	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	622	0	0	0	0	0	276	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	44	0	0	0	257	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	665	0	0	0	1133	0	550	0
	Entry flow Lane 1, pcu/h	665	0	0	0	257	0	550	0
	Entry flow Lane 2, pcu/h	0	0	0	0	876	0	0	0
	Conflicting flow, pcu/h	257	0	0	0	274	0	622	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	925	NA	NA	NA	842	842	717	NA
Entry Flow Rates, veh/h	652	NA	NA	NA	252	858	540	NA
V/C ratio	**0.70**	#VALUE!			**0.30**	**1.02**	**0.75**	
Control Delay, s/veh	**16.1**	#VALUE!			**7.6**	**58.0**	**22.4**	
LOS	C	#VALUE!			A	F	C	
95th % Queue (ft)	**155**	#VALUE!			**32**	**484**	**177**	
Approach Delay, LOS	16.1 sec, LOS C				46.6 sec, LOS E		22.4 sec, LOS C	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	1276	NA	NA	NA	1073	1073	919	NA
Entry Flow Rates, veh/h	652	NA	NA	NA	252	858	540	NA
V/C ratio	**0.51**	#VALUE!			**0.23**	**0.80**	**0.59**	
Control Delay, s/veh	**8.3**	#VALUE!			**5.6**	**19.2**	**12.3**	
LOS	A	#VALUE!			A	C	B	
95th % Queue (ft)	**77**	#VALUE!			**23**	**229**	**100**	
Approach Delay, LOS	8.3 sec, LOS A				16.1 sec, LOS C		12.3 sec, LOS B	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

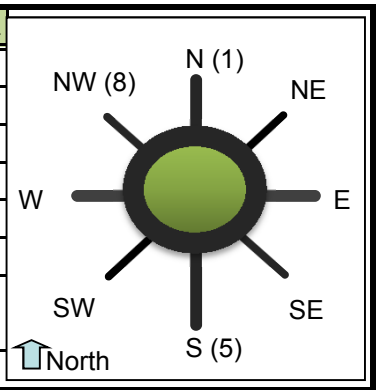
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	**1**	**1**	**2**	**2**	**2**	**2**
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: ***(Select Input Method)***						
*Lane Flow in Exit Leg****						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)						
F_{HV} (Entry Leg)						
F_{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2037, Multi-Lane 1 NBL/1NBT (No Bypass Lanes), AM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

Volumes	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation	Right-Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO) N (1), vph								
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph	407							
SW (6), vph								
W (7), vph	307							
NW (8), vph								
Entry Volume, vph	714	0	0	0	0	0	0	0

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Left Only	Thru	SELECT	SELECT	Lf-Th-Rt	SELECT	SELECT	SELECT
N (1), vph		733			22			
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph					158			
SW (6), vph								
W (7), vph	414							
NW (8), vph								
Entry Volume, vph	414	733	0	0	180	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.99*	*0.92*	*0.92*	*0.92*	*0.90*	*0.92*	*0.76*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	831	0	30	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	419	0	0	0	0	0	212	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	316	0	0	0	469	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	736	0	0	0	1300	0	242	0
	Entry flow Lane 1, pcu/h	736	0	0	0	469	0	242	0
	Entry flow Lane 2, pcu/h	0	0	0	0	831	0	0	0
	Conflicting flow, pcu/h	469	0	0	0	30	0	419	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	798	NA	NA	NA	1076	1076	826	NA
Entry Flow Rates, veh/h	721	NA	NA	NA	460	814	237	NA
V/C ratio	**0.90**	#VALUE!			**0.43**	**0.76**	**0.29**	
Control Delay, s/veh	**35.4**	#VALUE!			**8.0**	**16.7**	**7.5**	
LOS	E	#VALUE!			A	C	A	
95th % Queue (ft)	**315**	#VALUE!			**56**	**194**	**30**	
Approach Delay, LOS	35.4 sec, LOS E				13.6 sec, LOS B		7.5 sec, LOS A	

	NE		SE		SW		NW	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	1054	NA	NA	NA	1371	1371	1102	NA
Entry Flow Rates, veh/h	721	NA	NA	NA	460	814	237	NA
V/C ratio	**0.68**	#VALUE!			**0.34**	**0.59**	**0.21**	
Control Delay, s/veh	**13.9**	#VALUE!			**5.6**	**9.4**	**5.2**	
LOS	B	#VALUE!			A	A	A	
95th % Queue (ft)	**146**	#VALUE!			**38**	**106**	**21**	
Approach Delay, LOS	13.9 sec, LOS B				8 sec, LOS A		5.2 sec, LOS A	

	NE		SE		SW		NW	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

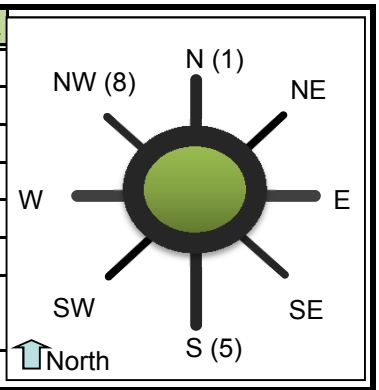
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	**1**	**1**	**2**	**2**	**2**	**2**
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: ***(Select Input Method)***						
*Lane Flow in Exit Leg****						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)						
F_{HV} (Entry Leg)						
F_{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2037, Multi-Lane 1 NBL/1 NBT (No Bypass Lanes), PM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation	Right-Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
N (1), vph								
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph	699							
SW (6), vph								
W (7), vph	49							
NW (8), vph								
Entry Volume, vph	748	0	0	0	0	0	0	0

Exit Legs (TO)

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Left Only	Thru	SELECT	SELECT	Lf-Th-Rt	SELECT	SELECT	SELECT
N (1), vph		995			279			
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph					285			
SW (6), vph								
W (7), vph	296							
NW (8), vph								
Entry Volume, vph	296	995	0	0	564	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.96*	*0.92*	*0.92*	*0.92*	*0.96*	*0.92*	*0.86*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	1057	0	331	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	743	0	0	0	0	0	338	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	52	0	0	0	315	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	795	0	0	0	1372	0	669	0
	Entry flow Lane 1, pcu/h	795	0	0	0	315	0	669	0
	Entry flow Lane 2, pcu/h	0	0	0	0	1057	0	0	0
	Conflicting flow, pcu/h	315	0	0	0	331	0	743	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	889	NA	NA	NA	796	796	659	NA
Entry Flow Rates, veh/h	779	NA	NA	NA	308	1036	656	NA
V/C ratio	**0.88**	#VALUE!			**0.39**	**1.30**	**1.00**	
Control Delay, s/veh	**29.3**	#VALUE!			**9.3**	**162.9**	**58.9**	
LOS	D	#VALUE!			A	F	F	
95th % Queue (ft)	**295**	#VALUE!			**47**	**1016**	**395**	
Approach Delay, LOS	29.3 sec, LOS D				127.7 sec, LOS F		58.9 sec, LOS F	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left Only*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	1211	NA	NA	NA	1014	1014	824	NA
Entry Flow Rates, veh/h	779	NA	NA	NA	308	1036	656	NA
V/C ratio	**0.64**	#VALUE!			**0.30**	**1.02**	**0.80**	
Control Delay, s/veh	**11.4**	#VALUE!			**6.6**	**54.2**	**23.0**	
LOS	B	#VALUE!			A	F	C	
95th % Queue (ft)	**126**	#VALUE!			**33**	**540**	**213**	
Approach Delay, LOS	11.4 sec, LOS B				43.3 sec, LOS E		23 sec, LOS C	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

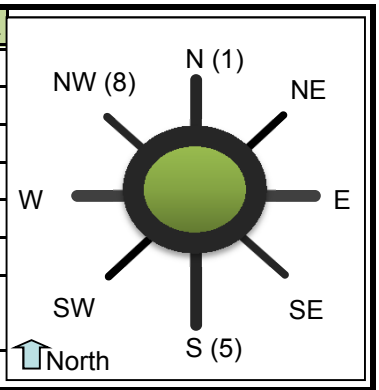
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	**1**	**1**	**2**	**2**	**2**	**2**
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: ***(Select Input Method)***						
*Lane Flow in Exit Leg****						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)						
F_{HV} (Entry Leg)						
F_{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2017 Multi-Lane 2 NBT (No Bypass Lanes), AM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Right-Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO)	N (1), vph								
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph	335							
	SW (6), vph								
	W (7), vph	252							
	NW (8), vph								
	Entry Volume, vph	587	0	0	0	0	0	0	0

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Left-Thru	Thru	SELECT	SELECT	Lf-Th-Rt	SELECT	SELECT	SELECT
	N (1), vph	104	499			18			
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph					129			
	SW (6), vph								
	W (7), vph	338							
	NW (8), vph								
	Entry Volume, vph	442	499	0	0	147	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.99*	*0.92*	*0.92*	*0.92*	*0.90*	*0.92*	*0.76*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	683	0	24	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	345	0	0	0	0	0	173	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	260	0	0	0	383	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	605	0	0	0	1066	0	197	0
	Entry flow Lane 1, pcu/h	605	0	0	0	501	0	197	0
	Entry flow Lane 2, pcu/h	0	0	0	0	566	0	0	0
	Conflicting flow, pcu/h	383	0	0	0	24	0	345	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	847	NA	NA	NA	1081	1081	870	NA
Entry Flow Rates, veh/h	593	NA	NA	NA	491	554	193	NA
V/C ratio	**0.70**	#VALUE!			**0.45**	**0.51**	**0.22**	
Control Delay, s/veh	**17.0**	#VALUE!			**8.3**	**9.3**	**6.4**	
LOS	C	#VALUE!			A	A	A	
95th % Queue (ft)	**150**	#VALUE!			**62**	**77**	**22**	
Approach Delay, LOS	17 sec, LOS C				8.9 sec, LOS A		6.4 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	1139	NA	NA	NA	1378	1378	1179	NA
Entry Flow Rates, veh/h	593	NA	NA	NA	491	554	193	NA
V/C ratio	**0.52**	#VALUE!			**0.36**	**0.40**	**0.16**	
Control Delay, s/veh	**9.1**	#VALUE!			**5.8**	**6.4**	**4.5**	
LOS	A	#VALUE!			A	A	A	
95th % Queue (ft)	**79**	#VALUE!			**42**	**51**	**15**	
Approach Delay, LOS	9.1 sec, LOS A				6.1 sec, LOS A		4.5 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

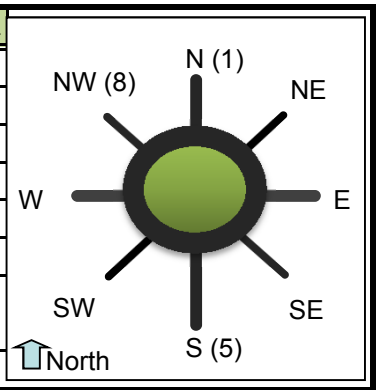
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	**1**	**1**	**2**	**2**	**2**	**2**
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: ***(Select Input Method)***						
*Lane Flow in Exit Leg****						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)						
F_{HV} (Entry Leg)						
F_{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2017, Multi-Lane 2 NBT (No Bypass Lanes), PM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Right-Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO)	N (1), vph								
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph	585							
	SW (6), vph								
	W (7), vph	41							
	NW (8), vph								
	Entry Volume, vph	626	0	0	0	0	0	0	0

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Left-Thru	Thru	SELECT	SELECT	Lf-Th-Rt	SELECT	SELECT	SELECT
	N (1), vph	259	565			231			
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph					233			
	SW (6), vph								
	W (7), vph	242							
	NW (8), vph								
	Entry Volume, vph	501	565	0	0	464	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.96*	*0.92*	*0.92*	*0.92*	*0.96*	*0.92*	*0.86*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	876	0	274	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	622	0	0	0	0	0	276	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	44	0	0	0	257	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	665	0	0	0	1133	0	550	0
	Entry flow Lane 1, pcu/h	665	0	0	0	532	0	550	0
	Entry flow Lane 2, pcu/h	0	0	0	0	600	0	0	0
	Conflicting flow, pcu/h	257	0	0	0	274	0	622	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	925	NA	NA	NA	842	842	717	NA
Entry Flow Rates, veh/h	652	NA	NA	NA	522	589	540	NA
V/C ratio	**0.70**	#VALUE!			**0.62**	**0.70**	**0.75**	
Control Delay, s/veh	**16.1**	#VALUE!			**14.1**	**17.0**	**22.4**	
LOS	C	#VALUE!			B	C	C	
95th % Queue (ft)	**155**	#VALUE!			**112**	**150**	**177**	
Approach Delay, LOS	16.1 sec, LOS C				15.6 sec, LOS C		22.4 sec, LOS C	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	1276	NA	NA	NA	1073	1073	919	NA
Entry Flow Rates, veh/h	652	NA	NA	NA	522	589	540	NA
V/C ratio	**0.51**	#VALUE!			**0.49**	**0.55**	**0.59**	
Control Delay, s/veh	**8.3**	#VALUE!			**8.9**	**10.1**	**12.3**	
LOS	A	#VALUE!			A	B	B	
95th % Queue (ft)	**77**	#VALUE!			**70**	**88**	**100**	
Approach Delay, LOS	8.3 sec, LOS A				9.5 sec, LOS A		12.3 sec, LOS B	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

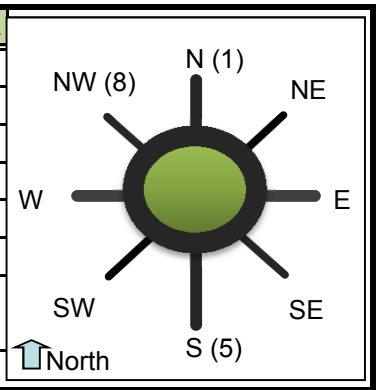
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	**1**	**1**	**2**	**2**	**2**	**2**
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: ***(Select Input Method)***						
*Lane Flow in Exit Leg****						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)						
F_{HV} (Entry Leg)						
F_{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2037, Multi-Lane 2 NBT (No Bypass Lanes), AM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Right-Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO)	N (1), vph								
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph	407							
	SW (6), vph								
	W (7), vph	307							
	NW (8), vph								
	Entry Volume, vph	714	0	0	0	0	0	0	0

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Left-Thru	Thru	SELECT	SELECT	Lf-Th-Rt	SELECT	SELECT	SELECT
	N (1), vph	125	608			22			
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph					158			
	SW (6), vph								
	W (7), vph	414							
	NW (8), vph								
	Entry Volume, vph	539	608	0	0	180	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.99*	*0.92*	*0.92*	*0.92*	*0.90*	*0.92*	*0.76*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	831	0	30	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	419	0	0	0	0	0	212	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	316	0	0	0	469	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	736	0	0	0	1300	0	242	0
	Entry flow Lane 1, pcu/h	736	0	0	0	611	0	242	0
	Entry flow Lane 2, pcu/h	0	0	0	0	689	0	0	0
	Conflicting flow, pcu/h	469	0	0	0	30	0	419	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	798	NA	NA	NA	1076	1076	826	NA
Entry Flow Rates, veh/h	721	NA	NA	NA	599	676	237	NA
V/C ratio	**0.90**	#VALUE!			**0.56**	**0.63**	**0.29**	
Control Delay, s/veh	**35.4**	#VALUE!			**10.3**	**12.0**	**7.5**	
LOS	E	#VALUE!			B	B	A	
95th % Queue (ft)	**315**	#VALUE!			**91**	**118**	**30**	
Approach Delay, LOS	35.4 sec, LOS E				11.2 sec, LOS B		7.5 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	1054	NA	NA	NA	1371	1371	1102	NA
Entry Flow Rates, veh/h	721	NA	NA	NA	599	676	237	NA
V/C ratio	**0.68**	#VALUE!			**0.44**	**0.49**	**0.21**	
Control Delay, s/veh	**13.9**	#VALUE!			**6.8**	**7.6**	**5.2**	
LOS	B	#VALUE!			A	A	A	
95th % Queue (ft)	**146**	#VALUE!			**58**	**72**	**21**	
Approach Delay, LOS	13.9 sec, LOS B				7.2 sec, LOS A		5.2 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

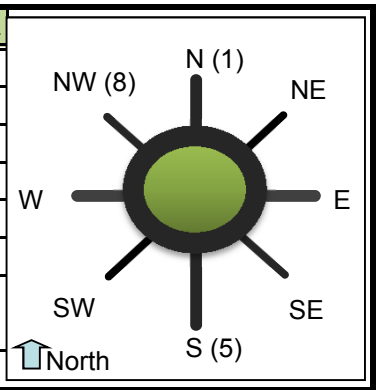
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	**1**	**1**	**2**	**2**	**2**	**2**
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: ***(Select Input Method)***						
*Lane Flow in Exit Leg****						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)						
F_{HV} (Entry Leg)						
F_{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

General & Site Information

v2.1

Analyst:	Pond & Company
Agency/Co:	
Date:	1/1/2016
Project or PI#:	Peachtree Corners Circle Roundabout
Year, Peak Hour:	2037, Multi-Lane 2 NBT (No Bypass Lanes), PM Peak
County/District:	Gwinnett County, City of Peachtree Corners
Intersection:	Peachtre Corners Circle at Medlock Bridge Road



Volumes

		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Right-Thru	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO)	N (1), vph								
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph	699							
	SW (6), vph								
	W (7), vph	49							
	NW (8), vph								
	Entry Volume, vph	748	0	0	0	0	0	0	0

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Left-Thru	Thru	SELECT	SELECT	Lf-Th-Rt	SELECT	SELECT	SELECT
	N (1), vph	311	684			279			
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph					285			
	SW (6), vph								
	W (7), vph	296							
	NW (8), vph								
	Entry Volume, vph	607	684	0	0	564	0	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	0	0	2	0	1	0
# of Conflict Flow Lanes	1	2	2	2	1	2	1	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98%	100%	100%	100%	98%	100%	98%	100%
% Heavy Vehicles	2%	0%	0%	0%	2%	0%	2%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.96*	*0.92*	*0.92*	*0.92*	*0.96*	*0.92*	*0.86*	*0.92*
F_{hv}	0.980	1.000	1.000	1.000	0.980	1.000	0.980	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	0	0	1057	0	331	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	0	0	0	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	743	0	0	0	0	0	338	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	52	0	0	0	315	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	795	0	0	0	1372	0	669	0
	Entry flow Lane 1, pcu/h	795	0	0	0	645	0	669	0
	Entry flow Lane 2, pcu/h	0	0	0	0	727	0	0	0
	Conflicting flow, pcu/h	315	0	0	0	331	0	743	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	889	NA	NA	NA	796	796	659	NA
Entry Flow Rates, veh/h	779	NA	NA	NA	632	713	656	NA
V/C ratio	**0.88**	#VALUE!			**0.79**	**0.90**	**1.00**	
Control Delay, s/veh	**29.3**	#VALUE!			**23.5**	**34.2**	**58.9**	
LOS	D	#VALUE!			C	D	F	
95th % Queue (ft)	**295**	#VALUE!			**211**	**305**	**395**	
Approach Delay, LOS	29.3 sec, LOS D				29.2 sec, LOS D		58.9 sec, LOS F	

	NE		SE		SW		NW	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	N		E		S		W	
Lane Designations	*Right-Thru*	*Lane 2*	*Lane 1*	*Lane 2*	*Left-Thru*	*Thru*	*Lf-Th-Rt*	*Lane 2*
Entry Capacity, veh/h	1211	NA	NA	NA	1014	1014	824	NA
Entry Flow Rates, veh/h	779	NA	NA	NA	632	713	656	NA
V/C ratio	**0.64**	#VALUE!			**0.62**	**0.70**	**0.80**	
Control Delay, s/veh	**11.4**	#VALUE!			**12.4**	**15.0**	**23.0**	
LOS	B	#VALUE!			B	B	C	
95th % Queue (ft)	**126**	#VALUE!			**116**	**156**	**213**	
Approach Delay, LOS	11.4 sec, LOS B				13.7 sec, LOS B		23 sec, LOS C	

	NE		SE		SW		NW	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	**1**	**1**	**2**	**2**	**2**	**2**
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: ***(Select Input Method)***						
*Lane Flow in Exit Leg****						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)						
F_{HV} (Entry Leg)						
F_{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

LANE SUMMARY

Site: P'tree Corners Cir. at Medlock Br. Rd. - 1 NBL / 1NBT Lane AM

1 NBT Lanes - 2017, AM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Medlock Bridge													
Lane 1	376	2.0	1260	0.298	100	8.8	LOS A	2.2	55.3	Short	300	0.0	0.0
Lane 2[d]	670	2.0	1482	0.452	100	2.5	LOS A	4.1	104.7	Full	1000	0.0	0.0
Approach	1046	2.0		0.452		4.7	LOS A	4.1	104.7				
North: Medlock Bridge													
Lane 1[d]	338	2.0	1031	0.328	100	4.7	LOS A	1.9	47.2	Full	1300	0.0	0.0
Lane 2	255	2.0	1579	0.161	100	2.6	LOS A	0.0	0.0	Short	200	0.0	0.0
Approach	593	2.0		0.328		3.8	LOS A	1.9	47.2				
West: Peachtree Corners													
Lane 1[d]	24	2.0	1120	0.021	100	8.5	LOS A	0.1	3.1	Full	1000	0.0	0.0
Lane 2	170	2.0	1120	0.152	100	3.5	LOS A	0.9	24.0	Full	1000	0.0	0.0
Approach	193	2.0		0.152		4.1	LOS A	0.9	24.0				
Intersection	1832	2.0		0.452		4.4	LOS A	4.1	104.7				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

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LANE SUMMARY

Site: P'tree Corners Cir. at Medlock Br. Rd. - 1 NBL / 1NBT Lane PM

1 NBT Lanes - 2017, PM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Medlock Bridge													
Lane 1	252	2.0	779	0.324	100	11.4	LOS B	2.2	54.8	Short	300	0.0	0.0
Lane 2[d]	858	2.0	1166	0.736	100	6.4	LOS A	10.2	258.7	Full	1000	0.0	0.0
Approach	1110	2.0		0.736		7.6	LOS A	10.2	258.7				
North: Medlock Bridge													
Lane 1[d]	609	2.0	1090	0.559	100	4.4	LOS A	4.4	111.8	Full	1300	0.0	0.0
Lane 2	43	2.0	1579	0.027	100	2.6	LOS A	0.0	0.0	Short	200	0.0	0.0
Approach	652	2.0		0.559		4.3	LOS A	4.4	111.8				
West: Peachtree Corners													
Lane 1[d]	269	2.0	863	0.311	100	10.9	LOS B	2.3	58.2	Full	1000	0.0	0.0
Lane 2	271	2.0	863	0.314	100	5.6	LOS A	2.3	58.8	Full	1000	0.0	0.0
Approach	540	2.0		0.314		8.2	LOS A	2.3	58.8				
Intersection	2302	2.0		0.736		6.8	LOS A	10.2	258.7				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

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LANE SUMMARY

Site: P'tree Corners Cir. at Medlock Br. Rd. - 1 NBL / 1NBT Lane AM

1 NBT Lanes - 2037, AM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Medlock Bridge													
Lane 1	460	2.0	1301	0.354	100	8.9	LOS A	2.8	71.4	Short	300	0.0	0.0
Lane 2[d]	814	2.0	1546	0.527	100	2.5	LOS A	5.5	139.0	Full	1000	0.0	0.0
Approach	1274	2.0		0.527		4.8	LOS A	5.5	139.0				
North: Medlock Bridge													
Lane 1[d]	411	2.0	1032	0.398	100	5.2	LOS A	2.5	62.7	Full	1300	0.0	0.0
Lane 2	310	2.0	1579	0.196	100	2.6	LOS A	0.0	0.0	Short	200	0.0	0.0
Approach	721	2.0		0.398		4.1	LOS A	2.5	62.7				
West: Peachtree Corners													
Lane 1[d]	29	2.0	1113	0.026	100	8.8	LOS A	0.2	4.0	Full	1000	0.0	0.0
Lane 2	208	2.0	1113	0.187	100	3.8	LOS A	1.3	31.8	Full	1000	0.0	0.0
Approach	237	2.0		0.187		4.4	LOS A	1.3	31.8				
Intersection	2232	2.0		0.527		4.5	LOS A	5.5	139.0				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

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LANE SUMMARY

Site: P'tree Corners Cir. at Medlock Br. Rd. - 1 NBL / 1NBT Lane

1 NBT Lanes - 2037, PM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Medlock Bridge													
Lane 1	308	2.0	793	0.389	100	11.7	LOS B	2.8	70.9	Short	300	0.0	0.0
Lane 2[d]	1036	2.0	1166	0.889	100	12.6	LOS B	20.6	522.1	Full	1000	0.0	0.0
Approach	1345	2.0		0.889		12.4	LOS B	20.6	522.1				
North: Medlock Bridge													
Lane 1[d]	728	2.0	1098	0.663	100	5.8	LOS A	6.9	174.3	Full	1300	0.0	0.0
Lane 2	51	2.0	1579	0.032	100	2.6	LOS A	0.0	0.0	Short	200	0.0	0.0
Approach	779	2.0		0.663		5.6	LOS A	6.9	174.3				
West: Peachtree Corners													
Lane 1[d]	324	2.0	785	0.413	100	11.8	LOS B	3.5	87.7	Full	1000	0.0	0.0
Lane 2	331	2.0	785	0.422	100	6.6	LOS A	3.5	89.9	Full	1000	0.0	0.0
Approach	656	2.0		0.422		9.2	LOS A	3.5	89.9				
Intersection	2780	2.0		0.889		9.7	LOS A	20.6	522.1				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

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LANE SUMMARY

Site: P'tree Corners Cir. at Medlock Br. Rd. - 1 NBL / 1NBT Lane AM - No Bypass

1 NBT Lanes - 2017, AM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Medlock Bridge													
Lane 1	376	2.0	1259	0.298	100	8.8	LOS A	2.2	57.0	Short	300	0.0	0.0
Lane 2[d]	670	2.0	1481	0.452	100	2.5	LOS A	4.3	108.3	Full	1000	0.0	0.0
Approach	1046	2.0		0.452		4.7	LOS A	4.3	108.3				
North: Medlock Bridge													
Lane 1[d]	593	2.0	846	0.701	100	9.3	LOS A	7.3	185.9	Full	1300	0.0	0.0
Approach	593	2.0		0.701		9.3	LOS A	7.3	185.9				
West: Peachtree Corners													
Lane 1[d]	193	2.0	879	0.220	100	4.9	LOS A	1.4	36.0	Full	1000	0.0	0.0
Approach	193	2.0		0.220		4.9	LOS A	1.4	36.0				
Intersection	1832	2.0		0.701		6.2	LOS A	7.3	185.9				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

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LANE SUMMARY

Site: P'tree Corners Cir. at Medlock Br. Rd. - 1 NBL / 1NBT Lane PM - No Bypass

1 NBT Lanes - 2017, PM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Medlock Bridge													
Lane 1	252	2.0	767	0.329	100	11.4	LOS B	2.3	57.4	Short	300	0.0	0.0
Lane 2[d]	858	2.0	1148	0.748	100	6.6	LOS A	10.9	276.0	Full	1000	0.0	0.0
Approach	1110	2.0		0.748		7.7	LOS A	10.9	276.0				
North: Medlock Bridge													
Lane 1[d]	652	2.0	906	0.719	100	7.4	LOS A	8.3	209.7	Full	1300	0.0	0.0
Approach	652	2.0		0.719		7.4	LOS A	8.3	209.7				
West: Peachtree Corners													
Lane 1[d]	540	2.0	646	0.835	100	23.3	LOS C	13.2	335.6	Full	1000	0.0	0.0
Approach	540	2.0		0.835		23.3	LOS C	13.2	335.6				
Intersection	2302	2.0		0.835		11.3	LOS B	13.2	335.6				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

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LANE SUMMARY

Site: P'tree Corners Cir. at Medlock Br. Rd. - 1 NBL / 1NBT Lane AM - No Bypass

1 NBT Lanes - 2037, AM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Medlock Bridge													
Lane 1	460	2.0	1299	0.354	100	8.9	LOS A	2.9	74.2	Short	300	0.0	0.0
Lane 2[d]	814	2.0	1544	0.528	100	2.5	LOS A	5.7	145.3	Full	1000	0.0	0.0
Approach	1274	2.0		0.528		4.8	LOS A	5.7	145.3				
North: Medlock Bridge													
Lane 1[d]	721	2.0	842	0.857	100	16.1	LOS C	14.1	358.7	Full	1300	0.0	0.0
Approach	721	2.0		0.857		16.1	LOS C	14.1	358.7				
West: Peachtree Corners													
Lane 1[d]	237	2.0	850	0.279	100	5.3	LOS A	2.0	49.8	Full	1000	0.0	0.0
Approach	237	2.0		0.279		5.3	LOS A	2.0	49.8				
Intersection	2232	2.0		0.857		8.5	LOS A	14.1	358.7				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

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LANE SUMMARY

Site: P'tree Corners Cir. at Medlock Br. Rd. - 1 NBL / 1NBT Lane PM - No Bypass

1 NBT Lanes - 2037, PM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Medlock Bridge													
Lane 1	308	2.0	828	0.373	100	11.2	LOS B	2.7	68.8	Short	300	0.0	0.0
Lane 2[d]	1036	2.0	1208	0.858	100	9.6	LOS A	17.7	449.0	Full	1000	0.0	0.0
Approach	1345	2.0		0.858		9.9	LOS A	17.7	449.0				
North: Medlock Bridge													
Lane 1[d]	779	2.0	912	0.854	100	12.2	LOS B	14.7	372.7	Full	1300	0.0	0.0
Approach	779	2.0		0.854		12.2	LOS B	14.7	372.7				
West: Peachtree Corners													
Lane 1[d]	656	2.0	561	1.170	100	108.9	LOS F	50.0	1269.0	Full	1000	0.0	12.5
Approach	656	2.0		1.170		108.9	LOS F	50.0	1269.0				
Intersection	2780	2.0		1.170		33.9	LOS D	50.0	1269.0				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

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APPENDIX C

Alternatives #1-3, Concept Drawings with Estimated Construction Limits

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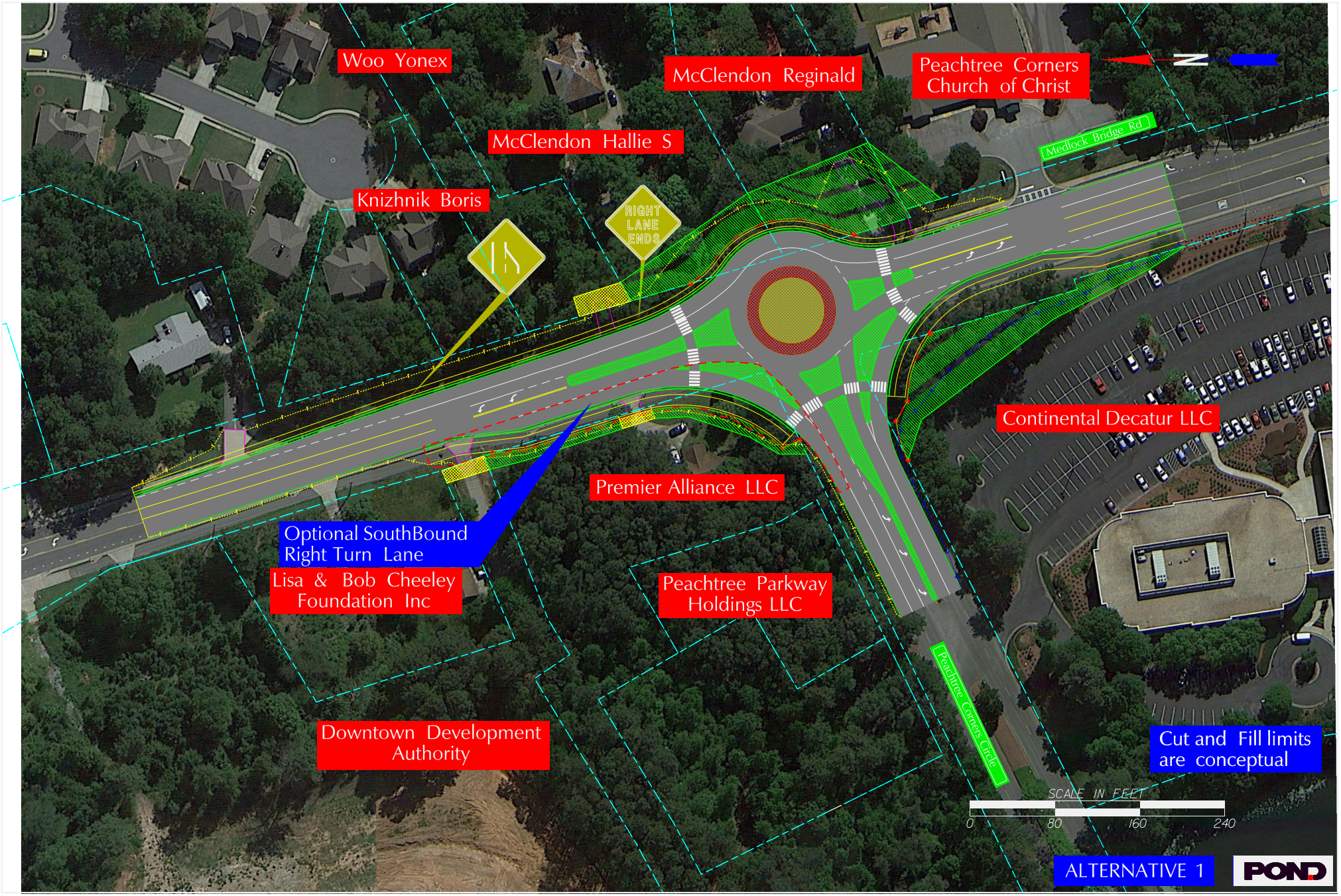
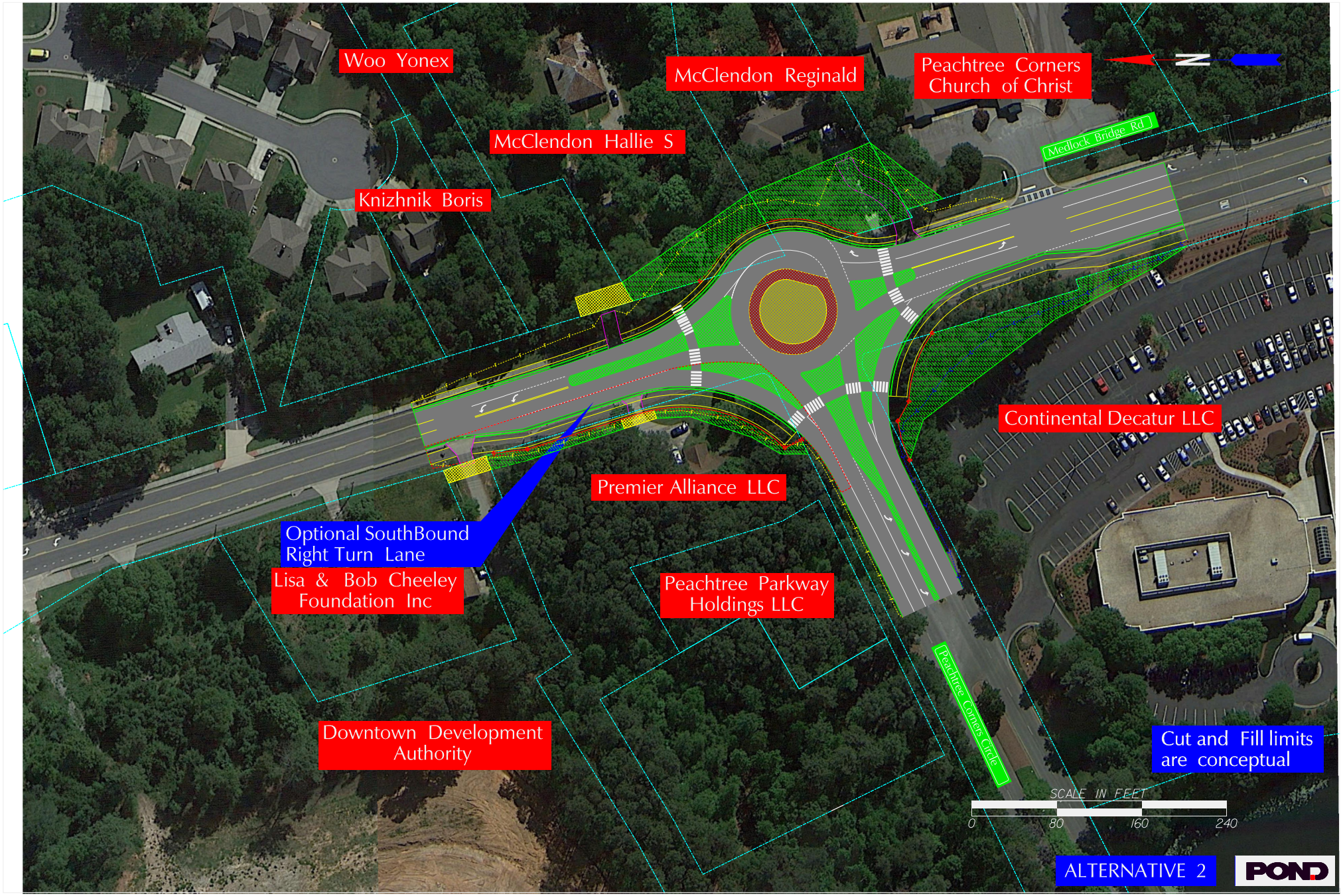
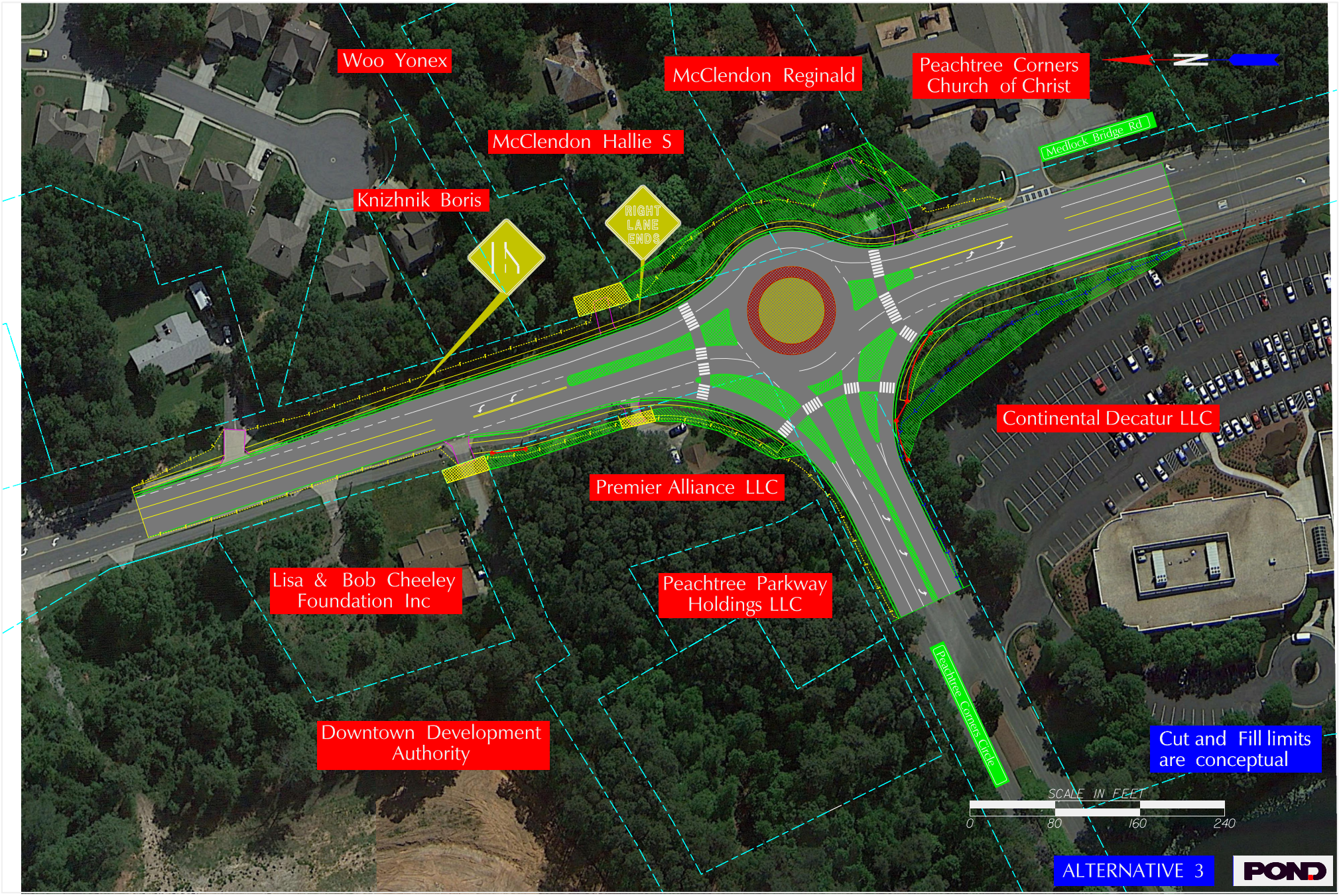

Woo Yonex
McClendon Reginald
Peachtree Corners Church of Christ
N
McClendon Hallie S
Medlock Bridge Rd
Knizhnik Boris
RIGHT LANE ENDS
Continental Decatur LLC
Premier Alliance LLC
Optional SouthBound Right Turn Lane
Lisa & Bob Cheeley Foundation Inc
Peachtree Parkway Holdings LLC
Peachtree Corners Circle
Downtown Development Authority
Cut and Fill limits are conceptual
SCALE IN FEET
0
80
160
240
ALTERNATIVE 1
POND


Woo Yonex
McClendon Reginald
Peachtree Corners Church of Christ
N
McClendon Hallie S
Medlock Bridge Rd
Knizhnik Boris
Continental Decatur LLC
Premier Alliance LLC
Optional SouthBound Right Turn Lane
Lisa & Bob Cheeley Foundation Inc
Peachtree Parkway Holdings LLC
Peachtree Corners Circle
Downtown Development Authority
Cut and Fill limits are conceptual
SCALE IN FEET
0
80
160
240
ALTERNATIVE 2
POND


Woo Yonex
McClendon Reginald
Peachtree Corners Church of Christ
N
McClendon Hallie S
Medlock Bridge Rd
Knizhnik Boris
RIGHT LANE ENDS
Continental Decatur LLC
Premier Alliance LLC
Lisa & Bob Cheeley Foundation Inc
Peachtree Parkway Holdings LLC
Peachtree Corners Circle
Downtown Development Authority
Cut and Fill limits are conceptual
SCALE IN FEET
0
80
160
240
ALTERNATIVE 3
POND

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APPENDIX D

Planning Level Cost Estimates

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Project No:	
DATE: Feb 15, 2016	
Client: Peachtree Corners	
CONCEPTUAL COST ESTIMATE - PEACHTREE CORNERS ROUNDABOUT	
ALTERNATIVE 1	

Item No.	ITEM:	Unit	Qty	Price	Cost
	ROADWAY ITEMS				
150-1000	TRAFFIC CONTROL	EA	1	$ 40,000.00	$ 40,000.00
210-0100	GRADING COMPLETE	EA	1	$ 90,000.00	$ 90,000.00
	MOBILIZATION	LS	1	$ 50,000.00	$ 50,000.00
310-1101	GR AGGR BASE CRS, INCL MATL	TN	1550	$ 26.66	$ 41,323.00
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	400	$ 75.00	$ 30,000.00
402-3130	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	TN	775	$ 109.00	$ 84,475.00
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	800	$ 85.00	$ 68,000.00
441-0016	DRIVEWAY CONCRETE, 6 IN TK	SY	324	$ 38.24	$ 12,389.76
310-5060	GR AGGR BASE CRS, 6 INCH, INCL MATL	SY	324	$ 13.80	$ 4,471.20
441-0104	CONC SIDEWALK, 4 IN	SY	1325	$ 40.61	$ 53,808.25
441-0748	CONCRETE MEDIAN, 6 IN	SY	1575	$ 54.32	$ 85,554.00
441-6216	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	LF	1636	$ 18.08	$ 29,578.88
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	500	$ 40.35	$ 20,175.00
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	100	$ 53.40	$ 5,340.00
634-1200	RIGHT OF WAY MARKERS	EA	12	$ 117.11	$ 1,405.32
668-1100	CATCH BASIN, GP 1	EA	5	$ 2,361.23	$ 11,806.15
668-4300	STORM SEWER MANHOLE, TP 1	EA	5	$ 1,805.51	$ 9,027.55
668-5000	JUNCTION BOX	EA	2	$ 1,833.58	$ 3,667.16
	EROSION CONTROL - PERMANENT				
700-9300	SOD	SY	1590	$ 5.63	$ 8,951.70
700-7000	AGRICULTURAL LIME	TN	2	$ 96.97	$ 193.94
700-8000	FERTILIZER MIXED GRADE	TN	1	$ 596.75	$ 596.75
700-8100	FERTILIZER NITROGEN CONTENT	LB	50	$ 4.51	$ 225.50
					$ -
	EROSION CONTROL - TEMPORARY				$ -
163-0232	TEMPORARY GRASSING	AC	1	$ 505.82	$ 505.82
163-0240	MULCH	TN	20	$ 248.45	$ 4,969.00
163-0300	CONSTRUCTION EXIT	EA	1	$ 1,367.10	$ 1,367.10
165-0101	MAINTENANCE OF CONSTRUCTION EXIT	EA	1	$ 550.97	$ 550.97
163-0550	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	EA	12	$ 186.02	$ 2,232.24
165-0105	MAINTENANCE OF INLET SEDIMENT TRAP	EA	12	$ 67.77	$ 813.24
171-0030	TEMPORARY SILT FENCE, TYPE C	LF	1700	$ 2.99	$ 5,083.00
165-0030	MAINTENANCE OF TEMPORARY SILT FENCE, TYPE C	LF	850	$ 0.94	$ 799.00
167-1000	WATER QUALITY MONITORING AND SAMPLING	EA	2	$ 324.32	$ 648.64
167-1500	WATER QUALITY INSPECTIONS	MO	6	$ 632.47	$ 3,794.82
	SIGNING AND MARKING				
636-1036	HIGHWAY SIGNS, TP 1, MATL, REFL SHEETING, TP 11	SF	250	$ 25.24	$ 6,310.00
653-1501	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	LF	1600	$ 0.56	$ 896.00
653-1502	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	LF	1200	$ 0.56	$ 672.00
	RIGHT OF WAY & EASEMENT				
	RIGHT OF WAY	SY	1158	$ 20.00	$ 23,160.00
	EASEMENT	SY	2845	$ 10.00	$ 28,450.00
	DRIVEWAY EASEMENT (NO CHARGE)	SY	198	$ -	$ -

ROADWAY SUBTOTAL		$ 641,021.27
EROSION CONTROL - PERMANENT SUBTOTAL		$ 9,967.89
EROSION CONTROL - TEMPORARY SUBTOTAL		$ 20,763.83
SIGNING AND MARKING SUBTOTAL		$ 7,878.00
ROW & EASEMENT SUBTOTAL		$ 51,610.00
CONSTRUCTION SUBTOTAL		$ 731,240.99
CONTIGENCY	10%	$ 73,124.10
UTILITIES		$ 67,175.30
PROJECT TOTAL		$ 871,540.39

RIGHT TURN LANE COSTS

TRAFFIC CONTROL	1	$ 5,000.00	$ 5,000.00
GRADING COMPLETE	1	$ 10,000.00	$ 10,000.00
GR AGGR BASE CRS, INCL MATL	390	$ 26.66	$ 10,397.40
RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	195	$ 75.00	$ 14,625.00
RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	49	$ 109.00	$ 5,341.00
RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	98	$ 85.00	$ 8,330.00
CONCRETE MEDIAN, 6 IN	145	$ 54.32	$ 7,876.40
ROW	223	$ 20.00	$ 4,460.00
EASEMENT	152	$ 10.00	$ 1,520.00
			$ 67,549.80
	TOTAL WITHOUT RIGHT TURN LANE		$ 803,990.59

Project No:	
DATE: Feb 15, 2016	
Client: Peachtree Corners	
CONCEPTUAL COST ESTIMATE - PEACHTREE CORNERS ROUNDABOUT	
ALTERNATIVE 2	

Item No.	ITEM:	Unit	Qty	Price	Cost
	ROADWAY ITEMS				
150-1000	TRAFFIC CONTROL	EA	1	$ 40,000.00	$ 40,000.00
210-0100	GRADING COMPLETE	EA	1	$ 75,000.00	$ 75,000.00
	MOBILIZATION	LS	1	$ 50,000.00	$ 50,000.00
310-1101	GR AGGR BASE CRS, INCL MATL	TN	1022	$ 26.66	$ 27,246.52
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	411	$ 75.00	$ 30,825.00
402-3130	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	TN	550	$ 109.00	$ 59,950.00
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	206	$ 85.00	$ 17,510.00
441-0016	DRIVEWAY CONCRETE, 6 IN TK	SY	324	$ 38.24	$ 12,389.76
310-5060	GR AGGR BASE CRS, 6 INCH, INCL MATL	SY	324	$ 13.80	$ 4,471.20
441-0104	CONC SIDEWALK, 4 IN	SY	1175	$ 40.61	$ 47,716.75
441-0748	CONCRETE MEDIAN, 6 IN	SY	1035	$ 54.32	$ 56,221.20
441-6216	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	LF	1415	$ 18.08	$ 25,583.20
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	450	$ 40.35	$ 18,157.50
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	80	$ 53.40	$ 4,272.00
634-1200	RIGHT OF WAY MARKERS	EA	10	$ 117.11	$ 1,171.10
668-1100	CATCH BASIN, GP 1	EA	5	$ 2,361.23	$ 11,806.15
668-4300	STORM SEWER MANHOLE, TP 1	EA	5	$ 1,805.51	$ 9,027.55
668-5000	JUNCTION BOX	EA	2	$ 1,833.58	$ 3,667.16
	EROSION CONTROL - PERMANENT				
700-9300	SOD	SY	1350	$ 5.63	$ 7,600.50
700-7000	AGRICULTURAL LIME	TN	2	$ 96.97	$ 193.94
700-8000	FERTILIZER MIXED GRADE	TN	1	$ 596.75	$ 596.75
700-8100	FERTILIZER NITROGEN CONTENT	LB	50	$ 4.51	$ 225.50
					$ -
	EROSION CONTROL - TEMPORARY				$ -
163-0232	TEMPORARY GRASSING	AC	1	$ 505.82	$ 505.82
163-0240	MULCH	TN	20	$ 248.45	$ 4,969.00
163-0300	CONSTRUCTION EXIT	EA	1	$ 1,367.10	$ 1,367.10
165-0101	MAINTENANCE OF CONSTRUCTION EXIT	EA	1	$ 550.97	$ 550.97
163-0550	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	EA	12	$ 186.02	$ 2,232.24
165-0105	MAINTENANCE OF INLET SEDIMENT TRAP	EA	12	$ 67.77	$ 813.24
171-0030	TEMPORARY SILT FENCE, TYPE C	LF	1500	$ 2.99	$ 4,485.00
165-0030	MAINTENANCE OF TEMPORARY SILT FENCE, TYPE C	LF	750	$ 0.94	$ 705.00
167-1000	WATER QUALITY MONITORING AND SAMPLING	EA	2	$ 324.32	$ 648.64
167-1500	WATER QUALITY INSPECTIONS	MO	6	$ 632.47	$ 3,794.82
	SIGNING AND MARKING				
636-1036	HIGHWAY SIGNS, TP 1, MATL, REFL SHEETING, TP 11	SF	250	$ 25.24	$ 6,310.00
653-1501	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	LF	1400	$ 0.56	$ 784.00
653-1502	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	LF	1000	$ 0.56	$ 560.00
	RIGHT OF WAY & EASEMENT				
	RIGHT OF WAY	SY	1158	$ 20.00	$ 23,160.00
	EASEMENT	SY	2845	$ 10.00	$ 28,450.00
	DRIVEWAY EASEMENT (NO CHARGE)	SY	198	$ -	$ -

ROADWAY SUBTOTAL		$ 495,015.09
EROSION CONTROL - PERMANENT SUBTOTAL		$ 8,616.69
EROSION CONTROL - TEMPORARY SUBTOTAL		$ 20,071.83
SIGNING AND MARKING SUBTOTAL		$ 7,654.00
ROW & EASEMENT SUBTOTAL		$ 51,610.00
CONSTRUCTION SUBTOTAL		$ 582,967.61
CONTIGENCY	10%	$ 58,296.76
UTILITIES		$ 52,370.36
PROJECT TOTAL		$ 693,634.73

RIGHT TURN LANE COSTS

TRAFFIC CONTROL	1	$ 4,000.00	$ 4,000.00
GRADING COMPLETE	1	$ 8,000.00	$ 8,000.00
GR AGGR BASE CRS, INCL	340	$ 26.66	$ 9,064.40
RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	170	$ 75.00	$ 12,750.00
RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	35	$ 109.00	$ 3,815.00
RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	85	$ 85.00	$ 7,225.00
CONCRETE MEDIAN, 6 IN	130	$ 54.32	$ 7,061.60
ROW	223	$ 20.00	$ 4,460.00
EASEMENT	152	$ 10.00	$ 1,520.00
			$ 57,896.00
	TOTAL WITHOUT RIGHT TURN LANE		$ 635,738.73

Project No:	
DATE: Feb 15, 2016	
Client: Peachtree Corners	
CONCEPTUAL COST ESTIMATE - PEACHTREE CORNERS ROUNDABOUT	
ALTERNATIVE 3	

Item No.	ITEM:	Unit	Qty	Price	Cost
	ROADWAY ITEMS				
150-1000	TRAFFIC CONTROL	EA	1	$ 50,000.00	$ 50,000.00
210-0100	GRADING COMPLETE	EA	1	$120,000.00	$ 120,000.00
	MOBILIZATION	LS	1	$ 50,000.00	$ 50,000.00
310-1101	GR AGGR BASE CRS, INCL MATL	TN	1327	$ 26.66	$ 35,377.82
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	664	$ 75.00	$ 49,800.00
402-3130	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	TN	745	$ 109.00	$ 81,205.00
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	332	$ 85.00	$ 28,220.00
441-0016	DRIVEWAY CONCRETE, 6 IN TK	SY	392	$ 38.24	$ 14,990.08
310-5060	GR AGGR BASE CRS, 6 INCH, INCL MATL	SY	392	$ 13.80	$ 5,409.60
441-0104	CONC SIDEWALK, 4 IN	SY	1248	$ 40.61	$ 50,681.28
441-0748	CONCRETE MEDIAN, 6 IN	SY	1588	$ 54.32	$ 86,260.16
441-6216	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	LF	1620	$ 18.08	$ 29,289.60
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	600	$ 40.35	$ 24,210.00
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	100	$ 53.40	$ 5,340.00
634-1200	RIGHT OF WAY MARKERS	EA	10	$ 117.11	$ 1,171.10
668-1100	CATCH BASIN, GP 1	EA	6	$ 2,361.23	$ 14,167.38
668-4300	STORM SEWER MANHOLE, TP 1	EA	6	$ 1,805.51	$ 10,833.06
668-5000	JUNCTION BOX	EA	3	$ 1,833.58	$ 5,500.74
	EROSION CONTROL - PERMANENT				
700-9300	SOD	SY	1650	$ 5.63	$ 9,289.50
700-7000	AGRICULTURAL LIME	TN	2	$ 96.97	$ 193.94
700-8000	FERTILIZER MIXED GRADE	TN	1	$ 596.75	$ 596.75
700-8100	FERTILIZER NITROGEN CONTENT	LB	50	$ 4.51	$ 225.50
	EROSION CONTROL - TEMPORARY				
163-0232	TEMPORARY GRASSING	AC	1	$ 505.82	$ 505.82
163-0240	MULCH	TN	20	$ 248.45	$ 4,969.00
163-0300	CONSTRUCTION EXIT	EA	1	$ 1,367.10	$ 1,367.10
165-0101	MAINTENANCE OF CONSTRUCTION EXIT	EA	1	$ 550.97	$ 550.97
163-0550	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	EA	15	$ 186.02	$ 2,790.30
165-0105	MAINTENANCE OF INLET SEDIMENT TRAP	EA	15	$ 67.77	$ 1,016.55
171-0030	TEMPORARY SILT FENCE, TYPE C	LF	1700	$ 2.99	$ 5,083.00
165-0030	MAINTENANCE OF TEMPORARY SILT FENCE, TYPE C	LF	850	$ 0.94	$ 799.00
167-1000	WATER QUALITY MONITORING AND SAMPLING	EA	2	$ 324.32	$ 648.64
167-1500	WATER QUALITY INSPECTIONS	MO	6	$ 632.47	$ 3,794.82
	SIGNING AND MARKING				
636-1036	HIGHWAY SIGNS, TP 1, MATL, REFL SHEETING, TP 11	SF	250	$ 25.24	$ 6,310.00
653-1501	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	LF	1600	$ 0.56	$ 896.00
653-1502	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	LF	1200	$ 0.56	$ 672.00
	RIGHT OF WAY & EASEMENT				
	RIGHT OF WAY	SY	1158	$ 20.00	$ 23,160.00
	EASEMENT	SY	2845	$ 10.00	$ 28,450.00
	DRIVEWAY EASEMENT (NO CHARGE)	SY	198	$ -	$ -

ROADWAY SUBTOTAL		$ 662,455.82
EROSION CONTROL - PERMANENT SUBTOTAL		$ 10,305.69
EROSION CONTROL - TEMPORARY SUBTOTAL		$ 21,525.20
SIGNING AND MARKING SUBTOTAL		$ 7,878.00
ROW & EASEMENT SUBTOTAL		$ 51,610.00
CONSTRUCTION SUBTOTAL		$ 753,774.71
CONTIGENCY	10%	$ 75,377.47
UTILITIES		$ 69,428.67
PROJECT TOTAL		$ 898,580.85

RIGHT TURN LANE COSTS

TRAFFIC CONTROL	1	$ 6,000.00	$ 6,000.00
GRADING COMPLETE	1	$ 12,000.00	$ 12,000.00
GR AGGR BASE CRS, INCL MATL	365	$ 26.66	$ 9,730.90
RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	180	$ 75.00	$ 13,500.00
RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	45	$ 109.00	$ 4,905.00
RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	95	$ 85.00	$ 8,075.00
CONCRETE MEDIAN, 6 IN	140	$ 54.32	$ 7,604.80
ROW	223	$ 20.00	$ 4,460.00
EASEMENT	152	$ 10.00	$ 1,520.00
			$ 67,795.70
	TOTAL WITHOUT RIGHT TURN LANE		$ 830,785.15