



Thompson Mill Road Project DRI #3279 Traffic Impact Study

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Executive Summary

A proposed warehousing development is planned to be located in Buford, GA near the intersection of Thompson Mill Rd and N Bogan Rd. The development will primarily occupy undeveloped land with two proposed driveways, one full access driveway on Thompson Mill Rd and one full access driveway on N Bogan Rd. The development is planned to have a build out in late 2022. This report analyzes multiple scenarios to include a GDOT planned interchange with I-985.

An aerial of the proposed development is shown in Figure i. The full site plan can be found in Appendix A. The proposed development trip generation is summarized in Table i.

Figure i: Site Aerial



Table i: Site Trip Generation

Land Use Information	Project Trips			Equation Used ¹	In / Out Distribution
	Total	Inbound	Outbound		
150- Warehousing				1,048,320	1000 S.F.
Daily	1,705	853	852	$T=1.58(X) + 48.54$	50% / 50%
AM Peak Hour	151	116	35	$T=0.12(X) + 25.32$	77% / 23%
PM Peak Hour	154	42	112	$T=0.12(X) + 27.82$	27% / 73%
150- Warehousing (Trucks - Included Above)				1,048,320	1000 S.F.
Daily	574	287	287	$T=0.54(X)+7.47$	50% / 50%
AM Peak Hour	21	11	10	$T=0.02(X)$	52% / 48%
PM Peak Hour	31	16	15	$T=0.03(X)$	52% / 48%

Note: ¹ Where: T = Trips; X = Density by Variable

The proposed development is anticipated to generate 1,705 daily vehicle trips (853 inbound, 852 outbound) with 151 AM peak hour vehicle trips (116 inbound, 35 outbound), and 154 PM peak hour trips (42 inbound, 112 outbound).

Truck generation is included in the general trip generation (not in addition to). The development is anticipated generate 574 daily truck trips (287 inbound, 287 outbound) with 21 AM peak hour truck trips (11 inbound, 10 outbound), and 31 PM peak hour trips (16 inbound, 15 outbound).

Due to the interaction with the proposed I-985 interchange ramp location a smaller footprint alternative is also being analyzed and is summarized in Table ii.

Table ii: Alternative Site Trip Generation

Land Use Information	Project Trips			Equation Used ¹	In / Out Distribution
	Total	Inbound	Outbound		
150- Warehousing				786,240	1000 S.F.
Daily	1,291	646	645	$T=1.58(X) + 48.54$	50% / 50%
AM Peak Hour	120	92	28	$T=0.12(X) + 25.32$	77% / 23%
PM Peak Hour	122	33	89	$T=0.12(X) + 27.82$	27% / 73%
150- Warehousing (Trucks - Included Above)				786,240	1000 S.F.
Daily	432	216	216	$T=0.54(X)+7.47$	50% / 50%
AM Peak Hour	16	8	8	$T=0.02(X)$	52% / 48%
PM Peak Hour	24	12	12	$T=0.03(X)$	52% / 48%

Note: ¹ Where: T = Trips; X = Density by Variable

The alternative development is anticipated to generate 1,291 daily vehicle trips (646 inbound, 645 outbound) with 120 AM peak hour vehicle trips (92 inbound, 28 outbound), and 122 PM peak hour trips (33 inbound, 89 outbound).

Truck generation is included in the general trip generation not in addition to. The alternative development is anticipated generate 432 daily truck trips (216 inbound, 216 outbound) with 16 AM peak hour truck trips (8 inbound, 8 outbound), and 24 PM peak hour trips (12 inbound, 12 outbound).

A comparison of required improvement intersection capacity and added volumes is shown in Table iii.

Table iii: Intersection Capacity Analysis Comparison

Intersection	Lane Group Movement	No Build PM Peak		No Build Improved PM Peak		Build PM Peak		No Build Improved PM Peak		Trips Added	% of Total
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS		
N Bogan Rd @ Friendship Rd	EB	0.0	-	0.0	-	0.0	-	0.0	-	1.0	2%
	WB	12.6	-	12.1	-	13.0	-	12.4	-	1.0	1%
	NB	1071.0	F	74.2	F	1523.2	F	85.2	F	10.0	7%
	Intersection	53.2	-	6.9	-	79.3	-	7.8	-	12.0	0.4%

The conclusions and recommendations of this report by intersection are as follows:

No Interchange

Thompson Mill Rd at SR 13 (Buford Highway)

- The intersection operates at LOS C for both AM and PM peak hours in build conditions.
- No improvements are recommended or required at the intersection.

Thompson Mill Rd at N Bogan Rd

- Gwinnett County has planned a roundabout improvement at the study intersection with development build year volumes the roundabout as designed is anticipated to operate at LOS A for both AM and PM peak hours.
- No improvements are recommended or required at the intersection.

N Bogan Rd NE at Friendship Rd (SR 347)

- The side-street stop-controlled intersection experiences a failing level of service for the northbound approach in existing conditions.
- The failing level of service is due primarily the nature of side-street stop-controlled intersections, particularly on a roadway with a 6-lane median divided cross section. A restricted RCUT or RIRO movement could be considered however when analyzed the LOS did not show improvement. A traffic signal would not be warranted based on peak hour volumes.
- The proposed development is anticipated to add minimal turning movement volumes, 2 vehicle trips during the AM peak hour, and 10 vehicle trips during the PM peak hour to the northbound approach. Failing level of service is present in No-Build conditions. Any improvements would be required without the proposed development.

Thompson Mill Rd at Driveway 1

- The proposed driveway is planned to align with the existing residential driveway to the south in the full density scenario.
- A right-turn lane is required per section 900-30.2. B of Gwinnett County municipal code
 - The right-turn lane should be constructed to a length of 200 feet with an additional 50-foot taper.
- A left-turn lane is required per Gwinnett County Department of Transportation Criteria and Guidelines for Left Turn Lanes June 20th, 2007.
 - The left turn lane should be constructed with an approach / departure taper of 270' with a bay taper of 100' and a minimum storage of 100'. If not geometrically possible a variance may be requested from GCDOT.
- The proposed driveway will operate with LOS of D for the residential neighborhood for the AM peak hour and LOS C for all other movements and peak hours.

N Bogan Rd NE at Driveway 2

- The proposed side-street stop driveway will operate with an exiting LOS of B for both peak hours.
- Turn lanes are not required per Gwinnett County code.

Interchange Alternative

GDOT has a planned interchange at the proposed development location. A reduced footprint was analyzed for the alternative. Traffic volumes provided in the interchange justification report were provided by GDOT for use in analysis. Traffic volumes are for a 2030 build year, proposed development volumes were added to the GDOT forecasted volumes for use in analysis.

Thompson Mill Rd at SR 13 (Buford Highway)

- With additional volume from the interchange (growth and re-routing) and changes in traffic patterns without any adjustment the LOS drops to F in the PM peak hour.
- It can be assumed that the signal timing for SR 13 will be maintained as needed and with signal timing adjustments the LOS returns to C/D for all approaches and peak hours.
 - Improvements in the form of signal phasing and additional turn lanes were also considered however due to conflicting movements the LOS for side-street movements would operate at LOS E.
- No improvements are recommended or required at the intersection.

Thompson Mill Rd at N Bogan Rd

- The planned roundabout is anticipated to operate at LOS C for both AM and PM peak hours and all approaches operating at LOS D or better with interchange and development volume.
- No improvements are recommended or required at the intersection.

N Bogan Rd NE at Friendship Rd (SR 347)

- With changes to traffic patterns due to the interchange project the NB approach operates at LOS E for build conditions, improved from LOS F in existing no-build conditions.
- No improvements are recommended or required at the intersection.

Thompson Mill Rd at I-985 SB Ramps

- The proposed signalized interchange ramp is anticipated to operate at LOS C in the AM peak hour and LOS B in the PM peak hour.
- No changes to the concept plan are required as part of the proposed development.

Thompson Mill Rd at I-985 NB Ramp

- The proposed signalized interchange ramp is anticipated to operate at LOS C in the AM and PM peak hours.
- No changes to the concept plan are required as part of the proposed development.

Thompson Mill Rd at Driveway 1

- The proposed interchange will align with the existing residential driveway, and the proposed Driveway 1 is planned to be located centered between the proposed interchange and the proposed roundabout.
- A right-turn lane is required per section 900-30.2.B of Gwinnett County municipal code.
 - The right-turn lane should be constructed to a length of 200 feet with an additional 50-foot taper.
- A left-turn lane is required per Gwinnett County Department of Transportation Criteria and Guidelines for Left Turn Lanes June 20th, 2007.
 - The left turn lane should be constructed with an approach / departure taper of 270' with a bay taper of 100' and a minimum storage of 100'. If not geometrically possible a variance may be requested from GCDOT.
- The proposed driveway will operate with approach LOS of D for the AM peak hour and LOS C for the PM peak hour.
- Coordination with Gwinnett County and GDOT will be required to accommodate the driveway location.

N Bogan Rd NE at Driveway 2

- The proposed side-street stop driveway will operate with an exiting LOS of B for both peak hours.
- Turn lanes are not required per Gwinnett County code.

1 Project Description

A proposed warehousing development is planned to be located in Buford, GA near the intersection of Thompson Mill Rd and N Bogan Rd. The development will primarily occupy undeveloped land with two proposed driveways one full access driveway on Thompson Mill Rd and one full access driveway on N Bogan Rd. A vicinity map is shown in Figure 1 and an aerial map is shown in Figure 2. The proposed site plan is also included in Appendix A.

The proposed development is planned for a single phase of development with an estimated completion in late 2022.

Figure 1: Vicinity Map

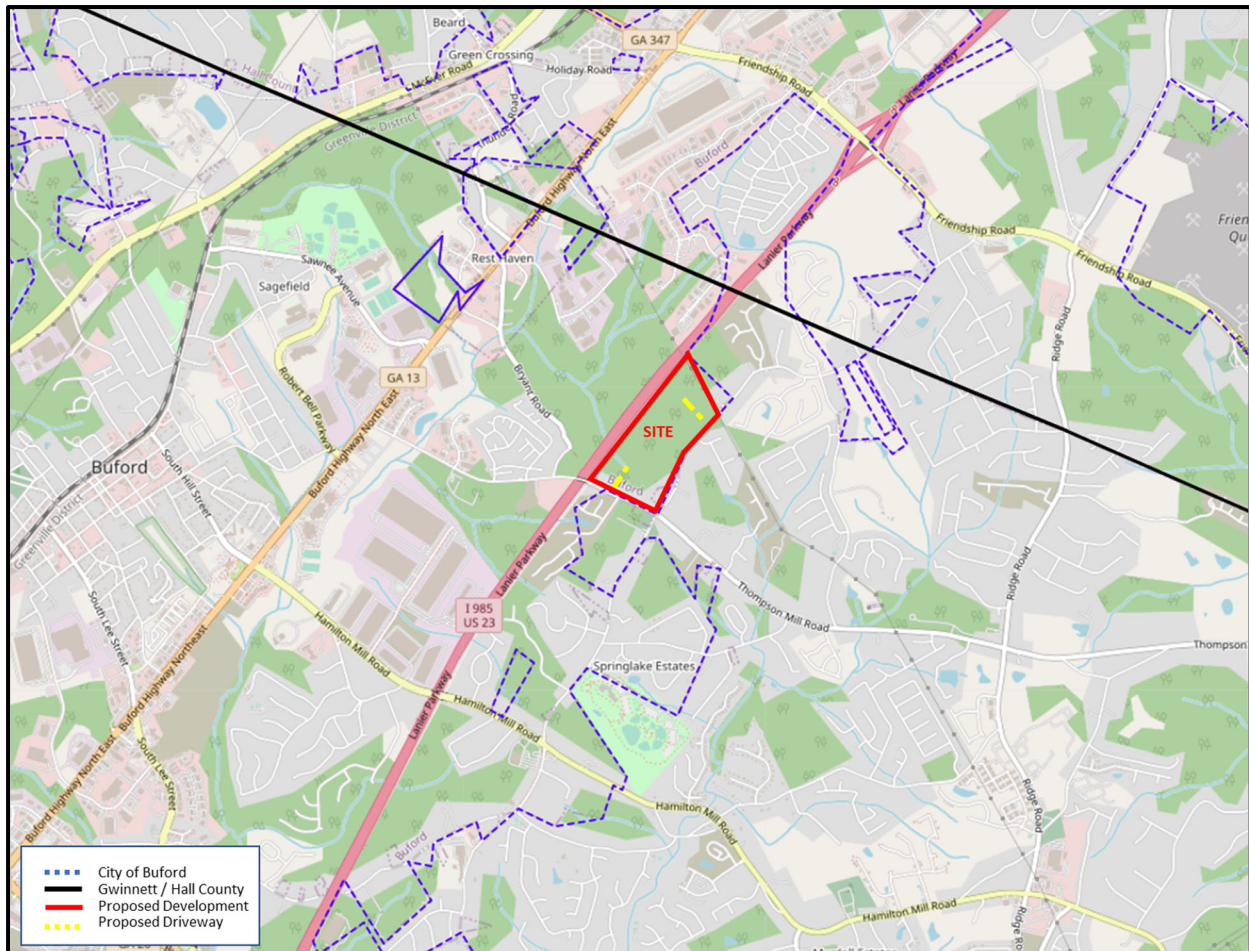


Figure 2: Aerial Map



1.1 Site Plan Summary

The proposed site is a single warehousing building consisting of 1,048,320 square feet.

1.2 Site Access

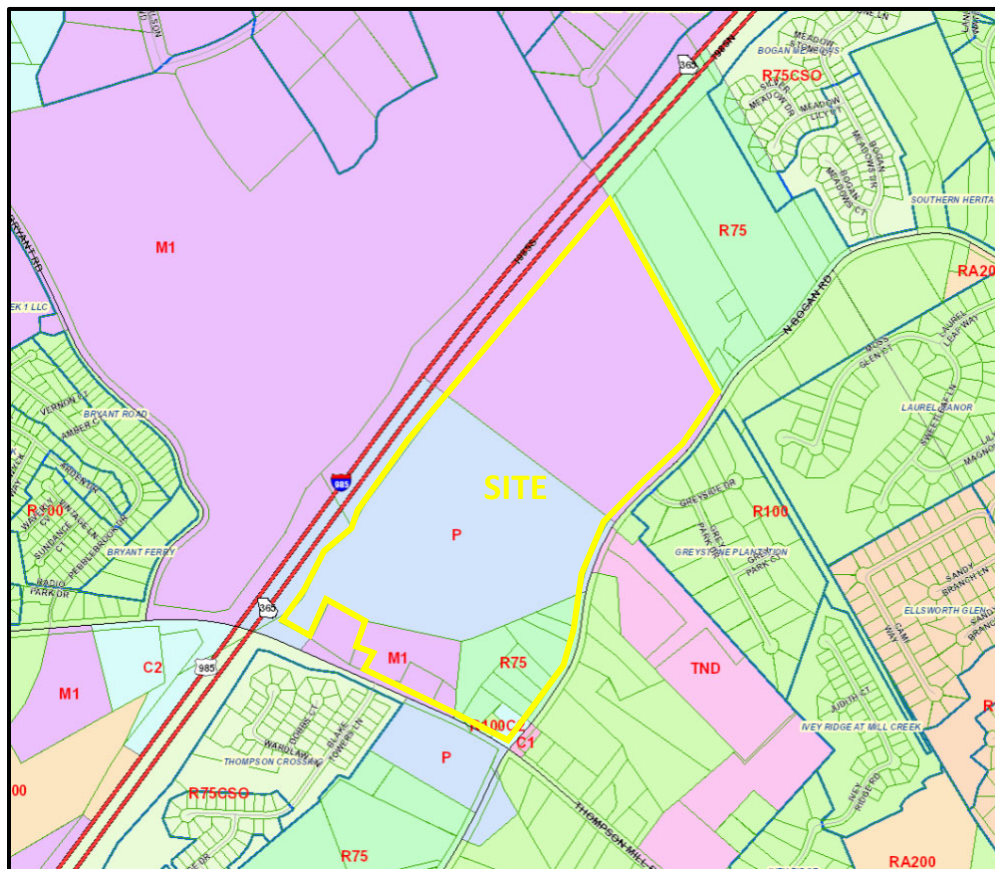
The proposed development will access the external roadway network via two proposed driveway locations.

- Driveway 1
 - Full-access driveway located on Thompson Mill Rd and aligned with Blake Towers Lane
 - This will serve as the Truck access into and out of the proposed development.
- Driveway 2
 - Full-access driveway located on N Bogan Rd

1.3 Zoning and Land Use

The existing zoning consists of M1 – Light Industry District, P – Public / Civic and, R-75 – Single Family Residence District. The proposed zoning is M1 – Light Industry District.

Figure 3: Existing Zoning Map



1.4 Nearby Project and Local Plan

The DRI will have a direct interaction with proposed roadway projects (roundabout) at the intersection of Thompson Mill Rd at N Bogan Rd. The development will have significant interaction with a proposed

interchange with I-985 at Thompson Mill Rd. This report also analyzes a reduced footprint and alternative access scenario in described in the build conditions section of this report.

Table 1: Projects in Study Network

Project Name	From / To Points:	Potential Sponsor	Project ID #	Project Timeline	Planning Document
Thompson Mill Rd	US 23 / SR 13 / Buford Hwy to Faith Industrial Dr	Gwinnett County / City of Buford	T-7	N/A	2017 SPLOST (attached) LCI Update (Buford)
I-85 Interchange	Thompson Mill Rd	GDOT	N/A	N/A	Concept Plan (attached)

2 Existing Conditions

2.1 Bicycle and Pedestrian Facilities Description

There are no bicycle or pedestrian facilities in the vicinity of the proposed development on Thompson Mill Rd or N Bogan Rd.

2.2 Transportation Facilities Description

Thompson Mill Road is a two-lane roadway that runs East/West with a posted speed limit of 45 mph. West of N Bogan Road, the functional classification is major collector. East of N Bogan Road, the functional classification is local road. The roadway is an approved Gwinnett County truck route.

N Bogan Road is a two-lane roadway that runs North/South with a posted speed limit of 40 mph. North of Thompson Mill Road, the functional classification is major collector. South of Thompson Mill Road, the functional classification is local road.

SR 13 is a four-lane median divided roadway with a posted speed limit of 50 mph. The roadway is functionally classified as a Minor Arterial and for the purposes of this analysis runs north to south. The roadway serves as the primary access to I-985 to the north and south for heavy vehicle traffic.

2.3 Study Network

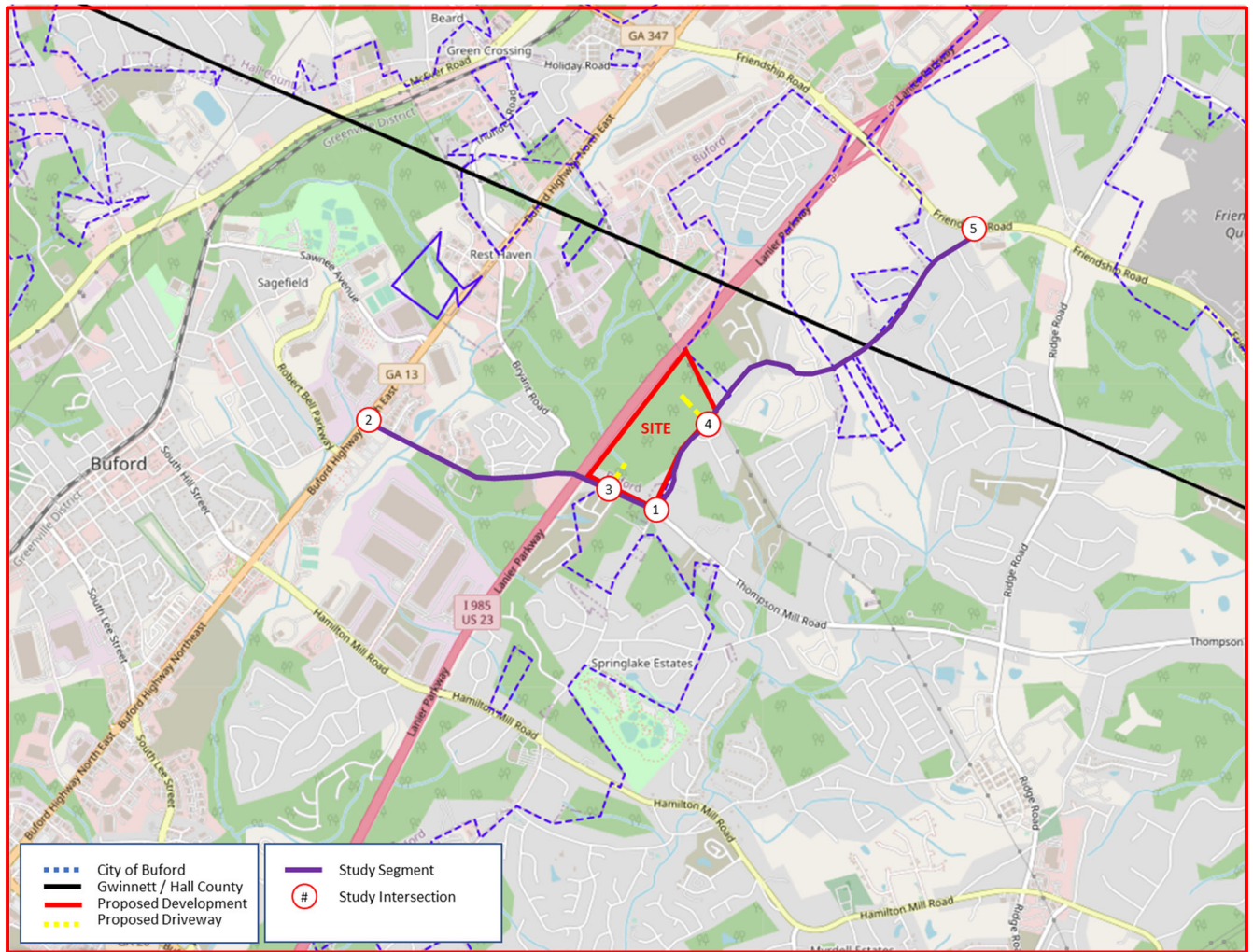
The study network as approved during the methodology meeting is shown in Figure 4.

2.3.1 Study Intersections:

- 1) Thompson Mill Rd at N Bogan Rd NE
- 2) Thompson Mill Rd at SR 13 (Buford Highway)
- 3) Thompson Mill Rd at Site Driveway 1
- 4) N Bogan Rd NE at Site Driveway 2
- 5) N Bogan Rd NE at Friendship Rd / Holiday Rd (SR 347)

Existing roadway geometry is shown in Figure 5.

Figure 4: Study Network Map



2.4 Traffic Data

Traffic counts were performed at three different study intersections on Wednesday, May 12, 2021. The peak hours were determined to be 7:15AM – 8:15AM and 4:30PM – 5:30PM. The peak hour turning movement volumes are shown graphically in Figure 6. The raw traffic counts are included in Appendix B.

Due to the ongoing COVID-19 pandemic vehicle traffic can differ from typical pre-pandemic volumes and patterns. To adjust for any variation a GDOT historic count from Friendship Rd west of the intersection with N Bogan Rd was used for comparison. The historic 2019 volume was grown to 2021 and then compared to existing traffic volumes. Analysis showed that the AM peak hour required an adjustment factor of 1.12 and the PM peak hour required an adjustment factor of 1.08. Analysis inputs are summarized in Table 2.

Table 2: COVID Adjustment Factors

	Existing Volume		GDOT Traffic Data	
Date	5/12/2021		2/13/2019 (Grown to 2021)	
Peak Hour	0700-0800	1700-1800	0700-0800	1700-1800
Peak Volume	2029	2402	2280	2592

	AM	PM
Adjustment Factor	1.12	1.08

Figure 5: Existing Lane Geometry

Signal Control

Stop Control

LEGEND

Existing Lane Geometry

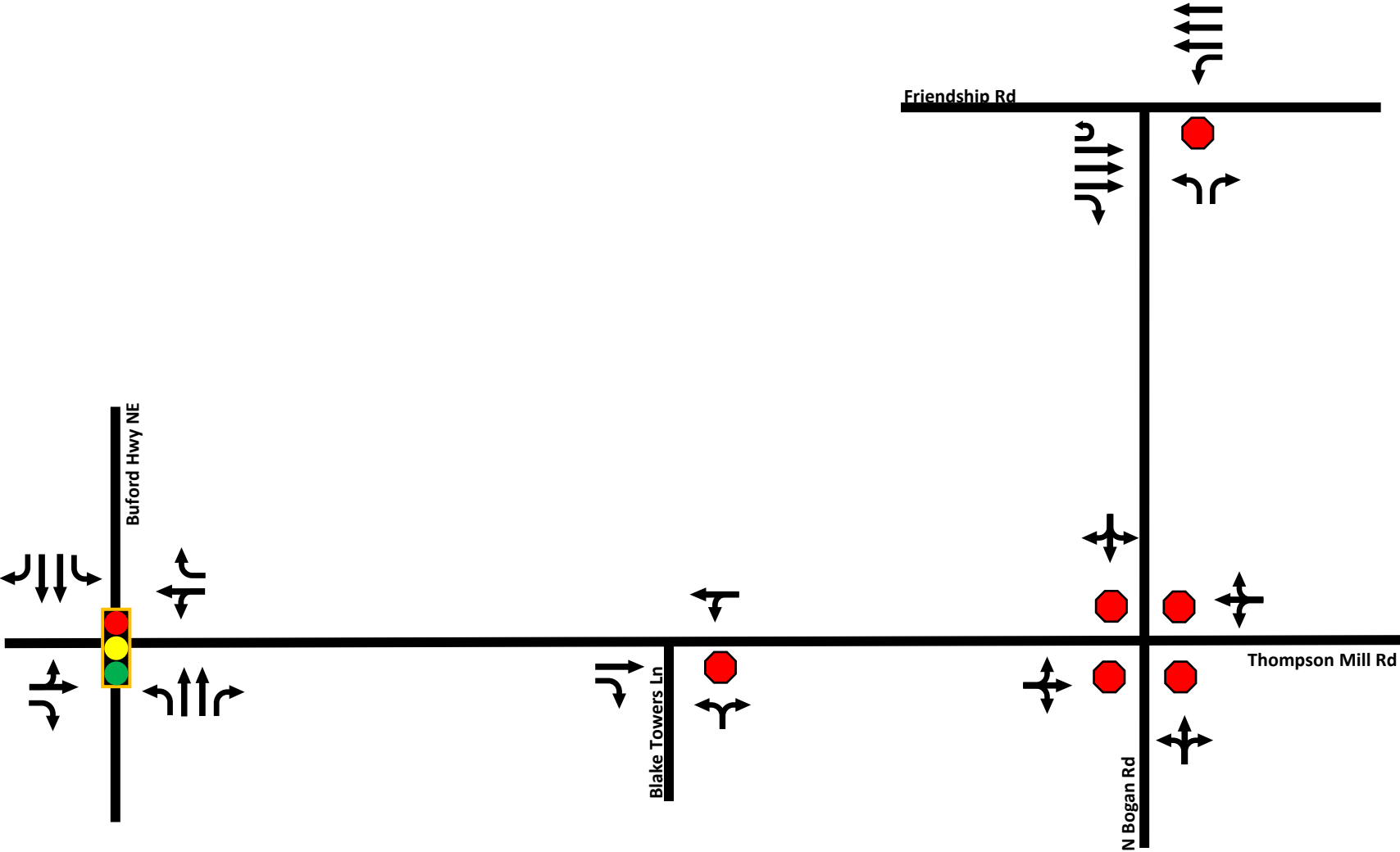
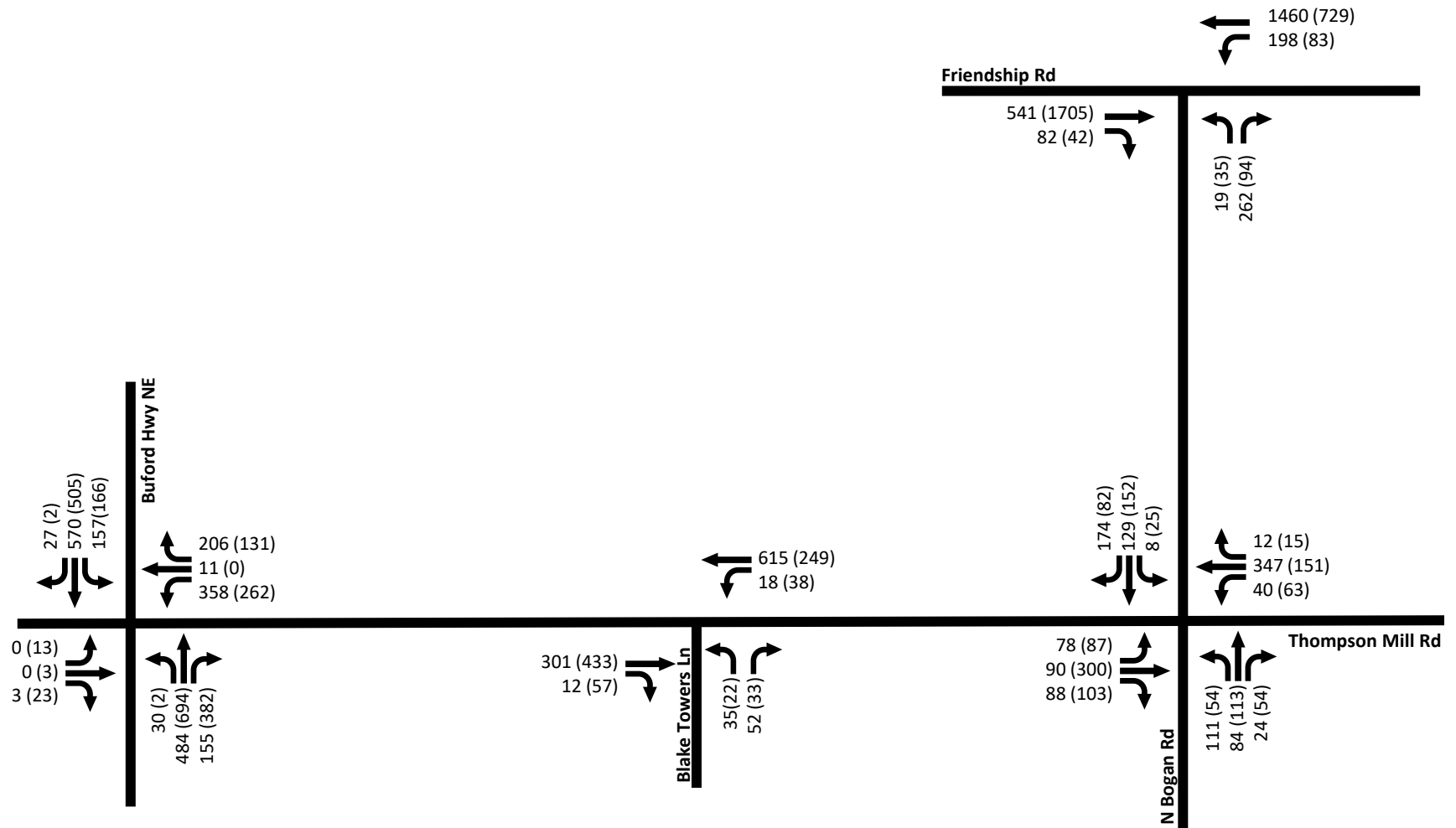
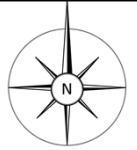
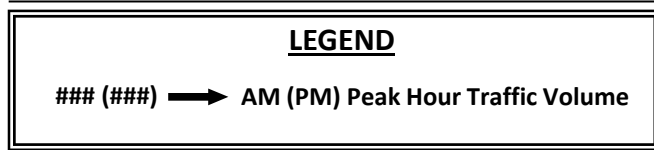


Figure 6: Existing (2021) Traffic Volumes



2.5 Existing Capacity Analysis

The existing traffic volumes were analyzed using a Synchro 11 model to determine the capacity of the AM and PM peak hours. The results are shown by lane group movement and total intersection capacity. Average vehicular delays are shown in seconds, level of service (LOS) is a grading system as defined by the Highway Capacity Manual (HCM) where A is best, and F is worst. The HCM 6th Edition methodology was used for analysis. Synchro reports and signal timings used in analysis are shown in Appendix C.

Table 3: Existing Conditions Capacity Analysis

#	Intersection	Control	Lane Group Movement	AM Peak Hour		PM Peak Hour	
				Delay (s)	LOS	Delay (s)	LOS
1	SR 13 @ Thompson Mill Rd	Signal Control	EB	0.0	A	48.7	D
			WB	40.6	D	45.6	D
			NB	13.3	B	10.1	B
			SB	15.8	B	13.7	B
			Intersection	22	C	18.7	B
2	Thompson Mill Rd @ N Bogan Rd	4-Way Stop Control	EB	25.4	D	76.6	F
			WB	42.3	E	18.5	C
			NB	20.3	C	17.6	C
			SB	26.7	D	18.6	C
			Intersection	30.2	D	43.5	E
3	N Bogan Rd @ Friendship Rd	Side-street Stop Control	EB	0.0		0.0	
			WB	1.8		11.0	
			NB	25.5	D	107.3	F
			Intersection	4.4		34.1	

Thompson Mill Rd at SR 13 (Buford Highway)

- The signalized intersection operates at LOS C during the AM peak hour and LOS B during the PM peak hour.

Thompson Mill Rd at N Bogan Rd

- The all-way stop controlled intersection operates at LOS D during the AM peak hour and LOS E during the PM peak hour.
- The WB movement operates at LOS E during the AM peak and the EB movement operates at LOS F during the PM peak hour.

N Bogan Rd NE at Friendship Rd (SR 347)

- The side-street stop-controlled intersection operates with an LOS F for the northbound movement during the PM peak hour. The LOS F is due to primarily the function of side-street stop-controlled intersections and the wide 6-lane cross section of Friendship Rd. Synchro does not stage turning vehicle movements in the median so LOS may be better in operation with vehicles utilizing the median break to make a two part left turn movement.

3 Background Conditions

3.1 Background Traffic Growth

Background traffic growth is the analysis method of analyzing historic trends in traffic volumes / population growth, and future growth projections to determine an annual growth rate which is applied to the existing traffic counts on the study network. A growth rate of 2% was determined and approved for analysis during the methodology meeting. Background traffic volumes are shown in Figure 7.

3.2 Background Lane Geometry

A single-lane roundabout is planned at the intersection of Thompson Mill Rd at N Bogan Rd. The project is primarily sponsored by Gwinnett County. Coordination was made during the analysis period to incorporate their design into background conditions. A concept plan is provided in Appendix D, background lane geometry is shown in Figure 8.

3.3 Background Interchange Alternative

GDOT has planned a new location interchange with I-985 and Thompson Mill Rd. The proposed interchange will add signalized ramps to Thompson Mill Rd. GDOT has provided forecasted traffic volumes for use in analysis. The volumes are for a build 2030 and were retained for the purposes of this analysis. Background interchange study network volumes are shown in Figure 9 and lane geometry is shown in Figure 10.

The concept plan and provided volumes are shown in Appendix D.

Figure 7: Background (2022) Traffic Volumes

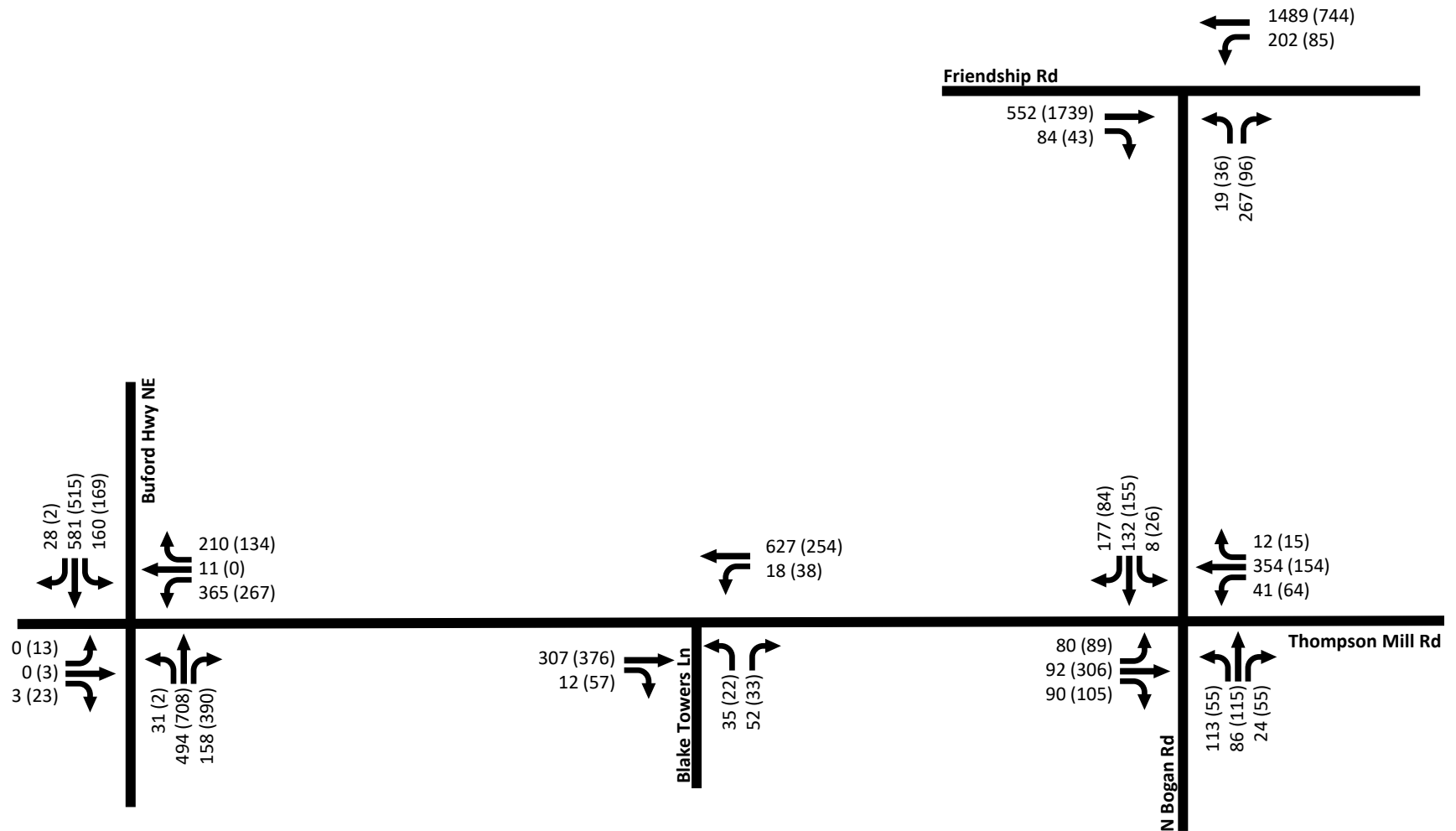
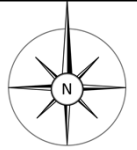
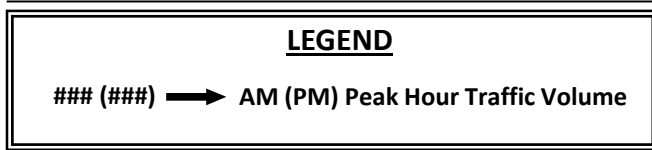


Figure 8: Background (2022) Lane Geometry

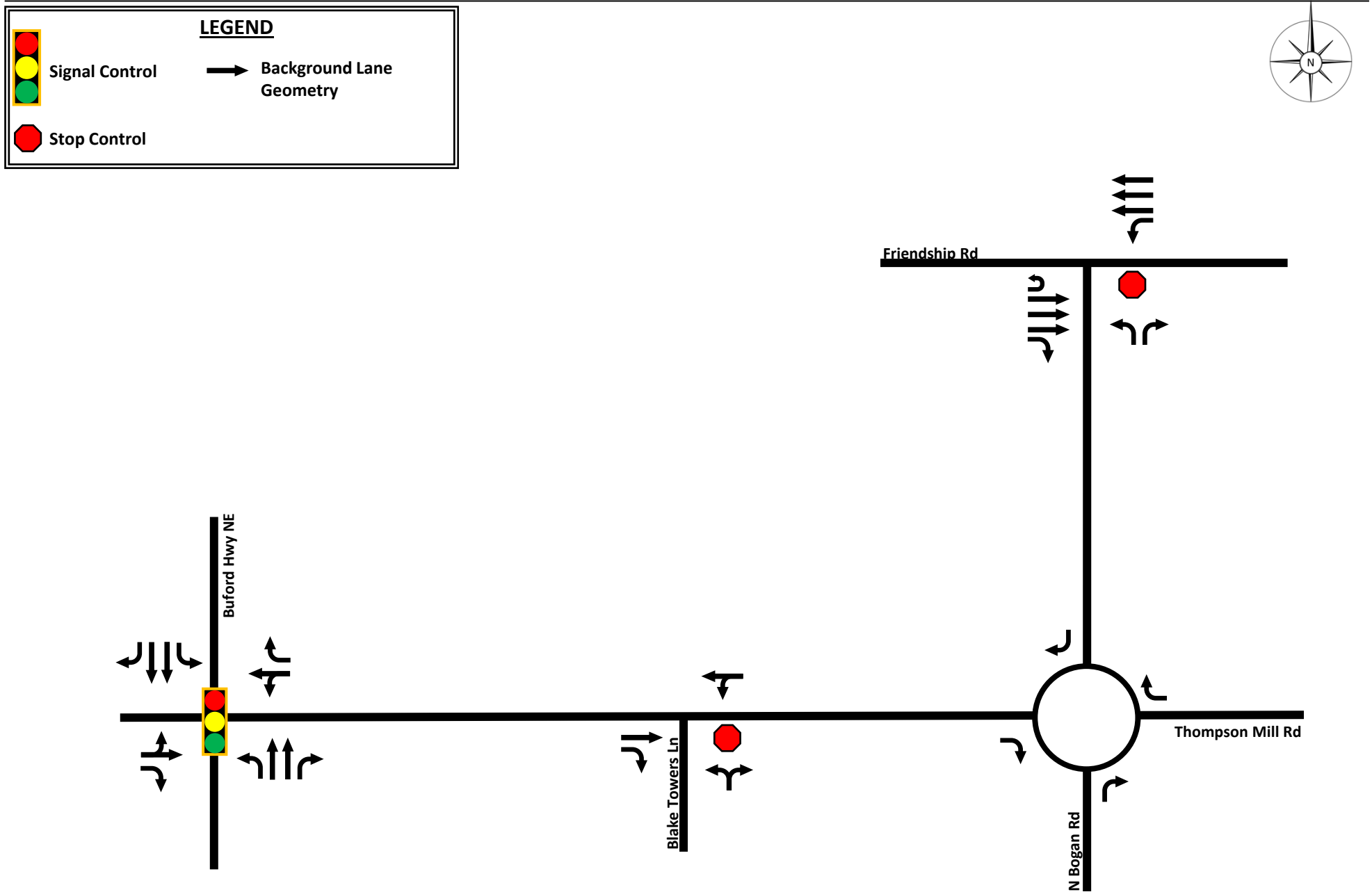


Figure 9: Background (2030) Interchange Alternative Traffic Volumes

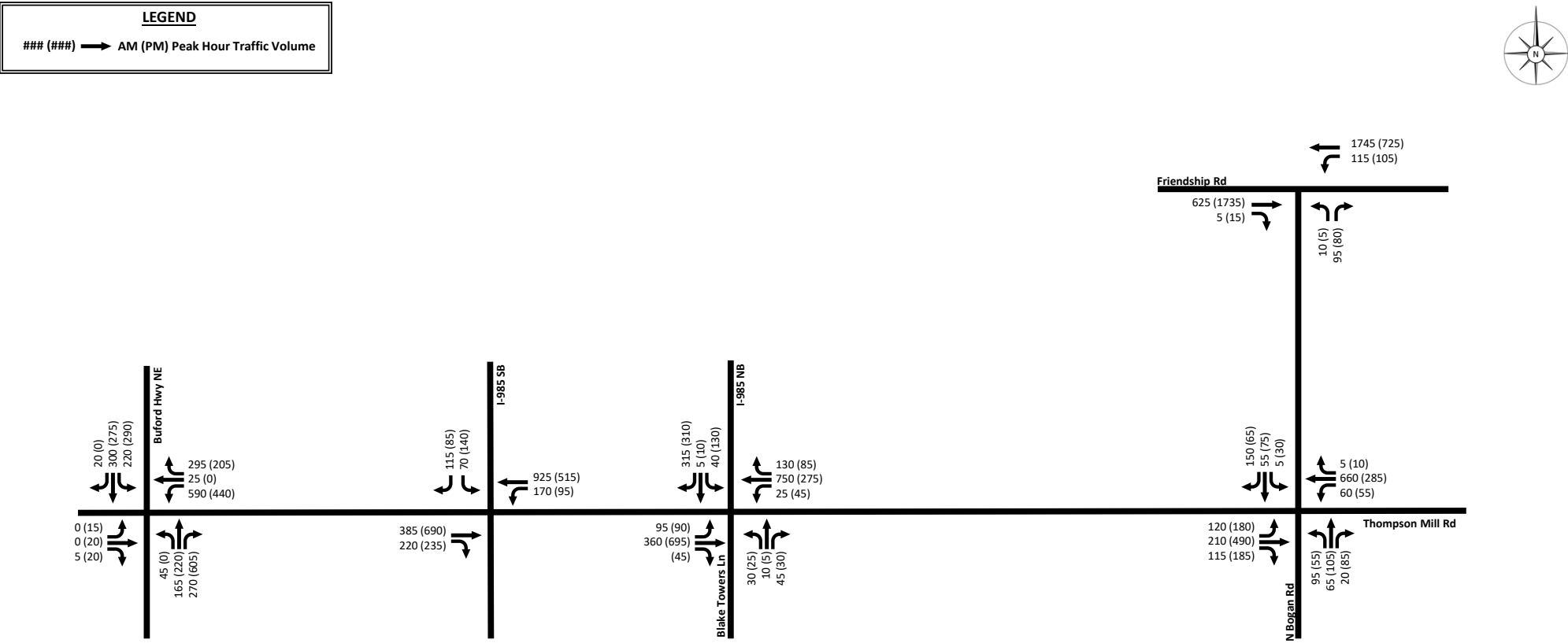
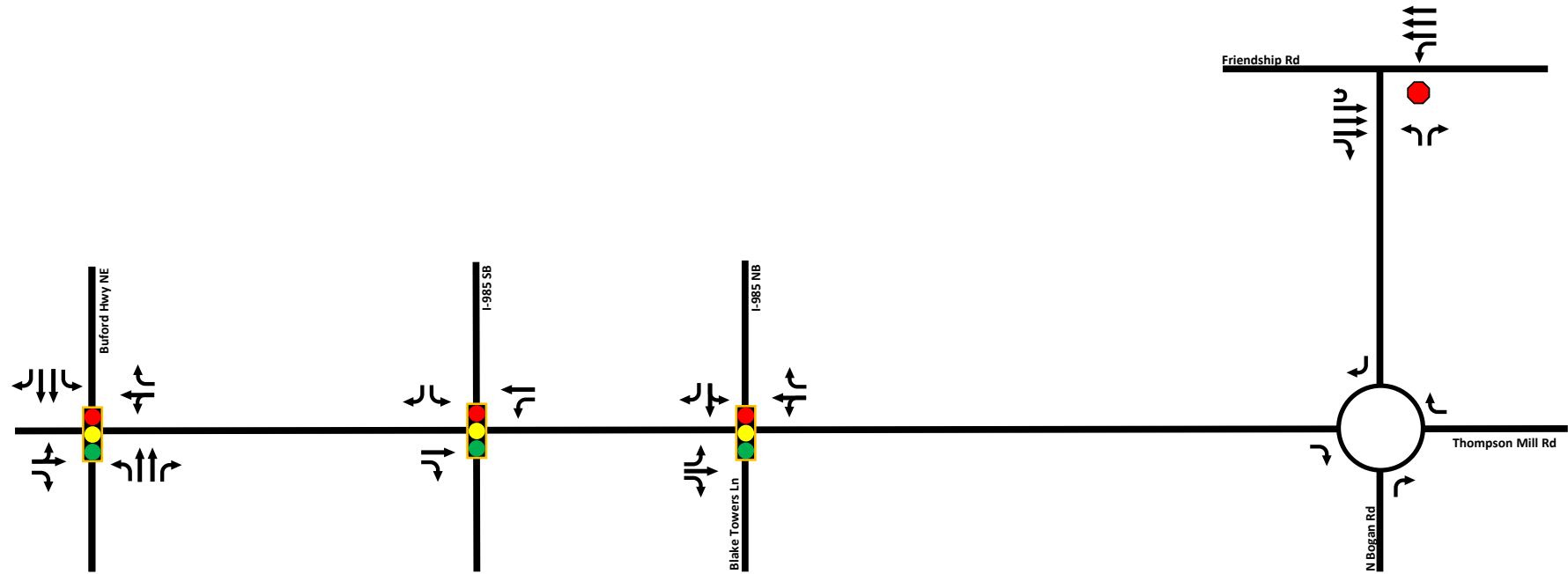
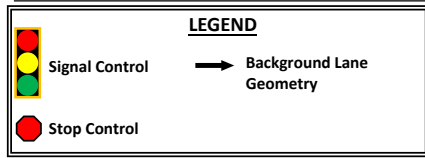


Figure 10: Background (2030) Interchange Alternative Lane Geometry



3.4 Background Capacity Analysis

The background traffic volumes were analyzed using a Synchro 11 model to determine the capacity of the AM and PM peak hours. The results are shown by lane group movement and total intersection capacity. Average vehicular delays are shown in seconds, level of service (LOS) is a grading system as defined by the Highway Capacity Manual (HCM) where A is best, and F is worst. HCM 6th Edition methodology was used for analysis. Signal timings were retained from existing conditions. Synchro output files and signal timings are included in Appendix C. The planned roundabout at the intersection of Thompson Mill Rd and N Bogan Rd was analyzed utilizing the GDOT Roundabout Tool v.4.2 and can be found in Appendix C.

Table 4: Background Conditions Capacity Analysis

#	Intersection	Control	Lane Group Movement	AM Peak Hour		PM Peak Hour	
				Delay (s)	LOS	Delay (s)	LOS
1	SR 13 @ Thompson Mill Rd	Signal Control	EB	0.0	A	48.6	D
			WB	40.4	D	45.5	D
			NB	13.7	B	10.4	B
			SB	16.5	B	14.5	B
			Intersection	22.3	C	19.1	B
2	Thompson Mill Rd @ N Bogan Rd	Roundabout	EB	7.1	A	11.0	B
			WB	9.3	A	6.2	A
			NB	5.8	A	7.8	A
			SB	11.1	B	6.4	A
			Intersection	8.6	A	8.6	A
3	N Bogan Rd @ Friendship Rd	Side-street Stop Control	EB	0.0		0.0	
			WB	1.8		12.6	
			NB	26.9	D	1071.0	F
			Intersection	4.5		53.2	

Thompson Mill Rd at SR 13 (Buford Highway)

- The intersection operates at the same LOS as in existing conditions.

Thompson Mill Rd at N Bogan Rd

- The background condition adds a planned roundabout to the previously all-way stop controlled intersection. The single-lane roundabout is projected to operate at LOS A for both peak hours.

N Bogan Rd NE at Friendship Rd (SR 347)

- The side-street stop-controlled intersection continues to fail for the northbound movement and will require improvement in background conditions.

3.4.1 Background Capacity Analysis – Interchange Alternative

The interchange alternative volumes were analyzed for capacity utilizing the same methodology and timings as background conditions.

Table 5: Background Conditions Capacity Analysis - Interchange Alternative

#	Intersection	Control	Lane Group Movement	AM Peak Hour		PM Peak Hour	
				Delay (s)	LOS	Delay (s)	LOS
1	SR 13 @ Thompson Mill Rd	Signal Control	EB	0.0	A	36.8	D
			WB	27.9	C	97.5	F
			NB	28.7	C	90.4	F
			SB	33.8	C	109.6	F
			Intersection	29.8	C	96.8	F
2	Thompson Mill Rd @ N Bogan Rd	Roundabout	EB	9.6	A	27.3	D
			WB	23.9	C	9.3	A
			NB	6.9	A	13.6	B
			SB	14.0	B	6.3	A
			Intersection	16.2	C	19.5	C
3	N Bogan Rd @ Friendship Rd	Side-street Stop Control	EB	0.0	-	0.0	-
			WB	0.9	-	22.4	-
			NB	18.0	C	40.9	E
			Intersection	1.5	-	6.5	-
4	I-985 SB at Thompson Mill Rd	Signal Control	EB	9.1	A	12.8	B
			WB	30.6	C	12.7	B
			SB	25.7	C	27.0	C
			Intersection	23.2	C	14.5	B
5	I-985 NB at Thompson Mill Rd	Signal Control	EB	15.0	B	17.8	B
			WB	16.1	B	11.5	B
			NB	25.9	C	22.4	C
			SB	41.9	D	32.1	C
			Intersection	21.3	C	20.1	C

Thompson Mill Rd at SR 13 (Buford Highway)

- With retaining signal timings, the intersection fails in the PM peak hour.

Thompson Mill Rd at N Bogan Rd

- The proposed roundabout is anticipated to operate at LOS C for both AM and PM peak hours.

N Bogan Rd NE at Friendship Rd (SR 347)

- With re-routing of traffic volumes due to the interchange project the side-street LOS drops to LOS E from LOS F in the non-interchange scenarios

Thompson Mill Rd at I-985 SB Ramp

- The proposed signalized interchange ramp is anticipated to operate at LOS C/B for the AM/PM peak hours.

Thompson Mill Rd at I-985 NB Ramp

- The proposed signalized interchange ramp is anticipated to operate at LOS C for both peak hours.

3.5 Background Conditions Required Improvements

The intersection of N Bogan Rd at Friendship Rd (SR 347) has a failing level of service in background conditions. The failing level of service is primarily function of intersection traffic control. A side-street stop with a six-lane median divided roadway will typically provide an inadequate level of service. Synchro 11

modeling will also not utilize the median to stage turning movements producing a LOS worse than field conditions. To improve the intersection an RCUT configuration was considered restricting the left-turn out movement with vehicles wishing to turn left being required to make a U-turn at the adjacent median break or at the nearest signalized intersection.

A traffic signal would not be warranted based on the low left-turn volume at the intersection during the peak hours.

Table 6: Background Conditions Capacity Analysis with Required Improvement

#	Intersection	Control	Approach	No Improvements				Improvements			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
3	Friendship Rd at N Bogan Rd	Side-Street Stop Control	EB	0.0	-	0.0	-	0.0	-	0.0	-
			WB	1.8	-	12.6	-	1.8	-	12.1	-
			NB	26.9	D	1071.0	F	24.9	C	74.2	F
			Intersection	4.5	-	53.2	-	4.3	-	6.9	-

Even with restricted movements the northbound approach and westbound left-turns experience a failing level of service. Additionally, Friendship Elementary School utilizes the driveway for their buses and restricting left-in movement will only move the failing level of service 980 feet to west to the next unsignalized median break with E Jones Dr.

3.5.1 Background Conditions Required Improvements – Interchange Alternative

With additional volume and varying traffic patterns without changes to signal timing the intersection of SR 13 and Thompson Mill Rd will experience a failing LOS. It is safe to assume with change in traffic patterns that the intersection of SR 13 will have signal timing improvements implemented. Adjusting signal timings will improve the LOS for the interchange alternative, other improvements such as protected /permissive left-turn phasing were analyzed however even with additional EB and WB left-turn lanes and phasing changes the EB/WB operate at LOS E.

Table 7: Background Conditions Capacity with Interchange with Improvement

#	Intersection	Control	Approach	No Improvements				Improvements			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
1	SR 13 @ Thompson Mill Rd	Signal Control	EB	0.0	A	36.8	D	0.0	A	22.8	C
			WB	27.9	C	97.5	F	32.9	C	45.5	D
			NB	28.7	C	90.4	F	19.3	B	31.0	C
			SB	33.8	C	109.6	F	22.1	C	47.3	D
			Intersection	29.8	C	96.8	F	26.4	C	40.1	D

4 Future Conditions

4.1 Trip Generation

A trip generation for the proposed development was created using the Institute of Traffic Engineers (ITE) Trip Generation Manual 10th Edition, 2017. ITE provides a supplement for truck trip generation, excerpts from the supplement are included in Appendix E.

Table 8: Trip Generation Summary

Land Use Information	Project Trips			Equation Used ¹	In / Out Distribution
	Total	Inbound	Outbound		
150- Warehousing				1,048,320	1000 S.F.
Daily	1,705	853	852	$T = 1.58(X) + 48.54$	50% / 50%
AM Peak Hour	151	116	35	$T = 0.12(X) + 25.32$	77% / 23%
PM Peak Hour	154	42	112	$T = 0.12(X) + 27.82$	27% / 73%
150- Warehousing (Trucks - Included Above)				1,048,320	1000 S.F.
Daily	574	287	287	$T = 0.54(X) + 7.47$	50% / 50%
AM Peak Hour	21	11	10	$T = 0.02(X)$	52% / 48%
PM Peak Hour	31	16	15	$T = 0.03(X)$	52% / 48%

Note: ¹ Where: T = Trips; X = Density by Variable

The proposed development is anticipated to generate 1,705 daily vehicle trips (853 inbound, 852 outbound) with 151 AM peak hour vehicle trips (116 inbound, 35 outbound), and 154 PM peak hour trips (42 inbound, 112 outbound).

Truck generation is included in the general trip generation (not in addition to). The development is anticipated to generate 574 daily truck trips (287 inbound, 287 outbound) with 21 AM peak hour truck trips (11 inbound, 10 outbound), and 31 PM peak hour trips (16 inbound, 15 outbound).

4.1.1 Alternative Trip Generation

Due to the interaction with the proposed I-985 interchange ramp location, a smaller footprint alternative is also being analyzed following the same methodology and is shown in Figure 6. The alternative concept site plan is shown in Appendix A.

Table 9: Alternative Trip Generation Summary

Land Use Information	Project Trips			Equation Used ¹	In / Out Distribution
	Total	Inbound	Outbound		
150- Warehousing				786,240	1000 S.F.
Daily	1,291	646	645	$T = 1.58(X) + 48.54$	50% / 50%
AM Peak Hour	120	92	28	$T = 0.12(X) + 25.32$	77% / 23%
PM Peak Hour	122	33	89	$T = 0.12(X) + 27.82$	27% / 73%
150- Warehousing (Trucks - Included Above)				786,240	1000 S.F.
Daily	432	216	216	$T = 0.54(X) + 7.47$	50% / 50%
AM Peak Hour	16	8	8	$T = 0.02(X)$	52% / 48%
PM Peak Hour	24	12	12	$T = 0.03(X)$	52% / 48%

Note: ¹ Where: T = Trips; X = Density by Variable

The alternative development is anticipated to generate 1,291 daily vehicle trips (646 inbound, 645 outbound) with 120 AM peak hour vehicle trips (92 inbound, 28 outbound), and 122 PM peak hour trips (33 inbound, 89 outbound).

Truck generation is included in the general trip generation (not in addition to). The alternative development is anticipated to generate 432 daily truck trips (216 inbound, 216 outbound) with 16 AM peak hour truck trips (8 inbound, 8 outbound), and 24 PM peak hour trips (12 inbound, 12 outbound).

4.2 Trip Distribution

The trip distribution for the proposed development was based on field observations, existing traffic counts and patterns, a review of land-use densities in the area, and potential origination / destination points. Additionally, discussions with the local jurisdictions during the methodology meeting helped to determine the distribution of project trips on the study network. The proposed project trip distribution was approved during the methodology meeting.

An alternative distribution was created due to the potential impact of the I-985 interchange. The distribution retains the primary distribution patterns of the approved distribution however heavy vehicles and passenger vehicles are anticipated to utilize I-985 over SR 13.

The trip distribution is shown in Figure 12, truck distribution is shown in Figure 13, project trips are shown in Figure 14. The alternative trip distribution is shown in Figure 17, truck distribution is shown in Figure 18, and project trips are shown in Figure 19.

4.3 Build Traffic Volumes

Build traffic volumes include background volumes and project trips that will be generated by the proposed development. Total build year traffic volumes are shown graphically in Figure 15. The alternative scenario build year traffic volumes are shown in Figure 20.

4.4 Turn Lane Warrant Analysis

Per Gwinnett County Municipal Code Section 900-30.2

- B. A deceleration lane shall be required to be provided at each project driveway or subdivision street entrance, as applicable, that is provided street access to a Minor Collector Street or Major Thoroughfare. In the event a street has an existing or proposed median, and the developer desires to construct a median break to serve the project, a left turn lane leading to the median break shall be required to be provided by the developer if approved by the Department of Transportation and shall meet the standards contained herein. The preferred spacing for median breaks shall be 2000 feet between the centerlines of the openings, and the minimum spacing for median breaks shall be 1000 feet between centerlines of the openings. Other factors will also be considered, such as distance to other median openings, adjacent land use, expected traffic volumes, and the resulting volume of U-turns that are likely to occur without the median opening. Meeting the spacing criteria is not, in itself, an indication that median opening will be allowed.
- D. A left turn lane shall be provided into each project driveway or subdivision street that accesses a Minor Collector or Major Thoroughfare in accordance with the Department of Transportation's "Criteria and Guidelines for Left Turn Lanes."

Table 3 of Gwinnett County Department of Transportation Criteria and Guidelines for Left Turn Lanes June 20th, 2007, is provided in Figure 11.

Figure 11: Gwinnett Left Turn Lane Requirement

**Gwinnett County – Non-Residential Developments
Left Turn Lane Criteria**

TABLE 3

Posted Speed Limit (mph)	2 Lane Routes -----ADT-----		More Than 2 Lanes on Main Road -----ADT-----	
	<6000	>=6000	<10,000	>=10,000
30 to 35	30 LTV/hr	20 LTV/hr	40 LTV/hr	30 LTV/hr
40 to 50	25 LTV/hr	20 LTV/hr	35 LTV/hr	25 LTV/hr
>= 55	20 LTV/hr	15 LTV/hr	25 LTV/hr	20 LTV/hr

LTV/hr. – Left turning vehicles entering development (in peak hour)

Thompson Mill Rd at Driveway 1

Thompson Mill Rd is a two-lane route with ≥ 6000 AADT and a speed limit of 45 mph. The proposed development has 74 peak hour left turning vehicles. A left-turn lane is Warranted.

A right turn lane is required per section 900-30.2.B

N Bogan Rd at Driveway 2

Bogan Rd is functionally classified as a local road and is anticipated to have minimal turning movement volumes. Turn lanes are not warranted at Driveway 2.

4.4.1 Turn Lane Required Lengths

Per Gwinnett County Municipal Code Section 900-30.2

- C. Deceleration lanes shall have a length of 200 feet, with an additional 50-foot taper length, pavement width of 12 feet (exclusive of curb and gutter) and shall be provided with curb and gutter. Additional right-of-way to accommodate the deceleration lane and an 11-foot shoulder shall be dedicated by the developer to Gwinnett County at no cost. Associated drainage improvements as deemed necessary by the construction of the deceleration lane shall also be required.

For left-turn lanes Gwinnett County Department of Transportation Criteria and Guidelines for Left Turn Lanes June 20th, 2007, provides guidance on symmetrical and asymmetrical widening. For symmetrical widening of six feet about the centerline the approach / departure taper should be 270' with a bay taper of 100' and a minimum storage length of 100'. Where not geometrically possible or prevailing roadway conditions limit construction a variance may be requested with GCDOT.

Figure 12: Trip Distribution

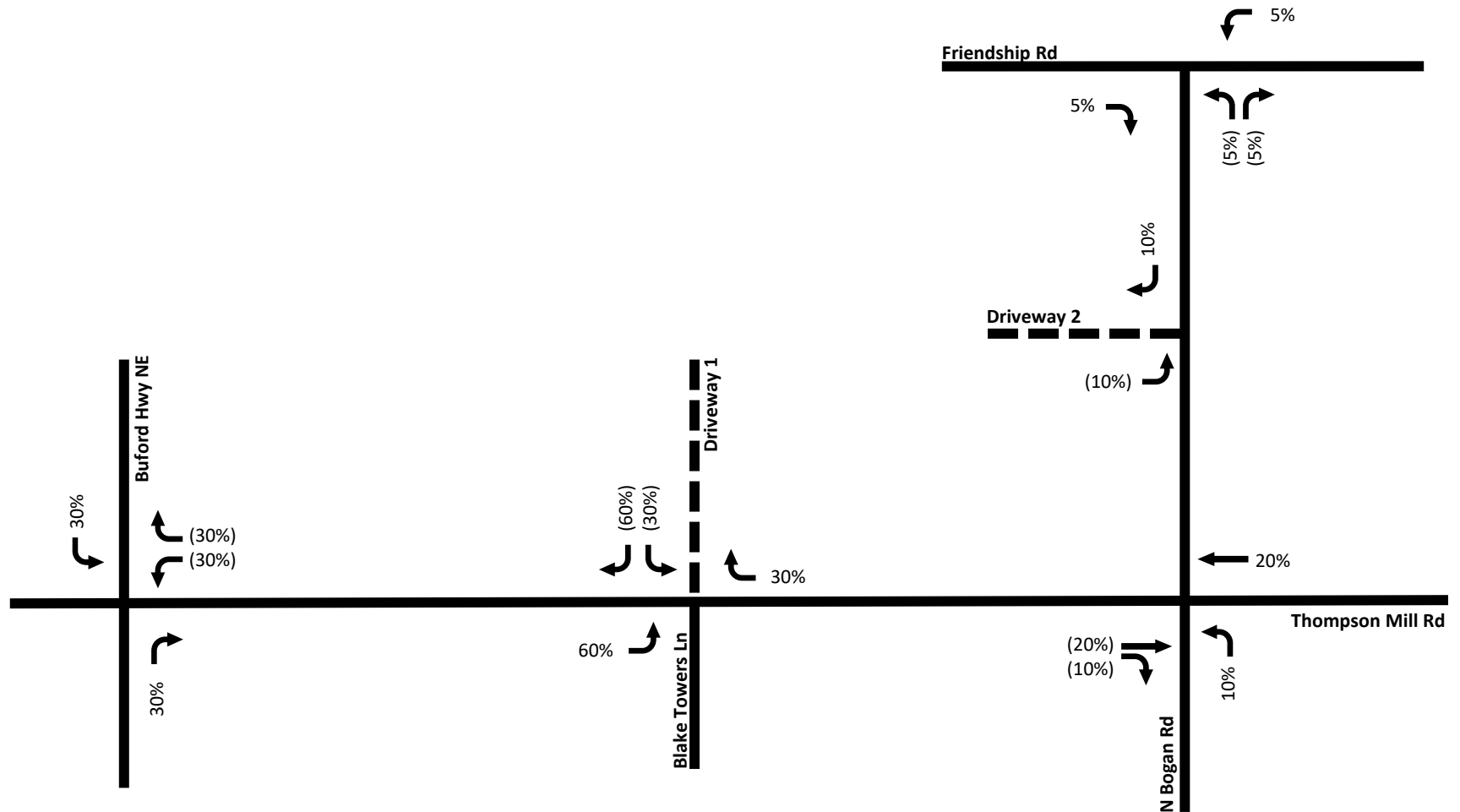
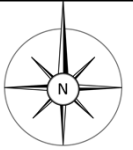
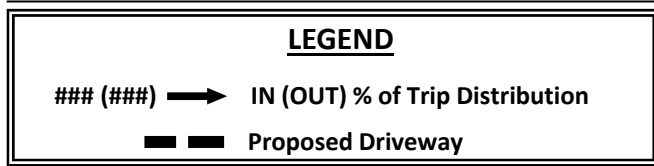


Figure 13: Truck Distribution

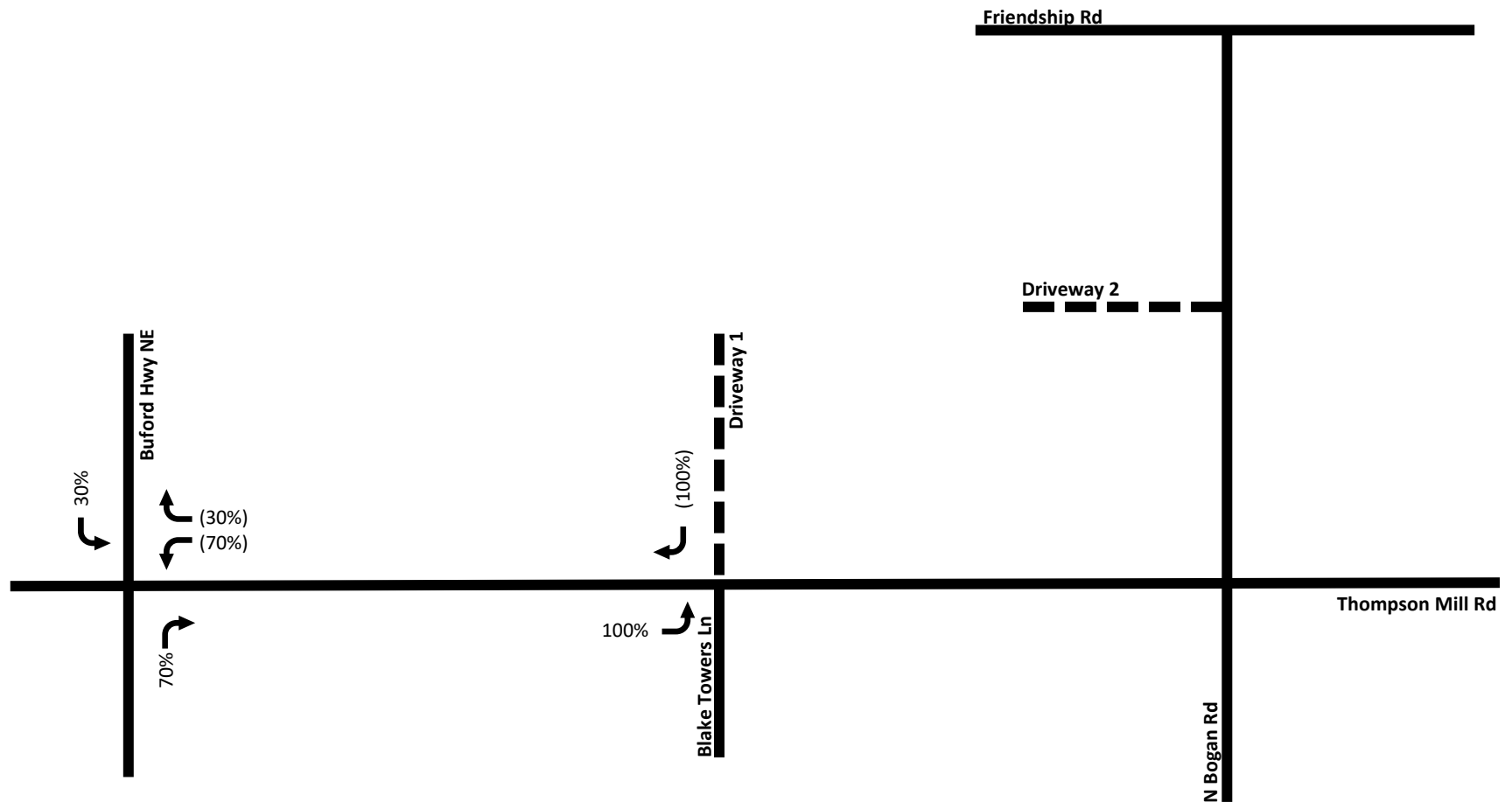
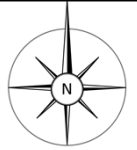
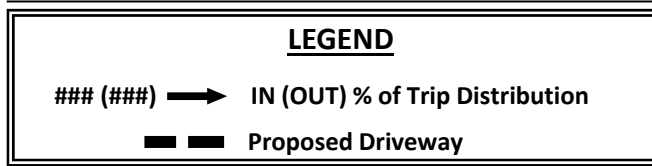


Figure 14: Project Trips

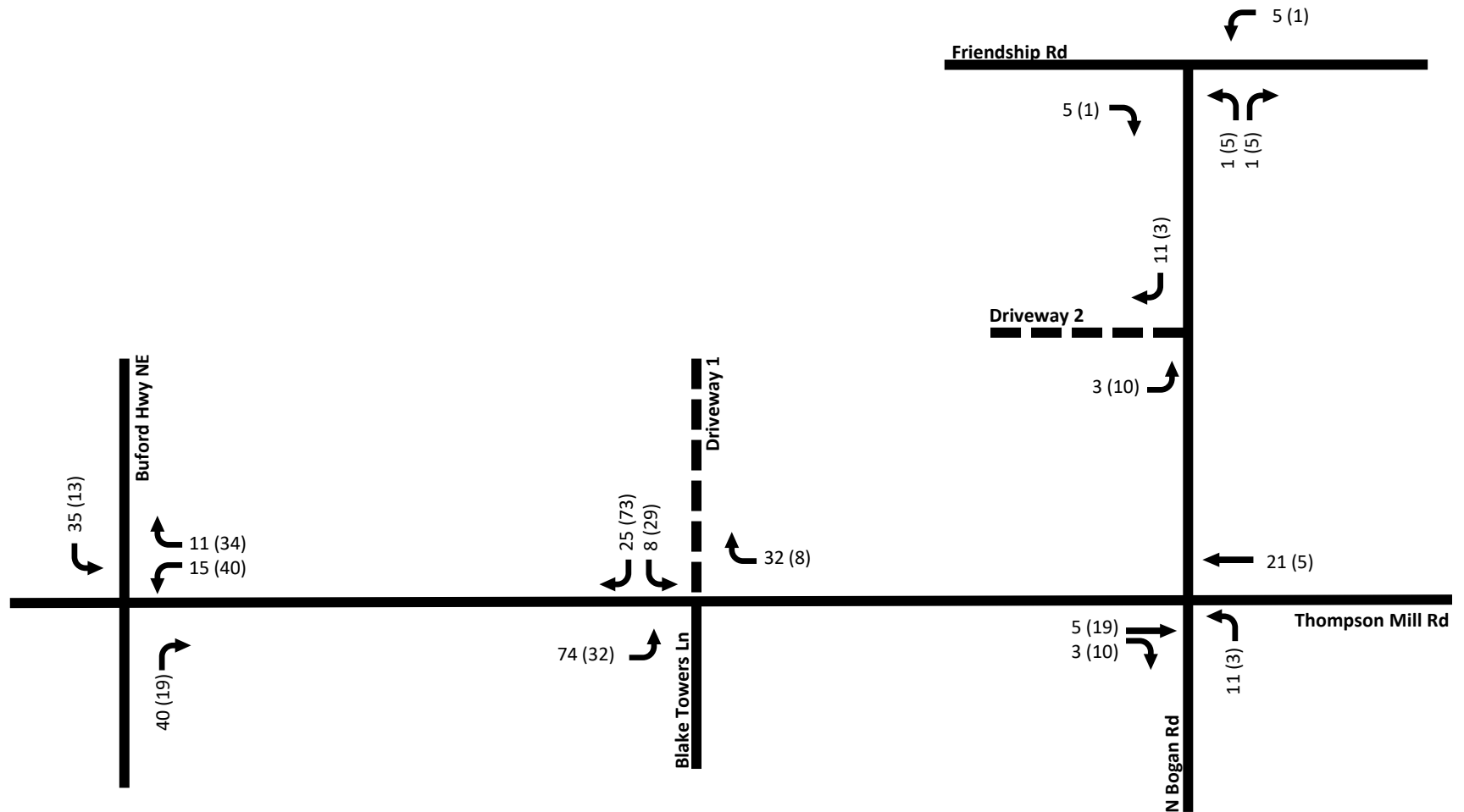
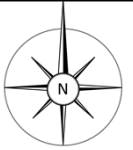
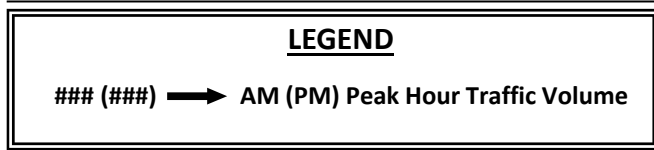


Figure 15: Build (2022) Traffic Volumes

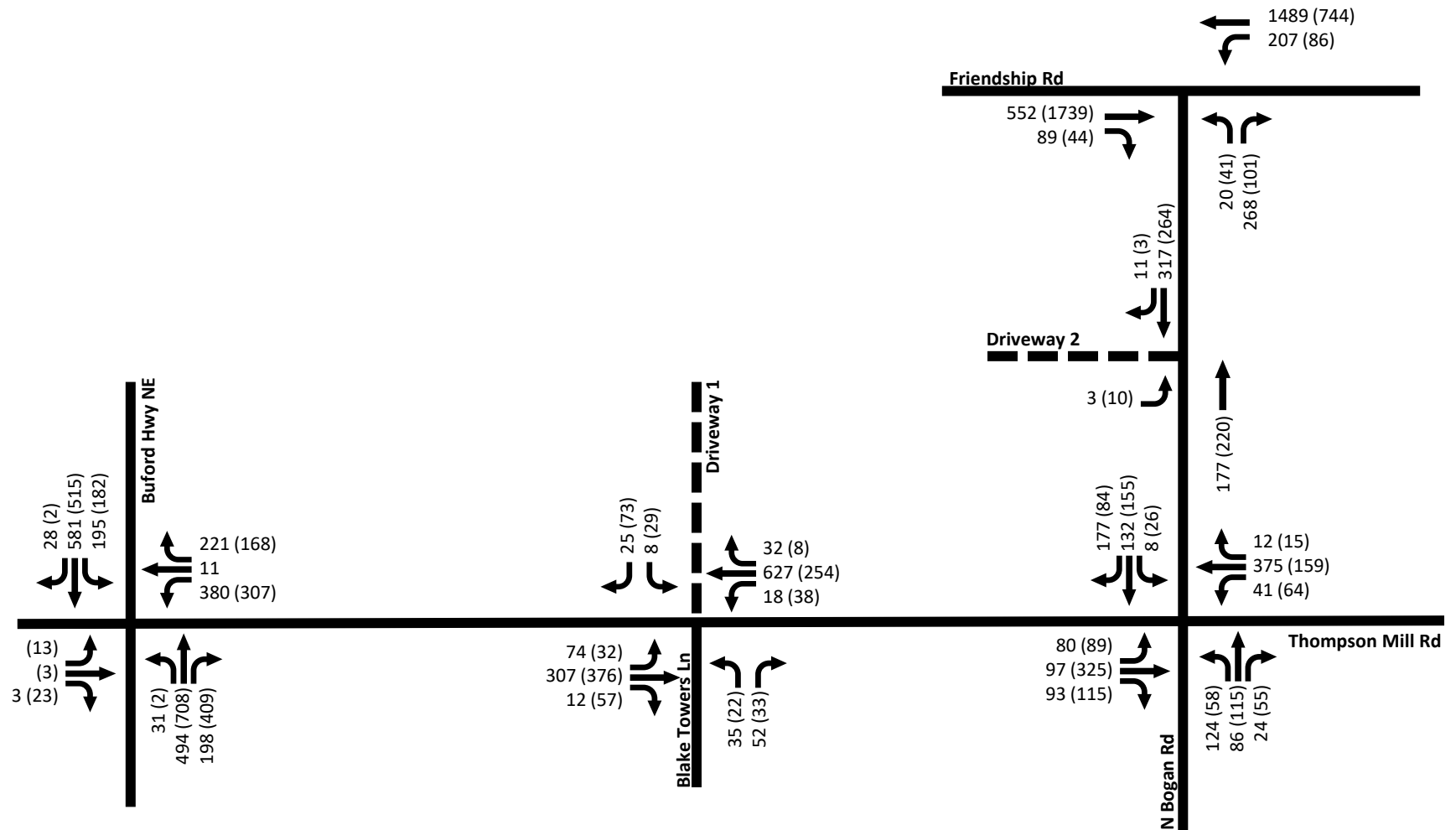
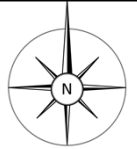
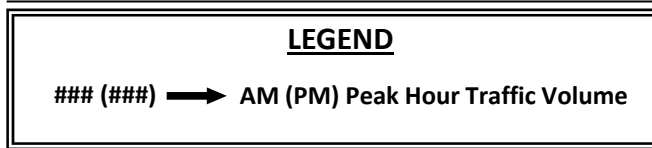


Figure 16: Build (2022) Lane Geometry

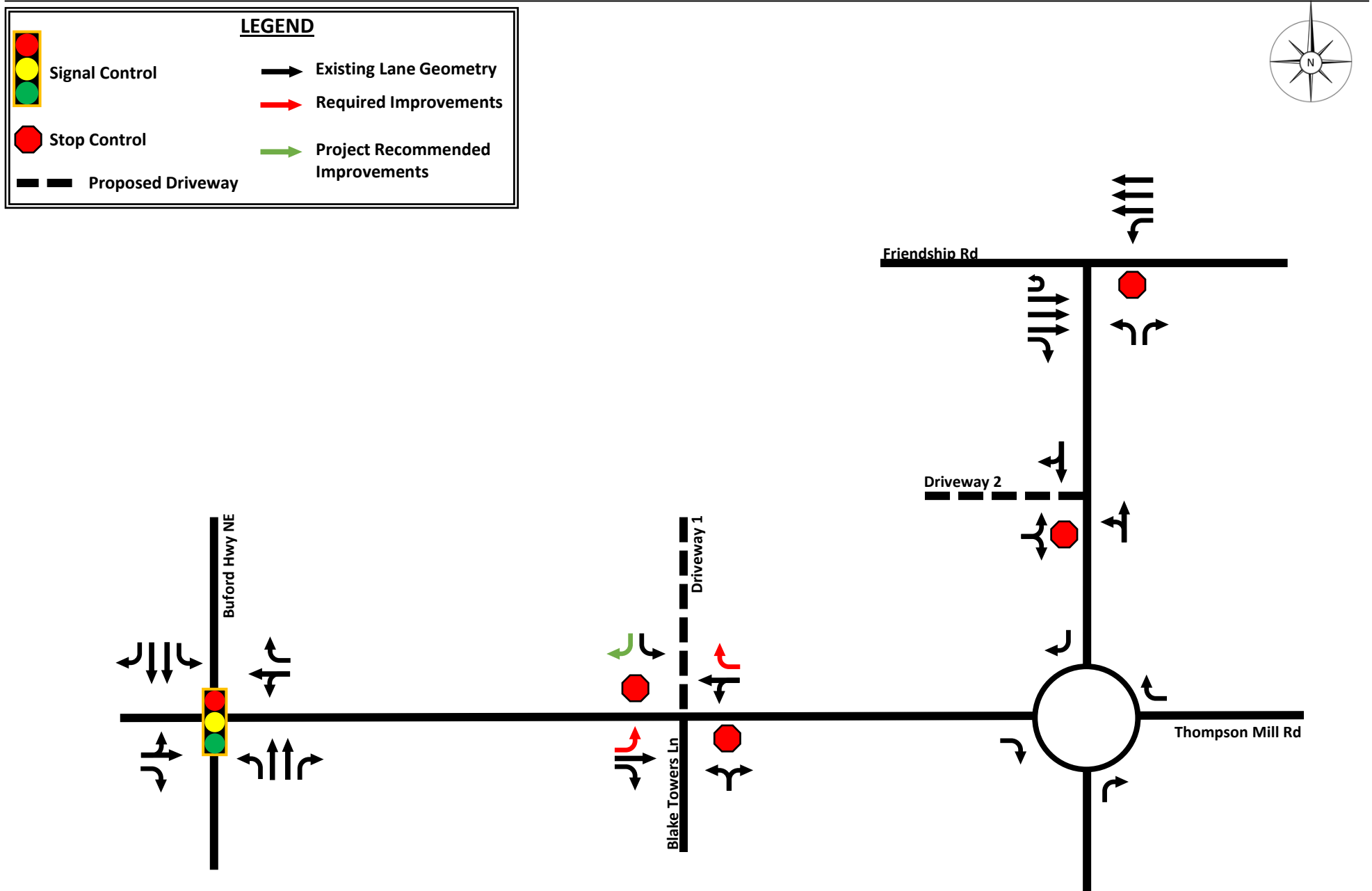


Figure 17: Alternative Trip Distribution

LEGEND

(###) → IN (OUT) % of Trip Distribution

--- Proposed Driveway

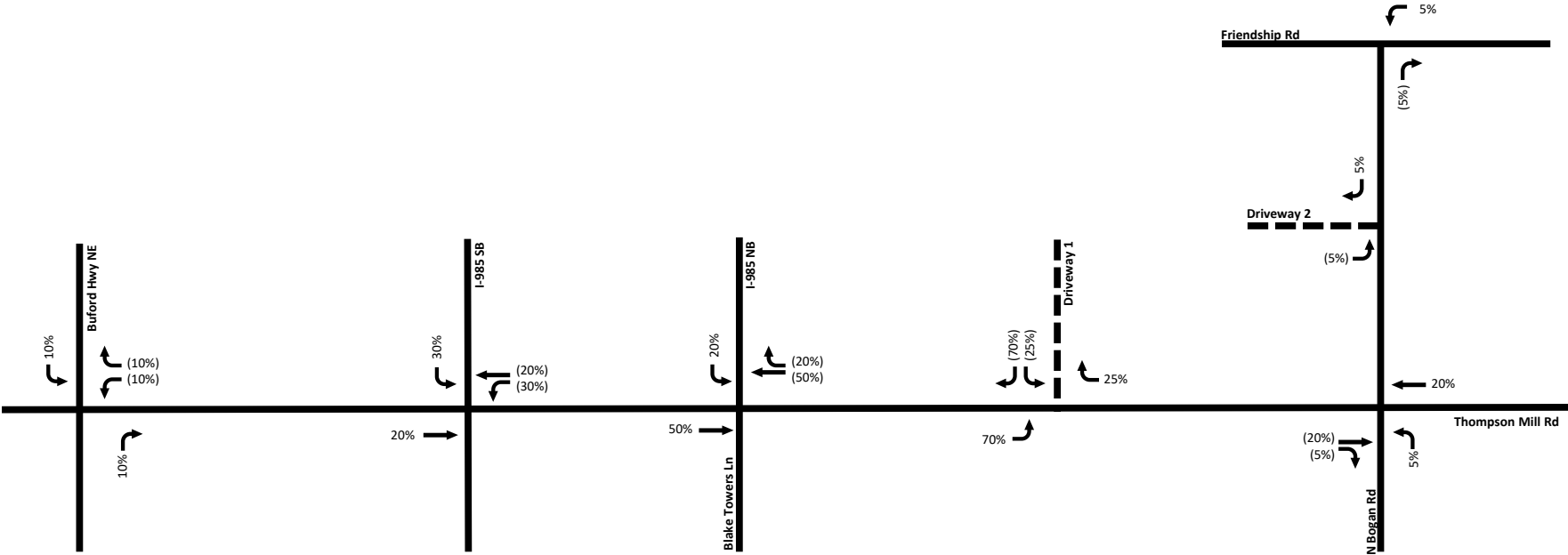


Figure 18: Alternative Truck Distribution

LEGEND

(###) → IN (OUT) % of Trip Distribution

--- Proposed Driveway

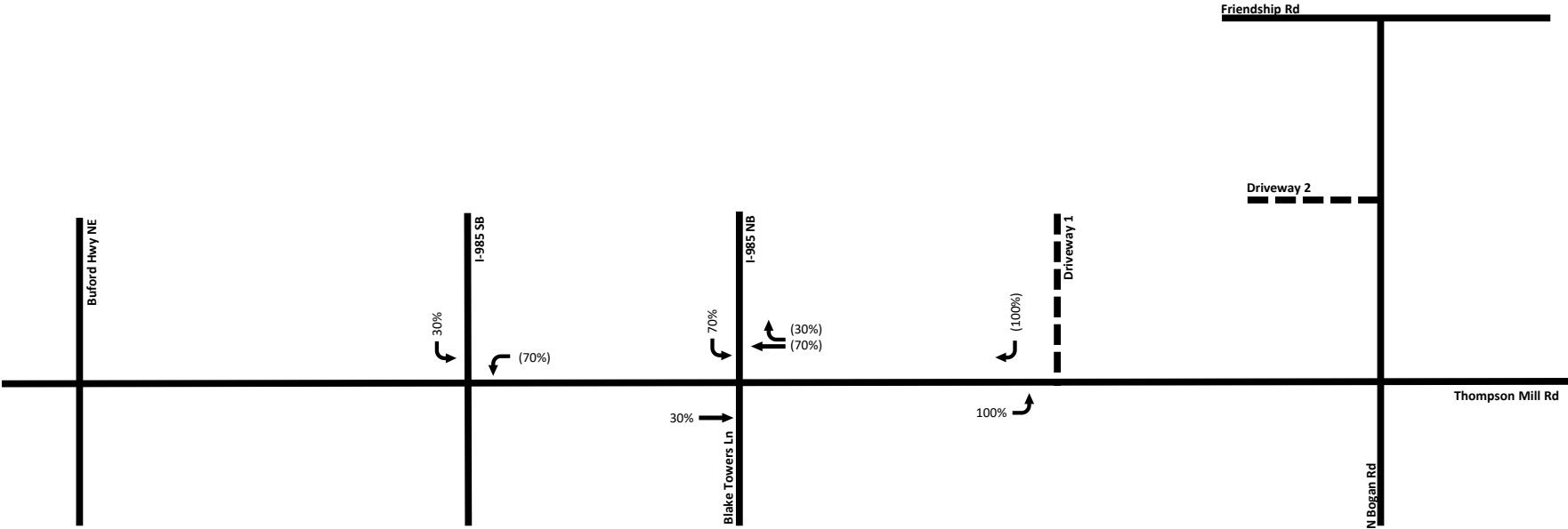


Figure 19: Alternative Build (2030) Project Trips

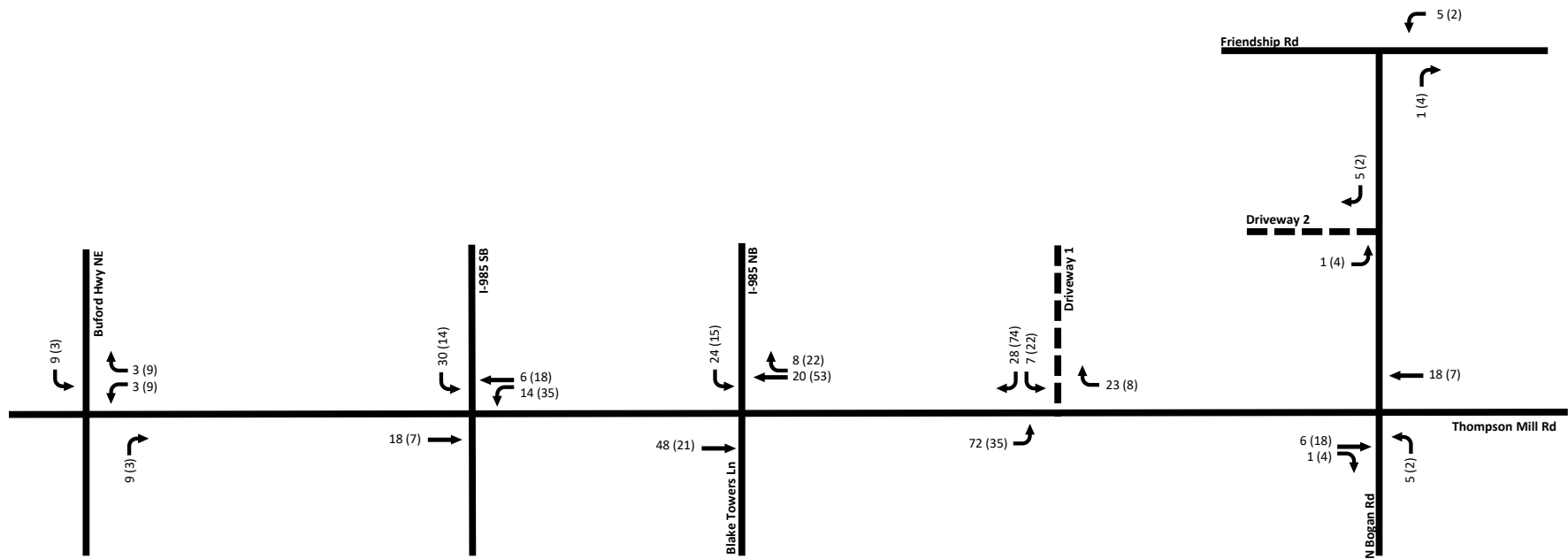
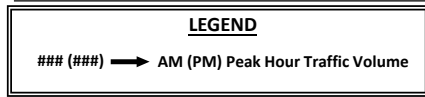


Figure 20: Alternative Build (2030) Traffic Volumes

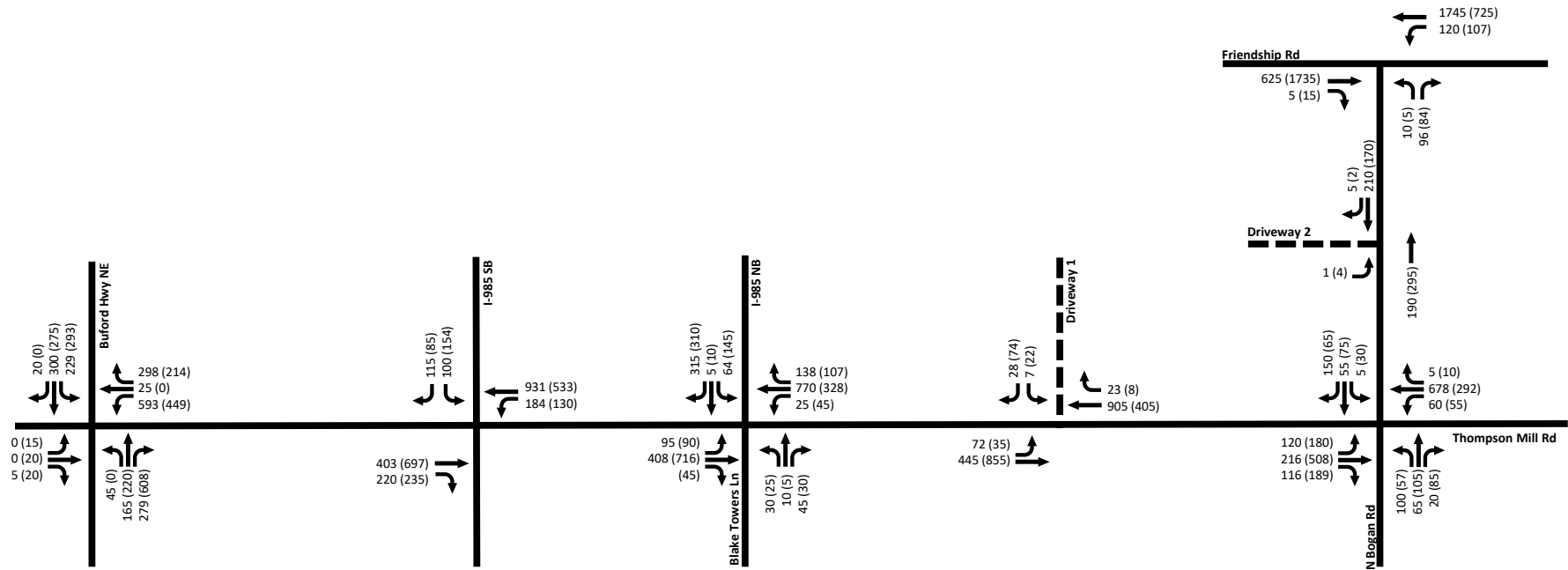
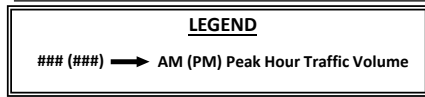
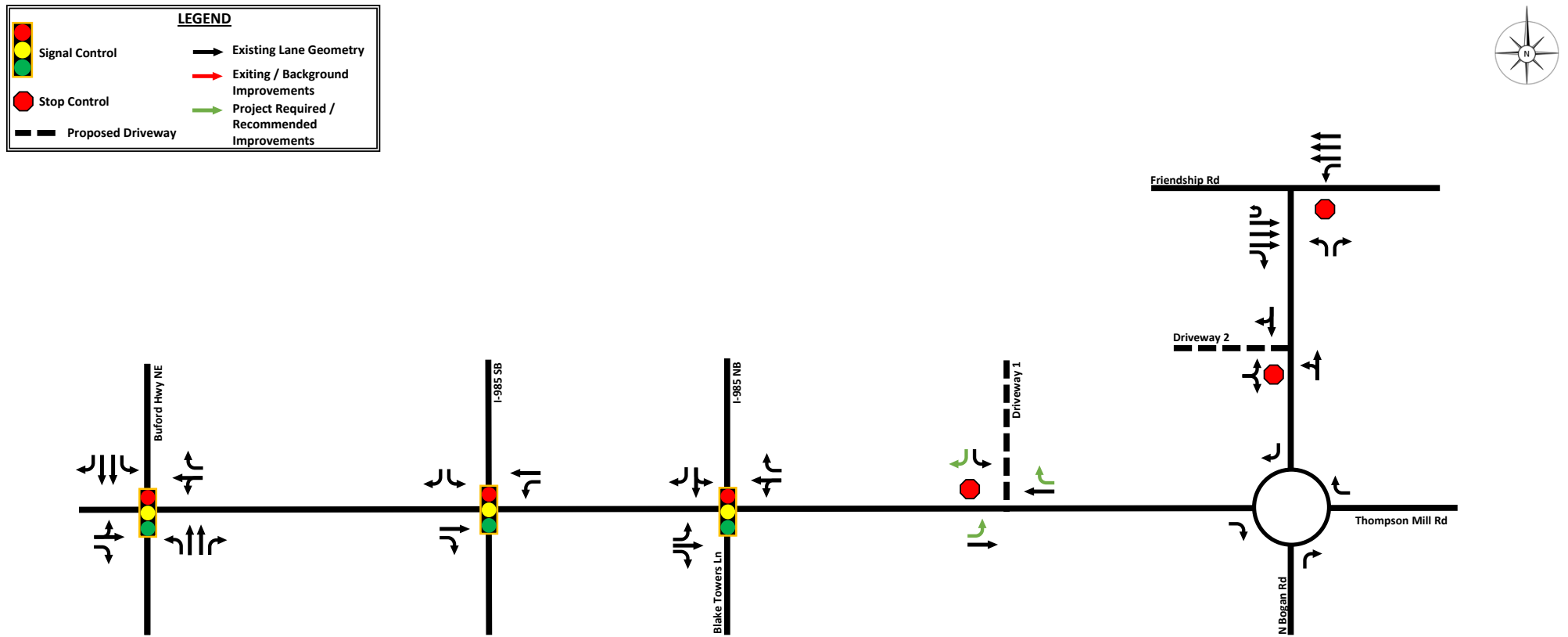


Figure 21: Alternative Build (2030) Lane Geometry



4.5 Build Capacity Analysis

The build traffic volumes were analyzed using a Synchro 11 model to determine the capacity of the AM and PM peak hours. The results are shown by lane group movement and total intersection capacity. Average vehicular delays are shown in seconds, level of service (LOS) is a grading system as defined by the Highway Capacity Manual (HCM) where A is best, and F is worst. HCM 6th Edition methodology was used for analysis. Signal timings were retained from existing conditions. Synchro output files and signal timings are included in Appendix C. The planned roundabout at the intersection of Thompson Mill Rd and N Bogan Rd was analyzed utilizing the GDOT Roundabout Tool v.4.2 and can be found in Appendix C.

Table 10: Build Conditions Capacity Analysis

#	Intersection	Control	Lane Group Movement	AM Peak Hour		PM Peak Hour	
				Delay (s)	LOS	Delay (s)	LOS
1	SR 13 @ Thompson Mill Rd	Signal Control	EB	0.0	A	46.1	D
			WB	39.7	D	41.9	D
			NB	14.8	B	13.4	B
			SB	19.4	B	20.6	C
			Intersection	23.5	C	22.2	C
2	Thompson Mill Rd @ N Bogan Rd	Roundabout	EB	7.2	A	11.8	B
			WB	10.0	A	6.3	A
			NB	5.9	A	8.1	A
			SB	11.9	B	6.5	A
			Intersection	9.1	A	9.1	A
3	N Bogan Rd @ Friendship Rd	Side-street Stop Control	EB	0.0		0.0	
			WB	1.9		13.0	
			NB	27.5	D	1523.2	F
			Intersection	4.7		79.3	
10	Driveway 1 @ Thompson Mill Rd	Side-street Stop Control	EB	1.8		0.6	
			WB	0.2		1.1	
			NB	31.0	D	18.2	C
			SB	22.1	C	16.2	C
			Intersection	3.5		3.3	
11	Driveway 2 @ N Bogan Rd	Side-street Stop Control	EB	12.6	B	12.3	B
			NB	0.0		0.0	
			SB	0.0		0.0	
			Intersection	0.1		0.2	

Thompson Mill Rd at SR 13 (Buford Highway)

- The PM peak hour drops from LOS B to C within acceptable LOS standards. The AM peak hour operates at the same LOS as existing and background conditions.

Thompson Mill Rd at N Bogan Rd

- The planned roundabout continues to operate at LOS A for both AM and PM peak hours.

N Bogan Rd NE at Friendship Rd (SR 347)

- The side-street stop-controlled intersection continues to fail for the northbound movement and will require improvement in background conditions. Alternative analysis is included below.

Thompson Mill Rd at Driveway 1

- The proposed side-street stop driveway will operate at LOS D (residential driveway) / LOS C during both peak hours.

N Bogan Rd NE at Driveway 2

- The proposed side-street stop driveway will operate with an exiting LOS of B for both peak hours.

4.5.1 Build Conditions Capacity Analysis – Interchange Alternative

The alternative build scenario was analyzed using the same methodology as build conditions. Signal timing was assumed and optimized for the proposed I-985 interchange ramps.

Table 11: Build Conditions Capacity Analysis – Interchange Alternative

#	Intersection	Control	Lane Group Movement	AM Peak Hour		PM Peak Hour	
				Delay (s)	LOS	Delay (s)	LOS
1	SR 13 @ Thompson Mill Rd	Signal Control	EB	0.0	A	36.8	D
			WB	27.7	C	103.8	F
			NB	29.3	C	91.9	F
			SB	35.3	D	113.0	F
			Intersection	30.3	C	100.4	F
2	Thompson Mill Rd @ N Bogan Rd	Roundabout	EB	9.8	A	30.4	D
			WB	26.5	D	9.5	A
			NB	7.1	A	14.2	B
			SB	14.6	B	6.4	A
			Intersection	17.5	C	21.4	C
3	N Bogan Rd @ Friendship Rd	Side-street Stop Control	EB	0.0	-	0.0	-
			WB	0.9	-	23.6	-
			NB	18.1	C	42.4	E
			Intersection	1.5		6.9	-
4	I-985 SB at Thompson Mill Rd	Signal Control	EB	9.2	A	13.0	B
			WB	31.4	C	14.3	B
			SB	26.2	C	27.5	C
			Intersection	23.7	C	15.3	B
5	I-985 NB at Thompson Mill Rd	Signal Control	EB	15.1	B	18.1	B
			WB	16.6	B	11.4	B
			NB	26.7	C	24.6	C
			SB	43.1	D	34.9	C
			Intersection	21.8	C	20.7	C
10	Driveway 1 @ Thompson Mill Rd	Side-street Stop Control	EB	1.6	-	0.3	-
			WB	0.0	-	0.0	-
			SB	29.6	D	20.8	C
			Intersection	1.2	-	1.6	-
11	Driveway 2 @ N Bogan Rd	Side-street Stop Control	EB	11.5	B	12.1	B
			NB	0.0	-	0.0	-
			SB	0.0	-	0.0	-
			Intersection	0	-	0.1	-

Thompson Mill Rd at SR 13 (Buford Highway)

- Intersection LOS remains the same as in background conditions. Improvement analysis is included below.

Thompson Mill Rd at N Bogan Rd

- Intersection LOS remains the same as in background conditions.

N Bogan Rd NE at Friendship Rd (SR 347)

- Intersection LOS remains the same as in background conditions.

Thompson Mill Rd at I-985 SB Ramp

- Intersection LOS remains the same as in background conditions.

Thompson Mill Rd at I-985 NB Ramp

- Intersection LOS remains the same as in background conditions.

Thompson Mill Rd at Driveway 1

- The proposed side-street stop driveway will operate at LOS D in the AM peak hour and LOS C during the PM peak hour.

N Bogan Rd NE at Driveway 2

- The proposed side-street stop driveway will operate with an exiting LOS of B for both peak hours.

4.6 Build Conditions Required Improvements

With improvements made in Background conditions required improvements the LOS remains the same as background conditions. Please refer to section 3.5 for additional detail.

Table 12: Build Conditions Capacity Analysis with Required Improvements

#	Intersection	Control	Approach	No Improvements				Improvements			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
3	Friendship Rd at N Bogan Rd	Side-Street Stop Control	EB	0.0	-	0.0	-	0.0	-	0.0	-
			WB	1.9	-	13.0	-	1.9	-	12.4	-
			NB	27.5	D	1523.2	F	25.2	D	85.2	F
			Intersection	4.7	-	79.3	-	4.4	-	7.8	-

4.7 Build Conditions Required Improvements – Interchange Alternative

With improvements made in background conditions required improvements the intersection operates at LOS C for the AM peak hour and LOS D for the PM peak hour.

Table 13: Build Conditions Capacity Analysis - Interchange Alternative with Required Improvements

#	Intersection	Control	Approach	No Improvements				Improvements			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
1	SR 13 @ Thompson Mill Rd	Signal Control	EB	0.0	A	36.8	D	0.0	A	22.8	C
			WB	27.7	C	103.8	F	32.7	C	47.9	D
			NB	29.3	C	91.9	F	19.7	B	31.3	C
			SB	35.3	D	113.0	F	22.9	C	48.9	D
			Intersection	30.3	C	100.4	F	26.6	C	41.4	D

5 Enhanced Focus Area – Heavy Vehicle

5.1.1 Heavy Vehicle Routing

Thompson Mill Rd is a truck route per Gwinnett County. The heavy vehicles accessing the site are planned to access via the proposed-full access driveway located on Thompson Mill Rd. Trucks are anticipated to utilize Thompson Mill Rd to travel west to SR 13 to access I-985 interchanges to the north and south. If the I-985 interchange with Thompson Mill Rd is developed, then those trucks will primarily utilize the new interchange access. N Bogan Rd is a restricted road with posted no trucks signage.

5.1.2 Pavement Condition

Google earth imagery was utilized for analyzing pavement conditions of Thompson Mill Rd to SR 13. Imagery is dated from February 2021 and is considered current. The planned roundabout at Thompson Mill Rd and Bogan Rd will replace / improve any existing deficiencies at that intersection, and the Thompson Mill TSPLOST Project T-7 will improve any deficiencies from SR 13 to Faith Industrial Blvd. Observed deficiencies are as follows:

Figure 22: Thompson Mill Rd EB at Chevron Drwy



Figure 23: Thompson Mill Rd EB at For Collision Center Drwy



Figure 24: Thompson Mill Rd EB at Arden Drive



5.1.3 Roadway Width

Gwinnett County Roadway widths are specified in the Gwinnett County Municipal Code section 900-10.2 Table 900.1. Thompson Mill Rd is functionally classified as a Major Collector there is no portion along its length within Gwinnett County that meets the specified 52-foot width. Existing roadway widths are summarized in Table 14.

Table 14: Roadway Width Summary

Roadway Section	Measured Width	GCDOT Width
Driveway 1	36'	32'
Thompson Mill Rd East of I-985	24'	52'
Thompson Mill Rd I-985 Bridge	30'	52'
Thompson Mill Rd West of I-985	24'	52'

5.1.4 Corner Radii

The design vehicle for the proposed site is WB-67, AASHTO minimum turning path is attached in Appendix F. Gwinnett County Municipal Code Section 900-50.5 Table 900.5 Intersection requires a 40-foot radius for roadway intersections. Section 900-40.2.C states for an industrial site a 40-foot radius is required. The proposed driveway will exceed the 40-foot radius and will require approval and coordination from Gwinnett County.

5.1.5 Heavy Vehicle Staging

The proposed development is being built with the end-user not known at this time. Anticipated delivery times are unknown, however, will likely be spread throughout normal operating hours. ITE truck trip generation shows an anticipated 31 truck trips (16 inbound and 15 outbound) 1,048,320 S.F. site plan and 24 truck trips (12 inbound and 12 outbound) for the reduced size interchange alternative site plan. Full trip generation rates can be found in Table 8 and Table 9. The internal queueing and site design is anticipated to hold all trucks within the site and not impact the external roadway network.

5.1.6 Pedestrian Safety

The proposed development is planned to include pedestrian improvements as required by per City of Buford Development Regulations Article 6:

6.13 Sidewalks:

6.13.1 Where Required:

Sidewalks shall be required along all arterial, collector, and local streets.

6.13.2 Location Requirements

Sidewalks shall be located twenty-four (24) inches from the back of curb. Where no curbing exists or future road improvements are anticipated, the sidewalks shall be placed in a location acceptable to the City. All new sidewalks shall provide a smooth transition to any existing sidewalk.

6.13.3 Construction Standards

Sidewalks shall be concrete, a minimum of five (5) feet wide commercial, industrial, multi-family and residential projects installed on compacted soil. Concrete shall be Class "A" (as defined by Georgia DOT) and have a strength of three thousand (3,000) PSI at twenty-eight (28) days. Disturbed areas along sidewalks shall be backfilled, stabilized, and grassed.

6 Recommendations and Conclusions

A proposed warehousing development is planned to be located in Buford, GA near the intersection of Thompson Mill Rd and N Bogan Rd. The development will primarily occupy undeveloped land with two proposed driveways one full access driveway on Thompson Mill Rd and one full access driveway on N Bogan Rd. Two scenarios were analyzed for this report one without GDOT's planned interchange and one with.

No Interchange

Thompson Mill Rd at SR 13 (Buford Highway)

- The intersection operates at LOS C for both AM and PM peak hours in build conditions.
- No improvements are recommended or required at the intersection.

Thompson Mill Rd at N Bogan Rd

- Gwinnett County has planned a roundabout improvement at the study intersection with development build year volumes the roundabout as designed is anticipated to operate at LOS A for both AM and PM peak hours.
- No improvements are recommended or required at the intersection.

N Bogan Rd NE at Friendship Rd (SR 347)

- The side-street stop-controlled intersection experiences a failing level of service for the northbound approach in existing conditions.
- The failing level of service is due primarily the nature of side-street stop-controlled intersections, particularly on a roadway with a 6-lane median divided cross section. A restricted RCUT or RIRO movement could be considered however when analyzed the LOS did not show improvement. A traffic signal would not be warranted based on peak hour volumes.
- The proposed development is anticipated to add minimal turning movement volumes, 2 vehicle trips during the AM peak hour, and 10 vehicle trips during the PM peak hour to the northbound approach. Failing level of service is present in No-Build conditions. Any improvements would be required without the proposed development.

Thompson Mill Rd at Driveway 1

- The proposed driveway is planned to align with the existing residential driveway to the south in the full density scenario.
- A right-turn lane is required per section 900-30.2. B of Gwinnett County municipal code
 - The right-turn lane should be constructed to a length of 200 feet with an additional 50-foot taper.
- A left-turn lane is required per Gwinnett County Department of Transportation Criteria and Guidelines for Left Turn Lanes June 20th, 2007.
 - The left turn lane should be constructed with an approach / departure taper of 270' with a bay taper of 100' and a minimum storage of 100'. If not geometrically possible a variance may be requested from GCDOT.
- The proposed driveway will operate at with approach LOS of D for the residential neighborhood for the AM peak hour and LOS C for all other movements and peak hours.

N Bogan Rd NE at Driveway 2

- The proposed side-street stop driveway will operate with an exiting LOS of B for both peak hours.
- Turn lanes are not required per Gwinnett County code.

Interchange Alternative

GDOT has a planned interchange at the proposed development location. A reduced footprint was analyzed for the alternative. Traffic volumes provided in the interchange justification report were provided by GDOT for use in analysis. Traffic volumes are for a 2030 build year, proposed development volumes were added to the GDOT forecasted volumes for use in analysis.

Thompson Mill Rd at SR 13 (Buford Highway)

- With additional volume from the interchange (growth and re-routing) and changes in traffic patterns without any adjustment the LOS drops to F in the PM peak hour.
- It can be assumed that the signal timing for SR 13 will be maintained as needed and with signal timing adjustments the LOS returns to C/D for all approaches and peak hours.
 - Improvements in the form of signal phasing and additional turn lanes were also considered however due to conflicting movements the LOS for side-street movements would operate at LOS E.
- No improvements are recommended or required at the intersection.

Thompson Mill Rd at N Bogan Rd

- The planned roundabout is anticipated to operate at LOS C for both AM and PM peak hours and all approaches operating at LOS D or better with interchange and development volume.
- No improvements are recommended or required at the intersection.

N Bogan Rd NE at Friendship Rd (SR 347)

- With changes to traffic patterns due to the interchange project the NB approach operates at LOS E for build conditions, improved from LOS F in existing no-build conditions.
- No improvements are recommended or required at the intersection.

Thompson Mill Rd at I-985 SB Ramps

- The proposed signalized interchange ramp is anticipated to operate at LOS C in the AM peak hour and LOS B in the PM peak hour.
- No changes to the concept plan are required as part of the proposed development.

Thompson Mill Rd at I-985 NB Ramp

- The proposed signalized interchange ramp is anticipated to operate at LOS C in the AM and PM peak hours.
- No changes to the concept plan are required as part of the proposed development.

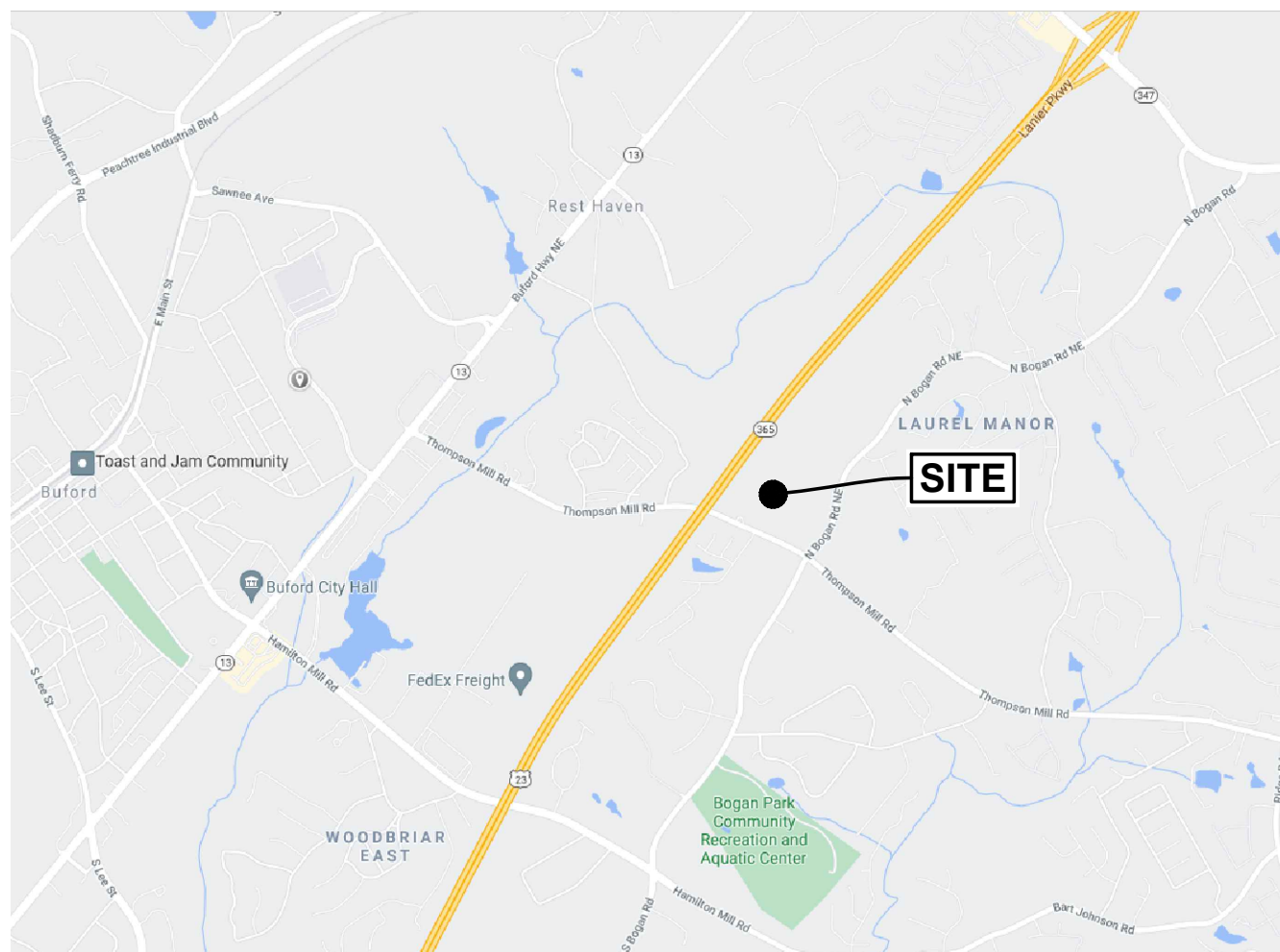
Thompson Mill Rd at Driveway 1

- The proposed interchange will align with the existing residential driveway, and the proposed Driveway 1 is planned to be located centered between the proposed interchange and the proposed roundabout.
- A right-turn lane is required per section 900-30.2.B of Gwinnett County municipal code.
 - The right-turn lane should be constructed to a length of 200 feet with an additional 50-foot taper.
- A left-turn lane is required per Gwinnett County Department of Transportation Criteria and Guidelines for Left Turn Lanes June 20th, 2007.
 - The left turn lane should be constructed with an approach / departure taper of 270' with a bay taper of 100' and a minimum storage of 100'. If not geometrically possible a variance may be requested from GCDOT.
- The proposed driveway will operate at with approach LOS of D for the AM peak hour and LOS C for the PM peak hour.
- Coordination with Gwinnett County and GDOT will be required to accommodate the driveway location.

N Bogan Rd NE at Driveway 2

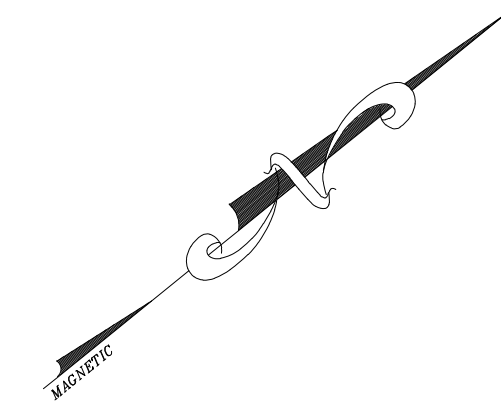
- The proposed side-street stop driveway will operate with an exiting LOS of B for both peak hours.
- Turn lanes are not required per Gwinnett County code.

Appendix A: Site Plan



LOCATION MAP

TRAFFIC ENGINEER:
BLAKE BREDBENNER, PE
LOWE ENGINEERS, LLC
990 HAMMOND DR., SUITE 900
ATLANTA, GA 30328
770-857-0575
BLAKE.BREDBENNER@LOWEENGINEERS.COM

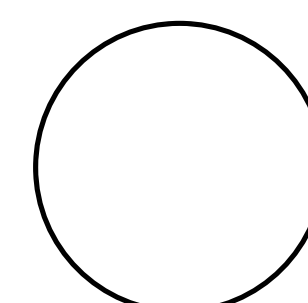


3715 Davinci Court, Suite 300
Peachtree Corners, GA 30092
770.717.3200 • 770.717.3312 (tx)

CIVIL ENGINEER
HAINES, GIPSON & ASSOCIATES
1550 NORTH BROWN RD.
SUITE 100
LAWRENCEVILLE, GA 30043
770-491-7550



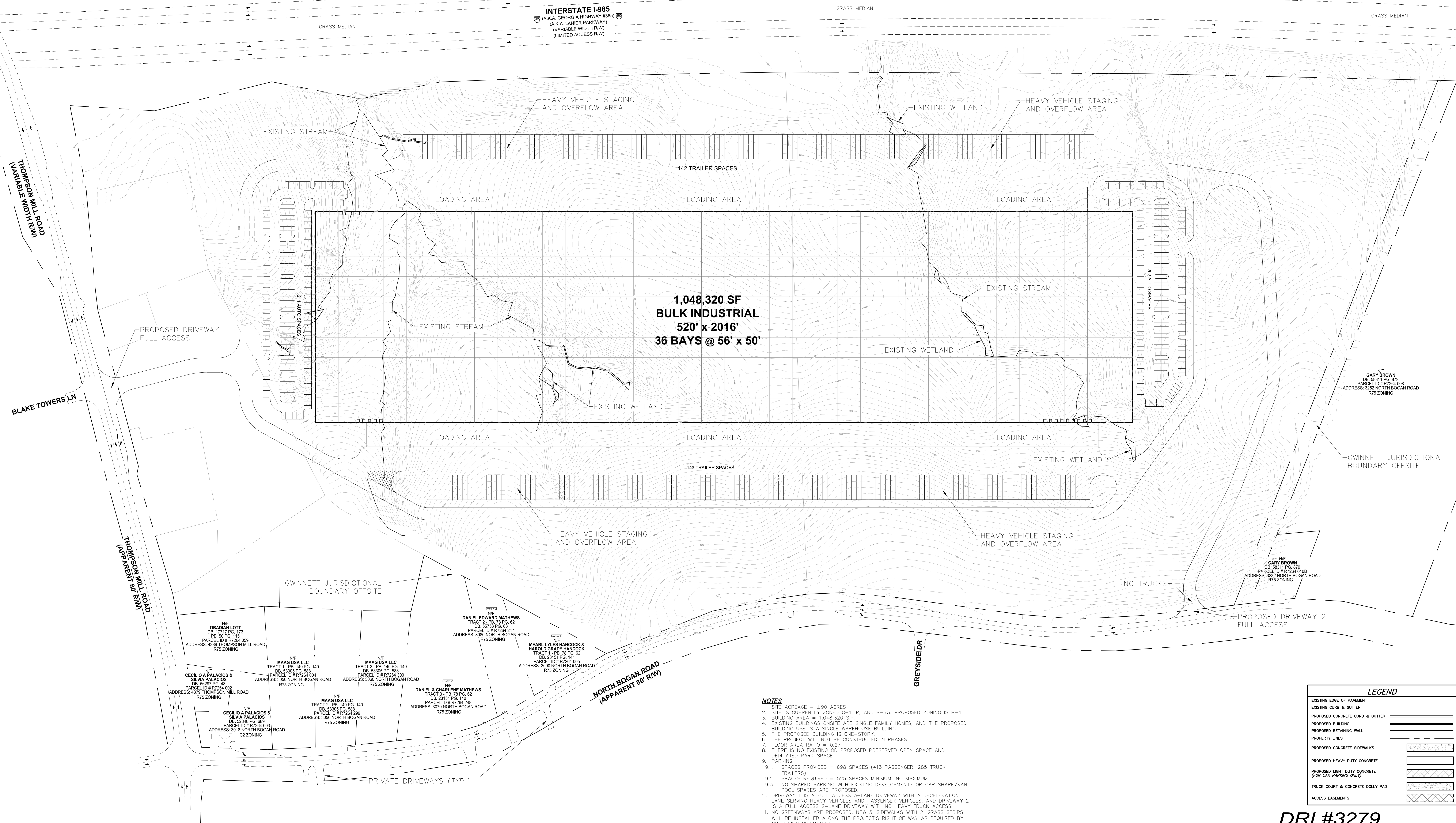
HAINES GIPSON & ASSOCIATES
Civil • Structural • Bridge



XXX/XX/21

GSWCC #900

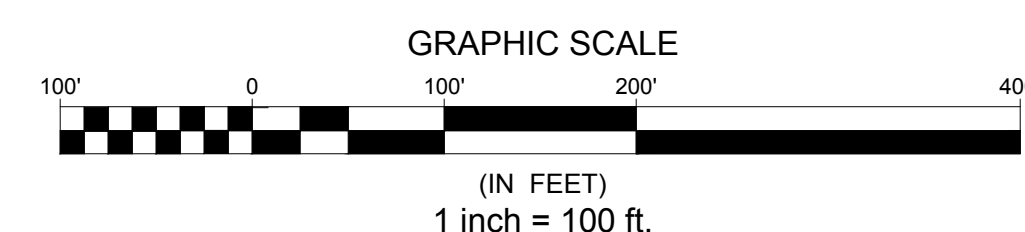
THOMPSON MILL ROAD PROJECT
NORTHEAST QUADRANT OF THE
I-985 / THOMPSON MILL INTERSECTION
CITY OF BUFORD, GWINNETT COUNTY, GEORGIA



- NOTES
1. SITE ACREAGE = 430 ACRES
 2. SITE IS CURRENTLY ZONED C-1, P, AND R-75. PROPOSED ZONING IS M-1.
 3. BUILDING AREA = 1,048,320 S.F.
 4. EXISTING BUILDINGS ON-SITE ARE SINGLE FAMILY HOMES, AND THE PROPOSED BUILDING USE IS A SINGLE WAREHOUSE BUILDING.
 5. THE PROPOSED BUILDING IS ONE-STORY.
 6. THE PROJECT WILL NOT BE CONSTRUCTED IN PHASES.
 7. FLOOR AREA RATIO = 0.27
 8. THERE IS NO EXISTING OR PROPOSED PRESERVED OPEN SPACE AND DEDICATED PARK SPACE.
 9. PARKING
 - 9.1. SPACES PROVIDED = 698 SPACES (413 PASSENGER, 285 TRUCK TRAILERS)
 - 9.2. SPACES REQUIRED = 525 SPACES MINIMUM, NO MAXIMUM
 - 9.3. NO SHARED PARKING WITH EXISTING DEVELOPMENTS OR CAR SHARE/VAN POOL SPACES ARE PROPOSED.
 10. DRIVEWAY 1 IS A FULL ACCESS 3-LANE DRIVEWAY WITH A DECELERATION LANE SERVING HEAVY VEHICLES AND PASSENGER VEHICLES, AND DRIVEWAY 2 IS A FULL ACCESS 2-LANE DRIVEWAY WITH NO HEAVY TRUCK ACCESS.
 11. NO GREENWAYS ARE PROPOSED. NEW 5' SIDEWALKS WITH 2' GRASS STRIPS WILL BE INSTALLED ALONG THE PROJECT'S RIGHT OF WAY AS REQUIRED BY GOVERNING ORDINANCES.

LEGEND	
EXISTING EDGE OF PAVEMENT	----
EXISTING CURB & GUTTER	----
PROPOSED CONCRETE CURB & GUTTER	----
PROPOSED BUILDING	----
PROPOSED RETAINING WALL	----
PROPERTY LINES	----
PROPOSED CONCRETE SIDEWALKS	----
PROPOSED HEAVY DUTY CONCRETE	----
PROPOSED LIGHT DUTY CONCRETE (FOR CAR PARKING ONLY)	----
TRUCK COURT & CONCRETE DOLLY PAD	----
ACCESS EASEMENTS	----

DRI #3279
SITE PLAN



ISSUANCES

#	Description	Date

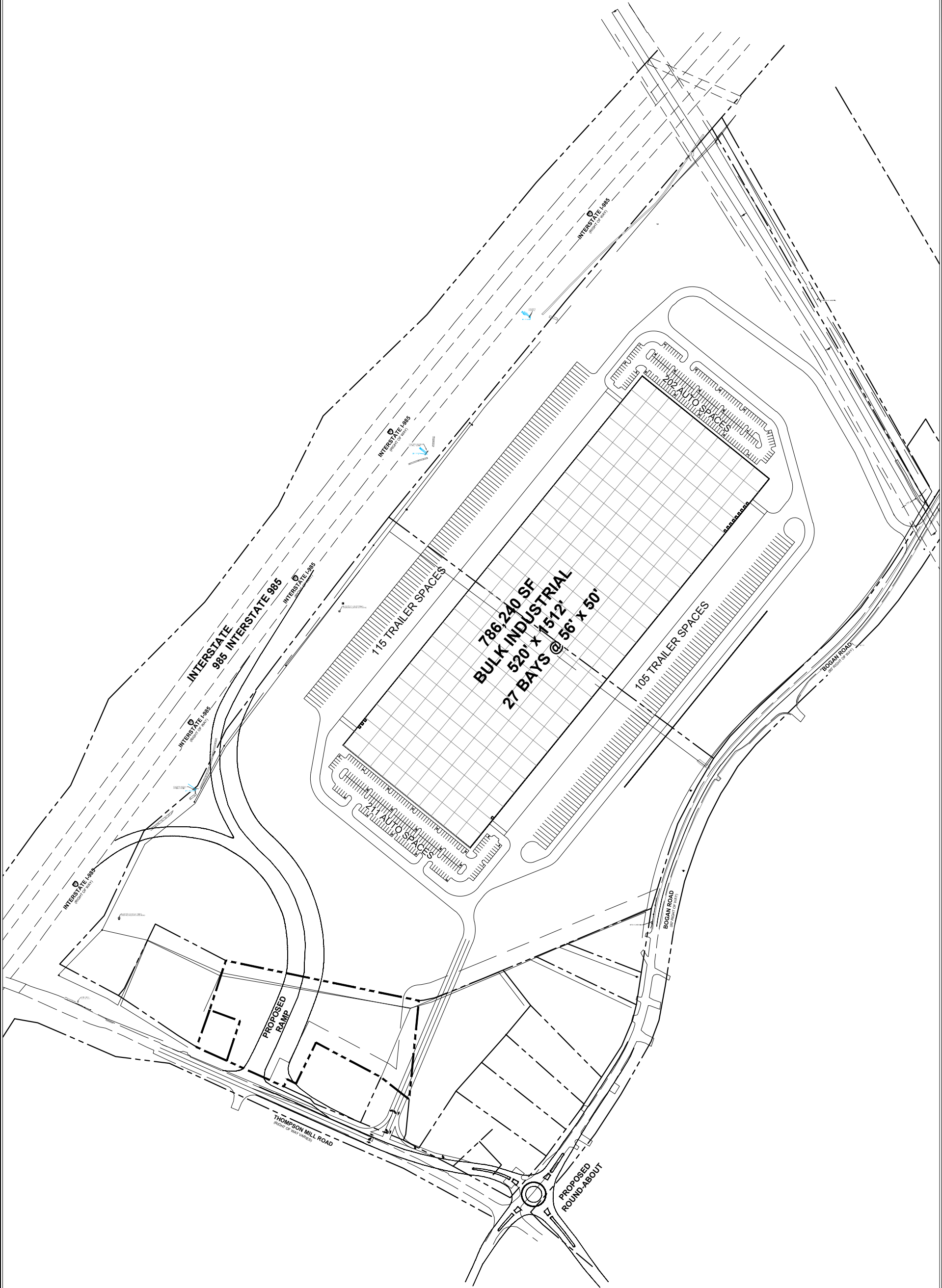
DRAWING INFORMATION

Scale: AS INDICATED
Date: 24 JUNE 2021
Checked By: RCL
Drawn By: JCM
Duke Realty Job#: DUKEXX-XXX
A/E Job #: 2020-249

DRAWING / SHEET TITLE
DRI #3279 SITE PLAN

SHEET NUMBER

DRI1.0



Scale: 1" = 300' (11x17)
Date: MAY 25 2021

EXHIBIT A
BOGAN ROAD CONCEPT PLAN
CITY OF BUFORD, GA



Appendix B: Traffic Counts



[Click here for Map](#)

Peak Hour Turning Movement Count

Buford, GA



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Wednesday, May 12, 2021	
Period	0700 - 0900
Peak Hour	0715 - 0815

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	
0715 - 0730	7	131	33	0	171	34	117	7	1	159	0	0	1	0	1	61	2	64	0	127	458
0730 - 0745	9	116	40	1	166	47	144	6	1	198	0	0	0	0	0	78	4	44	0	126	490
0745 - 0800	8	95	30	0	133	31	146	9	0	186	0	0	1	0	1	100	3	42	0	145	465
0800 - 0815	3	89	35	0	127	28	100	2	1	131	0	0	1	0	1	80	1	33	0	114	373
Total	27	431	138	1	597	140	507	24	3	674	0	0	3	0	3	319	10	183	0	512	1786
Approach %	4.52	72.19	23.12	0.17	-	20.77	75.22	3.56	0.45	-	0.00	0.00	100.00	0.00	-	62.30	1.95	35.74	0.00	-	
PHF	0.75	0.82	0.86	0.25	0.87	0.74	0.87	0.67	0.75	0.85	0.00	0.00	0.75	0.00	0.75	0.80	0.63	0.71	0.00	0.88	0.91

[illegible]

Time	Northbound					Southbound					Eastbound					Westbound					Int. Total	
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd						
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total		
0715 - 0730	1.1	7	124	33	0	164	34	114	7	1	156	0	0	1	0	1	59	2	64	0	125	446
0730 - 0745	9	111	39	1	160	45	135	6	1	187	0	0	0	0	0	74	4	44	0	122	469	
0745 - 0800	8	90	27	0	125	31	136	8	0	175	0	0	1	0	1	99	3	41	0	143	444	
0800 - 0815	3	80	34	0	117	27	96	2	1	126	0	0	1	0	1	75	1	33	0	109	353	
Total	27	405	133	1	566	137	481	23	3	644	0	0	3	0	3	307	10	182	0	499	1712	
Approach %	4.77	71.55	23.50	0.18	-	21.27	74.69	3.57	0.47	-	0.00	0.00	100.00	0.00	-	61.52	2.00	36.47	0.00	-	-	
PHF	0.75	0.82	0.85	0.25	0.86	0.76	0.88	0.72	0.75	0.86	0.00	0.00	0.75	0.00	0.75	0.78	0.63	0.71	0.00	0.87	0.91	

Time	Northbound					Southbound					Eastbound					Westbound					Int. Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
0715 - 0730	0	5	0	0	5	0	2	0	0	2	0	0	0	0	0	2	0	0	0	2	9
0730 - 0745	0	2	0	0	2	2	7	0	0	9	0	0	0	0	0	3	0	0	0	3	14
0745 - 0800	0	2	1	0	3	0	9	1	0	10	0	0	0	0	0	1	0	1	0	2	15
0800 - 0815	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0	3	0	0	0	3	9
Total	0	13	1	0	14	2	20	1	0	23	0	0	0	0	0	9	0	1	0	10	47
Approach %	0.00	92.86	7.14	0.00	-	8.70	86.96	4.35	0.00	-	0.00	0.00	0.00	0.00	-	90.00	0.00	10.00	0.00	-	
PHF	0.00	0.65	0.25	0.00	0.70	0.25	0.56	0.25	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.25	0.00	0.83	0.78

	Northbound					Southbound					Eastbound					Westbound						
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd						
Time	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	Int Total	
0715 - 0730	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	
0730 - 0745	0	3	1	0	4	0	2	0	0	2	0	0	0	0	0	1	0	0	0	0	1	7
0745 - 0800	0	3	2	0	5	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	6	
0800 - 0815	0	5	1	0	6	1	2	0	0	3	0	0	0	0	0	2	0	0	0	2	11	
Total	0	13	4	0	17	1	6	0	0	7	0	0	0	0	0	3	0	0	0	3	27	
Approach %	0.00	76.47	23.53	0.00	-	14.29	85.71	0.00	0.00	-	0.00	0.00	0.00	0.00	-	100.00	0.00	0.00	0.00	-		
PHF	0.00	0.65	0.50	0.00	0.71	0.25	0.75	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.38	0.61	

[illegible]



[Click here for Map](#)

Peak Hour Turning Movement Count

Buford, GA



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Wednesday, May 12, 2021	
Period	1600 - 1800
Peak Hour	1630 - 1730

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	
1630 - 1645	0	147	90	1	238	44	130	1	1	176	7	2	3	0	12	65	0	20	0	85	511
1645 - 1700	0	157	74	1	232	35	119	1	1	156	0	1	8	0	9	61	0	19	0	80	477
1700 - 1715	1	174	105	0	280	38	118	0	0	156	4	0	6	0	10	70	0	47	0	117	563
1715 - 1730	1	165	85	1	252	37	101	0	2	140	1	0	4	0	5	47	0	35	0	82	479
Total	2	643	354	3	1002	154	468	2	4	628	12	3	21	0	36	243	0	121	0	364	2030
Approach %	0.20	64.17	35.33	0.30	-	24.52	74.52	0.32	0.64	-	33.33	8.33	58.33	0.00	-	66.76	0.00	33.24	0.00	-	
PHF	0.50	0.92	0.84	0.75	0.89	0.88	0.90	0.50	0.50	0.89	0.43	0.38	0.66	0.00	0.75	0.87	0.00	0.64	0.00	0.78	0.90

[illegible]

Time	Northbound					Southbound					Eastbound					Westbound					Int. Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	
1630 - 1645	0	143	89	1	233	43	124	0	1	168	7	2	2	0	11	64	0	20	0	84	496
1645 - 1700	0	150	70	1	221	32	113	1	1	147	0	1	8	0	9	61	0	19	0	80	457
1700 - 1715	1	167	103	0	271	38	112	0	0	150	4	0	6	0	10	69	0	46	0	115	546
1715 - 1730	0	163	83	1	247	37	93	0	2	132	1	0	4	0	5	46	0	35	0	81	465
Total	1	623	345	3	972	150	442	1	4	597	12	3	20	0	35	240	0	120	0	360	1964
Approach %	0.10	64.09	35.49	0.31	-	25.13	74.04	0.17	0.67	-	34.29	8.57	57.14	0.00	-	66.67	0.00	33.33	0.00	-	-
PHF	0.25	0.93	0.84	0.75	0.90	0.87	0.89	0.25	0.50	0.89	0.43	0.38	0.63	0.00	0.80	0.87	0.00	0.65	0.00	0.78	0.90

Time	Northbound					Southbound					Eastbound					Westbound					Int. Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
1630 - 1645	0	3	1	0	4	1	4	1	0	6	0	0	1	0	1	0	0	0	0	0	11
1645 - 1700	0	4	4	0	8	3	4	0	0	7	0	0	0	0	0	0	0	0	0	0	15
1700 - 1715	0	6	2	0	8	0	1	0	0	1	0	0	0	0	0	1	0	1	0	2	11
1715 - 1730	0	1	2	0	3	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	6
Total	0	14	9	0	23	4	11	1	0	16	0	0	1	0	1	2	0	1	0	3	43
Approach %	0.00	60.87	39.13	0.00	-	25.00	68.75	6.25	0.00	-	0.00	0.00	100.00	0.00	-	66.67	0.00	33.33	0.00	-	
PHF	0.00	0.58	0.56	0.00	0.72	0.33	0.69	0.25	0.00	0.57	0.00	0.00	0.25	0.00	0.25	0.50	0.00	0.25	0.00	0.38	0.72

Time	Northbound					Southbound					Eastbound					Westbound					Int	Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd						
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total		
1630 - 1645	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	1	0	0	0	0	1	4
1645 - 1700	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5
1700 - 1715	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	6
1715 - 1730	1	1	0	0	2	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	8
Total	1	6	0	0	7	0	15	0	0	15	0	0	0	0	0	1	0	0	0	0	1	23
Approach %	14.29	85.71	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	100.00	0.00	0.00	0.00	-	-	-
PHF	0.25	0.50	0.00	0.00	0.58	0.00	0.63	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.72	0.72

	Northbound					Southbound					Eastbound					Westbound					
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
Time	EB 1a	WB 1b			App Total	EB 1c	WB 1d			App Total	NB 1e	Sb 1f			App Total	NB 1g	Sb 1h			App Total	Int Total
1630 - 1645	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0
1645 - 1700	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0
1700 - 1715	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0
1715 - 1730	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Classified Turn Movement Count || All vehicles

Buford, GA



Marr Traffic
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Site 1 of 3

GA-13 Buford Hwy (South)
GA-13 Buford Hwy (North)
Driveway
Thompson Mill Rd

Date

Wednesday, May 12, 2021

Weather

Cloudy
58°F

Lat/Long

34.123167°, -83.986295°

0700 - 0900 (Weekday 2h Session) (12-05-2021)

All vehicles

	Northbound					Southbound					Eastbound					Westbound					Int
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
TIME	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	Total
0700 - 0715	4	101	26	0	131	45	79	5	0	129	1	0	0	0	1	32	2	57	0	91	352
0715 - 0730	7	131	33	0	171	34	117	7	1	159	0	0	1	0	1	61	2	64	0	127	458
0730 - 0745	9	116	40	1	166	47	144	6	1	198	0	0	0	0	0	78	4	44	0	126	490
0745 - 0800	8	95	30	0	133	31	146	9	0	186	0	0	1	0	1	100	3	42	0	145	465
Hourly Total	28	443	129	1	601	157	486	27	2	672	1	0	2	0	3	271	11	207	0	489	1765
0800 - 0815	3	89	35	0	127	28	100	2	1	131	0	0	1	0	1	80	1	33	0	114	373
0815 - 0830	0	73	55	0	128	15	90	2	1	108	0	0	2	0	2	62	2	27	0	91	329
0830 - 0845	3	85	33	0	121	16	85	1	1	103	1	0	0	0	1	72	1	12	0	85	310
0845 - 0900	3	71	27	0	101	21	72	2	0	95	0	0	1	0	1	57	0	19	0	76	273
Hourly Total	9	318	150	0	477	80	347	7	3	437	1	0	4	0	5	271	4	91	0	366	1285
Grand Total	37	761	279	1	1078	237	833	34	5	1109	2	0	6	0	8	542	15	298	0	855	3050
Approach %	3.43	70.59	25.88	0.09	-	21.37	75.11	3.07	0.45	-	25.00	0.00	75.00	0.00	-	63.39	1.75	34.85	0.00	-	
Intersection %	1.21	24.95	9.15	0.03	35.34	7.77	27.31	1.11	0.16	36.36	0.07	0.00	0.20	0.00	0.26	17.77	0.49	9.77	0.00	28.03	
PHF	0.75	0.82	0.86	0.25	0.87	0.74	0.87	0.67	0.75	0.85	0.00	0.00	0.75	0.00	0.75	0.80	0.63	0.71	0.00	0.88	0.91

1600 - 1800 (Weekday 2h Session) (12-05-2021)

All vehicles

	Northbound					Southbound					Eastbound					Westbound					Int
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
TIME	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	Total
1600 - 1615	1	148	83	0	232	34	113	2	0	149	2	5	10	0	17	61	0	28	0	89	487
1615 - 1630	1	141	67	0	209	25	100	0	1	126	1	2	2	0	5	49	1	28	0	78	418
1630 - 1645	0	147	90	1	238	44	130	1	1	176	7	2	3	0	12	65	0	20	0	85	511
1645 - 1700	0	157	74	1	232	35	119	1	1	156	0	1	8	0	9	61	0	19	0	80	477
Hourly Total	2	593	314	2	911	138	462	4	3	607	10	10	23	0	43	236	1	95	0	332	1893
1700 - 1715	1	174	105	0	280	38	118	0	0	156	4	0	6	0	10	70	0	47	0	117	563
1715 - 1730	1	165	85	1	252	37	101	0	2	140	1	0	4	0	5	47	0	35	0	82	479
1730 - 1745	0	160	63	1	224	30	87	1	0	118	8	1	14	0	23	58	0	29	0	87	452
1745 - 1800	0	120	92	0	212	24	81	1	0	106	2	0	3	0	5	46	0	27	0	73	396
Hourly Total	2	619	345	2	968	129	387	2	2	520	15	1	27	0	43	221	0	138	0	359	1890
Grand Total	4	1212	659	4	1879	267	849	6	5	1127	25	11	50	0	86	457	1	233	0	691	3783
Approach %	0.21	64.50	35.07	0.21	-	23.69	75.33	0.53	0.44	-	29.07	12.79	58.14	0.00	-	66.14	0.14	33.72	0.00	-	
Intersection %	0.11	32.04	17.42	0.11	49.67	7.06	22.44	0.16	0.13	29.79	0.66	0.29	1.32	0.00	2.27	12.08	0.03	6.16	0.00	18.27	
PHF	0.50	0.92	0.84	0.75	0.89	0.88	0.90	0.50	0.50	0.89	0.43	0.38	0.66	0.00	0.75	0.87	0.00	0.64	0.00	0.78	0.90

Marr Traffic
DATA COLLECTION

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Weather

Cloudy
58°F

34.123167°, -83.986295°

Bikes

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Bikes

	Northbound					Southbound					Eastbound					Westbound					
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	Int Total
TIME																					
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Classified Turn Movement Count || Passenger Vehicles (1-3)

Buford, GA



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Site 1 of 3

GA-13 Buford Hwy (South)
GA-13 Buford Hwy (North)
Driveway
Thompson Mill Rd

Date

Wednesday, May 12, 2021

Weather

Cloudy
58°F

Lat/Long

34.123167°, -83.986295°

0700 - 0900 (Weekday 2h Session) (12-05-2021)

Passenger Vehicles (1-3)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
0700 - 0715	4	94	22	0	120	21	78	5	0	104	1	0	0	0	1	32	2	57	0	91	316
0715 - 0730	7	124	33	0	164	34	114	7	1	156	0	0	1	0	1	59	2	64	0	125	446
0730 - 0745	9	111	39	1	160	45	135	6	1	187	0	0	0	0	0	74	4	44	0	122	469
0745 - 0800	8	90	27	0	125	31	136	8	0	175	0	0	1	0	1	99	3	41	0	143	444
Hourly Total	28	419	121	1	569	131	463	26	2	622	1	0	2	0	3	264	11	206	0	481	1675
0800 - 0815	3	80	34	0	117	27	96	2	1	126	0	0	1	0	1	75	1	33	0	109	353
0815 - 0830	0	62	50	0	112	14	88	2	1	105	0	0	1	0	1	59	2	26	0	87	305
0830 - 0845	1	78	31	0	110	14	77	0	1	92	0	0	0	0	0	68	1	12	0	81	283
0845 - 0900	2	71	24	0	97	19	67	0	0	86	0	0	1	0	1	55	0	17	0	72	256
Hourly Total	6	291	139	0	436	74	328	4	3	409	0	0	3	0	3	257	4	88	0	349	1197
Grand Total	34	710	260	1	1005	205	791	30	5	1031	1	0	5	0	6	521	15	294	0	830	2872
Approach %	3.38	70.65	25.87	0.10	-	19.88	76.72	2.91	0.48	-	16.67	0.00	83.33	0.00	-	62.77	1.81	35.42	0.00	-	-
Intersection %	1.18	24.72	9.05	0.03	34.99	7.14	27.54	1.04	0.17	35.90	0.03	0.00	0.17	0.00	0.21	18.14	0.52	10.24	0.00	28.90	-

1600 - 1800 (Weekday 2h Session) (12-05-2021)

Passenger Vehicles (1-3)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
1600 - 1615	1	138	82	0	221	34	106	1	0	141	2	5	9	0	16	60	0	25	0	85	463
1615 - 1630	1	135	65	0	201	25	92	0	1	118	1	2	2	0	5	49	1	27	0	77	401
1630 - 1645	0	143	89	1	233	43	124	0	1	168	7	2	2	0	11	64	0	20	0	84	496
1645 - 1700	0	150	70	1	221	32	113	1	1	147	0	1	8	0	9	61	0	19	0	80	457
Hourly Total	2	566	306	2	876	134	435	2	3	574	10	10	21	0	41	234	1	91	0	326	1817
1700 - 1715	1	167	103	0	271	38	112	0	0	150	4	0	6	0	10	69	0	46	0	115	546
1715 - 1730	0	163	83	1	247	37	93	0	2	132	1	0	4	0	5	46	0	35	0	81	465
1730 - 1745	0	147	62	1	210	30	83	0	0	113	7	1	14	0	22	56	0	29	0	85	430
1745 - 1800	0	120	91	0	211	24	78	1	0	103	2	0	3	0	5	46	0	25	0	71	390
Hourly Total	1	597	339	2	939	129	366	1	2	498	14	1	27	0	42	217	0	135	0	352	1831
Grand Total	3	1163	645	4	1815	263	801	3	5	1072	24	11	48	0	83	451	1	226	0	678	3648
Approach %	0.17	64.08	35.54	0.22	-	24.53	74.72	0.28	0.47	-	28.92	13.25	57.83	0.00	-	66.52	0.15	33.33	0.00	-	
Intersection %	0.08	31.88	17.68	0.11	49.75	7.21	21.96	0.08	0.14	29.39	0.66	0.30	1.32	0.00	2.28	12.36	0.03	6.20	0.00	18.59	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Buford, GA



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Site 1 of 3

GA-13 Buford Hwy (South)
GA-13 Buford Hwy (North)
Driveway
Thompson Mill Rd

Date

Wednesday, May 12, 2021

Weather

Cloudy
58°F

Lat/Long

34.123167°, -83.986295°

0700 - 0900 (Weekday 2h Session) (12-05-2021)

Single Unit Trucks (4-7)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
0700 - 0715	0	6	4	0	10	24	1	0	0	25	0	0	0	0	0	0	0	0	0	0	35
0715 - 0730	0	5	0	0	5	0	2	0	0	2	0	0	0	0	0	2	0	0	0	2	9
0730 - 0745	0	2	0	0	2	2	7	0	0	9	0	0	0	0	0	3	0	0	0	3	14
0745 - 0800	0	2	1	0	3	0	9	1	0	10	0	0	0	0	0	1	0	1	0	2	15
Hourly Total	0	15	5	0	20	26	19	1	0	46	0	0	0	0	0	6	0	1	0	7	73
0800 - 0815	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0	3	0	0	0	3	9
0815 - 0830	0	5	2	0	7	1	1	0	0	2	0	0	1	0	1	3	0	0	0	3	13
0830 - 0845	0	4	1	0	5	2	7	1	0	10	1	0	0	0	1	4	0	0	0	4	20
0845 - 0900	0	0	1	0	1	2	2	2	0	6	0	0	0	0	0	2	0	1	0	3	10
Hourly Total	0	13	4	0	17	5	12	3	0	20	1	0	1	0	2	12	0	1	0	13	52
Grand Total	0	28	9	0	37	31	31	4	0	66	1	0	1	0	2	18	0	2	0	20	125
Approach %	0.00	75.68	24.32	0.00	-	46.97	46.97	6.06	0.00	-	50.00	0.00	50.00	0.00	-	90.00	0.00	10.00	0.00	-	
Intersection %	0.00	22.40	7.20	0.00	29.60	24.80	24.80	3.20	0.00	52.80	0.80	0.00	0.80	0.00	1.60	14.40	0.00	1.60	0.00	16.00	

1600 - 1800 (Weekday 2h Session) (12-05-2021)

Single Unit Trucks (4-7)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
1600 - 1615	0	7	0	0	7	0	5	1	0	6	0	0	0	0	0	0	0	2	0	2	15
1615 - 1630	0	4	2	0	6	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	9
1630 - 1645	0	3	1	0	4	1	4	1	0	6	0	0	1	0	1	0	0	0	0	0	11
1645 - 1700	0	4	4	0	8	3	4	0	0	7	0	0	0	0	0	0	0	0	0	0	15
Hourly Total	0	18	7	0	25	4	15	2	0	21	0	0	1	0	1	0	0	3	0	3	50
1700 - 1715	0	6	2	0	8	0	1	0	0	1	0	0	0	0	0	1	0	1	0	2	11
1715 - 1730	0	1	2	0	3	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	6
1730 - 1745	0	10	1	0	11	0	1	0	0	1	1	0	0	0	1	1	0	0	0	1	14
1745 - 1800	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	0	2	0	2	5
Hourly Total	0	17	6	0	23	0	6	0	0	6	1	0	0	0	1	3	0	3	0	6	36
Grand Total	0	35	13	0	48	4	21	2	0	27	1	0	1	0	2	3	0	6	0	9	86
Approach %	0.00	72.92	27.08	0.00	-	14.81	77.78	7.41	0.00	-	50.00	0.00	50.00	0.00	-	33.33	0.00	66.67	0.00	-	-
Intersection %	0.00	40.70	15.12	0.00	55.81	4.65	24.42	2.33	0.00	31.40	1.16	0.00	1.16	0.00	2.33	3.49	0.00	6.98	0.00	10.47	-

Classified Turn Movement Count || Combination Trucks (8-13)

Buford, GA



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Site 1 of 3

GA-13 Buford Hwy (South)
GA-13 Buford Hwy (North)
Driveway
Thompson Mill Rd

Date

Wednesday, May 12, 2021

Lat/Long

34.123167°, -83.986295°

Weather

Cloudy
58°F

0700 - 0900 (Weekday 2h Session) (12-05-2021)

Combination Trucks (8-13)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
0700 - 0715	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0715 - 0730	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
0730 - 0745	0	3	1	0	4	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	7
0745 - 0800	0	3	2	0	5	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	6
Hourly Total	0	9	3	0	12	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	17
0800 - 0815	0	5	1	0	6	1	2	0	0	3	0	0	0	0	0	2	0	0	0	2	11
0815 - 0830	0	6	3	0	9	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	11
0830 - 0845	2	3	1	0	6	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	7
0845 - 0900	1	0	2	0	3	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	7
Hourly Total	3	14	7	0	24	1	7	0	0	8	0	0	0	0	0	2	0	2	0	4	36
Grand Total	3	23	10	0	36	1	11	0	0	12	0	0	0	0	0	3	0	2	0	5	53
Approach %	8.33	63.89	27.78	0.00	-	8.33	91.67	0.00	0.00	-	0.00	0.00	0.00	0.00	-	60.00	0.00	40.00	0.00	-	
Intersection %	5.66	43.40	18.87	0.00	67.92	1.89	20.75	0.00	0.00	22.64	0.00	0.00	0.00	0.00	0.00	5.66	0.00	3.77	0.00	9.43	

1600 - 1800 (Weekday 2h Session) (12-05-2021)

Combination Trucks (8-13)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	GA-13 Buford Hwy (South)					GA-13 Buford Hwy (North)					Driveway					Thompson Mill Rd					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
1600 - 1615	0	3	1	0	4	0	2	0	0	2	0	0	1	0	1	1	0	1	0	2	9
1615 - 1630	0	2	0	0	2	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	8
1630 - 1645	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	4
1645 - 1700	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
Hourly Total	0	9	1	0	10	0	12	0	0	12	0	0	1	0	1	2	0	1	0	3	26
1700 - 1715	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	6
1715 - 1730	1	1	0	0	2	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	8
1730 - 1745	0	3	0	0	3	0	3	1	0	4	0	0	0	0	0	1	0	0	0	1	8
1745 - 1800	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Hourly Total	1	5	0	0	6	0	15	1	0	16	0	0	0	0	0	1	0	0	0	1	23
Grand Total	1	14	1	0	16	0	27	1	0	28	0	0	1	0	1	3	0	1	0	4	49
Approach %	6.25	87.50	6.25	0.00	-	0.00	96.43	3.57	0.00	-	0.00	0.00	100.00	0.00	-	75.00	0.00	25.00	0.00	-	
Intersection %	2.04	28.57	2.04	0.00	32.65	0.00	55.10	2.04	0.00	57.14	0.00	0.00	2.04	0.00	2.04	6.12	0.00	2.04	0.00	8.16	

Pedestrian Count || All vehicles

Buford, GA



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Site 1 of 3

GA-13 Buford Hwy (South)
GA-13 Buford Hwy (North)
Driveway
Thompson Mill Rd

Date

Wednesday, May 12, 2021

Weather

Cloudy
58°F

Lat/Long

34.123167°, -83.986295°

0700 - 0900 (Weekday 2h Session) (12-05-2021)

Pedestrians

TIME	Northbound			Southbound			Eastbound			Westbound			App Total	Int Total
	GA-13 Buford Hwy (South)			GA-13 Buford Hwy (North)			Driveway			Thompson Mill Rd				
	EB 1a	WB 1b	App Total	EB 1c	WB 1d	App Total	NB 1e	SB 1f	App Total	NB 1g	SB 1h	App Total		
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	-	-
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1600 - 1800 (Weekday 2h Session) (12-05-2021)

Pedestrians

TIME	Northbound			Southbound			Eastbound			Westbound			App Total	Int Total
	GA-13 Buford Hwy (South)			GA-13 Buford Hwy (North)			Driveway			Thompson Mill Rd				
	EB 1a	WB 1b	App Total	EB 1c	WB 1d	App Total	NB 1e	SB 1f	App Total	NB 1g	SB 1h	App Total		
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	1	1	0	0	0	1
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	1	1	0	0	0	1
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	2	2	0	0	0	2
1745 - 1800	0	0	0	0	0	0	0	1	0	1	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	1	2	3	0	0	0	3
Grand Total	0	0	0	0	0	0	0	1	3	4	0	0	0	4
Approach %	0.00	0.00	-	0.00	0.00	-	25.00	75.00	-	0.00	0.00	-	-	-
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	75.00	100.00	0.00	0.00	0.00	0.00



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Peak Hour Turning Movement Count

Buford, GA



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Wednesday, May 12, 2021	
Period	0700 - 0900
Peak Hour	0715 - 0815

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

Time	Northbound					Southbound					Eastbound					Westbound					Int. Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
0715 - 0730	33	14	7	0	54	1	28	50	0	79	20	19	22	0	61	11	82	3	0	96	290
0730 - 0745	24	20	5	0	49	2	22	40	0	64	23	27	21	0	71	10	78	3	0	91	275
0745 - 0800	25	16	7	0	48	2	31	34	0	67	11	20	18	0	49	10	83	3	0	96	260
0800 - 0815	17	25	2	0	44	2	34	31	0	67	15	14	17	0	46	5	66	2	0	73	230
Total	99	75	21	0	195	7	115	155	0	277	69	80	78	0	227	36	309	11	0	356	1055
Approach %	50.77	38.46	10.77	0.00	-	2.53	41.52	55.96	0.00	-	30.40	35.24	34.36	0.00	-	10.11	86.80	3.09	0.00	-	-
PHF	0.75	0.75	0.75	0.00	0.90	0.88	0.85	0.78	0.00	0.88	0.75	0.74	0.89	0.00	0.80	0.82	0.93	0.92	0.00	0.93	0.91

Bikes

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Passenger Vehicles (1-3)

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
0715 - 0730	32	13	7	0	52	1	28	50	0	79	15	15	22	0	52	11	81	3	0	95	278
0730 - 0745	23	20	5	0	48	2	22	39	0	63	18	21	21	0	60	10	76	3	0	89	260
0745 - 0800	25	16	6	0	47	1	31	33	0	65	9	18	16	0	43	10	80	2	0	92	247
0800 - 0815	17	23	2	0	42	2	34	31	0	67	14	13	16	0	43	5	62	2	0	69	221
Total	97	72	20	0	189	6	115	153	0	274	56	67	75	0	198	36	299	10	0	345	1006
Approach %	51.32	38.10	10.58	0.00	-	2.19	41.97	55.84	0.00	-	28.28	33.84	37.88	0.00	-	10.43	86.67	2.90	0.00	-	-
PHF	0.76	0.78	0.71	0.00	0.91	0.75	0.85	0.77	0.00	0.87	0.78	0.80	0.85	0.00	0.83	0.82	0.92	0.83	0.00	0.91	0.90

Single Unit Trucks (4-7)

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
0715 - 0730	1	1	0	0	2	0	0	0	0	0	5	3	0	0	8	0	1	0	0	1	11
0730 - 0745	1	0	0	0	1	0	0	1	0	1	5	4	0	0	9	0	1	0	0	1	12
0745 - 0800	0	0	1	0	1	1	0	1	0	2	2	2	2	0	6	0	3	1	0	4	13
0800 - 0815	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	0	2	0	0	2	6
Total	2	3	1	0	6	1	0	2	0	3	12	10	3	0	25	0	7	1	0	8	42
Approach %	33.33	50.00	16.67	0.00	-	33.33	0.00	66.67	0.00	-	48.00	40.00	12.00	0.00	-	0.00	87.50	12.50	0.00	-	-
PHF	0.50	0.38	0.25	0.00	0.75	0.25	0.00	0.50	0.00	0.38	0.60	0.63	0.38	0.00	0.69	0.00	0.58	0.25	0.00	0.50	0.81

Combination Trucks (8-13)

Commutation Trucks (6-15)																								
Time	Northbound					Southbound					Eastbound					Westbound					Int Total			
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)								
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total				
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1			
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	3			
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
0800 - 0815	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	2	3			
Total	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	3	0	0	3	7			
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	25.00	75.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	-			
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.38	0.00	0.00	0.50	0.00	0.38	0.00	0.00	0.38	0.58			

Pedestrians

		Northbound					Southbound					Eastbound					Westbound					Int Total
		N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
Time	EB 2a	WB 2b			App Total	EB 2c	WB 2d			App Total	NB 2e	SB 2f			App Total	NB 2g	SB 2h			App Total		
	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	
	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	
	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	
	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	
	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	0	-	-	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	



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Peak Hour Turning Movement Count

Buford, GA



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Wednesday, May 12, 2021	
Period	1600 - 1800
Peak Hour	1700 - 1800

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
1700 - 1715	14	26	13	0	53	4	31	25	0	60	18	87	30	0	135	10	30	3	1	44	292
1715 - 1730	11	27	16	0	54	6	39	15	0	60	20	69	26	0	115	22	38	3	0	63	292
1730 - 1745	10	27	10	0	47	2	40	16	0	58	25	58	18	0	101	10	38	6	0	54	260
1745 - 1800	10	36	19	0	65	3	37	21	0	61	26	49	16	0	91	8	52	3	0	63	280
Total	45	116	58	0	219	15	147	77	0	239	89	263	90	0	442	50	158	15	1	224	1124
Approach	20.55	52.97	26.48	0.00	-	6.28	61.51	32.22	0.00	-	20.14	59.50	20.36	0.00	-	22.32	70.54	6.70	0.45	-	
PHF	0.80	0.81	0.76	0.00	0.84	0.63	0.92	0.77	0.00	0.98	0.86	0.76	0.75	0.00	0.82	0.57	0.76	0.63	0.25	0.89	0.96

Bikes

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Passenger Vehicles (1-3)

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
1700 - 1715	14	25	13	0	52	4	31	25	0	60	18	85	29	0	132	10	30	3	1	44	288
1715 - 1730	10	27	16	0	53	6	38	15	0	59	20	67	26	0	113	22	36	3	0	61	286
1730 - 1745	10	27	10	0	47	2	38	16	0	56	25	58	18	0	101	10	36	5	0	51	255
1745 - 1800	10	35	19	0	64	3	37	21	0	61	26	49	16	0	91	8	52	3	0	63	279
Total	44	114	58	0	216	15	144	77	0	236	89	259	89	0	437	50	154	14	1	219	1108
Approach %	20.37	52.78	26.85	0.00	-	6.36	61.02	32.63	0.00	-	20.37	59.27	20.37	0.00	-	22.83	70.32	6.39	0.46	-	
PHF	0.79	0.81	0.76	0.00	0.84	0.63	0.95	0.77	0.00	0.97	0.86	0.76	0.77	0.00	0.83	0.57	0.74	0.70	0.25	0.87	0.96

Single Unit Trucks (4-7)

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
1700 - 1715	0	1	0	0	1	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	4
1715 - 1730	1	0	0	0	1	0	1	0	0	1	0	2	0	0	2	0	2	0	0	2	6
1730 - 1745	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	4
1745 - 1800	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	2	0	0	3	0	3	0	0	3	0	4	1	0	5	0	3	1	0	4	15
Approach %	33.33	66.67	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	80.00	20.00	0.00	-	0.00	75.00	25.00	0.00	-	
PHF	0.25	0.50	0.00	0.00	0.75	0.00	0.38	0.00	0.00	0.38	0.00	0.50	0.25	0.00	0.42	0.00	0.38	0.25	0.00	0.50	0.63

Combination Trucks (8-13)

Commutation Peaks (6-15)																							
Time	Northbound					Southbound					Eastbound					Westbound					Int Total		
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)							
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total			
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	-	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25	0.25	0.25	

Pedestrians

		Northbound					Southbound					Eastbound					Westbound					Int Total			
		N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)								
Time	EB 2a	WB 2b				App Total	EB 2c	WB 2d				App Total	NB 2e	SB 2f				App Total	NB 2g	SB 2h				App Total	
	0	0	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	0	0
	0	0	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	0	0
	0	0	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	0	0
	0	0	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	0	0
	0	0	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	0	0
Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %		0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00
PHF		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Classified Turn Movement Count || All vehicles

Buford, GA



Marr Traffic
DATA COLLECTION

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Site 2 of 3

N Bogan Rd NE (South)
N Bogan Rd NE (North)
Thompson Mill Rd (West)
Thompson Mill Rd (East)

Date

Wednesday, May 12, 2021

Lat/Long

34.117851°, -83.965431°

Weather

Cloudy
58°F

0700 - 0900 (Weekday 2h Session) (12-05-2021)

All vehicles

	Northbound					Southbound					Eastbound					Westbound					Int
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
TIME	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	Total
0700 - 0715	18	16	6	0	40	3	15	49	0	67	13	8	13	0	34	15	68	0	0	83	224
0715 - 0730	33	14	7	0	54	1	28	50	0	79	20	19	22	0	61	11	82	3	0	96	290
0730 - 0745	24	20	5	0	49	2	22	40	0	64	23	27	21	0	71	10	78	3	0	91	275
0745 - 0800	25	16	7	0	48	2	31	34	0	67	11	20	18	0	49	10	83	3	0	96	260
Hourly Total	100	66	25	0	191	8	96	173	0	277	67	74	74	0	215	46	311	9	0	366	1049
0800 - 0815	17	25	2	0	44	2	34	31	0	67	15	14	17	0	46	5	66	2	0	73	230
0815 - 0830	21	19	3	0	43	2	31	21	0	54	16	21	18	0	55	12	54	1	0	67	219
0830 - 0845	17	25	12	0	54	1	33	23	0	57	9	23	22	0	54	8	35	1	0	44	209
0845 - 0900	10	20	3	0	33	2	28	20	0	50	9	17	10	0	36	10	48	2	0	60	179
Hourly Total	65	89	20	0	174	7	126	95	0	228	49	75	67	0	191	35	203	6	0	244	837
Grand Total	165	155	45	0	365	15	222	268	0	505	116	149	141	0	406	81	514	15	0	610	1886
Approach %	45.21	42.47	12.33	0.00	-	2.97	43.96	53.07	0.00	-	28.57	36.70	34.73	0.00	-	13.28	84.26	2.46	0.00	-	
Intersection %	8.75	8.22	2.39	0.00	19.35	0.80	11.77	14.21	0.00	26.78	6.15	7.90	7.48	0.00	21.53	4.29	27.25	0.80	0.00	32.34	
PHF	0.75	0.75	0.75	0.00	0.90	0.88	0.85	0.78	0.00	0.88	0.75	0.74	0.89	0.00	0.80	0.82	0.93	0.92	0.00	0.93	0.91

1600 - 1800 (Weekday 2h Session) (12-05-2021)

All vehicles

	Northbound					Southbound					Eastbound					Westbound					
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
TIME	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	Int Total
1600 - 1615	10	21	10	0	41	9	32	17	0	58	23	62	30	0	115	10	39	0	0	49	263
1615 - 1630	17	26	10	0	53	7	44	16	0	67	26	67	18	0	111	11	33	3	0	47	278
1630 - 1645	8	31	11	0	50	9	34	16	0	59	26	57	16	0	99	10	34	3	0	47	255
1645 - 1700	17	21	10	0	48	4	37	20	0	61	17	65	23	0	105	16	38	5	0	59	273
Hourly Total	52	99	41	0	192	29	147	69	0	245	92	251	87	0	430	47	144	11	0	202	1069
1700 - 1715	14	26	13	0	53	4	31	25	0	60	18	87	30	0	135	10	30	3	1	44	292
1715 - 1730	11	27	16	0	54	6	39	15	0	60	20	69	26	0	115	22	38	3	0	63	292
1730 - 1745	10	27	10	0	47	2	40	16	0	58	25	58	18	0	101	10	38	6	0	54	260
1745 - 1800	10	36	19	0	65	3	37	21	0	61	26	49	16	0	91	8	52	3	0	63	280
Hourly Total	45	116	58	0	219	15	147	77	0	239	89	263	90	0	442	50	158	15	1	224	1124
Grand Total	97	215	99	0	411	44	294	146	0	484	181	514	177	0	872	97	302	26	1	426	2193
Approach %	23.60	52.31	24.09	0.00	-	9.09	60.74	30.17	0.00	-	20.76	58.94	20.30	0.00	-	22.77	70.89	6.10	0.23	-	
Intersection %	4.42	9.80	4.51	0.00	18.74	2.01	13.41	6.66	0.00	22.07	8.25	23.44	8.07	0.00	39.76	4.42	13.77	1.19	0.05	19.43	
PHF	0.80	0.81	0.76	0.00	0.84	0.63	0.92	0.77	0.00	0.98	0.86	0.76	0.75	0.00	0.82	0.57	0.76	0.63	0.25	0.89	0.96

Marr Traffic
DATA COLLECTION

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34.117851°, -83.965431°

	Northbound					Southbound					Eastbound					Westbound					
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	Int Total
TIME																					
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Classified Turn Movement Count || Passenger Vehicles (1-3)

Buford, GA



Marr Traffic
DATA COLLECTION

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Site 2 of 3

N Bogan Rd NE (South)
N Bogan Rd NE (North)
Thompson Mill Rd (West)
Thompson Mill Rd (East)

Date

Wednesday, May 12, 2021

Weather

Cloudy
58°F

Lat/Long

34.117851°, -83.965431°

0700 - 0900 (Weekday 2h Session) (12-05-2021)

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound					Westbound					
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
TIME	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	Int Total
0700 - 0715	18	16	6	0	40	3	15	49	0	67	9	7	11	0	27	15	68	0	0	83	217
0715 - 0730	32	13	7	0	52	1	28	50	0	79	15	15	22	0	52	11	81	3	0	95	278
0730 - 0745	23	20	5	0	48	2	22	39	0	63	18	21	21	0	60	10	76	3	0	89	260
0745 - 0800	25	16	6	0	47	1	31	33	0	65	9	18	16	0	43	10	80	2	0	92	247
Hourly Total	98	65	24	0	187	7	96	171	0	274	51	61	70	0	182	46	305	8	0	359	1002
0800 - 0815	17	23	2	0	42	2	34	31	0	67	14	13	16	0	43	5	62	2	0	69	221
0815 - 0830	21	18	3	0	42	2	30	20	0	52	15	18	17	0	50	11	51	0	0	62	206
0830 - 0845	16	23	12	0	51	1	32	21	0	54	8	20	20	0	48	8	34	1	0	43	196
0845 - 0900	8	20	2	0	30	2	27	20	0	49	9	16	9	0	34	10	45	2	0	57	170
Hourly Total	62	84	19	0	165	7	123	92	0	222	46	67	62	0	175	34	192	5	0	231	793
Grand Total	160	149	43	0	352	14	219	263	0	496	97	128	132	0	357	80	497	13	0	590	1795
Approach %	45.45	42.33	12.22	0.00	-	2.82	44.15	53.02	0.00	-	27.17	35.85	36.97	0.00	-	13.56	84.24	2.20	0.00	-	
Intersection %	8.91	8.30	2.40	0.00	19.61	0.78	12.20	14.65	0.00	27.63	5.40	7.13	7.35	0.00	19.89	4.46	27.69	0.72	0.00	32.87	

1600 - 1800 (Weekday 2h Session) (12-05-2021)

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound					Westbound					
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
TIME	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	Int Total
1600 - 1615	10	19	10	0	39	8	30	17	0	55	23	60	28	0	111	10	36	0	0	46	251
1615 - 1630	16	25	10	0	51	5	43	16	0	64	25	66	17	0	108	10	32	3	0	45	268
1630 - 1645	8	31	9	0	48	9	34	16	0	59	25	57	16	0	98	10	34	3	0	47	252
1645 - 1700	17	21	10	0	48	4	36	20	0	60	17	62	23	0	102	16	38	5	0	59	269
Hourly Total	51	96	39	0	186	26	143	69	0	238	90	245	84	0	419	46	140	11	0	197	1040
1700 - 1715	14	25	13	0	52	4	31	25	0	60	18	85	29	0	132	10	30	3	1	44	288
1715 - 1730	10	27	16	0	53	6	38	15	0	59	20	67	26	0	113	22	36	3	0	61	286
1730 - 1745	10	27	10	0	47	2	38	16	0	56	25	58	18	0	101	10	36	5	0	51	255
1745 - 1800	10	35	19	0	64	3	37	21	0	61	26	49	16	0	91	8	52	3	0	63	279
Hourly Total	44	114	58	0	216	15	144	77	0	236	89	259	89	0	437	50	154	14	1	219	1108
Grand Total	95	210	97	0	402	41	287	146	0	474	179	504	173	0	856	96	294	25	1	416	2148
Approach %	23.63	52.24	24.13	0.00	-	8.65	60.55	30.80	0.00	-	20.91	58.88	20.21	0.00	-	23.08	70.67	6.01	0.24	-	
Intersection %	4.42	9.78	4.52	0.00	18.72	1.91	13.36	6.80	0.00	22.07	8.33	23.46	8.05	0.00	39.85	4.47	13.69	1.16	0.05	19.37	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Buford, GA



Marr Traffic
DATA COLLECTION

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Site 2 of 3

N Bogan Rd NE (South)
N Bogan Rd NE (North)
Thompson Mill Rd (West)
Thompson Mill Rd (East)

Date

Wednesday, May 12, 2021

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34.117851°, -83.965431°

Weather

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58°F

0700 - 0900 (Weekday 2h Session) (12-05-2021)

Single Unit Trucks (4-7)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	4	1	2	0	7	0	0	0	0	0	7
0715 - 0730	1	1	0	0	2	0	0	0	0	0	5	3	0	0	8	0	1	0	0	1	11
0730 - 0745	1	0	0	0	1	0	0	1	0	1	5	4	0	0	9	0	1	0	0	1	12
0745 - 0800	0	0	1	0	1	1	0	1	0	2	2	2	2	0	6	0	3	1	0	4	13
Hourly Total	2	1	1	0	4	1	0	2	0	3	16	10	4	0	30	0	5	1	0	6	43
0800 - 0815	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	0	2	0	0	2	6
0815 - 0830	0	0	0	0	0	0	1	1	0	2	0	1	1	0	2	1	2	1	0	4	8
0830 - 0845	1	2	0	0	3	0	1	2	0	3	1	1	0	0	2	0	1	0	0	1	9
0845 - 0900	2	0	1	0	3	0	1	0	0	1	0	1	1	0	2	0	2	0	0	2	8
Hourly Total	3	4	1	0	8	0	3	3	0	6	1	4	3	0	8	1	7	1	0	9	31
Grand Total	5	5	2	0	12	1	3	5	0	9	17	14	7	0	38	1	12	2	0	15	74
Approach %	41.67	41.67	16.67	0.00	-	11.11	33.33	55.56	0.00	-	44.74	36.84	18.42	0.00	-	6.67	80.00	13.33	0.00	-	-
Intersection %	6.76	6.76	2.70	0.00	16.22	1.35	4.05	6.76	0.00	12.16	22.97	18.92	9.46	0.00	51.35	1.35	16.22	2.70	0.00	20.27	-

1600 - 1800 (Weekday 2h Session) (12-05-2021)

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
TIME	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
1600 - 1615	0	2	0	0	2	1	2	0	0	3	0	1	2	0	3	0	1	0	0	1	9
1615 - 1630	1	1	0	0	2	2	1	0	0	3	1	1	1	0	3	1	0	0	0	1	9
1630 - 1645	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
1645 - 1700	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	4
Hourly Total	1	3	2	0	6	3	4	0	0	7	2	5	3	0	10	1	1	0	0	2	25
1700 - 1715	0	1	0	0	1	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	4
1715 - 1730	1	0	0	0	1	0	1	0	0	1	0	2	0	0	2	0	2	0	0	2	6
1730 - 1745	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	4
1745 - 1800	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hourly Total	1	2	0	0	3	0	3	0	0	3	0	4	1	0	5	0	3	1	0	4	15
Grand Total	2	5	2	0	9	3	7	0	0	10	2	9	4	0	15	1	4	1	0	6	40
Approach %	22.22	55.56	22.22	0.00	-	30.00	70.00	0.00	0.00	-	13.33	60.00	26.67	0.00	-	16.67	66.67	16.67	0.00	-	
Intersection %	5.00	12.50	5.00	0.00	22.50	7.50	17.50	0.00	0.00	25.00	5.00	22.50	10.00	0.00	37.50	2.50	10.00	2.50	0.00	15.00	

Classified Turn Movement Count || Combination Trucks (8-13)

Buford, GA



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DATA COLLECTION

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Site 2 of 3

N Bogan Rd NE (South)
N Bogan Rd NE (North)
Thompson Mill Rd (West)
Thompson Mill Rd (East)

Date

Wednesday, May 12, 2021

Lat/Long

34.117851°, -83.965431°

Weather

Cloudy
58°F

0700 - 0900 (Weekday 2h Session) (12-05-2021)

Combination Trucks (8-13)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	3
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	4
0800 - 0815	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	2	3
0815 - 0830	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	0	1	0	0	1	5
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	4
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Hourly Total	0	1	0	0	1	0	0	0	0	0	2	4	2	0	8	0	4	0	0	4	13
Grand Total	0	1	0	0	1	0	0	0	0	0	2	7	2	0	11	0	5	0	0	5	17
Approach %	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	18.18	63.64	18.18	0.00	-	0.00	100.00	0.00	0.00	-	
Intersection %	0.00	5.88	0.00	0.00	5.88	0.00	0.00	0.00	0.00	0.00	11.76	41.18	11.76	0.00	64.71	0.00	29.41	0.00	0.00	29.41	

1600 - 1800 (Weekday 2h Session) (12-05-2021)

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound					Westbound					
	N Bogan Rd NE (South)					N Bogan Rd NE (North)					Thompson Mill Rd (West)					Thompson Mill Rd (East)					
TIME	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	Int Total
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	3
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	4
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	4	0	0	4	5
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	20.00	0.00	80.00	0.00	0.00	80.00	

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Weather

Cloudy
58°F

34.117851°, -83.965431°

Pedestrians

[illegible]

Pedestrians

	Northbound				Southbound				Eastbound				Westbound				
	N Bogan Rd NE (South)				N Bogan Rd NE (North)				GA-347 Holiday Rd (West)				GA-347 Holiday Rd (East)				
TIME	EB 2a	WB 2b		App Total	EB 2c	WB 2d		App Total	NB 2e	SB 2f		App Total	NB 2g	SB 2h		App Total	Int Total
1600 - 1615	0	0		0	0	0		0	0	0		0	0	0		0	0
1615 - 1630	0	0		0	0	0		0	0	0		0	0	0		0	0
1630 - 1645	0	0		0	0	0		0	0	0		0	0	0		0	0
1645 - 1700	0	0		0	0	0		0	0	0		0	0	0		0	0
Hourly Total	0	0		0	0	0		0	0	0		0	0	0		0	0
1700 - 1715	0	0		0	0	0		0	0	0		0	0	0		0	0
1715 - 1730	0	0		0	0	0		0	0	0		0	0	0		0	0
1730 - 1745	0	0		0	0	0		0	0	0		0	0	0		0	0
1745 - 1800	0	0		0	0	0		0	0	0		0	0	0		0	0
Hourly Total	0	0		0	0	0		0	0	0		0	0	0		0	0
Grand Total	0	0		0	0	0		0	0	0		0	0	0		0	0
Approach %	0.00	0.00		-	0.00	0.00		-	0.00	0.00		-	0.00	0.00		-	
Intersection %	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	

Start Date: 5/12/2021		N Bogan Rd NE (South) Northbound			N Bogan Rd NE (North) Southbound			Thompson Mill Rd (West) Eastbound			Thompson Mill Rd (East) Westbound			
Time	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
15 Minute Totals														
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 AM - 01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 AM - 01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 AM - 01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 AM - 01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 AM - 02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 AM - 02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 AM - 02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 AM - 02:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 AM - 03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 AM - 03:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 AM - 03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 AM - 03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 AM - 04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00 AM - 04:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 AM - 04:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 AM - 04:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 AM - 05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:00 AM - 05:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:15 AM - 05:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:30 AM - 05:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:45 AM - 06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:00 AM - 06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15 AM - 06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30 AM - 06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM - 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM - 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM - 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM - 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM - 08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM - 08:15 AM	17	25	2	2	34	31	15	14	17	5	66	2	230	
08:15 AM - 08:30 AM	21	19	1	3	31	21	16	21	18	12	54	1	219	
08:30 AM - 08:45 AM	17	25	12	1	33	23	9	23	22	8	35	1	209	
08:45 AM - 09:00 AM	10	20	3	2	28	20	9	17	10	10	48	2	179	
09:00 AM - 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM - 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM - 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:45 AM - 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 AM - 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15 AM - 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 AM - 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM - 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 AM - 11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM - 11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM - 11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM - 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM - 12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM - 12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM - 12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM - 01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 PM - 01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM - 01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM - 01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM - 02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM - 02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM - 02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM - 02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM - 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM - 03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM - 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM - 03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM - 04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00 PM - 04:15 PM	10	21	10	9	32	17	23	62	30	10	39	0	263	
04:15 PM - 04:30 PM	17	26	10	7	44	67	26	67	18	11	33	3	278	
04:30 PM - 04:45 PM	8	31	8	9	34	16	26	67	16	10	36	3	255	
04:45 PM - 05:00 PM	17	21	10	4	37	20	17	65	23	16	38	5	273	
05:00 PM - 05:15 PM	14	26	13	4	31	25	18	87	30	10	30	3	292	
05:15 PM - 05:30 PM	11	27	16	6	39	15	20	69	26	22	38	3	292	
05:30 PM - 05:45 PM	10	27	15	6	40	16	22	58	18	10	36	6	280	
05:45 PM - 06:00 PM	10	36	19	3	37	21	26	49	16	8	52	3	280	
06:00 PM - 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15 PM - 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30 PM - 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM - 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 PM - 07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 PM - 07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 PM - 07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 PM - 08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 PM - 08:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 PM - 08:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 PM - 08:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 PM - 09:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 PM - 09:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 PM - 09:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 PM - 09:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:45 PM - 10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 PM - 10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15 PM - 10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 PM - 10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 PM - 11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 PM - 11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 PM - 11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 PM - 11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 PM - 12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	



[Click here for Map](#)

Peak Hour Turning Movement Count

Buford, GA



Marr Traffic
DATA COLLECTION

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Wednesday, May 12, 2021	
Period	0700 - 0900
Peak Hour	0715 - 0815

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Time	Northbound					Southbound					Eastbound					Westbound					Int. Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 4.0	Right 4.1	U-Turn 4.2	App Total	Left 4.3	Thru 4.4	Right 4.5	U-Turn 4.6	App Total	
0715 - 0730	0	0	70	0	70	0	0	0	0	0	0	77	20	0	97	52	322	0	0	374	541
0730 - 0745	0	0	83	0	83	0	0	0	0	0	0	125	40	1	166	65	348	0	0	413	662
0745 - 0800	14	0	70	0	84	0	0	0	0	0	0	129	12	0	141	39	356	0	0	395	620
0800 - 0815	3	0	10	0	13	0	0	0	0	0	0	150	1	0	151	20	273	0	0	293	457
Total	17	0	233	0	250	0	0	0	0	0	0	481	73	1	555	176	1299	0	0	1475	2280
Approach %	6.80	0.00	93.20	0.00	-	0.00	0.00	0.00	0.00	-	0.00	86.67	13.15	0.18	-	11.93	88.07	0.00	0.00	-	-
PHF	0.30	0.00	0.70	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.46	0.25	0.84	0.68	0.91	0.00	0.00	0.89	0.86

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Passenger Vehicles (1-5)		Northbound					Southbound					Eastbound					Westbound					Int Total	
		N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)						
		Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
Time																							
0715 - 0730	0	0	65	0	65	0	0	0	0	0	0	69	20	0	89	51	319	0	0	370	524		
0730 - 0745	0	0	77	0	77	0	0	0	0	0	0	118	39	1	158	64	340	0	0	404	639		
0745 - 0800	14	0	63	0	77	0	0	0	0	0	0	120	12	0	132	39	352	0	0	391	600		
0800 - 0815	3	0	8	0	11	0	0	0	0	0	0	146	1	0	147	19	267	0	0	286	444		
Total	17	0	213	0	230	0	0	0	0	0	0	453	72	1	526	173	1278	0	0	1451	2207		
Approach %	7.39	0.00	92.61	0.00	-	0.00	0.00	0.00	0.00	-	-	0.86	12.69	0.19	-	11.92	88.08	0.00	0.00	-	-		
PHF	0.30	0.00	0.69	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.46	0.25	0.83	0.68	0.91	0.00	0.00	0.90	0.86		

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0715 - 0730	0	0	5	0	5	0	0	0	0	0	0	7	0	0	7	1	3	0	0	4	16
0730 - 0745	0	0	6	0	6	0	0	0	0	0	0	5	1	0	6	1	6	0	0	7	19
0745 - 0800	0	0	7	0	7	0	0	0	0	0	0	8	0	0	8	0	3	0	0	3	18
0800 - 0815	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	1	5	0	0	6	9
Total	0	0	19	0	19	0	0	0	0	0	0	22	1	0	23	3	17	0	0	20	62
Approach %	0.00	0.00	100.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	95.65	4.35	0.00	-	15.00	85.00	0.00	0.00	-	-
PHF	0.00	0.00	0.68	0.00	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.25	0.00	0.72	0.75	0.71	0.00	0.00	0.71	0.82

Time		Northbound					Southbound					Eastbound					Westbound					Int Total
		N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
		Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0715 - 0730		0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
0730 - 0745		0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	2	0	0	2	4
0745 - 0800		0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
0800 - 0815		0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	4
Total		0	0	1	0	1	0	0	0	0	0	0	6	0	0	6	0	4	0	0	4	11
Approach %		0.00	0.00	100.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	-
PHF		0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.75	0.00	0.50	0.00	0.00	0.50	0.69

[illegible]



[Click here for Map](#)

Peak Hour Turning Movement Count

Buford, GA



Marr Traffic
DATA COLLECTION

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Wednesday, May 12, 2021	
Period	1600 - 1800
Peak Hour	1645 - 1745

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



	Northbound					Southbound					Eastbound					Westbound					
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
Time	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	Int Total
1645 - 1700	8	0	19	0	27	0	0	0	0	0	0	371	12	0	383	18	157	0	0	175	585
1700 - 1715	6	0	21	0	27	0	0	0	0	0	0	403	11	0	414	21	186	0	0	207	648
1715 - 1730	11	0	20	0	31	0	0	0	0	0	0	485	10	2	497	22	170	0	0	192	720
1730 - 1745	15	0	21	0	36	0	0	0	0	0	0	361	8	0	369	17	161	0	0	178	583
Total	40	0	81	0	121	0	0	0	0	0	0	1620	41	2	1663	78	674	0	0	752	2536
Approach %	33.06	0.00	66.94	0.00	-	0.00	0.00	0.00	0.00	-	0.00	97.41	2.47	0.12	-	10.37	89.63	0.00	0.00	-	
PHF	0.67	0.00	0.96	0.00	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.85	0.25	0.84	0.89	0.91	0.00	0.00	0.91	0.88

[illegible]

	Northbound					Southbound					Eastbound					Westbound					
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
Time	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Total
	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
1645 - 1700	8	0	18	0	26	0	0	0	0	0	0	364	12	0	376	17	152	0	0	169	571
1700 - 1715	6	0	20	0	26	0	0	0	0	0	0	394	11	0	405	21	182	0	0	203	634
1715 - 1730	11	0	20	0	31	0	0	0	0	0	0	478	10	2	490	22	166	0	0	188	709
1730 - 1745	15	0	21	0	36	0	0	0	0	0	0	354	8	0	362	17	155	0	0	172	570
Total	40	0	79	0	119	0	0	0	0	0	0	1590	41	2	1633	77	655	0	0	732	2484
Approach %	33.61	0.00	66.39	0.00	-	0.00	0.00	0.00	0.00	-	0.00	97.37	2.51	0.12	-	10.52	89.48	0.00	0.00	-	
PHF	0.67	0.00	0.94	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.83	0.85	0.25	0.83	0.88	0.90	0.00	0.00	0.90	0.88

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 4.0	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
1645 - 1700	0	0	1	0	1	0	0	0	0	0	0	4	0	0	4	1	3	0	0	4	9
1700 - 1715	0	0	1	0	1	0	0	0	0	0	0	7	0	0	7	0	3	0	0	3	11
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	3	0	0	3	8
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	3	0	0	3	8
Total	0	0	2	0	2	0	0	0	0	0	0	21	0	0	21	1	12	0	0	13	36
Approach %	0.00	0.00	100.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	7.69	92.31	0.00	0.00	-	
PHF	0.00	0.00	0.50	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.75	0.25	1.00	0.00	0.00	0.81	0.82

Time	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	2	0	0	2	5
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	3
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	3
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	3	0	0	3	5
Total	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	0	7	0	0	7	16
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.75	0.00	0.58	0.00	0.00	0.58	0.80

[illegible]

Classified Turn Movement Count || All vehicles

Buford, GA



Marr Traffic
DATA COLLECTION

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Site 3 of 3

N Bogan Rd
Driveway
GA-347 Holiday Rd (West)
GA-347 Holiday Rd (East)

Date

Wednesday, May 12, 2021

Weather

Cloudy
58°F

Lat/Long

34.134566°, -83.941944°

0700 - 0900 (Weekday 2h Session) (12-05-2021)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0700 - 0715	0	0	11	0	11	0	0	0	0	0	0	124	10	0	134	17	292	0	0	309	454
0715 - 0730	0	0	70	0	70	0	0	0	0	0	0	77	20	0	97	52	322	0	0	374	541
0730 - 0745	0	0	83	0	83	0	0	0	0	0	0	125	40	1	166	65	348	0	0	413	662
0745 - 0800	14	0	70	0	84	0	0	0	0	0	0	129	12	0	141	39	356	0	0	395	620
Hourly Total	14	0	234	0	248	0	0	0	0	0	0	455	82	1	538	173	1318	0	0	1491	2277
0800 - 0815	3	0	10	0	13	0	0	0	0	0	0	150	1	0	151	20	273	0	0	293	457
0815 - 0830	9	0	19	0	28	0	0	0	0	0	0	129	4	0	133	17	246	0	0	263	424
0830 - 0845	4	0	12	0	16	0	0	0	0	0	0	128	5	0	133	21	206	0	0	227	376
0845 - 0900	6	0	13	0	19	0	0	0	0	0	0	127	3	0	130	13	231	0	0	244	393
Hourly Total	22	0	54	0	76	0	0	0	0	0	0	534	13	0	547	71	956	0	0	1027	1650
Grand Total	36	0	288	0	324	0	0	0	0	0	0	989	95	1	1085	244	2274	0	0	2518	3927
Approach %	11.11	0.00	88.89	0.00	-	0.00	0.00	0.00	0.00	-	0.00	91.15	8.76	0.09	-	9.69	90.31	0.00	0.00	-	-
Intersection %	0.92	0.00	7.33	0.00	8.25	0.00	0.00	0.00	0.00	0.00	0.00	25.18	2.42	0.03	27.63	6.21	57.91	0.00	0.00	64.12	-
PHF	0.30	0.00	0.70	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.46	0.25	0.84	0.68	0.91	0.00	0.00	0.89	0.86

1600 - 1800 (Weekday 2h Session) (12-05-2021)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
1600 - 1615	14	0	17	0	31	0	0	0	0	0	0	330	7	0	337	17	147	0	0	164	532
1615 - 1630	4	0	18	0	22	0	0	0	0	0	0	328	11	1	340	17	147	0	0	164	526
1630 - 1645	7	0	27	0	34	0	0	0	0	0	0	321	6	0	327	16	163	0	0	179	540
1645 - 1700	8	0	19	0	27	0	0	0	0	0	0	371	12	0	383	18	157	0	0	175	585
Hourly Total	33	0	81	0	114	0	0	0	0	0	0	1350	36	1	1387	68	614	0	0	682	2183
1700 - 1715	6	0	21	0	27	0	0	0	0	0	0	403	11	0	414	21	186	0	0	207	648
1715 - 1730	11	0	20	0	31	0	0	0	0	0	0	485	10	2	497	22	170	0	0	192	720
1730 - 1745	15	0	21	0	36	0	0	0	0	0	0	361	8	0	369	17	161	0	0	178	583
1745 - 1800	7	0	19	0	26	0	0	0	0	0	0	334	13	0	347	12	186	0	0	198	571
Hourly Total	39	0	81	0	120	0	0	0	0	0	0	1583	42	2	1627	72	703	0	0	775	2522
Grand Total	72	0	162	0	234	0	0	0	0	0	0	2933	78	3	3014	140	1317	0	0	1457	4705
Approach %	30.77	0.00	69.23	0.00	-	0.00	0.00	0.00	0.00	-	0.00	97.31	2.59	0.10	-	9.61	90.39	0.00	0.00	-	
Intersection %	1.53	0.00	3.44	0.00	4.97	0.00	0.00	0.00	0.00	0.00	0.00	62.34	1.66	0.06	64.06	2.98	27.99	0.00	0.00	30.97	
PHF	0.67	0.00	0.96	0.00	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.85	0.25	0.84	0.89	0.91	0.00	0.00	0.91	0.88

Marr Traffic
DATA COLLECTION

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34.134566°, -83.941944°

Bikes

	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
TIME	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Bikes

[illegible]

Classified Turn Movement Count || Passenger Vehicles (1-3)

Buford, GA



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Site 3 of 3

N Bogan Rd
Driveway
GA-347 Holiday Rd (West)
GA-347 Holiday Rd (East)

Date

Wednesday, May 12, 2021

Weather

Cloudy
58°F

Lat/Long

34.134566°, -83.941944°

0700 - 0900 (Weekday 2h Session) (12-05-2021)

Passenger Vehicles (1-3)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0700 - 0715	0	0	9	0	9	0	0	0	0	0	0	110	10	0	120	17	287	0	0	304	433
0715 - 0730	0	0	65	0	65	0	0	0	0	0	0	69	20	0	89	51	319	0	0	370	524
0730 - 0745	0	0	77	0	77	0	0	0	0	0	0	118	39	1	158	64	340	0	0	404	639
0745 - 0800	14	0	63	0	77	0	0	0	0	0	0	120	12	0	132	39	352	0	0	391	600
Hourly Total	14	0	214	0	228	0	0	0	0	0	0	417	81	1	499	171	1298	0	0	1469	2196
0800 - 0815	3	0	8	0	11	0	0	0	0	0	0	146	1	0	147	19	267	0	0	286	444
0815 - 0830	9	0	16	0	25	0	0	0	0	0	0	120	3	0	123	17	238	0	0	255	403
0830 - 0845	4	0	11	0	15	0	0	0	0	0	0	118	5	0	123	20	198	0	0	218	356
0845 - 0900	6	0	11	0	17	0	0	0	0	0	0	117	3	0	120	13	223	0	0	236	373
Hourly Total	22	0	46	0	68	0	0	0	0	0	0	501	12	0	513	69	926	0	0	995	1576
Grand Total	36	0	260	0	296	0	0	0	0	0	0	918	93	1	1012	240	2224	0	0	2464	3772
Approach %	12.16	0.00	87.84	0.00	-	0.00	0.00	0.00	0.00	-	0.00	90.71	9.19	0.10	-	9.74	90.26	0.00	0.00	-	-
Intersection %	0.95	0.00	6.89	0.00	7.85	0.00	0.00	0.00	0.00	0.00	0.00	24.34	2.47	0.03	26.83	6.36	58.96	0.00	0.00	65.32	-

1600 - 1800 (Weekday 2h Session) (12-05-2021)

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
TIME	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
1600 - 1615	14	0	17	0	31	0	0	0	0	0	0	324	7	0	331	15	138	0	0	153	
1615 - 1630	4	0	17	0	21	0	0	0	0	0	0	326	11	1	338	16	142	0	0	158	
1630 - 1645	7	0	26	0	33	0	0	0	0	0	0	319	6	0	325	16	161	0	0	177	
1645 - 1700	8	0	18	0	26	0	0	0	0	0	0	364	12	0	376	17	152	0	0	169	
Hourly Total	33	0	78	0	111	0	0	0	0	0	0	1333	36	1	1370	64	593	0	0	657	
1700 - 1715	6	0	20	0	26	0	0	0	0	0	0	394	11	0	405	21	182	0	0	203	
1715 - 1730	11	0	20	0	31	0	0	0	0	0	0	478	10	2	490	22	166	0	0	188	
1730 - 1745	15	0	21	0	36	0	0	0	0	0	0	354	8	0	362	17	155	0	0	172	
1745 - 1800	7	0	19	0	26	0	0	0	0	0	0	327	13	0	340	12	174	0	0	186	
Hourly Total	39	0	80	0	119	0	0	0	0	0	0	1553	42	2	1597	72	677	0	0	749	
Grand Total	72	0	158	0	230	0	0	0	0	0	0	2886	78	3	2967	136	1270	0	0	1406	
Approach %	31.30	0.00	68.70	0.00	-	0.00	0.00	0.00	0.00	-	0.00	97.27	2.63	0.10	-	9.67	90.33	0.00	0.00	-	
Intersection %	1.56	0.00	3.43	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	62.70	1.69	0.07	64.46	2.95	27.59	0.00	0.00	30.55	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Buford, GA



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Site 3 of 3

N Bogan Rd
Driveway
GA-347 Holiday Rd (West)
GA-347 Holiday Rd (East)

Date

Wednesday, May 12, 2021

Weather

Cloudy
58°F

Lat/Long

34.134566°, -83.941944°

0700 - 0900 (Weekday 2h Session) (12-05-2021)

Single Unit Trucks (4-7)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0700 - 0715	0	0	3	0	2	0	0	0	0	0	0	12	0	0	12	0	4	0	0	4	18
0715 - 0730	0	0	5	0	5	0	0	0	0	0	0	7	0	0	7	1	3	0	0	4	16
0730 - 0745	0	0	6	0	6	0	0	0	0	0	0	5	1	0	6	1	6	0	0	7	19
0745 - 0800	0	0	7	0	7	0	0	0	0	0	0	8	0	0	8	0	3	0	0	3	18
Hourly Total	0	0	20	0	20	0	0	0	0	0	0	32	1	0	33	2	16	0	0	18	71
0800 - 0815	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	1	5	0	0	6	9
0815 - 0830	0	0	2	0	2	0	0	0	0	0	0	7	1	0	8	0	6	0	0	6	16
0830 - 0845	0	0	1	0	1	0	0	0	0	0	0	8	0	0	8	1	8	0	0	9	18
0845 - 0900	0	0	1	0	1	0	0	0	0	0	0	8	0	0	8	0	6	0	0	6	15
Hourly Total	0	0	5	0	5	0	0	0	0	0	0	25	1	0	26	2	25	0	0	27	58
Grand Total	0	0	25	0	25	0	0	0	0	0	0	57	2	0	59	4	41	0	0	45	129
Approach %	0.00	0.00	100.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	96.61	3.39	0.00	-	8.89	91.11	0.00	0.00	-	
Intersection %	0.00	0.00	19.38	0.00	19.38	0.00	0.00	0.00	0.00	0.00	0.00	44.19	1.55	0.00	45.74	3.10	31.78	0.00	0.00	34.88	

1600 - 1800 (Weekday 2h Session) (12-05-2021)

Single Unit Trucks (4-7)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	2	8	0	0	10	16
1615 - 1630	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	1	3	0	0	4	7
1630 - 1645	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	4
1645 - 1700	0	0	1	0	1	0	0	0	0	0	0	4	0	0	4	1	3	0	0	4	9
Hourly Total	0	0	3	0	3	0	0	0	0	0	0	13	0	0	13	4	16	0	0	20	36
1700 - 1715	0	0	1	0	1	0	0	0	0	0	0	7	0	0	7	0	3	0	0	3	11
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	3	0	0	3	8
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	3	0	0	3	8
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	9	0	0	9	15
Hourly Total	0	0	1	0	1	0	0	0	0	0	0	23	0	0	23	0	18	0	0	18	42
Grand Total	0	0	4	0	4	0	0	0	0	0	0	36	0	0	36	4	34	0	0	38	78
Approach %	0.00	0.00	100.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	10.53	89.47	0.00	0.00	-	
Intersection %	0.00	0.00	5.13	0.00	5.13	0.00	0.00	0.00	0.00	0.00	0.00	46.15	0.00	0.00	46.15	5.13	43.59	0.00	0.00	48.72	

Classified Turn Movement Count || Combination Trucks (8-13)

Buford, GA



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Site 3 of 3

N Bogan Rd
Driveway
GA-347 Holiday Rd (West)
GA-347 Holiday Rd (East)

Date

Wednesday, May 12, 2021

Weather

Cloudy
58°F

Lat/Long

34.134566°, -83.941944°

0700 - 0900 (Weekday 2h Session) (12-05-2021)

Combination Trucks (8-13)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	3
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	4
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	2
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	4	0	0	4	10
0800 - 0815	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	4
0815 - 0830	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	5
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
0845 - 0900	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	5
Hourly Total	0	0	3	0	3	0	0	0	0	0	0	8	0	0	8	0	5	0	0	5	16
Grand Total	0	0	3	0	3	0	0	0	0	0	0	14	0	0	14	0	9	0	0	9	26
Approach %	0.00	0.00	100.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
Intersection %	0.00	0.00	11.54	0.00	11.54	0.00	0.00	0.00	0.00	0.00	0.00	53.85	0.00	0.00	53.85	0.00	34.62	0.00	0.00	34.62	

1600 - 1800 (Weekday 2h Session) (12-05-2021)

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound					Westbound					
	N Bogan Rd					Driveway					GA-347 Holiday Rd (West)					GA-347 Holiday Rd (East)					
TIME	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	Int Total
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	2	0	0	2	5
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	5	0	0	5	9
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	3
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	3
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	3	0	0	3	5
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	4
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	8	0	0	8	15
Grand Total	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	13	0	0	13	24
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.83	0.00	0.00	45.83	0.00	54.17	0.00	0.00	54.17	

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Weather

Cloudy
58°F

Pedestrians

[illegible]

Pedestrians

	Northbound				Southbound				Eastbound				Westbound				
	N Bogan Rd				Driveway				GA-347 Holiday Rd (West)				GA-347 Holiday Rd (East)				
TIME	EB 3a	WB 3b		App Total	EB 3c	WB 3d		App Total	NB 3e	SB 3f		App Total	NB 3g	SB 3h		App Total	Int Total
1600 - 1615	0	0		0	0	0		0	0	0		0	0	0		0	0
1615 - 1630	0	0		0	0	0		0	0	0		0	0	0		0	0
1630 - 1645	0	0		0	0	0		0	0	0		0	0	0		0	0
1645 - 1700	0	0		0	0	0		0	0	0		0	0	0		0	0
Hourly Total	0	0		0	0	0		0	0	0		0	0	0		0	0
1700 - 1715	0	0		0	0	0		0	0	0		0	0	0		0	0
1715 - 1730	0	0		0	0	0		0	0	0		0	0	0		0	0
1730 - 1745	0	0		0	0	0		0	0	0		0	0	0		0	0
1745 - 1800	0	0		0	0	0		0	0	0		0	0	0		0	0
Hourly Total	0	0		0	0	0		0	0	0		0	0	0		0	0
Grand Total	0	0		0	0	0		0	0	0		0	0	0		0	0
Approach %	0.00	0.00		-	0.00	0.00		-	0.00	0.00		-	0.00	0.00		-	
Intersection %	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	

Multi-Day Volume Report 139-0487 Wednesday, February 13, 2019

Site Name 139-0487
 Site ID 0000139_0487
 Description RPX 419006L419005R

Lanes Each Lane
 Bins Volume data
 Time Period 1 hour
 Exclude data: None

All directions				
	Wed 2019-02-13	Average Workday 7 Day		Total Count
00:00:00	89			89
01:00:00	53			53
02:00:00	46			46
03:00:00	70			70
04:00:00	153			153
05:00:00	548			548
06:00:00	1365			1365
07:00:00	2191			2191
08:00:00	1751			1751
09:00:00	1346			1346
10:00:00	1359			1359
11:00:00	1219			1219
12:00:00	1222			1222
13:00:00	1306			1306
14:00:00	1451			1451
15:00:00	1587			1587
16:00:00	2098			2098
17:00:00	2491			2491
18:00:00	1890			1890
19:00:00	1051			1051
20:00:00	854			854
21:00:00	535			535
22:00:00	341			341
23:00:00	198			198
7am-7pm	19911			19911
6am-10pm	23716			23716
6am-12am	24255			24255
12am-12am	25214			25214
am Peak	7:00:00			
Peak Volume	2191			
pm Peak	17:00:00			
Peak Volume	2491			

All Eastbound				
	Wed	Average		Total
	2019-02-13	Workday	7 Day	Count
00:00:00	53			53
01:00:00	34			34
02:00:00	31			31
03:00:00	15			15
04:00:00	41			41
05:00:00	105			105
06:00:00	271			271
07:00:00	540			540
08:00:00	521			521
09:00:00	502			502
10:00:00	495			495
11:00:00	552			552
12:00:00	625			625
13:00:00	699			699
14:00:00	793			793
15:00:00	992			992
16:00:00	1446			1446
17:00:00	1840			1840
18:00:00	1256			1256
19:00:00	721			721
20:00:00	580			580
21:00:00	350			350
22:00:00	236			236
23:00:00	136			136
7am-7pm	10261			10261
6am-10pm	12183			12183
6am-12am	12555			12555
12am-12am	12834			12834
am Peak	11:00:00			
Peak Volume	552			
pm Peak	17:00:00			
Peak Volume	1840			

All Westbound				
	Wed	Average		Total
	2019-02-13	Workday	7 Day	Count
00:00:00	36			36
01:00:00	19			19
02:00:00	15			15
03:00:00	55			55
04:00:00	112			112
05:00:00	443			443
06:00:00	1094			1094
07:00:00	1651			1651
08:00:00	1230			1230
09:00:00	844			844
10:00:00	864			864
11:00:00	667			667
12:00:00	597			597
13:00:00	607			607
14:00:00	658			658
15:00:00	595			595
16:00:00	652			652
17:00:00	651			651
18:00:00	634			634
19:00:00	330			330
20:00:00	274			274
21:00:00	185			185
22:00:00	105			105
23:00:00	62			62
7am-7pm	9650			9650
6am-10pm	11533			11533
6am-12am	11700			11700
12am-12am	12380			12380
am Peak	7:00:00			
Peak Volume	1651			
pm Peak	14:00:00			
Peak Volume	658			

Ln 1 EB				
	Wed	Average		Total
	2019-02-13	Workday	7 Day	Count
00:00:00	53			53
01:00:00	34			34
02:00:00	31			31
03:00:00	15			15
04:00:00	41			41
05:00:00	105			105
06:00:00	271			271
07:00:00	540			540
08:00:00	521			521
09:00:00	502			502
10:00:00	495			495
11:00:00	552			552
12:00:00	625			625
13:00:00	699			699
14:00:00	793			793
15:00:00	992			992
16:00:00	1446			1446
17:00:00	1840			1840
18:00:00	1256			1256
19:00:00	721			721
20:00:00	580			580
21:00:00	350			350
22:00:00	236			236
23:00:00	136			136
7am-7pm	10261			10261
6am-10pm	12183			12183
6am-12am	12555			12555
12am-12am	12834			12834
am Peak	11:00:00			
Peak Volume	552			
pm Peak	17:00:00			
Peak Volume	1840			

Ln 2 WB				
	Wed	Average		Total
	2019-02-13	Workday	7 Day	Count
00:00:00	36			36
01:00:00	19			19
02:00:00	15			15
03:00:00	55			55
04:00:00	112			112
05:00:00	443			443
06:00:00	1094			1094
07:00:00	1651			1651
08:00:00	1230			1230
09:00:00	844			844
10:00:00	864			864
11:00:00	667			667
12:00:00	597			597
13:00:00	607			607
14:00:00	658			658
15:00:00	595			595
16:00:00	652			652
17:00:00	651			651
18:00:00	634			634
19:00:00	330			330
20:00:00	274			274
21:00:00	185			185
22:00:00	105			105
23:00:00	62			62
7am-7pm	9650			9650
6am-10pm	11533			11533
6am-12am	11700			11700
12am-12am	12380			12380
am Peak	7:00:00			
Peak Volume	1651			
pm Peak	14:00:00			
Peak Volume	658			

Event key:  QC failure  Atypical (QC)  Special  Holiday  Offline

 Weekends and defined holidays

Notes on data:

Weekly (7-day) averages are weighted by each day of the week.

Holidays & Events:

None

Appendix C: Synchro Reports, Roundabout Reports, Signal Timing Parameters

Timings

1: Buford Hwy & Thompson Mill Rd

06/29/2021

												
Lane Group	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	358	11	206	1	30	484	155	3	157	570	27
Future Volume (vph)	3	358	11	206	1	30	484	155	3	157	570	27
Turn Type	Perm	Perm	NA	Perm	Perm	Perm	NA	Perm	Perm	Perm	NA	Perm
Protected Phases			8				2				6	
Permitted Phases	4	8		8	2	2		2	6	6		6
Detector Phase	4	8	8	8	2	2	2	2	6	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	57.0	57.0	57.0	57.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0
Total Split (%)	47.5%	47.5%	47.5%	47.5%	52.5%	52.5%	52.5%	52.5%	52.5%	52.5%	52.5%	52.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 120

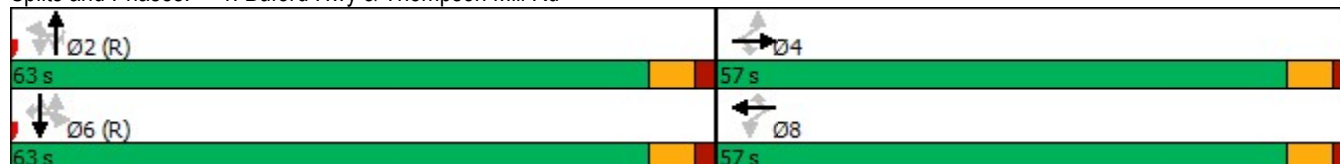
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 1: Buford Hwy & Thompson Mill Rd



Timings

1: Buford Hwy & Thompson Mill Rd

06/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	13	3	23	262	0	131	3	2	694	382	4	166
Future Volume (vph)	13	3	23	262	0	131	3	2	694	382	4	166
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8				2			
Permitted Phases	4		4	8		8	2	2		2	6	6
Detector Phase	4	4	4	8	8	8	2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	46.0	46.0	46.0	46.0	46.0	46.0	74.0	74.0	74.0	74.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	38.3%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 120

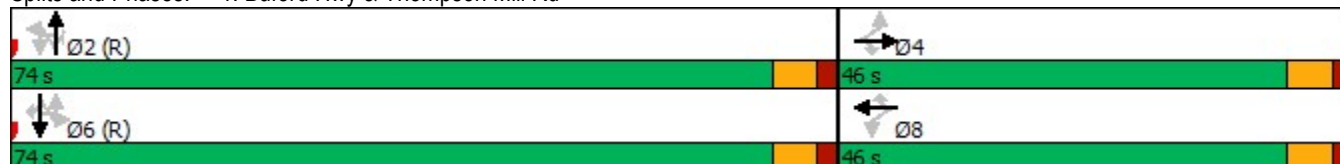
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 1: Buford Hwy & Thompson Mill Rd



Timings

1: Buford Hwy & Thompson Mill Rd

06/29/2021



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	505	2
Future Volume (vph)	505	2
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	22.5	22.5
Total Split (s)	74.0	74.0
Total Split (%)	61.7%	61.7%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	C-Max	C-Max
Intersection Summary		

Timings 4: I-985 S

06/29/2021

						
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	385	220	170	925	70	115
Future Volume (vph)	385	220	170	925	70	115
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases		2	6		4	4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	60.0	60.0	60.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Splits and Phases: 4: I-985 S

 Ø2	 Ø4
60 s	30 s
 Ø6	
60 s	

Timings 5: I-985 NB

06/29/2021

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	95	360	25	750	130	30	10	40	5	315
Future Volume (vph)	95	360	25	750	130	30	10	40	5	315
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases		2		6			8		4	
Permitted Phases	2		6		6	8		4		4
Detector Phase	2	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	60.0	60.0	60.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0		6.0	6.0
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max

Intersection Summary

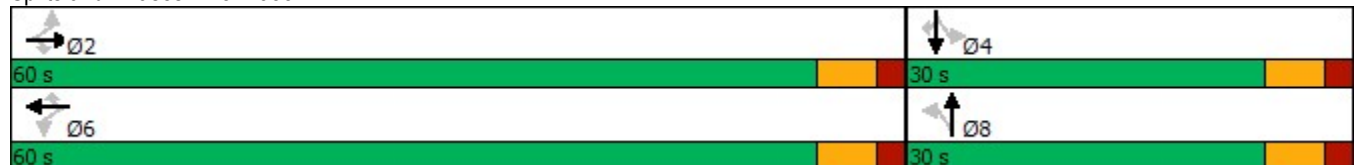
Cycle Length: 90

Actuated Cycle Length: 80

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: I-985 NB



Timings 4: I-985 S

06/29/2021

						
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	690	235	95	515	140	85
Future Volume (vph)	690	235	95	515	140	85
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases		2	6		4	4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	60.0	60.0	60.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 4: I-985 S

 Ø2	 Ø4
60 s	30 s
 Ø6	
60 s	

Timings 5: I-985 NB

06/29/2021

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	90	695	45	275	85	25	5	130	10	310
Future Volume (vph)	90	695	45	275	85	25	5	130	10	310
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases		2		6			8		4	
Permitted Phases	2		6		6	8		4		4
Detector Phase	2	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	60.0	60.0	60.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0		6.0	6.0
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max

Intersection Summary

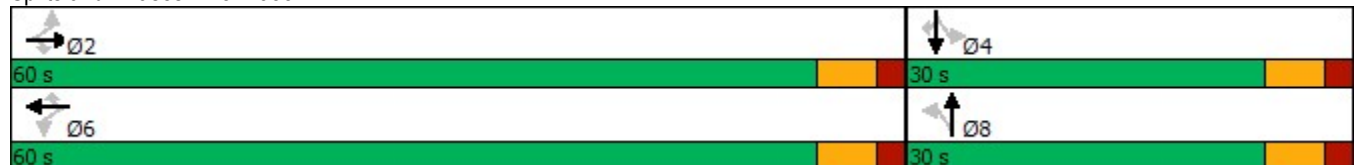
Cycle Length: 90

Actuated Cycle Length: 73.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: I-985 NB



Timings

1: Buford Hwy & Thompson Mill Rd

06/29/2021

										
Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	593	25	298	45	165	279	229	300	20
Future Volume (vph)	5	593	25	298	45	165	279	229	300	20
Turn Type	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases			8			2			6	
Permitted Phases	4	8		8	2		2	6		6
Detector Phase	4	8	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 120

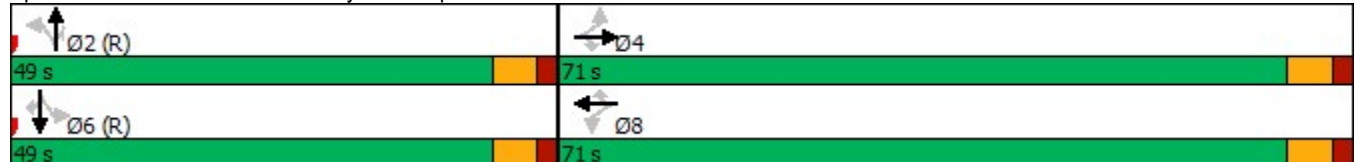
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 1: Buford Hwy & Thompson Mill Rd



Timings

1: Buford Hwy & Thompson Mill Rd

06/29/2021

									
Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	15	20	20	449	214	220	608	293	275
Future Volume (vph)	15	20	20	449	214	220	608	293	275
Turn Type	Perm	NA	Perm	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		4				2			6
Permitted Phases	4		4	8	8		2	6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	53.0	53.0	53.0	53.0	53.0	67.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%	55.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 120

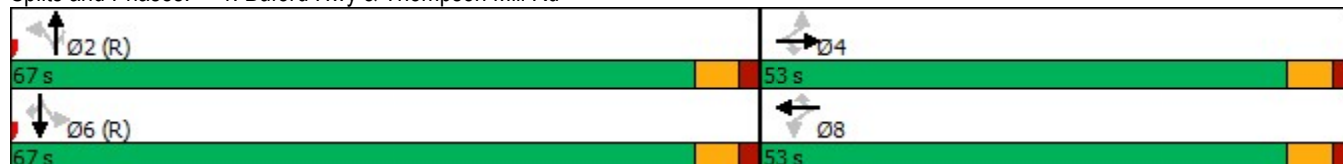
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 1: Buford Hwy & Thompson Mill Rd



HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations									 			
Traffic Volume (veh/h)	0	0	3	358	11	206	1	30	484	155	3	157
Future Volume (veh/h)	0	0	3	358	11	206	1	30	484	155	3	157
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856		1826	1826	1826		1841
Adj Flow Rate, veh/h	0	0	0	407	12	234		34	556	178		185
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88		0.87	0.87	0.87		0.85
Percent Heavy Veh, %	2	2	2	3	3	3		5	5	5		4
Cap, veh/h	0	605		504	13	509		406	1999	892		412
Arrive On Green	0.00	0.00	0.00	0.32	0.32	0.32		0.58	0.58	0.58		0.58
Sat Flow, veh/h	0	1870	1585	1376	41	1572		726	3469	1547		711
Grp Volume(v), veh/h	0	0	0	419	0	234		34	556	178		185
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1416	0	1572		726	1735	1547		711
Q Serve(g_s), s	0.0	0.0	0.0	34.1	0.0	14.2		3.1	9.7	6.6		21.3
Cycle Q Clear(g_c), s	0.0	0.0	0.0	34.1	0.0	14.2		15.2	9.7	6.6		31.0
Prop In Lane	0.00		1.00	0.97		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	0	605		518	0	509		406	1999	892		412
V/C Ratio(X)	0.00	0.00		0.81	0.00	0.46		0.08	0.28	0.20		0.45
Avail Cap(c_a), veh/h	0	795		661	0	668		406	1999	892		412
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	39.0	0.0	32.2		17.3	12.8	12.2		20.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	5.9	0.0	0.6		0.4	0.3	0.5		3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	12.1	0.0	5.3		0.5	3.5	2.2		3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	44.9	0.0	32.9		17.7	13.2	12.7		24.1
LnGrp LOS	A	A		D	A	C		B	B	B		C
Approach Vol, veh/h	0			A			653			768		
Approach Delay, s/veh	0.0						40.6			13.3		
Approach LOS				D			B					
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	75.2			44.8			75.2			44.8		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	57.0			51.0			57.0			51.0		
Max Q Clear Time (g_c+l1), s	17.2			0.0			33.0			36.1		
Green Ext Time (p_c), s	4.5			0.0			5.9			2.7		

Intersection Summary

HCM 6th Ctrl Delay 22.0

HCM 6th LOS C

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	570	27
Future Volume (veh/h)	570	27
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1841	1841
Adj Flow Rate, veh/h	671	32
Peak Hour Factor	0.85	0.85
Percent Heavy Veh, %	4	4
Cap, veh/h	2015	899
Arrive On Green	0.58	0.58
Sat Flow, veh/h	3497	1560
Grp Volume(v), veh/h	671	32
Grp Sat Flow(s),veh/h/ln	1749	1560
Q Serve(g_s), s	12.1	1.1
Cycle Q Clear(g_c), s	12.1	1.1
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2015	899
V/C Ratio(X)	0.33	0.04
Avail Cap(c_a), veh/h	2015	899
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	13.3	11.0
Incr Delay (d2), s/veh	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.4
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	13.8	11.1
LnGrp LOS	B	B
Approach Vol, veh/h	888	
Approach Delay, s/veh	15.8	
Approach LOS	B	
Timer - Assigned Phs		

Intersection

Intersection Delay, s/veh 30.2

Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	78	90	88	40	347	12	111	84	24	8	129	174
Future Vol, veh/h	78	90	88	40	347	12	111	84	24	8	129	174
Peak Hour Factor	0.80	0.80	0.80	0.93	0.93	0.93	0.90	0.90	0.90	0.88	0.88	0.88
Heavy Vehicles, %	13	13	13	3	3	3	3	3	3	1	1	1
Mvmt Flow	98	113	110	43	373	13	123	93	27	9	147	198
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	25.4	42.3	20.3	26.7
HCM LOS	D	E	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	51%	30%	10%	3%
Vol Thru, %	38%	35%	87%	41%
Vol Right, %	11%	34%	3%	56%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	219	256	399	311
LT Vol	111	78	40	8
Through Vol	84	90	347	129
RT Vol	24	88	12	174
Lane Flow Rate	243	320	429	353
Geometry Grp	1	1	1	1
Degree of Util (X)	0.542	0.678	0.871	0.716
Departure Headway (Hd)	8.022	7.626	7.312	7.297
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	448	474	498	498
Service Time	6.103	5.703	5.341	5.328
HCM Lane V/C Ratio	0.542	0.675	0.861	0.709
HCM Control Delay	20.3	25.4	42.3	26.7
HCM Lane LOS	C	D	E	D
HCM 95th-tile Q	3.2	5	9.3	5.7

HCM 6th TWSC
3: Bogan Rd & Friendship Rd

06/25/2021

Intersection							
Int Delay, s/veh	4.4						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱	↑↑↑	↱	↱	↑↑↑	↱	↱
Traffic Vol, veh/h	1	541	82	198	1460	19	262
Future Vol, veh/h	1	541	82	198	1460	19	262
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	0	280
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	84	84	84	89	89	74	74
Heavy Vehicles, %	5	5	5	2	2	8	8
Mvmt Flow	1	644	98	222	1640	26	354
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	1198	0	0	644	0	1746	322
Stage 1	-	-	-	-	-	646	-
Stage 2	-	-	-	-	-	1100	-
Critical Hdwy	5.7	-	-	5.34	-	5.86	7.26
Critical Hdwy Stg 1	-	-	-	-	-	6.76	-
Critical Hdwy Stg 2	-	-	-	-	-	6.16	-
Follow-up Hdwy	2.35	-	-	3.12	-	3.88	3.98
Pot Cap-1 Maneuver	331	-	-	579	-	120	562
Stage 1	-	-	-	-	-	383	-
Stage 2	-	-	-	-	-	241	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	331	-	-	579	-	74	562
Mov Cap-2 Maneuver	-	-	-	-	-	74	-
Stage 1	-	-	-	-	-	382	-
Stage 2	-	-	-	-	-	149	-
Approach	EB		WB		NB		
HCM Control Delay, s	0		1.8		25.5		
HCM LOS	D						
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	74	562	331	-	-	579	-
HCM Lane V/C Ratio	0.347	0.63	0.004	-	-	0.384	-
HCM Control Delay (s)	77.6	21.7	15.9	-	-	15	-
HCM Lane LOS	F	C	C	-	-	C	-
HCM 95th %tile Q(veh)	1.3	4.4	0	-	-	1.8	-

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations									 			
Traffic Volume (veh/h)	13	3	23	262	0	131	3	2	694	382	4	166
Future Volume (veh/h)	13	3	23	262	0	131	3	2	694	382	4	166
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885		1856	1856	1856		1826
Adj Flow Rate, veh/h	17	4	0	336	0	168		2	780	429		187
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78		0.89	0.89	0.89		0.89
Percent Heavy Veh, %	3	3	3	1	1	1		3	3	3		5
Cap, veh/h	88	15		432	0	392		551	2307	1029		311
Arrive On Green	0.25	0.25	0.00	0.25	0.00	0.25		0.65	0.65	0.65		0.65
Sat Flow, veh/h	139	62	1572	1517	0	1598		836	3526	1572		451
Grp Volume(v), veh/h	21	0	0	336	0	168		2	780	429		187
Grp Sat Flow(s),veh/h/ln	201	0	1572	1517	0	1598		836	1763	1572		451
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	10.6		0.1	11.8	15.6		37.7
Cycle Q Clear(g_c), s	26.8	0.0	0.0	25.6	0.0	10.6		8.2	11.8	15.6		49.5
Prop In Lane	0.81		1.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	104	0		432	0	392		551	2307	1029		311
V/C Ratio(X)	0.20	0.00		0.78	0.00	0.43		0.00	0.34	0.42		0.60
Avail Cap(c_a), veh/h	217	0		557	0	533		551	2307	1029		311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	47.8	0.0	0.0	43.8	0.0	38.2		10.3	9.2	9.8		20.2
Incr Delay (d2), s/veh	1.0	0.0	0.0	5.2	0.0	0.7		0.0	0.4	1.2		8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	9.9	0.0	4.1		0.0	4.0	4.9		4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.7	0.0	0.0	49.0	0.0	38.9		10.3	9.6	11.1		28.5
LnGrp LOS	D	A		D	A	D		B	A	B		C
Approach Vol, veh/h	21		A	504			1211					
Approach Delay, s/veh	48.7			45.6			10.1					
Approach LOS	D			D			B					
Timer - Assigned Phs	2			4			6		8			
Phs Duration (G+Y+Rc), s	84.5			35.5			84.5		35.5			
Change Period (Y+Rc), s	6.0			6.0			6.0		6.0			
Max Green Setting (Gmax), s	68.0			40.0			68.0		40.0			
Max Q Clear Time (g_c+I1), s	17.6			28.8			51.5		27.6			
Green Ext Time (p_c), s	7.6			0.0			5.5		1.9			

Intersection Summary

HCM 6th Ctrl Delay 18.7

HCM 6th LOS B

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	505	2
Future Volume (veh/h)	505	2
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1826
Adj Flow Rate, veh/h	567	2
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	5	5
Cap, veh/h	2271	1013
Arrive On Green	0.65	0.65
Sat Flow, veh/h	3469	1547
Grp Volume(v), veh/h	567	2
Grp Sat Flow(s),veh/h/ln	1735	1547
Q Serve(g_s), s	8.1	0.1
Cycle Q Clear(g_c), s	8.1	0.1
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2271	1013
V/C Ratio(X)	0.25	0.00
Avail Cap(c_a), veh/h	2271	1013
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	8.6	7.2
Incr Delay (d2), s/veh	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	8.8	7.2
LnGrp LOS	A	A
Approach Vol, veh/h	756	
Approach Delay, s/veh	13.7	
Approach LOS	B	
Timer - Assigned Phs		

Intersection

Intersection Delay, s/veh43.5

Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	87	300	103	63	151	15	54	113	54	25	152	82
Future Vol, veh/h	87	300	103	63	151	15	54	113	54	25	152	82
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.95	0.95	0.95	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	1	1	1	2	2	2	1	1	1
Mvmt Flow	104	357	123	74	178	18	57	119	57	26	155	84
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	76.6	18.5	17.6	18.6
HCM LOS	F	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	18%	28%	10%
Vol Thru, %	51%	61%	66%	59%
Vol Right, %	24%	21%	7%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	221	490	229	259
LT Vol	54	87	63	25
Through Vol	113	300	151	152
RT Vol	54	103	15	82
Lane Flow Rate	233	583	269	264
Geometry Grp	1	1	1	1
Degree of Util (X)	0.482	1.048	0.536	0.533
Departure Headway (Hd)	7.65	6.47	7.341	7.452
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	475	566	496	486
Service Time	5.65	4.47	5.341	5.452
HCM Lane V/C Ratio	0.491	1.03	0.542	0.543
HCM Control Delay	17.6	76.6	18.5	18.6
HCM Lane LOS	C	F	C	C
HCM 95th-tile Q	2.6	16.6	3.1	3.1

HCM 6th TWSC
3: Bogan Rd & Friendship Rd

06/25/2021

Intersection							
Int Delay, s/veh	34.1						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	2	↑↑↑	↑	↑	↑↑↑	↑	↑
Traffic Vol, veh/h	2	1705	42	83	729	35	94
Future Vol, veh/h	2	1705	42	83	729	35	94
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	0	280
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	82	82	82	91	91	88	88
Heavy Vehicles, %	2	2	2	2	2	3	3
Mvmt Flow	2	2079	51	91	801	40	107

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	585	0	0	2079	0	2585	1040
Stage 1	-	-	-	-	-	2083	-
Stage 2	-	-	-	-	-	502	-
Critical Hdwy	5.64	-	-	5.34	-	5.76	7.16
Critical Hdwy Stg 1	-	-	-	-	-	6.66	-
Critical Hdwy Stg 2	-	-	-	-	-	6.06	-
Follow-up Hdwy	2.32	-	-	3.12	-	3.83	3.93
Pot Cap-1 Maneuver	745	-	-	114	-	44	194
Stage 1	-	-	-	-	-	50	-
Stage 2	-	-	-	-	-	521	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	745	-	-	114	-	~ 9	194
Mov Cap-2 Maneuver	-	-	-	-	-	~ 9	-
Stage 1	-	-	-	-	-	50	-
Stage 2	-	-	-	-	-	105	-

Approach	EB	WB	NB
HCM Control Delay, s	0	11	\$ 670.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	9	194	745	-	-	114	-
HCM Lane V/C Ratio	4.419	0.551	0.003	-	-	0.8	-
HCM Control Delay (s)	\$ 2352.2	44.2	9.8	-	-	107.3	-
HCM Lane LOS	F	E	A	-	-	F	-
HCM 95th %tile Q(veh)	6.2	2.9	0	-	-	4.6	-

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

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	365	11	210	1	31	494	158	3	160
Future Volume (veh/h)	0	0	3	365	11	210	1	31	494	158	3	160
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856		1826	1826	1826		1841
Adj Flow Rate, veh/h	0	0	0	415	12	239		36	568	182		188
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88		0.87	0.87	0.87		0.85
Percent Heavy Veh, %	2	2	2	3	3	3		5	5	5		4
Cap, veh/h	0	616		512	13	518		394	1980	883		401
Arrive On Green	0.00	0.00	0.00	0.33	0.33	0.33		0.57	0.57	0.57		0.57
Sat Flow, veh/h	0	1870	1585	1376	40	1572		717	3469	1547		701
Grp Volume(v), veh/h	0	0	0	427	0	239		36	568	182		188
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1416	0	1572		717	1735	1547		701
Q Serve(g_s), s	0.0	0.0	0.0	34.8	0.0	14.4		3.4	10.1	6.9		22.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	34.8	0.0	14.4		15.9	10.1	6.9		32.7
Prop In Lane	0.00		1.00	0.97		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	0	616		525	0	518		394	1980	883		401
V/C Ratio(X)	0.00	0.00		0.81	0.00	0.46		0.09	0.29	0.21		0.47
Avail Cap(c_a), veh/h	0	795		661	0	668		394	1980	883		401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	38.6	0.0	31.8		18.0	13.2	12.5		21.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	6.2	0.0	0.6		0.5	0.4	0.5		3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	12.4	0.0	5.4		0.6	3.7	2.3		3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	44.8	0.0	32.5		18.4	13.6	13.1		25.5
LnGrp LOS	A	A		D	A	C		B	B	B		C
Approach Vol, veh/h	0		A	666				786				
Approach Delay, s/veh	0.0			40.4				13.7				
Approach LOS				D				B				
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	74.5		45.5		74.5		45.5					
Change Period (Y+Rc), s	6.0		6.0		6.0		6.0					
Max Green Setting (Gmax), s	57.0		51.0		57.0		51.0					
Max Q Clear Time (g_c+I1), s	17.9		0.0		34.7		36.8					
Green Ext Time (p_c), s	4.7		0.0		6.0		2.8					
Intersection Summary												
HCM 6th Ctrl Delay			22.3									
HCM 6th LOS			C									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	581	28
Future Volume (veh/h)	581	28
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1841	1841
Adj Flow Rate, veh/h	684	33
Peak Hour Factor	0.85	0.85
Percent Heavy Veh, %	4	4
Cap, veh/h	1996	890
Arrive On Green	0.57	0.57
Sat Flow, veh/h	3497	1560
Grp Volume(v), veh/h	684	33
Grp Sat Flow(s),veh/h/ln	1749	1560
Q Serve(g_s), s	12.5	1.1
Cycle Q Clear(g_c), s	12.5	1.1
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	1996	890
V/C Ratio(X)	0.34	0.04
Avail Cap(c_a), veh/h	1996	890
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	13.7	11.3
Incr Delay (d2), s/veh	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.4
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	14.2	11.4
LnGrp LOS	B	B
Approach Vol, veh/h	905	
Approach Delay, s/veh	16.5	
Approach LOS	B	
Timer - Assigned Phs		

HCM 6th TWSC
3: Bogan Rd & Friendship Rd

06/25/2021

Intersection							
Int Delay, s/veh	4.5						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰	↑↑↑	↱	↱	↑↑↑	↱	↱
Traffic Vol, veh/h	1	552	84	202	1489	19	267
Future Vol, veh/h	1	552	84	202	1489	19	267
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	0	280
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	84	84	84	89	89	74	74
Heavy Vehicles, %	5	5	5	2	2	8	8
Mvmt Flow	1	657	100	227	1673	26	361
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	1221	0	0	657	0	1782	329
Stage 1	-	-	-	-	-	659	-
Stage 2	-	-	-	-	-	1123	-
Critical Hdwy	5.7	-	-	5.34	-	5.86	7.26
Critical Hdwy Stg 1	-	-	-	-	-	6.76	-
Critical Hdwy Stg 2	-	-	-	-	-	6.16	-
Follow-up Hdwy	2.35	-	-	3.12	-	3.88	3.98
Pot Cap-1 Maneuver	322	-	-	571	-	115	556
Stage 1	-	-	-	-	-	376	-
Stage 2	-	-	-	-	-	234	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	322	-	-	571	-	69	556
Mov Cap-2 Maneuver	-	-	-	-	-	69	-
Stage 1	-	-	-	-	-	375	-
Stage 2	-	-	-	-	-	141	-
Approach	EB		WB		NB		
HCM Control Delay, s	0		1.8		26.9		
HCM LOS	D						
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	69	556	322	-	-	571	-
HCM Lane V/C Ratio	0.372	0.649	0.004	-	-	0.397	-
HCM Control Delay (s)	85.3	22.7	16.2	-	-	15.4	-
HCM Lane LOS	F	C	C	-	-	C	-
HCM 95th %tile Q(veh)	1.4	4.7	0	-	-	1.9	-

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations									 			
Traffic Volume (veh/h)	13	3	23	267	0	134	3	2	708	390	4	169
Future Volume (veh/h)	13	3	23	267	0	134	3	2	708	390	4	169
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885		1856	1856	1856		1826
Adj Flow Rate, veh/h	17	4	0	342	0	172		2	796	438		190
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78		0.89	0.89	0.89		0.89
Percent Heavy Veh, %	3	3	3	1	1	1		3	3	3		5
Cap, veh/h	88	15		438	0	398		540	2294	1023		302
Arrive On Green	0.25	0.25	0.00	0.25	0.00	0.25		0.65	0.65	0.65		0.65
Sat Flow, veh/h	136	61	1572	1517	0	1598		827	3526	1572		441
Grp Volume(v), veh/h	21	0	0	342	0	172		2	796	438		190
Grp Sat Flow(s),veh/h/ln	198	0	1572	1517	0	1598		827	1763	1572		441
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	10.9		0.1	12.2	16.2		41.1
Cycle Q Clear(g_c), s	27.2	0.0	0.0	26.0	0.0	10.9		8.5	12.2	16.2		53.3
Prop In Lane	0.81		1.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	104	0		438	0	398		540	2294	1023		302
V/C Ratio(X)	0.20	0.00		0.78	0.00	0.43		0.00	0.35	0.43		0.63
Avail Cap(c_a), veh/h	212	0		558	0	533		540	2294	1023		302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	47.6	0.0	0.0	43.6	0.0	37.9		10.6	9.5	10.2		21.5
Incr Delay (d2), s/veh	1.0	0.0	0.0	5.4	0.0	0.7		0.0	0.4	1.3		9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	10.1	0.0	4.2		0.0	4.2	5.2		4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	0.0	0.0	49.0	0.0	38.6		10.6	9.9	11.5		31.1
LnGrp LOS	D	A		D	A	D		B	A	B		C
Approach Vol, veh/h		21	A		514				1236			
Approach Delay, s/veh		48.6			45.5				10.4			
Approach LOS		D			D				B			
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.1		35.9		84.1		35.9				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		68.0		40.0		68.0		40.0				
Max Q Clear Time (g_c+I1), s		18.2		29.2		55.3		28.0				
Green Ext Time (p_c), s		7.8		0.0		4.9		1.9				

Intersection Summary

HCM 6th Ctrl Delay 19.1

HCM 6th LOS B

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	515	2
Future Volume (veh/h)	515	2
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1826
Adj Flow Rate, veh/h	579	2
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	5	5
Cap, veh/h	2257	1007
Arrive On Green	0.65	0.65
Sat Flow, veh/h	3469	1547
Grp Volume(v), veh/h	579	2
Grp Sat Flow(s),veh/h/ln	1735	1547
Q Serve(g_s), s	8.4	0.1
Cycle Q Clear(g_c), s	8.4	0.1
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2257	1007
V/C Ratio(X)	0.26	0.00
Avail Cap(c_a), veh/h	2257	1007
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	8.8	7.3
Incr Delay (d2), s/veh	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	9.1	7.3
LnGrp LOS	A	A
Approach Vol, veh/h	771	
Approach Delay, s/veh	14.5	
Approach LOS	B	
Timer - Assigned Phs		

HCM 6th TWSC
3: Bogan Rd & Friendship Rd

06/25/2021

Intersection							
Int Delay, s/veh	53.2						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	2	↑↑↑	↑	↑	↑↑↑	↑	↑
Traffic Vol, veh/h	2	1739	43	85	744	36	96
Future Vol, veh/h	2	1739	43	85	744	36	96
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	0	280
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	82	82	82	91	91	88	88
Heavy Vehicles, %	2	2	2	2	2	3	3
Mvmt Flow	2	2121	52	93	818	41	109

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	597	0	0	2121	0	2638	1061
Stage 1	-	-	-	-	-	2125	-
Stage 2	-	-	-	-	-	513	-
Critical Hdwy	5.64	-	-	5.34	-	5.76	7.16
Critical Hdwy Stg 1	-	-	-	-	-	6.66	-
Critical Hdwy Stg 2	-	-	-	-	-	6.06	-
Follow-up Hdwy	2.32	-	-	3.12	-	3.83	3.93
Pot Cap-1 Maneuver	734	-	-	109	-	41	187
Stage 1	-	-	-	-	-	47	-
Stage 2	-	-	-	-	-	514	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	734	-	-	109	-	~ 6	187
Mov Cap-2 Maneuver	-	-	-	-	-	~ 6	-
Stage 1	-	-	-	-	-	47	-
Stage 2	-	-	-	-	-	76	-

Approach	EB	WB	NB
HCM Control Delay, s	0	12.6	\$ 1071.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	6	187	734	-	-	109	-
HCM Lane V/C Ratio	6.818	0.583	0.003	-	-	0.857	-
HCM Control Delay (s)	\$ 3799.5	48.2	9.9	-	-	123.2	-
HCM Lane LOS	F	E	A	-	-	F	-
HCM 95th %tile Q(veh)	6.7	3.2	0	-	-	5	-

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

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	365	11	210	1	31	494	158	3	160
Future Volume (veh/h)	0	0	3	365	11	210	1	31	494	158	3	160
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856		1826	1826	1826		1841
Adj Flow Rate, veh/h	0	0	0	415	12	239		36	568	182		188
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88		0.87	0.87	0.87		0.85
Percent Heavy Veh, %	2	2	2	3	3	3		5	5	5		4
Cap, veh/h	0	616		512	13	518		394	1980	883		401
Arrive On Green	0.00	0.00	0.00	0.33	0.33	0.33		0.57	0.57	0.57		0.57
Sat Flow, veh/h	0	1870	1585	1376	40	1572		717	3469	1547		701
Grp Volume(v), veh/h	0	0	0	427	0	239		36	568	182		188
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1416	0	1572		717	1735	1547		701
Q Serve(g_s), s	0.0	0.0	0.0	34.8	0.0	14.4		3.4	10.1	6.9		22.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	34.8	0.0	14.4		15.9	10.1	6.9		32.7
Prop In Lane	0.00		1.00	0.97		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	0	616		525	0	518		394	1980	883		401
V/C Ratio(X)	0.00	0.00		0.81	0.00	0.46		0.09	0.29	0.21		0.47
Avail Cap(c_a), veh/h	0	795		661	0	668		394	1980	883		401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	38.6	0.0	31.8		18.0	13.2	12.5		21.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	6.2	0.0	0.6		0.5	0.4	0.5		3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	12.4	0.0	5.4		0.6	3.7	2.3		3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	44.8	0.0	32.5		18.4	13.6	13.1		25.5
LnGrp LOS	A	A		D	A	C		B	B	B		C
Approach Vol, veh/h	0		A		666		786					
Approach Delay, s/veh	0.0				40.4		13.7					
Approach LOS			D				B					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	74.5		45.5		74.5		45.5					
Change Period (Y+Rc), s	6.0		6.0		6.0		6.0					
Max Green Setting (Gmax), s	57.0		51.0		57.0		51.0					
Max Q Clear Time (g_c+I1), s	17.9		0.0		34.7		36.8					
Green Ext Time (p_c), s	4.7		0.0		6.0		2.8					
Intersection Summary												
HCM 6th Ctrl Delay	22.3											
HCM 6th LOS	C											
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	581	28
Future Volume (veh/h)	581	28
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1841	1841
Adj Flow Rate, veh/h	684	33
Peak Hour Factor	0.85	0.85
Percent Heavy Veh, %	4	4
Cap, veh/h	1996	890
Arrive On Green	0.57	0.57
Sat Flow, veh/h	3497	1560
Grp Volume(v), veh/h	684	33
Grp Sat Flow(s),veh/h/ln	1749	1560
Q Serve(g_s), s	12.5	1.1
Cycle Q Clear(g_c), s	12.5	1.1
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	1996	890
V/C Ratio(X)	0.34	0.04
Avail Cap(c_a), veh/h	1996	890
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	13.7	11.3
Incr Delay (d2), s/veh	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.4
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	14.2	11.4
LnGrp LOS	B	B
Approach Vol, veh/h	905	
Approach Delay, s/veh	16.5	
Approach LOS	B	
Timer - Assigned Phs		

HCM 6th TWSC
3: Bogan Rd & Friendship Rd

06/28/2021

Intersection

Int Delay, s/veh 4.3

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱	↑↑↑	↗	↘	↑↑↑		↗
Traffic Vol, veh/h	1	552	84	202	1508	0	286
Future Vol, veh/h	1	552	84	202	1508	0	286
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	-	-
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	84	84	84	89	89	74	74
Heavy Vehicles, %	5	5	5	2	2	8	8
Mvmt Flow	1	657	100	227	1694	0	386

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	1237	0	0	657	0	-	329
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	5.7	-	-	5.34	-	-	7.26
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	2.35	-	-	3.12	-	-	3.98
Pot Cap-1 Maneuver	315	-	-	571	-	0	556
Stage 1	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	0	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	315	-	-	571	-	-	556
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	24.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	556	315	-	-	571	-
HCM Lane V/C Ratio	0.695	0.004	-	-	0.397	-
HCM Control Delay (s)	24.9	16.5	-	-	15.4	-
HCM Lane LOS	C	C	-	-	C	-
HCM 95th %tile Q(veh)	5.4	0	-	-	1.9	-

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations									 			
Traffic Volume (veh/h)	13	3	23	267	0	134	3	2	708	390	4	169
Future Volume (veh/h)	13	3	23	267	0	134	3	2	708	390	4	169
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885		1856	1856	1856		1826
Adj Flow Rate, veh/h	17	4	0	342	0	172		2	796	438		190
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78		0.89	0.89	0.89		0.89
Percent Heavy Veh, %	3	3	3	1	1	1		3	3	3		5
Cap, veh/h	89	15		439	0	399		564	2380	1061		316
Arrive On Green	0.25	0.25	0.00	0.25	0.00	0.25		0.67	0.67	0.67		0.67
Sat Flow, veh/h	140	62	1572	1517	0	1598		827	3526	1572		441
Grp Volume(v), veh/h	21	0	0	342	0	172		2	796	438		190
Grp Sat Flow(s),veh/h/ln	202	0	1572	1517	0	1598		827	1763	1572		441
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	10.9		0.1	11.4	15.1		38.2
Cycle Q Clear(g_c), s	27.2	0.0	0.0	26.0	0.0	10.9		7.9	11.4	15.1		49.6
Prop In Lane	0.81		1.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	105	0		439	0	399		564	2380	1061		316
V/C Ratio(X)	0.20	0.00		0.78	0.00	0.43		0.00	0.33	0.41		0.60
Avail Cap(c_a), veh/h	228	0		576	0	553		564	2380	1061		316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	47.5	0.0	0.0	43.5	0.0	37.8		9.2	8.2	8.8		18.6
Incr Delay (d2), s/veh	0.9	0.0	0.0	5.0	0.0	0.7		0.0	0.4	1.2		8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	10.0	0.0	4.2		0.0	3.8	4.6		4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.4	0.0	0.0	48.5	0.0	38.6		9.2	8.6	10.0		26.8
LnGrp LOS	D	A		D	A	D		A	A	A		C
Approach Vol, veh/h	21			A			514			1236		
Approach Delay, s/veh	48.4						45.2			9.1		
Approach LOS	D						D			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	85.5			34.5			85.5			34.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	69.5			41.5			69.5			41.5		
Max Q Clear Time (g_c+I1), s	17.1			29.2			51.6			28.0		
Green Ext Time (p_c), s	7.9			0.0			5.9			2.0		

Intersection Summary

HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	515	2
Future Volume (veh/h)	515	2
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1826
Adj Flow Rate, veh/h	579	2
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	5	5
Cap, veh/h	2342	1044
Arrive On Green	0.67	0.67
Sat Flow, veh/h	3469	1547
Grp Volume(v), veh/h	579	2
Grp Sat Flow(s),veh/h/ln	1735	1547
Q Serve(g_s), s	7.8	0.1
Cycle Q Clear(g_c), s	7.8	0.1
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2342	1044
V/C Ratio(X)	0.25	0.00
Avail Cap(c_a), veh/h	2342	1044
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	7.6	6.3
Incr Delay (d2), s/veh	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	7.9	6.4
LnGrp LOS	A	A
Approach Vol, veh/h	771	
Approach Delay, s/veh	12.5	
Approach LOS	B	
Timer - Assigned Phs		

HCM 6th TWSC
3: Bogan Rd & Friendship Rd

06/28/2021

Intersection							
Int Delay, s/veh	6.9						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	2	↑↑↑	↑	↑	↑↑↑		↑
Traffic Vol, veh/h	2	1739	43	85	780	0	132
Future Vol, veh/h	2	1739	43	85	780	0	132
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	-	-
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	82	82	82	91	91	88	88
Heavy Vehicles, %	2	2	2	2	2	3	3
Mvmt Flow	2	2121	52	93	857	0	150
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	626	0	0	2121	0	-	1061
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	5.64	-	-	5.34	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	2.32	-	-	3.12	-	-	3.93
Pot Cap-1 Maneuver	707	-	-	109	-	0	187
Stage 1	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	707	-	-	109	-	-	187
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Approach	EB		WB		NB		
HCM Control Delay, s	0		12.1		74.2		
HCM LOS					F		
Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT	
Capacity (veh/h)	187	707	-	-	109	-	
HCM Lane V/C Ratio	0.802	0.003	-	-	0.857	-	
HCM Control Delay (s)	74.2	10.1	-	-	123.2	-	
HCM Lane LOS	F	B	-	-	F	-	
HCM 95th %tile Q(veh)	5.5	0	-	-	5	-	

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations									 			
Traffic Volume (veh/h)	0	0	3	380	11	221	1	31	494	198	3	195
Future Volume (veh/h)	0	0	3	380	11	221	1	31	494	198	3	195
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841		1826	1826	1826		1841
Adj Flow Rate, veh/h	0	0	0	432	12	251		36	568	228		229
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88		0.87	0.87	0.87		0.85
Percent Heavy Veh, %	2	2	2	4	4	4		5	5	5		4
Cap, veh/h	0	643		529	13	536		381	1929	861		375
Arrive On Green	0.00	0.00	0.00	0.34	0.34	0.34		0.56	0.56	0.56		0.56
Sat Flow, veh/h	0	1870	1585	1366	38	1560		717	3469	1547		671
Grp Volume(v), veh/h	0	0	0	444	0	251		36	568	228		229
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1404	0	1560		717	1735	1547		671
Q Serve(g_s), s	0.0	0.0	0.0	36.4	0.0	15.1		3.5	10.4	9.2		33.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	36.4	0.0	15.1		16.4	10.4	9.2		43.4
Prop In Lane	0.00		1.00	0.97		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	0	643		542	0	536		381	1929	861		375
V/C Ratio(X)	0.00	0.00		0.82	0.00	0.47		0.09	0.29	0.26		0.61
Avail Cap(c_a), veh/h	0	810		668	0	676		381	1929	861		375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	37.8	0.0	30.8		19.2	14.1	13.9		25.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	6.6	0.0	0.6		0.5	0.4	0.8		7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	12.9	0.0	5.6		0.6	3.8	3.1		5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	44.4	0.0	31.4		19.7	14.5	14.6		32.9
LnGrp LOS	A	A		D	A	C		B	B	B		C
Approach Vol, veh/h	0		A		695		832					
Approach Delay, s/veh	0.0				39.7		14.8					
Approach LOS			D				B					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	72.7		47.3		72.7		47.3					
Change Period (Y+Rc), s	6.0		6.0		6.0		6.0					
Max Green Setting (Gmax), s	56.0		52.0		56.0		52.0					
Max Q Clear Time (g_c+l1), s	18.4		0.0		45.4		38.4					
Green Ext Time (p_c), s	4.8		0.0		4.5		2.9					
Intersection Summary												
HCM 6th Ctrl Delay	23.5											
HCM 6th LOS	C											
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	581	28
Future Volume (veh/h)	581	28
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1841	1841
Adj Flow Rate, veh/h	684	33
Peak Hour Factor	0.85	0.85
Percent Heavy Veh, %	4	4
Cap, veh/h	1945	868
Arrive On Green	0.56	0.56
Sat Flow, veh/h	3497	1560
Grp Volume(v), veh/h	684	33
Grp Sat Flow(s),veh/h/ln	1749	1560
Q Serve(g_s), s	12.9	1.2
Cycle Q Clear(g_c), s	12.9	1.2
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	1945	868
V/C Ratio(X)	0.35	0.04
Avail Cap(c_a), veh/h	1945	868
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	14.7	12.1
Incr Delay (d2), s/veh	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.4
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	15.2	12.2
LnGrp LOS	B	B
Approach Vol, veh/h	946	
Approach Delay, s/veh	19.4	
Approach LOS	B	
Timer - Assigned Phs		

HCM 6th TWSC
3: Bogan Rd & Friendship Rd

06/25/2021

Intersection							
Int Delay, s/veh	4.7						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰	↑↑↑	↱	↱	↑↑↑	↱	↱
Traffic Vol, veh/h	1	552	89	207	1489	20	268
Future Vol, veh/h	1	552	89	207	1489	20	268
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	0	280
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	84	84	84	89	89	74	74
Heavy Vehicles, %	5	5	5	2	2	8	8
Mvmt Flow	1	657	106	233	1673	27	362
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	1221	0	0	657	0	1794	329
Stage 1	-	-	-	-	-	659	-
Stage 2	-	-	-	-	-	1135	-
Critical Hdwy	5.7	-	-	5.34	-	5.86	7.26
Critical Hdwy Stg 1	-	-	-	-	-	6.76	-
Critical Hdwy Stg 2	-	-	-	-	-	6.16	-
Follow-up Hdwy	2.35	-	-	3.12	-	3.88	3.98
Pot Cap-1 Maneuver	322	-	-	571	-	113	556
Stage 1	-	-	-	-	-	376	-
Stage 2	-	-	-	-	-	231	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	322	-	-	571	-	67	556
Mov Cap-2 Maneuver	-	-	-	-	-	67	-
Stage 1	-	-	-	-	-	375	-
Stage 2	-	-	-	-	-	137	-
Approach	EB		WB		NB		
HCM Control Delay, s	0		1.9		27.5		
HCM LOS	D						
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	67	556	322	-	-	571	-
HCM Lane V/C Ratio	0.403	0.651	0.004	-	-	0.407	-
HCM Control Delay (s)	91.1	22.8	16.2	-	-	15.6	-
HCM Lane LOS	F	C	C	-	-	C	-
HCM 95th %tile Q(veh)	1.5	4.7	0	-	-	2	-

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	307	12	18	627	32	35	0	52	8	0	25
Future Vol, veh/h	74	307	12	18	627	32	35	0	52	8	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	235	-	225	-	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	13	13	13	2	2	2	2	2	30
Mvmt Flow	84	349	14	20	713	36	38	0	57	9	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	749	0	0	349	0	0	1302	1306	349	1299	1270	713
Stage 1	-	-	-	-	-	-	517	517	-	753	753	-
Stage 2	-	-	-	-	-	-	785	789	-	546	517	-
Critical Hdwy	4.14	-	-	4.23	-	-	7.12	6.52	6.22	7.12	6.52	6.5
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.317	-	-	3.518	4.018	3.318	3.518	4.018	3.57
Pot Cap-1 Maneuver	851	-	-	1151	-	-	138	160	694	138	168	388
Stage 1	-	-	-	-	-	-	541	534	-	402	417	-
Stage 2	-	-	-	-	-	-	386	402	-	522	534	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	851	-	-	1151	-	-	116	140	694	115	147	388
Mov Cap-2 Maneuver	-	-	-	-	-	-	116	140	-	115	147	-
Stage 1	-	-	-	-	-	-	487	481	-	362	404	-
Stage 2	-	-	-	-	-	-	348	390	-	432	481	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			0.2			31			22.1		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	231	851	-	-	1151	-	-	246
HCM Lane V/C Ratio	0.409	0.099	-	-	0.018	-	-	0.146
HCM Control Delay (s)	31	9.7	-	-	8.2	0	-	22.1
HCM Lane LOS	D	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	1.9	0.3	-	-	0.1	-	-	0.5

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	0	177	317	11
Future Vol, veh/h	3	0	0	177	317	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	84	88	92
Heavy Vehicles, %	2	2	2	11	1	2
Mvmt Flow	3	0	0	211	360	12

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	577	366	372
Stage 1	366	-	-
Stage 2	211	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	478	679	1186
Stage 1	702	-	-
Stage 2	824	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	478	679	1186
Mov Cap-2 Maneuver	478	-	-
Stage 1	702	-	-
Stage 2	824	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1186	-	478	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	0	-	12.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations									 			
Traffic Volume (veh/h)	13	3	23	307	0	168	3	2	708	409	4	182
Future Volume (veh/h)	13	3	23	307	0	168	3	2	708	409	4	182
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1856	1856	1856	1841	1841	1841		1856	1856	1856		1826
Adj Flow Rate, veh/h	17	4	0	394	0	215		2	796	460		204
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78		0.89	0.89	0.89		0.89
Percent Heavy Veh, %	3	3	3	4	4	4		3	3	3		5
Cap, veh/h	94	17		494	0	458		496	2138	954		272
Arrive On Green	0.29	0.29	0.00	0.29	0.00	0.29		0.61	0.61	0.61		0.61
Sat Flow, veh/h	136	57	1572	1480	0	1560		827	3526	1572		431
Grp Volume(v), veh/h	21	0	0	394	0	215		2	796	460		204
Grp Sat Flow(s),veh/h/ln	192	0	1572	1480	0	1560		827	1763	1572		431
Q Serve(g_s), s	1.3	0.0	0.0	0.0	0.0	13.6		0.1	13.8	19.5		54.7
Cycle Q Clear(g_c), s	31.7	0.0	0.0	30.5	0.0	13.6		9.6	13.8	19.5		68.5
Prop In Lane	0.81		1.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	111	0		494	0	458		496	2138	954		272
V/C Ratio(X)	0.19	0.00		0.80	0.00	0.47		0.00	0.37	0.48		0.75
Avail Cap(c_a), veh/h	275	0		677	0	663		496	2138	954		272
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	40.7	0.0	34.7		13.4	12.0	13.1		29.4
Incr Delay (d2), s/veh	0.8	0.0	0.0	4.7	0.0	0.8		0.0	0.5	1.7		17.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	11.3	0.0	5.1		0.0	5.0	6.5		6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	0.0	0.0	45.4	0.0	35.5		13.4	12.5	14.9		46.6
LnGrp LOS	D	A		D	A	D		B	B	B		D
Approach Vol, veh/h	21		A	609			1258					
Approach Delay, s/veh	46.1			41.9			13.4					
Approach LOS	D			D			B					
Timer - Assigned Phs	2			4			6		8			
Phs Duration (G+Y+Rc), s	78.8			41.2			78.8		41.2			
Change Period (Y+Rc), s	6.0			6.0			6.0		6.0			
Max Green Setting (Gmax), s	57.0			51.0			57.0		51.0			
Max Q Clear Time (g_c+I1), s	21.5			33.7			70.5		32.5			
Green Ext Time (p_c), s	7.7			0.0			0.0		2.7			
Intersection Summary												
HCM 6th Ctrl Delay	22.2											
HCM 6th LOS	C											
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/25/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	515	2
Future Volume (veh/h)	515	2
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1826
Adj Flow Rate, veh/h	579	2
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	5	5
Cap, veh/h	2104	939
Arrive On Green	0.61	0.61
Sat Flow, veh/h	3469	1547
Grp Volume(v), veh/h	579	2
Grp Sat Flow(s),veh/h/ln	1735	1547
Q Serve(g_s), s	9.5	0.1
Cycle Q Clear(g_c), s	9.5	0.1
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2104	939
V/C Ratio(X)	0.28	0.00
Avail Cap(c_a), veh/h	2104	939
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	11.1	9.3
Incr Delay (d2), s/veh	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	11.5	9.3
LnGrp LOS	B	A
Approach Vol, veh/h	785	
Approach Delay, s/veh	20.6	
Approach LOS	C	
Timer - Assigned Phs		

HCM 6th TWSC
3: Bogan Rd & Friendship Rd

06/25/2021

Intersection							
Int Delay, s/veh	79.3						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	2	↑↑↑	↑	↑	↑↑↑	↑	↑
Traffic Vol, veh/h	2	1739	44	86	744	41	101
Future Vol, veh/h	2	1739	44	86	744	41	101
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	0	280
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	82	82	82	91	91	88	88
Heavy Vehicles, %	2	2	2	2	2	3	3
Mvmt Flow	2	2121	54	95	818	47	115

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	597	0	0	2121	0	2642
Stage 1	-	-	-	-	-	2125
Stage 2	-	-	-	-	-	517
Critical Hdwy	5.64	-	-	5.34	-	5.76
Critical Hdwy Stg 1	-	-	-	-	-	6.66
Critical Hdwy Stg 2	-	-	-	-	-	6.06
Follow-up Hdwy	2.32	-	-	3.12	-	3.83
Pot Cap-1 Maneuver	734	-	-	109	-	~ 41
Stage 1	-	-	-	-	-	47
Stage 2	-	-	-	-	-	512
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	734	-	-	109	-	~ 5
Mov Cap-2 Maneuver	-	-	-	-	-	~ 5
Stage 1	-	-	-	-	-	47
Stage 2	-	-	-	-	-	66

Approach	EB	WB	NB
HCM Control Delay, s	0	13	\$ 1523.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	5	187	734	-	-	109	-
HCM Lane V/C Ratio	9.318	0.614	0.003	-	-	0.867	-
HCM Control Delay (s)	\$ 5150.4	50.8	9.9	-	-	125.5	-
HCM Lane LOS	F	F	A	-	-	F	-
HCM 95th %tile Q(veh)	7.5	3.4	0	-	-	5.1	-

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

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	376	57	38	254	8	22	0	33	29	0	73
Future Vol, veh/h	32	376	57	38	254	8	22	0	33	29	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	235	-	225	-	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	85	85	85	92	92	92	92	92	92
Heavy Vehicles, %	9	9	9	2	2	2	2	2	2	2	2	17
Mvmt Flow	38	448	68	45	299	9	24	0	36	32	0	79

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	308	0	0	448	0	0	957	922	448	931	913	299
Stage 1	-	-	-	-	-	-	524	524	-	389	389	-
Stage 2	-	-	-	-	-	-	433	398	-	542	524	-
Critical Hdwy	4.19	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.281	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.453
Pot Cap-1 Maneuver	1214	-	-	1112	-	-	237	270	611	247	273	707
Stage 1	-	-	-	-	-	-	537	530	-	635	608	-
Stage 2	-	-	-	-	-	-	601	603	-	525	530	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1214	-	-	1112	-	-	198	249	611	219	252	707
Mov Cap-2 Maneuver	-	-	-	-	-	-	198	249	-	219	252	-
Stage 1	-	-	-	-	-	-	520	514	-	615	578	-
Stage 2	-	-	-	-	-	-	507	573	-	479	514	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	1.1	18.2	16.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	333	1214	-	-	1112	-	-	433
HCM Lane V/C Ratio	0.18	0.031	-	-	0.04	-	-	0.256
HCM Control Delay (s)	18.2	8.1	-	-	8.4	0	-	16.2
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0.1	-	-	1

HCM 6th TWSC
11: Bogan Rd & Site Drwy 2

06/25/2021

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	0	0	220	264	3
Future Vol, veh/h	10	0	0	220	264	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	83	98	92
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	11	0	0	265	269	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	536	271	272	0	-	0
Stage 1	271	-	-	-	-	-
Stage 2	265	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	505	768	1291	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	505	768	1291	-	-	-
Mov Cap-2 Maneuver	505	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.3	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1291	-	505	-	-	
HCM Lane V/C Ratio	-	-	0.022	-	-	
HCM Control Delay (s)	0	-	12.3	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations									 			
Traffic Volume (veh/h)	0	0	3	380	11	221	1	31	494	198	3	195
Future Volume (veh/h)	0	0	3	380	11	221	1	31	494	198	3	195
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841		1826	1826	1826		1841
Adj Flow Rate, veh/h	0	0	0	432	12	251		36	568	228		229
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88		0.87	0.87	0.87		0.85
Percent Heavy Veh, %	2	2	2	4	4	4		5	5	5		4
Cap, veh/h	0	645		530	13	538		381	1926	859		374
Arrive On Green	0.00	0.00	0.00	0.34	0.34	0.34		0.56	0.56	0.56		0.56
Sat Flow, veh/h	0	1870	1585	1366	38	1560		717	3469	1547		671
Grp Volume(v), veh/h	0	0	0	444	0	251		36	568	228		229
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1404	0	1560		717	1735	1547		671
Q Serve(g_s), s	0.0	0.0	0.0	36.4	0.0	15.1		3.5	10.4	9.2		33.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	36.4	0.0	15.1		16.5	10.4	9.2		43.5
Prop In Lane	0.00		1.00	0.97		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	0	645		543	0	538		381	1926	859		374
V/C Ratio(X)	0.00	0.00		0.82	0.00	0.47		0.09	0.29	0.27		0.61
Avail Cap(c_a), veh/h	0	842		691	0	702		381	1926	859		374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	37.7	0.0	30.7		19.3	14.2	13.9		25.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	6.1	0.0	0.6		0.5	0.4	0.8		7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	12.8	0.0	5.6		0.6	3.8	3.1		5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	43.7	0.0	31.3		19.8	14.6	14.7		33.0
LnGrp LOS	A	A		D	A	C		B	B	B		C
Approach Vol, veh/h	0		A		695		832					
Approach Delay, s/veh	0.0				39.3		14.8					
Approach LOS			D		B							
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	72.6		47.4		72.6		47.4					
Change Period (Y+Rc), s	6.0		6.0		6.0		6.0					
Max Green Setting (Gmax), s	54.0		54.0		54.0		54.0					
Max Q Clear Time (g_c+I1), s	18.5		0.0		45.5		38.4					
Green Ext Time (p_c), s	4.8		0.0		3.9		3.0					
Intersection Summary												
HCM 6th Ctrl Delay			23.5									
HCM 6th LOS			C									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	581	28
Future Volume (veh/h)	581	28
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1841	1841
Adj Flow Rate, veh/h	684	33
Peak Hour Factor	0.85	0.85
Percent Heavy Veh, %	4	4
Cap, veh/h	1942	866
Arrive On Green	0.56	0.56
Sat Flow, veh/h	3497	1560
Grp Volume(v), veh/h	684	33
Grp Sat Flow(s),veh/h/ln	1749	1560
Q Serve(g_s), s	13.0	1.2
Cycle Q Clear(g_c), s	13.0	1.2
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	1942	866
V/C Ratio(X)	0.35	0.04
Avail Cap(c_a), veh/h	1942	866
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	14.8	12.1
Incr Delay (d2), s/veh	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.4
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	15.3	12.2
LnGrp LOS	B	B
Approach Vol, veh/h	946	
Approach Delay, s/veh	19.5	
Approach LOS	B	
Timer - Assigned Phs		

HCM 6th TWSC
3: Bogan Rd & Friendship Rd

06/28/2021

Intersection							
Int Delay, s/veh	4.4						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰	↑↑↑	↱	↱	↑↑↑		↱
Traffic Vol, veh/h	1	552	89	207	1509	0	288
Future Vol, veh/h	1	552	89	207	1509	0	288
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	-	-
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	84	84	84	89	89	74	74
Heavy Vehicles, %	5	5	5	2	2	8	8
Mvmt Flow	1	657	106	233	1696	0	389
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	1238	0	0	657	0	-	329
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	5.7	-	-	5.34	-	-	7.26
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	2.35	-	-	3.12	-	-	3.98
Pot Cap-1 Maneuver	315	-	-	571	-	0	556
Stage 1	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	0	-
Platoon blocked, %		-	-		-		
Mov Cap-1 Maneuver	315	-	-	571	-	-	556
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Approach	EB		WB		NB		
HCM Control Delay, s	0		1.9		25.2		
HCM LOS	D						
Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT	
Capacity (veh/h)	556	315	-	-	571	-	
HCM Lane V/C Ratio	0.7	0.004	-	-	0.407	-	
HCM Control Delay (s)	25.2	16.5	-	-	15.6	-	
HCM Lane LOS	D	C	-	-	C	-	
HCM 95th %tile Q(veh)	5.5	0	-	-	2	-	

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations									 			
Traffic Volume (veh/h)	13	3	23	307	0	168	3	2	708	409	4	182
Future Volume (veh/h)	13	3	23	307	0	168	3	2	708	409	4	182
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1856	1856	1856	1841	1841	1841		1856	1856	1856		1826
Adj Flow Rate, veh/h	17	4	0	394	0	215		2	796	460		204
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78		0.89	0.89	0.89		0.89
Percent Heavy Veh, %	3	3	3	4	4	4		3	3	3		5
Cap, veh/h	95	17		495	0	458		496	2137	953		272
Arrive On Green	0.29	0.29	0.00	0.29	0.00	0.29		0.61	0.61	0.61		0.61
Sat Flow, veh/h	138	57	1572	1480	0	1560		827	3526	1572		431
Grp Volume(v), veh/h	21	0	0	394	0	215		2	796	460		204
Grp Sat Flow(s),veh/h/ln	195	0	1572	1480	0	1560		827	1763	1572		431
Q Serve(g_s), s	1.3	0.0	0.0	0.0	0.0	13.5		0.1	13.8	19.5		54.8
Cycle Q Clear(g_c), s	31.7	0.0	0.0	30.5	0.0	13.5		9.6	13.8	19.5		68.5
Prop In Lane	0.81		1.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	112	0		495	0	458		496	2137	953		272
V/C Ratio(X)	0.19	0.00		0.80	0.00	0.47		0.00	0.37	0.48		0.75
Avail Cap(c_a), veh/h	296	0		700	0	689		496	2137	953		272
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	45.2	0.0	0.0	40.7	0.0	34.7		13.4	12.0	13.2		29.5
Incr Delay (d2), s/veh	0.8	0.0	0.0	4.3	0.0	0.7		0.0	0.5	1.7		17.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	11.3	0.0	5.1		0.0	5.0	6.5		6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	0.0	0.0	44.9	0.0	35.4		13.5	12.5	14.9		46.7
LnGrp LOS	D	A		D	A	D		B	B	B		D
Approach Vol, veh/h	21		A	609			1258					
Approach Delay, s/veh	46.0			41.6			13.4					
Approach LOS	D			D			B					
Timer - Assigned Phs	2			4			6		8			
Phs Duration (G+Y+Rc), s	78.7			41.3			78.7		41.3			
Change Period (Y+Rc), s	6.0			6.0			6.0		6.0			
Max Green Setting (Gmax), s	55.0			53.0			55.0		53.0			
Max Q Clear Time (g_c+I1), s	21.5			33.7			70.5		32.5			
Green Ext Time (p_c), s	7.6			0.0			0.0		2.8			
Intersection Summary												
HCM 6th Ctrl Delay	22.2											
HCM 6th LOS	C											
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	515	2
Future Volume (veh/h)	515	2
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1826
Adj Flow Rate, veh/h	579	2
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	5	5
Cap, veh/h	2103	938
Arrive On Green	0.61	0.61
Sat Flow, veh/h	3469	1547
Grp Volume(v), veh/h	579	2
Grp Sat Flow(s),veh/h/ln	1735	1547
Q Serve(g_s), s	9.5	0.1
Cycle Q Clear(g_c), s	9.5	0.1
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2103	938
V/C Ratio(X)	0.28	0.00
Avail Cap(c_a), veh/h	2103	938
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	11.2	9.3
Incr Delay (d2), s/veh	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	11.5	9.3
LnGrp LOS	B	A
Approach Vol, veh/h	785	
Approach Delay, s/veh	20.6	
Approach LOS	C	
Timer - Assigned Phs		

HCM 6th TWSC
3: Bogan Rd & Friendship Rd

06/28/2021

Intersection							
Int Delay, s/veh	7.8						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	□ ↑↑↑	↑↑↑	↑	↑	↑↑↑		↑
Traffic Vol, veh/h	2	1739	44	86	785	0	142
Future Vol, veh/h	2	1739	44	86	785	0	142
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	-	-
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	82	82	82	91	91	88	88
Heavy Vehicles, %	2	2	2	2	2	3	3
Mvmt Flow	2	2121	54	95	863	0	161

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	630	0	0	2121	0	-	1061
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	5.64	-	-	5.34	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	2.32	-	-	3.12	-	-	3.93
Pot Cap-1 Maneuver	704	-	-	109	-	0	187
Stage 1	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	704	-	-	109	-	-	187
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	12.4	85.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	187	704	-	-	109	-
HCM Lane V/C Ratio	0.863	0.003	-	-	0.867	-
HCM Control Delay (s)	85.2	10.1	-	-	125.5	-
HCM Lane LOS	F	B	-	-	F	-
HCM 95th %tile Q(veh)	6.3	0	-	-	5.1	-

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	590	25	295	45	165	270	220	300	20
Future Volume (veh/h)	0	0	5	590	25	295	45	165	270	220	300	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1826	1826	1826	1841	1841	1841
Adj Flow Rate, veh/h	0	0	0	670	28	335	52	190	310	259	353	24
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88	0.87	0.87	0.87	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	3	3	3	5	5	5	4	4	4
Cap, veh/h	0	959		758	29	806	373	1344	599	371	1355	604
Arrive On Green	0.00	0.00	0.00	0.51	0.51	0.51	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	0	1870	1585	1363	57	1572	982	3469	1547	884	3497	1560
Grp Volume(v), veh/h	0	0	0	698	0	335	52	190	310	259	353	24
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1420	0	1572	982	1735	1547	884	1749	1560
Q Serve(g_s), s	0.0	0.0	0.0	56.5	0.0	15.8	4.6	4.3	18.4	32.2	8.3	1.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	56.5	0.0	15.8	12.8	4.3	18.4	36.5	8.3	1.1
Prop In Lane	0.00		1.00	0.96		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	959		787	0	806	373	1344	599	371	1355	604
V/C Ratio(X)	0.00	0.00		0.89	0.00	0.42	0.14	0.14	0.52	0.70	0.26	0.04
Avail Cap(c_a), veh/h	0	1013		828	0	852	373	1344	599	371	1355	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.36	0.00	0.36	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	28.0	0.0	18.1	29.4	23.8	28.2	35.6	25.0	22.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.5	0.0	0.1	0.8	0.2	3.2	10.4	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	18.4	0.0	5.4	1.1	1.7	7.0	7.6	3.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.5	0.0	18.2	30.2	24.0	31.3	46.1	25.5	23.0
LnGrp LOS	A	A		C	A	B	C	C	C	D	C	C
Approach Vol, veh/h	0			A			1033			552		
Approach Delay, s/veh	0.0						27.9			28.7		
Approach LOS				C			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	52.5			67.5			52.5			67.5		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	43.0			65.0			43.0			65.0		
Max Q Clear Time (g_c+I1), s	20.4			0.0			38.5			58.5		
Green Ext Time (p_c), s	2.3			0.0			1.5			3.0		

Intersection Summary

HCM 6th Ctrl Delay 29.8

HCM 6th LOS C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
3: N Bogan Rd & Friendship Rd

06/28/2021

Intersection							
Int Delay, s/veh	1.5						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	□	↑↑↑	↑	↑	↑↑↑	↑	↑
Traffic Vol, veh/h	0	625	5	115	1745	10	95
Future Vol, veh/h	0	625	5	115	1745	10	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	0	280
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	84	84	84	89	89	74	74
Heavy Vehicles, %	5	5	5	2	2	8	8
Mvmt Flow	0	744	6	129	1961	14	128

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	1431	0	0	744	0	1786
Stage 1	-	-	-	-	-	744
Stage 2	-	-	-	-	-	1042
Critical Hdwy	5.7	-	-	5.34	-	5.86
Critical Hdwy Stg 1	-	-	-	-	-	6.76
Critical Hdwy Stg 2	-	-	-	-	-	6.16
Follow-up Hdwy	2.35	-	-	3.12	-	3.88
Pot Cap-1 Maneuver	245	-	-	519	-	114
Stage 1	-	-	-	-	-	334
Stage 2	-	-	-	-	-	260
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	245	-	-	519	-	86
Mov Cap-2 Maneuver	-	-	-	-	-	86
Stage 1	-	-	-	-	-	334
Stage 2	-	-	-	-	-	195

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	18
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	86	521	245	-	-	519	-
HCM Lane V/C Ratio	0.157	0.246	-	-	-	0.249	-
HCM Control Delay (s)	54.5	14.2	0	-	-	14.2	-
HCM Lane LOS	F	B	A	-	-	B	-
HCM 95th %tile Q(veh)	0.5	1	0	-	-	1	-

HCM Signalized Intersection Capacity Analysis

4: I-985 S

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	385	220	170	925	0	0	0	0	70	0	115
Future Volume (vph)	0	385	220	170	925	0	0	0	0	70	0	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Lane Util. Factor		1.00	1.00	1.00	1.00					1.00		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1845	1568	1752	1845					1752		1568
Flt Permitted		1.00	1.00	0.46	1.00					0.95		1.00
Satd. Flow (perm)		1845	1568	841	1845					1752		1568
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	438	250	193	1051	0	0	0	0	76	0	125
RTOR Reduction (vph)	0	0	100	0	0	0	0	0	0	0	0	78
Lane Group Flow (vph)	0	438	150	193	1051	0	0	0	0	76	0	47
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	3%	2%	3%
Turn Type		NA	Perm	Perm	NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2	6						4		4
Actuated Green, G (s)		54.0	54.0	54.0	54.0					24.0		24.0
Effective Green, g (s)		54.0	54.0	54.0	54.0					24.0		24.0
Actuated g/C Ratio		0.60	0.60	0.60	0.60					0.27		0.27
Clearance Time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		1107	940	504	1107					467		418
v/s Ratio Prot		0.24			c0.57							
v/s Ratio Perm			0.10	0.23						c0.04		0.03
v/c Ratio		0.40	0.16	0.38	0.95					0.16		0.11
Uniform Delay, d1		9.4	8.0	9.3	16.7					25.3		24.9
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		0.2	0.1	2.2	17.3					0.7		0.5
Delay (s)		9.7	8.0	11.5	34.1					26.0		25.5
Level of Service		A	A	B	C					C		C
Approach Delay (s)		9.1			30.6			0.0			25.7	
Approach LOS		A			C			A			C	
Intersection Summary												
HCM 2000 Control Delay			23.2			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			65.8%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

5: I-985 NB

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	360	0	25	750	130	30	10	45	40	5	315
Future Volume (veh/h)	95	360	0	25	750	130	30	10	45	40	5	315
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	108	409	0	28	852	148	33	11	49	43	5	342
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	3	3	3
Cap, veh/h	204	1099	931	60	1064	931	166	70	202	423	45	428
Arrive On Green	0.59	0.59	0.00	0.59	0.59	0.59	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	559	1856	1572	30	1797	1572	408	258	741	1270	166	1572
Grp Volume(v), veh/h	108	409	0	880	0	148	93	0	0	48	0	342
Grp Sat Flow(s),veh/h/ln	559	1856	1572	1828	0	1572	1407	0	0	1436	0	1572
Q Serve(g_s), s	16.5	10.2	0.0	8.3	0.0	3.7	0.1	0.0	0.0	0.0	0.0	17.9
Cycle Q Clear(g_c), s	49.4	10.2	0.0	32.9	0.0	3.7	3.7	0.0	0.0	1.8	0.0	17.9
Prop In Lane	1.00		1.00	0.03		1.00	0.35		0.53	0.90		1.00
Lane Grp Cap(c), veh/h	204	1099	931	1124	0	931	438	0	0	468	0	428
V/C Ratio(X)	0.53	0.37	0.00	0.78	0.00	0.16	0.21	0.00	0.00	0.10	0.00	0.80
Avail Cap(c_a), veh/h	215	1135	962	1160	0	962	438	0	0	468	0	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	9.4	0.0	14.0	0.0	8.1	24.7	0.0	0.0	24.0	0.0	29.9
Incr Delay (d2), s/veh	2.2	0.2	0.0	3.5	0.0	0.1	1.1	0.0	0.0	0.4	0.0	14.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.4	0.0	11.9	0.0	1.1	1.6	0.0	0.0	0.8	0.0	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	9.6	0.0	17.4	0.0	8.2	25.9	0.0	0.0	24.5	0.0	44.4
LnGrp LOS	D	A	A	B	A	A	C	A	A	C	A	D
Approach Vol, veh/h	517			1028			93			390		
Approach Delay, s/veh	15.0			16.1			25.9			41.9		
Approach LOS	B			B			C			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	58.3			30.0			58.3			30.0		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	54.0			24.0			54.0			24.0		
Max Q Clear Time (g_c+I1), s	51.4			19.9			34.9			5.7		
Green Ext Time (p_c), s	0.8			0.6			6.5			0.4		
Intersection Summary												
HCM 6th Ctrl Delay	21.3											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	20	20	440	0	205	0	220	605	290	275	0
Future Volume (veh/h)	15	20	20	440	0	205	0	220	605	290	275	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	20	27	0	564	0	263	0	247	680	326	309	0
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	1	1	1	3	3	3	5	5	5
Cap, veh/h	43	42		475	0	825	60	1351	603	258	1330	593
Arrive On Green	0.52	0.52	0.00	0.52	0.00	0.52	0.00	0.38	0.38	0.38	0.38	0.00
Sat Flow, veh/h	0	81	1572	802	0	1598	1062	3526	1572	589	3469	1547
Grp Volume(v), veh/h	47	0	0	564	0	263	0	247	680	326	309	0
Grp Sat Flow(s),veh/h/ln	81	0	1572	802	0	1598	1062	1763	1572	589	1735	1547
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	11.4	0.0	5.6	46.0	40.4	7.2	0.0
Cycle Q Clear(g_c), s	62.0	0.0	0.0	62.0	0.0	11.4	0.0	5.6	46.0	46.0	7.2	0.0
Prop In Lane	0.43		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	0		475	0	825	60	1351	603	258	1330	593
V/C Ratio(X)	0.56	0.00		1.19	0.00	0.32	0.00	0.18	1.13	1.26	0.23	0.00
Avail Cap(c_a), veh/h	85	0		475	0	825	60	1351	603	258	1330	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.87	0.00	0.87	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.0	0.0	0.0	32.9	0.0	16.8	0.0	24.5	37.0	44.5	25.0	0.0
Incr Delay (d2), s/veh	7.8	0.0	0.0	102.2	0.0	0.2	0.0	0.3	77.3	144.9	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	27.6	0.0	4.0	0.0	2.3	29.3	18.0	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	0.0	0.0	135.1	0.0	17.0	0.0	24.8	114.3	189.4	25.5	0.0
LnGrp LOS	D	A		F	A	B	A	C	F	F	C	A
Approach Vol, veh/h		47	A		827			927			635	
Approach Delay, s/veh		36.8			97.5			90.4			109.6	
Approach LOS		D			F			F			F	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		52.0		68.0		52.0		68.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		46.0		62.0		46.0		62.0				
Max Q Clear Time (g_c+I1), s		48.0		64.0		48.0		64.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				96.8								
HCM 6th LOS				F								
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th TWSC
3: N Bogan Rd & Friendship Rd

06/28/2021

Intersection							
Int Delay, s/veh	6.5						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱	↑↑↑	↱	↱	↑↑↑	↱	↱
Traffic Vol, veh/h	0	1735	15	105	725	5	80
Future Vol, veh/h	0	1735	15	105	725	5	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	0	280
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	82	82	82	91	91	88	88
Heavy Vehicles, %	2	2	2	2	2	3	3
Mvmt Flow	0	2116	18	115	797	6	91

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	582	0	0	2116	0	2665
Stage 1	-	-	-	-	-	2116
Stage 2	-	-	-	-	-	549
Critical Hdwy	5.64	-	-	5.34	-	5.76
Critical Hdwy Stg 1	-	-	-	-	-	6.66
Critical Hdwy Stg 2	-	-	-	-	-	6.06
Follow-up Hdwy	2.32	-	-	3.12	-	3.83
Pot Cap-1 Maneuver	748	-	-	~ 109	-	40
Stage 1	-	-	-	-	-	47
Stage 2	-	-	-	-	-	493
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	748	-	-	~ 109	-	0
Mov Cap-2 Maneuver	-	-	-	-	-	0
Stage 1	-	-	-	-	-	47
Stage 2	-	-	-	-	-	0

Approach	EB	WB	NB
HCM Control Delay, s	0	22.4	
HCM LOS			-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	188	748	-	-	~ 109	-
HCM Lane V/C Ratio	-	0.484	-	-	-	1.059	-
HCM Control Delay (s)	-	40.9	0	-	-	177.3	-
HCM Lane LOS	-	E	A	-	-	F	-
HCM 95th %tile Q(veh)	-	2.4	0	-	-	7	-

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

HCM Signalized Intersection Capacity Analysis

4: I-985 S

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	690	235	95	515	0	0	0	0	140	0	85
Future Volume (vph)	0	690	235	95	515	0	0	0	0	140	0	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Lane Util. Factor		1.00	1.00	1.00	1.00					1.00		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1845	1568	1752	1845					1752		1568
Flt Permitted		1.00	1.00	0.23	1.00					0.95		1.00
Satd. Flow (perm)		1845	1568	417	1845					1752		1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	775	264	107	579	0	0	0	0	152	0	92
RTOR Reduction (vph)	0	0	106	0	0	0	0	0	0	0	0	67
Lane Group Flow (vph)	0	775	158	107	579	0	0	0	0	152	0	25
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Turn Type		NA	Perm	Perm	NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2	6						4		4
Actuated Green, G (s)		54.0	54.0	54.0	54.0					24.0		24.0
Effective Green, g (s)		54.0	54.0	54.0	54.0					24.0		24.0
Actuated g/C Ratio		0.60	0.60	0.60	0.60					0.27		0.27
Clearance Time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		1107	940	250	1107					467		418
v/s Ratio Prot		c0.42			0.31							
v/s Ratio Perm			0.10	0.26						c0.09		0.02
v/c Ratio		0.70	0.17	0.43	0.52					0.33		0.06
Uniform Delay, d1		12.4	8.0	9.7	10.5					26.5		24.6
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		2.0	0.1	5.3	1.8					1.8		0.3
Delay (s)		14.4	8.1	15.0	12.3					28.3		24.9
Level of Service		B	A	B	B					C		C
Approach Delay (s)		12.8			12.7			0.0			27.0	
Approach LOS		B			B			A			C	
Intersection Summary												
HCM 2000 Control Delay			14.5			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				12.0		
Intersection Capacity Utilization			62.7%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

5: I-985 NB

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	695	0	45	275	85	25	5	30	130	10	310
Future Volume (veh/h)	90	695	0	45	275	85	25	5	30	130	10	310
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	101	781	0	51	309	96	27	5	33	141	11	337
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	3	3	3
Cap, veh/h	263	1032	875	100	569	875	159	47	147	424	30	465
Arrive On Green	0.56	0.56	0.00	0.56	0.56	0.56	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	972	1856	1572	89	1023	1572	324	159	498	1143	101	1572
Grp Volume(v), veh/h	101	781	0	360	0	96	65	0	0	152	0	337
Grp Sat Flow(s),veh/h/ln	972	1856	1572	1113	0	1572	982	0	0	1245	0	1572
Q Serve(g_s), s	7.7	26.2	0.0	4.6	0.0	2.3	0.4	0.0	0.0	0.0	0.0	15.6
Cycle Q Clear(g_c), s	38.4	26.2	0.0	30.7	0.0	2.3	10.0	0.0	0.0	9.7	0.0	15.6
Prop In Lane	1.00		1.00	0.14		1.00	0.42		0.51	0.93		1.00
Lane Grp Cap(c), veh/h	263	1032	875	670	0	875	353	0	0	454	0	465
V/C Ratio(X)	0.38	0.76	0.00	0.54	0.00	0.11	0.18	0.00	0.00	0.34	0.00	0.72
Avail Cap(c_a), veh/h	369	1235	1046	833	0	1046	353	0	0	454	0	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.5	13.8	0.0	11.6	0.0	8.5	21.2	0.0	0.0	23.5	0.0	25.6
Incr Delay (d2), s/veh	0.9	2.2	0.0	0.7	0.0	0.1	1.1	0.0	0.0	2.0	0.0	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	9.3	0.0	3.0	0.0	0.7	1.0	0.0	0.0	2.5	0.0	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	16.0	0.0	12.3	0.0	8.6	22.4	0.0	0.0	25.5	0.0	35.1
LnGrp LOS	C	B	A	B	A	A	C	A	A	C	A	D
Approach Vol, veh/h	882			456			65			489		
Approach Delay, s/veh	17.8			11.5			22.4			32.1		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	51.1			30.0			51.1			30.0		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	54.0			24.0			54.0			24.0		
Max Q Clear Time (g_c+I1), s	40.4			17.6			32.7			12.0		
Green Ext Time (p_c), s	4.7			1.1			2.5			0.2		
Intersection Summary												
HCM 6th Ctrl Delay	20.1											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	590	25	295	45	165	270	220	300	20
Future Volume (veh/h)	0	0	5	590	25	295	45	165	270	220	300	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1826	1826	1826	1841	1841	1841
Adj Flow Rate, veh/h	0	0	0	670	28	335	52	190	310	259	353	24
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88	0.87	0.87	0.87	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	3	3	3	5	5	5	4	4	4
Cap, veh/h	0	762		780	756	640	488	1710	763	470	1723	769
Arrive On Green	0.00	0.00	0.00	0.41	0.41	0.41	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	0	1870	1585	1767	1856	1572	982	3469	1547	884	3497	1560
Grp Volume(v), veh/h	0	0	0	670	28	335	52	190	310	259	353	24
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1767	1856	1572	982	1735	1547	884	1749	1560
Q Serve(g_s), s	0.0	0.0	0.0	43.4	1.1	19.3	3.8	3.5	15.2	26.7	6.8	1.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	43.4	1.1	19.3	10.6	3.5	15.2	30.2	6.8	1.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	762		780	756	640	488	1710	763	470	1723	769
V/C Ratio(X)	0.00	0.00		0.86	0.04	0.52	0.11	0.11	0.41	0.55	0.20	0.03
Avail Cap(c_a), veh/h	0	1013		1017	1005	852	488	1710	763	470	1723	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.36	0.36	0.36	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	34.0	21.4	26.8	20.2	16.3	19.3	24.4	17.2	15.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.3	0.0	0.2	0.4	0.1	1.6	4.6	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	18.0	0.5	6.9	0.9	1.3	5.4	5.8	2.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	36.2	21.4	27.0	20.6	16.5	20.9	29.0	17.4	15.8
LnGrp LOS	A	A		D	C	C	C	B	C	C	B	B
Approach Vol, veh/h	0			A			1033			552		
Approach Delay, s/veh	0.0						32.9			19.3		
Approach LOS				C			B			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	65.1			54.9			65.1			54.9		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	43.0			65.0			43.0			65.0		
Max Q Clear Time (g_c+I1), s	17.2			0.0			32.2			45.4		
Green Ext Time (p_c), s	2.3			0.0			2.7			3.4		

Intersection Summary

HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
3: N Bogan Rd & Friendship Rd

06/28/2021

Intersection							
Int Delay, s/veh	1.3						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⇐	⇐⇐⇐	⇐	⇐	⇐⇐⇐		⇐
Traffic Vol, veh/h	0	625	5	115	1755	0	105
Future Vol, veh/h	0	625	5	115	1755	0	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	-	-
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	84	84	84	89	89	74	74
Heavy Vehicles, %	5	5	5	2	2	8	8
Mvmt Flow	0	744	6	129	1972	0	142
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	1439	0	0	744	0	-	372
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	5.7	-	-	5.34	-	-	7.26
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	2.35	-	-	3.12	-	-	3.98
Pot Cap-1 Maneuver	242	-	-	519	-	0	521
Stage 1	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	242	-	-	519	-	-	521
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.9		14.5		
HCM LOS					B		
Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT	
Capacity (veh/h)	521	242	-	-	519	-	
HCM Lane V/C Ratio	0.272	-	-	-	0.249	-	
HCM Control Delay (s)	14.5	0	-	-	14.2	-	
HCM Lane LOS	B	A	-	-	B	-	
HCM 95th %tile Q(veh)	1.1	0	-	-	1	-	

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	20	20	440	0	205	0	220	605	290	275	0
Future Volume (veh/h)	15	20	20	440	0	205	0	220	605	290	275	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	20	27	0	564	0	263	0	247	680	326	309	0
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	1	1	1	3	3	3	5	5	5
Cap, veh/h	269	347		612	738	626	60	1792	799	338	1764	787
Arrive On Green	0.39	0.39	0.00	0.39	0.00	0.39	0.00	0.51	0.51	0.51	0.51	0.00
Sat Flow, veh/h	578	887	1572	1394	1885	1598	1062	3526	1572	589	3469	1547
Grp Volume(v), veh/h	47	0	0	564	0	263	0	247	680	326	309	0
Grp Sat Flow(s),veh/h/ln	1465	0	1572	1394	1885	1598	1062	1763	1572	589	1735	1547
Q Serve(g_s), s	0.0	0.0	0.0	45.1	0.0	14.4	0.0	4.4	45.0	56.6	5.8	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.0	47.0	0.0	14.4	0.0	4.4	45.0	61.0	5.8	0.0
Prop In Lane	0.43		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	617	0		612	738	626	60	1792	799	338	1764	787
V/C Ratio(X)	0.08	0.00		0.92	0.00	0.42	0.00	0.14	0.85	0.97	0.18	0.00
Avail Cap(c_a), veh/h	617	0		612	738	626	60	1792	799	338	1764	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.87	0.00	0.87	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.8	0.0	0.0	36.7	0.0	26.6	0.0	15.6	25.6	35.9	15.9	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	17.5	0.0	0.4	0.0	0.2	11.0	41.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	18.7	0.0	5.3	0.0	1.7	17.5	13.5	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	0.0	54.2	0.0	27.0	0.0	15.8	36.6	76.9	16.1	0.0
LnGrp LOS	C	A		D	A	C	A	B	D	E	B	A
Approach Vol, veh/h		47	A		827			927			635	
Approach Delay, s/veh		22.8			45.5			31.0			47.3	
Approach LOS		C			D			C			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		67.0		53.0		67.0		53.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		61.0		47.0		61.0		47.0				
Max Q Clear Time (g_c+I1), s		47.0		3.9		63.0		49.0				
Green Ext Time (p_c), s		3.6		0.3		0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay 40.1

HCM 6th LOS D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
3: N Bogan Rd & Friendship Rd

06/28/2021

Intersection							
Int Delay, s/veh	7.8						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱	↑↑↑	↱	↱	↑↑↑		↱
Traffic Vol, veh/h	0	1735	15	105	730	0	85
Future Vol, veh/h	0	1735	15	105	730	0	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	-	-
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	82	82	82	91	91	88	88
Heavy Vehicles, %	2	2	2	2	2	3	3
Mvmt Flow	0	2116	18	115	802	0	97
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	586	0	0	2116	0	-	1058
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	5.64	-	-	5.34	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	2.32	-	-	3.12	-	-	3.93
Pot Cap-1 Maneuver	744	-	-	~ 109	-	0	188
Stage 1	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	744	-	-	~ 109	-	-	188
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Approach	EB		WB		NB		
HCM Control Delay, s	0		22.3		42.8		
HCM LOS					E		
Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT	
Capacity (veh/h)	188	744	-	-	~ 109	-	
HCM Lane V/C Ratio	0.514	-	-	-	1.059	-	
HCM Control Delay (s)	42.8	0	-	-	177.3	-	
HCM Lane LOS	E	A	-	-	F	-	
HCM 95th %tile Q(veh)	2.6	0	-	-	7	-	
Notes							
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon							

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	593	25	298	45	165	279	229	300	20
Future Volume (veh/h)	0	0	5	593	25	298	45	165	279	229	300	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1826	1826	1826	1841	1841	1841
Adj Flow Rate, veh/h	0	0	0	674	28	339	52	190	321	269	353	24
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88	0.87	0.87	0.87	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	3	3	3	5	5	5	4	4	4
Cap, veh/h	0	963		761	29	810	370	1336	596	366	1347	601
Arrive On Green	0.00	0.00	0.00	0.51	0.51	0.51	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	0	1870	1585	1363	57	1572	982	3469	1547	875	3497	1560
Grp Volume(v), veh/h	0	0	0	702	0	339	52	190	321	269	353	24
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1420	0	1572	982	1735	1547	875	1749	1560
Q Serve(g_s), s	0.0	0.0	0.0	56.9	0.0	16.0	4.6	4.3	19.3	34.7	8.3	1.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	56.9	0.0	16.0	12.9	4.3	19.3	38.9	8.3	1.2
Prop In Lane	0.00		1.00	0.96		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	963		790	0	810	370	1336	596	366	1347	601
V/C Ratio(X)	0.00	0.00		0.89	0.00	0.42	0.14	0.14	0.54	0.74	0.26	0.04
Avail Cap(c_a), veh/h	0	1013		828	0	852	370	1336	596	366	1347	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.35	0.00	0.35	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	27.9	0.0	18.0	29.6	24.0	28.6	36.7	25.2	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.5	0.0	0.1	0.8	0.2	3.5	12.4	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	18.5	0.0	5.5	1.1	1.7	7.3	8.2	3.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.4	0.0	18.1	30.4	24.2	32.1	49.0	25.7	23.2
LnGrp LOS	A	A		C	A	B	C	C	C	D	C	C
Approach Vol, veh/h	0		A	1041				563		646		
Approach Delay, s/veh	0.0			27.7				29.3		35.3		
Approach LOS				C				C		D		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	52.2		67.8		52.2		67.8					
Change Period (Y+Rc), s	6.0		6.0		6.0		6.0					
Max Green Setting (Gmax), s	43.0		65.0		43.0		65.0					
Max Q Clear Time (g_c+I1), s	21.3		0.0		40.9		58.9					
Green Ext Time (p_c), s	2.3		0.0		0.8		2.9					
Intersection Summary												
HCM 6th Ctrl Delay	30.3											
HCM 6th LOS	C											

HCM 6th TWSC
3: N Bogan Rd & Friendship Rd

06/28/2021

Intersection							
Int Delay, s/veh	1.5						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⇐	⇐⇐⇐	⇐	⇐	⇐⇐⇐	⇐	⇐
Traffic Vol, veh/h	0	625	5	120	1745	10	96
Future Vol, veh/h	0	625	5	120	1745	10	96
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	0	280
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	84	84	84	89	89	74	74
Heavy Vehicles, %	5	5	5	2	2	8	8
Mvmt Flow	0	744	6	135	1961	14	130

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	1431	0	0	744	0	1798
Stage 1	-	-	-	-	-	744
Stage 2	-	-	-	-	-	1054
Critical Hdwy	5.7	-	-	5.34	-	5.86
Critical Hdwy Stg 1	-	-	-	-	-	6.76
Critical Hdwy Stg 2	-	-	-	-	-	6.16
Follow-up Hdwy	2.35	-	-	3.12	-	3.88
Pot Cap-1 Maneuver	245	-	-	519	-	113
Stage 1	-	-	-	-	-	334
Stage 2	-	-	-	-	-	256
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	245	-	-	519	-	84
Mov Cap-2 Maneuver	-	-	-	-	-	84
Stage 1	-	-	-	-	-	334
Stage 2	-	-	-	-	-	189

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	18.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	84	521	245	-	-	519	-
HCM Lane V/C Ratio	0.161	0.249	-	-	-	0.26	-
HCM Control Delay (s)	55.9	14.2	0	-	-	14.4	-
HCM Lane LOS	F	B	A	-	-	B	-
HCM 95th %tile Q(veh)	0.5	1	0	-	-	1	-

HCM Signalized Intersection Capacity Analysis

4: I-985 S

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	403	220	184	931	0	0	0	0	100	0	115
Future Volume (vph)	0	403	220	184	931	0	0	0	0	100	0	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Lane Util. Factor		1.00	1.00	1.00	1.00					1.00		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1845	1568	1752	1845					1752		1568
Flt Permitted		1.00	1.00	0.44	1.00					0.95		1.00
Satd. Flow (perm)		1845	1568	814	1845					1752		1568
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	458	250	209	1058	0	0	0	0	109	0	125
RTOR Reduction (vph)	0	0	100	0	0	0	0	0	0	0	0	78
Lane Group Flow (vph)	0	458	150	209	1058	0	0	0	0	109	0	47
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	3%	2%	3%
Turn Type		NA	Perm	Perm	NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2	6						4		4
Actuated Green, G (s)		54.0	54.0	54.0	54.0					24.0		24.0
Effective Green, g (s)		54.0	54.0	54.0	54.0					24.0		24.0
Actuated g/C Ratio		0.60	0.60	0.60	0.60					0.27		0.27
Clearance Time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		1107	940	488	1107					467		418
v/s Ratio Prot		0.25			c0.57							
v/s Ratio Perm			0.10	0.26						c0.06		0.03
v/c Ratio		0.41	0.16	0.43	0.96					0.23		0.11
Uniform Delay, d1		9.6	8.0	9.7	16.9					25.8		25.0
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		0.3	0.1	2.7	18.3					1.2		0.5
Delay (s)		9.8	8.0	12.4	35.2					27.0		25.5
Level of Service		A	A	B	D					C		C
Approach Delay (s)		9.2			31.4			0.0			26.2	
Approach LOS		A			C			A			C	
Intersection Summary												
HCM 2000 Control Delay			23.7			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			66.1%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

5: I-985 NB

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	408	0	25	770	138	30	10	45	64	5	315
Future Volume (veh/h)	95	408	0	25	770	138	30	10	45	64	5	315
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1856	1870	1856
Adj Flow Rate, veh/h	108	464	0	28	875	157	33	11	49	70	5	342
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	3	2	3
Cap, veh/h	196	1113	943	59	1077	943	163	69	198	432	28	419
Arrive On Green	0.60	0.60	0.00	0.60	0.60	0.60	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	542	1856	1572	30	1796	1572	408	258	741	1330	106	1572
Grp Volume(v), veh/h	108	464	0	903	0	157	93	0	0	75	0	342
Grp Sat Flow(s),veh/h/ln	542	1856	1572	1825	0	1572	1407	0	0	1436	0	1572
Q Serve(g_s), s	17.6	12.0	0.0	9.4	0.0	4.0	0.2	0.0	0.0	0.0	0.0	18.3
Cycle Q Clear(g_c), s	52.3	12.0	0.0	34.7	0.0	4.0	3.9	0.0	0.0	2.9	0.0	18.3
Prop In Lane	1.00		1.00	0.03		1.00	0.35		0.53	0.93		1.00
Lane Grp Cap(c), veh/h	196	1113	943	1137	0	943	429	0	0	460	0	419
V/C Ratio(X)	0.55	0.42	0.00	0.79	0.00	0.17	0.22	0.00	0.00	0.16	0.00	0.82
Avail Cap(c_a), veh/h	196	1113	943	1137	0	943	429	0	0	460	0	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.7	9.6	0.0	14.1	0.0	8.0	25.6	0.0	0.0	25.3	0.0	30.9
Incr Delay (d2), s/veh	3.2	0.2	0.0	4.0	0.0	0.1	1.2	0.0	0.0	0.8	0.0	15.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	4.1	0.0	12.6	0.0	1.1	1.7	0.0	0.0	1.3	0.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	9.9	0.0	18.0	0.0	8.1	26.7	0.0	0.0	26.0	0.0	46.9
LnGrp LOS	D	A	A	B	A	A	C	A	A	C	A	D
Approach Vol, veh/h	572			1060			93			417		
Approach Delay, s/veh	15.1			16.6			26.7			43.1		
Approach LOS	B			B			C			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	60.0			30.0			60.0			30.0		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	54.0			24.0			54.0			24.0		
Max Q Clear Time (g_c+I1), s	54.3			20.3			36.7			5.9		
Green Ext Time (p_c), s	0.0			0.6			6.5			0.4		
Intersection Summary												
HCM 6th Ctrl Delay	21.8											
HCM 6th LOS	C											

HCM 6th TWSC
10: Thompson Mill Rd & Site Drwy 1

06/28/2021

Intersection

Int Delay, s/veh 1.2

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations						
Traffic Vol, veh/h	72	445	905	23	7	28
Future Vol, veh/h	72	445	905	23	7	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	92	92
Heavy Vehicles, %	3	3	3	3	2	30
Mvmt Flow	82	506	1028	26	8	30

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	1054	0	-	0	1698	1028
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	670	-
Critical Hdwy	4.13	-	-	-	6.42	6.5
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.227	-	-	-	3.518	3.57
Pot Cap-1 Maneuver	657	-	-	-	102	251
Stage 1	-	-	-	-	345	-
Stage 2	-	-	-	-	509	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	657	-	-	-	89	251
Mov Cap-2 Maneuver	-	-	-	-	89	-
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	509	-

Approach EB WB SB

HCM Control Delay, s	1.6	0	29.6
HCM LOS			D

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	657	-	-	-	184
HCM Lane V/C Ratio	0.125	-	-	-	0.207
HCM Control Delay (s)	11.3	-	-	-	29.6
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	0.8

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	190	210	5
Future Vol, veh/h	1	0	0	190	210	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	84	84	88	88
Heavy Vehicles, %	2	2	2	11	1	2
Mvmt Flow	1	0	0	226	239	6
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	468	242	245	0	-	0
Stage 1	242	-	-	-	-	-
Stage 2	226	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	553	797	1321	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	553	797	1321	-	-	-
Mov Cap-2 Maneuver	553	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.5	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1321	-	553	-	-	
HCM Lane V/C Ratio	-	-	0.002	-	-	
HCM Control Delay (s)	0	-	11.5	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	20	20	449	0	214	0	220	608	293	275	0
Future Volume (veh/h)	15	20	20	449	0	214	0	220	608	293	275	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	20	27	0	576	0	274	0	247	683	329	309	0
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	1	1	1	3	3	3	5	5	5
Cap, veh/h	43	42		475	0	825	60	1351	603	258	1330	593
Arrive On Green	0.52	0.52	0.00	0.52	0.00	0.52	0.00	0.38	0.38	0.38	0.38	0.00
Sat Flow, veh/h	0	81	1572	802	0	1598	1062	3526	1572	587	3469	1547
Grp Volume(v), veh/h	47	0	0	576	0	274	0	247	683	329	309	0
Grp Sat Flow(s),veh/h/ln	81	0	1572	802	0	1598	1062	1763	1572	587	1735	1547
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	12.0	0.0	5.6	46.0	40.4	7.2	0.0
Cycle Q Clear(g_c), s	62.0	0.0	0.0	62.0	0.0	12.0	0.0	5.6	46.0	46.0	7.2	0.0
Prop In Lane	0.43		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	0		475	0	825	60	1351	603	258	1330	593
V/C Ratio(X)	0.56	0.00		1.21	0.00	0.33	0.00	0.18	1.13	1.28	0.23	0.00
Avail Cap(c_a), veh/h	85	0		475	0	825	60	1351	603	258	1330	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.86	0.00	0.86	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.0	0.0	0.0	32.9	0.0	16.9	0.0	24.5	37.0	44.5	25.0	0.0
Incr Delay (d2), s/veh	7.8	0.0	0.0	112.1	0.0	0.2	0.0	0.3	79.1	150.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	28.9	0.0	4.2	0.0	2.3	29.6	18.4	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	0.0	0.0	145.1	0.0	17.1	0.0	24.8	116.1	195.2	25.5	0.0
LnGrp LOS	D	A		F	A	B	A	C	F	F	C	A
Approach Vol, veh/h		47	A		850			930			638	
Approach Delay, s/veh		36.8			103.8			91.9			113.0	
Approach LOS		D			F			F			F	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		52.0		68.0		52.0		68.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		46.0		62.0		46.0		62.0				
Max Q Clear Time (g_c+I1), s		48.0		64.0		48.0		64.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				100.4								
HCM 6th LOS				F								
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th TWSC
3: N Bogan Rd & Friendship Rd

06/28/2021

Intersection							
Int Delay, s/veh	6.9						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱	↑↑↑	↱	↱	↑↑↑	↱	↱
Traffic Vol, veh/h	0	1735	15	107	725	5	84
Future Vol, veh/h	0	1735	15	107	725	5	84
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	0	280
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	82	82	82	91	91	88	88
Heavy Vehicles, %	2	2	2	2	2	3	3
Mvmt Flow	0	2116	18	118	797	6	95

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	582	0	0	2116	0	2671	1058
Stage 1	-	-	-	-	-	2116	-
Stage 2	-	-	-	-	-	555	-
Critical Hdwy	5.64	-	-	5.34	-	5.76	7.16
Critical Hdwy Stg 1	-	-	-	-	-	6.66	-
Critical Hdwy Stg 2	-	-	-	-	-	6.06	-
Follow-up Hdwy	2.32	-	-	3.12	-	3.83	3.93
Pot Cap-1 Maneuver	748	-	-	~ 109	-	40	188
Stage 1	-	-	-	-	-	47	-
Stage 2	-	-	-	-	-	489	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	748	-	-	~ 109	-	0	188
Mov Cap-2 Maneuver	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	47	-
Stage 2	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	23.6	
HCM LOS			-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	188	748	-	-	~ 109	-
HCM Lane V/C Ratio	-	0.508	-	-	-	1.079	-
HCM Control Delay (s)	-	42.4	0	-	-	183.6	-
HCM Lane LOS	-	E	A	-	-	F	-
HCM 95th %tile Q(veh)	-	2.5	0	-	-	7.2	-

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

HCM Signalized Intersection Capacity Analysis

4: I-985 S

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	697	235	130	533	0	0	0	0	154	0	85
Future Volume (vph)	0	697	235	130	533	0	0	0	0	154	0	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Lane Util. Factor		1.00	1.00	1.00	1.00					1.00		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1845	1568	1752	1845					1752		1568
Flt Permitted		1.00	1.00	0.22	1.00					0.95		1.00
Satd. Flow (perm)		1845	1568	407	1845					1752		1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	783	264	146	599	0	0	0	0	167	0	92
RTOR Reduction (vph)	0	0	106	0	0	0	0	0	0	0	0	67
Lane Group Flow (vph)	0	783	158	146	599	0	0	0	0	167	0	25
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Turn Type		NA	Perm	Perm	NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2	6						4		4
Actuated Green, G (s)		54.0	54.0	54.0	54.0					24.0		24.0
Effective Green, g (s)		54.0	54.0	54.0	54.0					24.0		24.0
Actuated g/C Ratio		0.60	0.60	0.60	0.60					0.27		0.27
Clearance Time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		1107	940	244	1107					467		418
v/s Ratio Prot		c0.42			0.32							
v/s Ratio Perm			0.10	0.36						c0.10		0.02
v/c Ratio		0.71	0.17	0.60	0.54					0.36		0.06
Uniform Delay, d1		12.5	8.0	11.2	10.7					26.8		24.6
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		2.1	0.1	10.4	1.9					2.1		0.3
Delay (s)		14.6	8.1	21.6	12.6					28.9		24.9
Level of Service		B	A	C	B					C		C
Approach Delay (s)		13.0			14.3			0.0			27.5	
Approach LOS		B			B			A			C	
Intersection Summary												
HCM 2000 Control Delay			15.3			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				12.0		
Intersection Capacity Utilization			65.8%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

5: I-985 NB

06/28/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	716	0	45	328	107	25	5	30	145	10	310
Future Volume (veh/h)	90	716	0	45	328	107	25	5	30	145	10	310
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	101	804	0	51	369	120	27	5	33	158	11	337
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	3	3	3
Cap, veh/h	248	1057	896	93	630	896	130	41	114	381	24	451
Arrive On Green	0.57	0.57	0.00	0.57	0.57	0.57	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	900	1856	1572	79	1106	1572	242	144	398	1036	83	1572
Grp Volume(v), veh/h	101	804	0	420	0	120	65	0	0	169	0	337
Grp Sat Flow(s),veh/h/ln	900	1856	1572	1184	0	1572	784	0	0	1119	0	1572
Q Serve(g_s), s	8.7	27.5	0.0	5.2	0.0	3.0	0.5	0.0	0.0	0.0	0.0	16.3
Cycle Q Clear(g_c), s	41.3	27.5	0.0	32.7	0.0	3.0	13.9	0.0	0.0	13.3	0.0	16.3
Prop In Lane	1.00		1.00	0.12		1.00	0.42		0.51	0.93		1.00
Lane Grp Cap(c), veh/h	248	1057	896	723	0	896	286	0	0	404	0	451
V/C Ratio(X)	0.41	0.76	0.00	0.58	0.00	0.13	0.23	0.00	0.00	0.42	0.00	0.75
Avail Cap(c_a), veh/h	316	1198	1015	839	0	1015	286	0	0	404	0	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.7	13.7	0.0	11.6	0.0	8.4	22.8	0.0	0.0	25.9	0.0	27.1
Incr Delay (d2), s/veh	1.1	2.6	0.0	0.7	0.0	0.1	1.8	0.0	0.0	3.2	0.0	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	9.9	0.0	3.6	0.0	0.9	1.1	0.0	0.0	3.1	0.0	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	16.2	0.0	12.3	0.0	8.5	24.6	0.0	0.0	29.1	0.0	37.8
LnGrp LOS	C	B	A	B	A	A	C	A	A	C	A	D
Approach Vol, veh/h	905			540			65			506		
Approach Delay, s/veh	18.1			11.4			24.6			34.9		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	53.6			30.0			53.6			30.0		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	54.0			24.0			54.0			24.0		
Max Q Clear Time (g_c+I1), s	43.3			18.3			34.7			15.9		
Green Ext Time (p_c), s	4.3			1.1			2.9			0.1		

Intersection Summary

HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

HCM 6th TWSC
10: Thompson Mill Rd & Site Drwy 1

06/28/2021

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	855	405	8	22	74
Future Vol, veh/h	35	855	405	8	22	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	92	92
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	39	961	455	9	24	80

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	464	0	0 1494 455
Stage 1	-	-	- 455 -
Stage 2	-	-	- 1039 -
Critical Hdwy	4.13	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.227	-	- 3.518 3.318
Pot Cap-1 Maneuver	1092	-	- 136 605
Stage 1	-	-	- 639 -
Stage 2	-	-	- 341 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1092	-	- 131 605
Mov Cap-2 Maneuver	-	-	- 131 -
Stage 1	-	-	- 616 -
Stage 2	-	-	- 341 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	20.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1092	-	-	-	331
HCM Lane V/C Ratio	0.036	-	-	-	0.315
HCM Control Delay (s)	8.4	-	-	-	20.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.3

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	0	0	295	170	2
Future Vol, veh/h	4	0	0	295	170	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	83	98	92
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	4	0	0	355	173	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	529	174	175	0	-	0
Stage 1	174	-	-	-	-	-
Stage 2	355	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	510	869	1401	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	510	869	1401	-	-	-
Mov Cap-2 Maneuver	510	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1401	-	510	-	-	
HCM Lane V/C Ratio	-	-	0.009	-	-	
HCM Control Delay (s)	0	-	12.1	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	593	25	298	45	165	279	229	300	20
Future Volume (veh/h)	0	0	5	593	25	298	45	165	279	229	300	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1826	1826	1826	1841	1841	1841
Adj Flow Rate, veh/h	0	0	0	674	28	339	52	190	321	269	353	24
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88	0.87	0.87	0.87	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	3	3	3	5	5	5	4	4	4
Cap, veh/h	0	766		784	760	644	485	1702	759	463	1715	765
Arrive On Green	0.00	0.00	0.00	0.41	0.41	0.41	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	0	1870	1585	1767	1856	1572	982	3469	1547	875	3497	1560
Grp Volume(v), veh/h	0	0	0	674	28	339	52	190	321	269	353	24
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1767	1856	1572	982	1735	1547	875	1749	1560
Q Serve(g_s), s	0.0	0.0	0.0	43.7	1.1	19.5	3.8	3.5	16.0	28.7	6.9	1.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	43.7	1.1	19.5	10.7	3.5	16.0	32.3	6.9	1.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	766		784	760	644	485	1702	759	463	1715	765
V/C Ratio(X)	0.00	0.00		0.86	0.04	0.53	0.11	0.11	0.42	0.58	0.21	0.03
Avail Cap(c_a), veh/h	0	1013		1017	1005	852	485	1702	759	463	1715	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.35	0.35	0.35	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	33.8	21.2	26.7	20.3	16.5	19.7	25.2	17.3	15.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.2	0.0	0.2	0.4	0.1	1.7	5.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	18.1	0.5	7.0	0.9	1.4	5.7	6.2	2.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	36.1	21.2	26.9	20.8	16.6	21.4	30.4	17.6	15.9
LnGrp LOS	A	A		D	C	C	C	B	C	C	B	B
Approach Vol, veh/h	0			A			1041			563		
Approach Delay, s/veh	0.0						32.7			19.7		
Approach LOS				C			B			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	64.9			55.1			64.9			55.1		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	43.0			65.0			43.0			65.0		
Max Q Clear Time (g_c+I1), s	18.0			0.0			34.3			45.7		
Green Ext Time (p_c), s	2.4			0.0			2.4			3.5		

Intersection Summary

HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
3: N Bogan Rd & Friendship Rd

06/28/2021

Intersection							
Int Delay, s/veh	1.3						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⇐	⇐⇐⇐	⇐	⇐	⇐⇐⇐		⇐
Traffic Vol, veh/h	0	625	5	120	1755	0	106
Future Vol, veh/h	0	625	5	120	1755	0	106
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	-	-
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	84	84	84	89	89	74	74
Heavy Vehicles, %	5	5	5	2	2	8	8
Mvmt Flow	0	744	6	135	1972	0	143
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	1439	0	0	744	0	-	372
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	5.7	-	-	5.34	-	-	7.26
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	2.35	-	-	3.12	-	-	3.98
Pot Cap-1 Maneuver	242	-	-	519	-	0	521
Stage 1	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	242	-	-	519	-	-	521
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.9		14.5		
HCM LOS					B		
Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT	
Capacity (veh/h)	521	242	-	-	519	-	
HCM Lane V/C Ratio	0.275	-	-	-	0.26	-	
HCM Control Delay (s)	14.5	0	-	-	14.4	-	
HCM Lane LOS	B	A	-	-	B	-	
HCM 95th %tile Q(veh)	1.1	0	-	-	1	-	

HCM 6th Signalized Intersection Summary

1: Buford Hwy & Thompson Mill Rd

06/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	20	20	449	0	214	0	220	608	293	275	0
Future Volume (veh/h)	15	20	20	449	0	214	0	220	608	293	275	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	20	27	0	576	0	274	0	247	683	329	309	0
Peak Hour Factor	0.75	0.75	0.75	0.78	0.78	0.78	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	1	1	1	3	3	3	5	5	5
Cap, veh/h	268	346		612	738	626	60	1792	799	337	1764	787
Arrive On Green	0.39	0.39	0.00	0.39	0.00	0.39	0.00	0.51	0.51	0.51	0.51	0.00
Sat Flow, veh/h	575	883	1572	1394	1885	1598	1062	3526	1572	587	3469	1547
Grp Volume(v), veh/h	47	0	0	576	0	274	0	247	683	329	309	0
Grp Sat Flow(s),veh/h/ln	1458	0	1572	1394	1885	1598	1062	1763	1572	587	1735	1547
Q Serve(g_s), s	0.0	0.0	0.0	45.1	0.0	15.1	0.0	4.4	45.3	56.6	5.8	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.0	47.0	0.0	15.1	0.0	4.4	45.3	61.0	5.8	0.0
Prop In Lane	0.43		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	614	0		612	738	626	60	1792	799	337	1764	787
V/C Ratio(X)	0.08	0.00		0.94	0.00	0.44	0.00	0.14	0.85	0.98	0.18	0.00
Avail Cap(c_a), veh/h	614	0		612	738	626	60	1792	799	337	1764	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.86	0.00	0.86	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.8	0.0	0.0	37.2	0.0	26.8	0.0	15.6	25.6	36.2	15.9	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	20.5	0.0	0.4	0.0	0.2	11.3	43.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	19.7	0.0	5.6	0.0	1.7	17.7	13.8	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	0.0	57.7	0.0	27.2	0.0	15.8	36.9	79.7	16.1	0.0
LnGrp LOS	C	A		E	A	C	A	B	D	E	B	A
Approach Vol, veh/h		47	A		850			930			638	
Approach Delay, s/veh		22.8			47.9			31.3			48.9	
Approach LOS		C			D			C			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		67.0		53.0		67.0		53.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		61.0		47.0		61.0		47.0				
Max Q Clear Time (g_c+I1), s		47.3		3.9		63.0		49.0				
Green Ext Time (p_c), s		3.5		0.3		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			41.4									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th TWSC
3: N Bogan Rd & Friendship Rd

06/28/2021

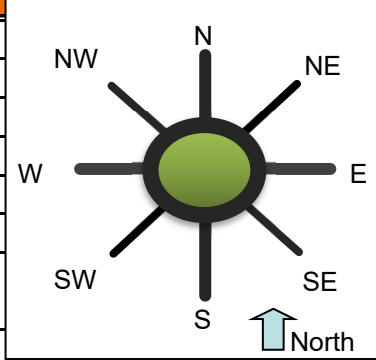
Intersection							
Int Delay, s/veh	8.3						
Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱	↑↑↑	↱	↱	↑↑↑		↱
Traffic Vol, veh/h	0	1735	15	107	730	0	89
Future Vol, veh/h	0	1735	15	107	730	0	89
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	Yield	-	None	-	None
Storage Length	250	-	500	225	-	-	-
Veh in Median Storage, #	-	0	-	-	0	0	-
Grade, %	-	0	-	-	0	0	-
Peak Hour Factor	82	82	82	91	91	88	88
Heavy Vehicles, %	2	2	2	2	2	3	3
Mvmt Flow	0	2116	18	118	802	0	101

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	586	0	0	2116	0	-	1058
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	5.64	-	-	5.34	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	2.32	-	-	3.12	-	-	3.93
Pot Cap-1 Maneuver	744	-	-	~ 109	-	0	188
Stage 1	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	744	-	-	~ 109	-	-	188
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	23.5	44.5
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	188	744	-	-	~ 109	-
HCM Lane V/C Ratio	0.538	-	-	-	1.079	-
HCM Control Delay (s)	44.5	0	-	-	183.6	-
HCM Lane LOS	E	A	-	-	F	-
HCM 95th %tile Q(veh)	2.8	0	-	-	7.2	-

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

General & Site Information v 4.2									
Analyst:									
Agency/Co: Lowe Engineers									
Date: 6/21/2021									
Project or PI#: DRI 3279									
Year, Peak Hour: Background 2022, 7:15 AM									
County/District: Gwinnett									
Intersection Name: Thompson Mill Rd at N Bogan Rd									
									
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			12		86		80	
	NE (2), vph								
	E (3), vph	8				24		92	
	SE (4), vph								
	S (5), vph	132		41				90	
	SW (6), vph								
	W (7), vph	177		354		113			
	NW (8), vph								
Output	Total Vehicles	317	0	407	0	223	0	262	0
Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		99.0%	100.0%	97.0%	100.0%	97.0%	100.0%	87.0%	100.0%
% Heavy Vehicles		1.0%	0.0%	3.0%	0.0%	3.0%	0.0%	13.0%	0.0%
% Bicycle		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)		0	0	0	0	0	0	0	0
PHF		0.88	0.95	0.93	0.95	0.90	0.95	0.80	0.95
F _{HV}		0.990	1.000	0.971	1.000	0.971	1.000	0.885	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	13	0	98	0	113	0
	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	9	0	0	0	27	0	130	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	152	0	45	0	0	0	127	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	203	0	392	0	129	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	364	0	451	0	255	0	370	0
Conflicting flow, pcu/h		567	0	341	0	252	0	206	0

Results: Approach Measures of Effectiveness								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	766	NA	946	NA	1036	NA	990	NA
Entry Flow Rates, vph	360	0	438	0	248	0	328	0
V/C ratio	0.47		0.46		0.24		0.33	
Control Delay, sec/pcu	11.1		9.3		5.8		7.1	
LOS	B		A		A		A	
Average Queue (ft)	28		28		10		16	
95th % Queue (ft)	64		64		24		41	
Overall Intersection Measures of Effectiveness								
Int Control Delay (sec)	8.6		Int LOS	A		Max Approach V/C	0.47	

Notes:

v 4.2

Unit Legend:

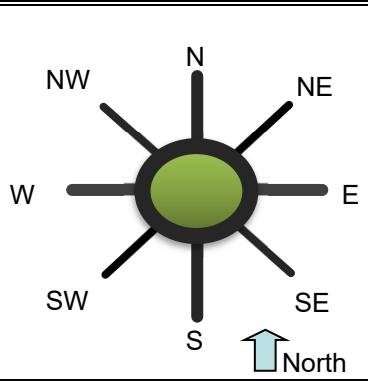
vph = vehicles per hour

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)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F_{HV}						
F_{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

General & Site Information v 4.2									
Analyst: _____									
Agency/Co: _____ Lowe Engineers									
Date: _____ 6/21/2021									
Project or PI#: _____ DRI 3279									
Year, Peak Hour: _____ Background 2022, 4:30 PM									
County/District: _____ Gwinnett									
Intersection Name: _____ Thompson Mill Rd at N Bogan Rd									
									
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			15		115		89	
	NE (2), vph								
	E (3), vph	26				55		306	
	SE (4), vph								
	S (5), vph	155		64				105	
	SW (6), vph								
	W (7), vph	84		154		55			
	NW (8), vph								
Output	Total Vehicles	265	0	233	0	225	0	500	0
Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		99.0%	100.0%	99.0%	100.0%	98.0%	100.0%	98.0%	100.0%
% Heavy Vehicles		1.0%	0.0%	1.0%	0.0%	2.0%	0.0%	2.0%	0.0%
% Bicycle		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)		0	0	0	0	0	0	0	0
PHF		0.98	0.95	0.85	0.95	0.95	0.95	0.84	0.95
F _{HV}		0.990	1.000	0.990	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	18	0	123	0	108	0
NE (2), pcu/h		0	0	0	0	0	0	0	0
E (3), pcu/h		27	0	0	0	59	0	372	0
SE (4), pcu/h		0	0	0	0	0	0	0	0
S (5), pcu/h		160	0	76	0	0	0	128	0
SW (6), pcu/h		0	0	0	0	0	0	0	0
W (7), pcu/h		87	0	183	0	59	0	0	0
NW (8), pcu/h		0	0	0	0	0	0	0	0
Entry flow, pcu/h		273	0	277	0	242	0	607	0
Conflicting flow, pcu/h		318	0	291	0	506	0	263	0

Results: Approach Measures of Effectiveness								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	988	NA	1016	NA	807	NA	1035	NA
Entry Flow Rates, vph	270	0	274	0	237	0	595	0
V/C ratio	0.27		0.27		0.29		0.58	
Control Delay, sec/pcu	6.4		6.2		7.8		11.0	
LOS	A		A		A		B	
Average Queue (ft)	12		12		13		45	
95th % Queue (ft)	28		28		31		97	

Overall Intersection Measures of Effectiveness					
Int Control Delay (sec)	8.6	Int LOS	A	Max Approach V/C	0.58

Notes:

v 4.2

Unit Legend:

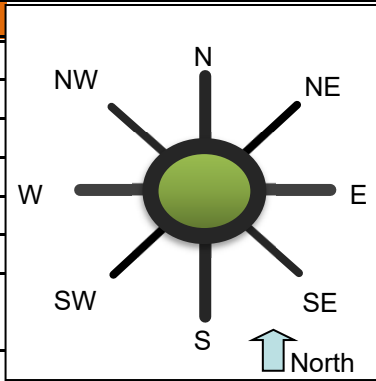
vph = vehicles per hour

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)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F _{HV}						
F _{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

General & Site Information								v 4.2	
Analyst: _____									
Agency/Co: _____ Lowe Engineers									
Date: _____ 6/21/2021									
Project or PI#: _____ DRI 3279									
Year, Peak Hour: _____ Background w/ Interchange 2022, 7:15 AM									
County/District: _____ Gwinnett									
Intersection Name: _____ Thompson Mill Rd at N Bogan Rd									
									
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			5		65		120	
	NE (2), vph								
	E (3), vph	5				20		210	
	SE (4), vph								
	S (5), vph	55		60				115	
	SW (6), vph								
	W (7), vph	150		660		95			
	NW (8), vph								
Output	Total Vehicles	210	0	725	0	180	0	445	0
Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		99.0%	100.0%	97.0%	100.0%	97.0%	100.0%	87.0%	100.0%
% Heavy Vehicles		1.0%	0.0%	3.0%	0.0%	3.0%	0.0%	13.0%	0.0%
% Bicycle		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)		0	0	0	0	0	0	0	0
PHF		0.88	0.95	0.93	0.95	0.90	0.95	0.80	0.95
F _{HV}		0.990	1.000	0.971	1.000	0.971	1.000	0.885	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	6	0	74	0	170	0
NE (2), pcu/h		0	0	0	0	0	0	0	0
E (3), pcu/h		6	0	0	0	23	0	297	0
SE (4), pcu/h		0	0	0	0	0	0	0	0
S (5), pcu/h		63	0	66	0	0	0	162	0
SW (6), pcu/h		0	0	0	0	0	0	0	0
W (7), pcu/h		172	0	731	0	109	0	0	0
NW (8), pcu/h		0	0	0	0	0	0	0	0
Entry flow, pcu/h		241	0	803	0	206	0	629	0
Conflicting flow, pcu/h		906	0	353	0	472	0	135	0

Results: Approach Measures of Effectiveness								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	542	NA	935	NA	828	NA	1064	NA
Entry Flow Rates, vph	239	0	780	0	200	0	556	0
V/C ratio	0.44		0.83		0.24		0.52	
Control Delay, sec/pcu	14.0		23.9		6.9		9.6	
LOS	B		C		A		A	
Average Queue (ft)	23		130		10		37	
95th % Queue (ft)	56		256		24		89	

Overall Intersection Measures of Effectiveness					
Int Control Delay (sec)	16.2	Int LOS	C	Max Approach V/C	0.83

Notes:

v 4.2

Unit Legend:

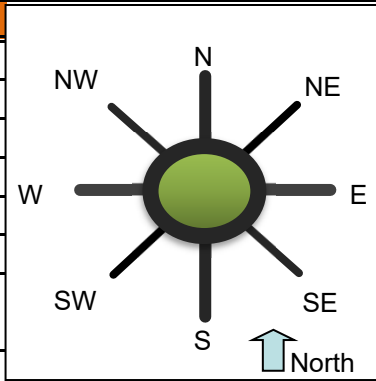
vph = vehicles per hour

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)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F_{HV}						
F_{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

General & Site Information v 4.2									
Analyst: _____									
Agency/Co: _____ Lowe Engineers									
Date: _____ 6/21/2021									
Project or PI#: _____ DRI 3279									
Year, Peak Hour: _____ Background w/ Interchange 2022, 4:30 PM									
County/District: _____ Gwinnett									
Intersection Name: _____ Thompson Mill Rd at N Bogan Rd									
									
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			10		105		180	
	NE (2), vph								
	E (3), vph	30				85		490	
	SE (4), vph								
	S (5), vph	75		55				185	
	SW (6), vph								
	W (7), vph	65		285		55			
	NW (8), vph								
Output	Total Vehicles	170	0	350	0	245	0	855	0
Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		99.0%	100.0%	99.0%	100.0%	98.0%	100.0%	98.0%	100.0%
% Heavy Vehicles		1.0%	0.0%	1.0%	0.0%	2.0%	0.0%	2.0%	0.0%
% Bicycle		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)		0	0	0	0	0	0	0	0
PHF		0.98	0.95	0.85	0.95	0.95	0.95	0.84	0.95
F _{HV}		0.990	1.000	0.990	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	12	0	113	0	219	0
NE (2), pcu/h		0	0	0	0	0	0	0	0
E (3), pcu/h		31	0	0	0	91	0	595	0
SE (4), pcu/h		0	0	0	0	0	0	0	0
S (5), pcu/h		77	0	65	0	0	0	225	0
SW (6), pcu/h		0	0	0	0	0	0	0	0
W (7), pcu/h		67	0	339	0	59	0	0	0
NW (8), pcu/h		0	0	0	0	0	0	0	0
Entry flow, pcu/h		175	0	416	0	263	0	1038	0
Conflicting flow, pcu/h		463	0	390	0	844	0	174	0

Results: Approach Measures of Effectiveness								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	852	NA	918	NA	572	NA	1133	NA
Entry Flow Rates, vph	173	0	412	0	258	0	1018	0
V/C ratio	0.20		0.45		0.45		0.90	
Control Delay, sec/pcu	6.3		9.3		13.6		27.3	
LOS	A		A		B		D	
Average Queue (ft)	8		27		24		193	
95th % Queue (ft)	19		59		59		347	
Overall Intersection Measures of Effectiveness								
Int Control Delay (sec)	19.5		Int LOS	C		Max Approach V/C	0.90	

Notes:

v 4.2

Unit Legend:

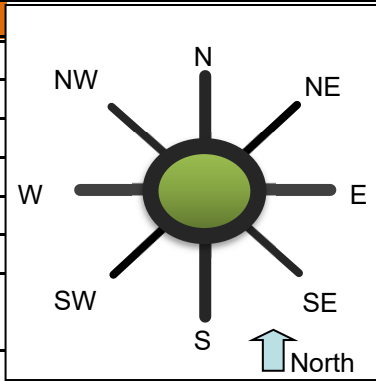
vph = vehicles per hour

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)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F_{HV}						
F_{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

General & Site Information								v 4.2	
Analyst:									
Agency/Co:		Lowe Engineers							
Date:		6/21/2021							
Project or PI#:		DRI 3279							
Year, Peak Hour:		Build 2022, 7:15 AM							
County/District:		Gwinnett							
Intersection Name:		Thompson Mill Rd at N Bogan Rd							
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			12		86		80	
	NE (2), vph								
	E (3), vph	8				24		97	
	SE (4), vph								
	S (5), vph	132		41				93	
	SW (6), vph								
	W (7), vph	177		375		124			
	NW (8), vph								
Output	Total Vehicles	317	0	428	0	234	0	270	0
Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		99.0%	100.0%	97.0%	100.0%	97.0%	100.0%	87.0%	100.0%
% Heavy Vehicles		1.0%	0.0%	3.0%	0.0%	3.0%	0.0%	13.0%	0.0%
% Bicycle		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)		0	0	0	0	0	0	0	0
PHF		0.88	0.95	0.93	0.95	0.90	0.95	0.80	0.95
F _{HV}		0.990	1.000	0.971	1.000	0.971	1.000	0.885	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	13	0	98	0	113	0
	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	9	0	0	0	27	0	137	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	152	0	45	0	0	0	131	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	203	0	415	0	142	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h		364	0	474	0	268	0	381	0
Conflicting flow, pcu/h		603	0	353	0	259	0	206	0

Results: Approach Measures of Effectiveness								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	739	NA	934	NA	1029	NA	990	NA
Entry Flow Rates, vph	360	0	460	0	260	0	338	0
V/C ratio	0.49		0.49		0.25		0.34	
Control Delay, sec/pcu	11.9		10.0		5.9		7.2	
LOS	B		A		A		A	
Average Queue (ft)	30		32		11		17	
95th % Queue (ft)	68		72		26		43	
Overall Intersection Measures of Effectiveness								
Int Control Delay (sec)	9.1		Int LOS	A		Max Approach V/C	0.49	

Notes:

v 4.2

Unit Legend:

vph = vehicles per hour

PHF = peak hour factor

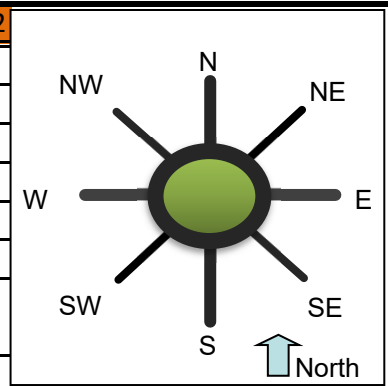
 F_{HV} = heavy vehicle factor

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)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F_{HV}						
F_{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

General & Site Information v 4.2

Analyst: _____
 Agency/Co: _____ Lowe Engineers
 Date: _____ 6/21/2021
 Project or PI#: _____ DRI 3279
 Year, Peak Hour: _____ Build 2022, 4:30 PM
 County/District: _____ Gwinnett
 Intersection Name: _____ Thompson Mill Rd at N Bogan Rd



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			15		115		89	
	NE (2), vph								
	E (3), vph	26				55		325	
	SE (4), vph								
	S (5), vph	155		64				115	
	SW (6), vph								
	W (7), vph	84		159		58			
	NW (8), vph								
Output	Total Vehicles	265	0	238	0	228	0	529	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	99.0%	100.0%	99.0%	100.0%	98.0%	100.0%	98.0%	100.0%
% Heavy Vehicles	1.0%	0.0%	1.0%	0.0%	2.0%	0.0%	2.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.98	0.95	0.85	0.95	0.95	0.95	0.84	0.95
F _{HV}	0.990	1.000	0.990	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	18	0	123	0	108	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	27	0	0	0	59	0	395	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	160	0	76	0	0	0	140	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	87	0	189	0	62	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	273	0	283	0	245	0	642	0
Conflicting flow, pcu/h	327	0	294	0	530	0	263	0

Results: Approach Measures of Effectiveness								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	979	NA	1013	NA	788	NA	1035	NA
Entry Flow Rates, vph	270	0	280	0	240	0	630	0
V/C ratio	0.28		0.28		0.30		0.61	
Control Delay, sec/pcu	6.5		6.3		8.1		11.8	
LOS	A		A		A		B	
Average Queue (ft)	12		12		13		51	
95th % Queue (ft)	29		29		33		110	
Overall Intersection Measures of Effectiveness								
Int Control Delay (sec)	9.1		Int LOS	A		Max Approach V/C	0.61	

Notes:

v 4.2

Unit Legend:

vph = vehicles per hour

PHF = peak hour factor

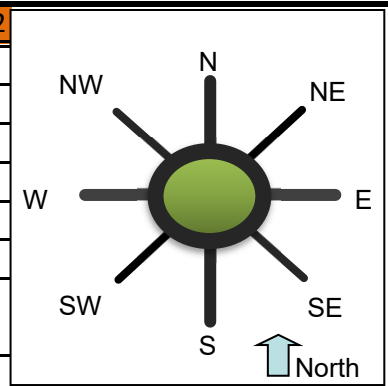
 F_{HV} = heavy vehicle factor

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)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F_{HV}						
F_{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

General & Site Information v 4.2

Analyst: _____
 Agency/Co: _____ Lowe Engineers
 Date: _____ 6/21/2021
 Project or PI#: _____ DRI 3279
 Year, Peak Hour: _____ Build w/ Interchange 2022, 7:15 AM
 County/District: _____ Gwinnett
 Intersection Name: _____ Thompson Mill Rd at N Bogan Rd



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			5		65		120	
	NE (2), vph								
	E (3), vph	5				20		216	
	SE (4), vph								
	S (5), vph	55		60				116	
	SW (6), vph								
	W (7), vph	150		678		100			
	NW (8), vph								
Output	Total Vehicles	210	0	743	0	185	0	452	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	99.0%	100.0%	97.0%	100.0%	97.0%	100.0%	87.0%	100.0%
% Heavy Vehicles	1.0%	0.0%	3.0%	0.0%	3.0%	0.0%	13.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.88	0.95	0.93	0.95	0.90	0.95	0.80	0.95
F _{HV}	0.990	1.000	0.971	1.000	0.971	1.000	0.885	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	6	0	74	0	170	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	6	0	0	0	23	0	305	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	63	0	66	0	0	0	164	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	172	0	751	0	114	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	241	0	823	0	212	0	638	0
Conflicting flow, pcu/h	932	0	358	0	480	0	135	0

Results: Approach Measures of Effectiveness								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	528	NA	930	NA	821	NA	1064	NA
Entry Flow Rates, vph	239	0	799	0	206	0	565	0
V/C ratio	0.45		0.86		0.25		0.53	
Control Delay, sec/pcu	14.6		26.5		7.1		9.8	
LOS	B		D		A		A	
Average Queue (ft)	24		147		10		38	
95th % Queue (ft)	59		283		25		91	
Overall Intersection Measures of Effectiveness								
Int Control Delay (sec)	17.5		Int LOS	C		Max Approach V/C	0.86	

Notes:

v 4.2

Unit Legend:

vph = vehicles per hour

PHF = peak hour factor

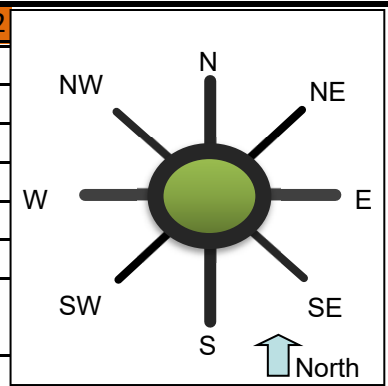
F_{HV} = heavy vehicle factor

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)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F _{HV}						
F _{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

General & Site Information v 4.2

Analyst: _____
 Agency/Co: _____ Lowe Engineers
 Date: _____ 6/21/2021
 Project or PI#: _____ DRI 3279
 Year, Peak Hour: _____ Build w/ Interchange 2022, 4:30 PM
 County/District: _____ Gwinnett
 Intersection Name: _____ Thompson Mill Rd at N Bogan Rd



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			10		105		180	
	NE (2), vph								
	E (3), vph	30				85		508	
	SE (4), vph								
	S (5), vph	75		55				189	
	SW (6), vph								
	W (7), vph	65		292		57			
	NW (8), vph								
Output	Total Vehicles	170	0	357	0	247	0	877	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	99.0%	100.0%	99.0%	100.0%	98.0%	100.0%	98.0%	100.0%
% Heavy Vehicles	1.0%	0.0%	1.0%	0.0%	2.0%	0.0%	2.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.98	0.95	0.85	0.95	0.95	0.95	0.84	0.95
F _{HV}	0.990	1.000	0.990	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	12	0	113	0	219	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	31	0	0	0	91	0	617	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	77	0	65	0	0	0	230	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	67	0	347	0	61	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	175	0	424	0	265	0	1065	0
Conflicting flow, pcu/h	474	0	393	0	866	0	174	0

Results: Approach Measures of Effectiveness								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	843	NA	916	NA	559	NA	1133	NA
Entry Flow Rates, vph	173	0	420	0	260	0	1044	0
V/C ratio	0.21		0.46		0.47		0.92	
Control Delay, sec/pcu	6.4		9.5		14.2		30.4	
LOS	A		A		B		D	
Average Queue (ft)	8		28		26		221	
95th % Queue (ft)	19		62		62		382	
Overall Intersection Measures of Effectiveness								
Int Control Delay (sec)	21.4		Int LOS	C		Max Approach V/C	0.92	

Notes:

v 4.2

Unit Legend:

vph = vehicles per hour

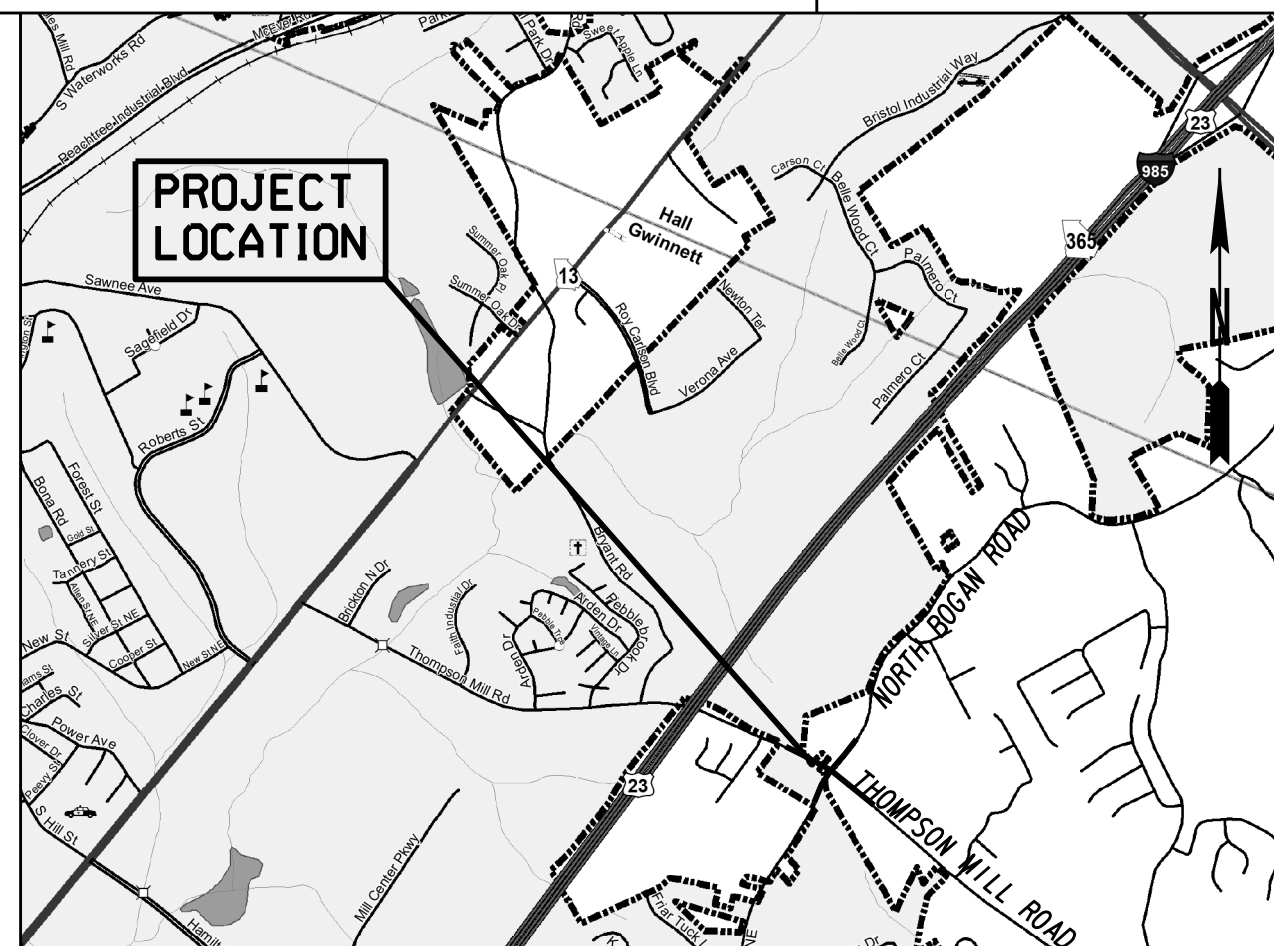
PHF = peak hour factor

 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)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F_{HV}						
F_{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

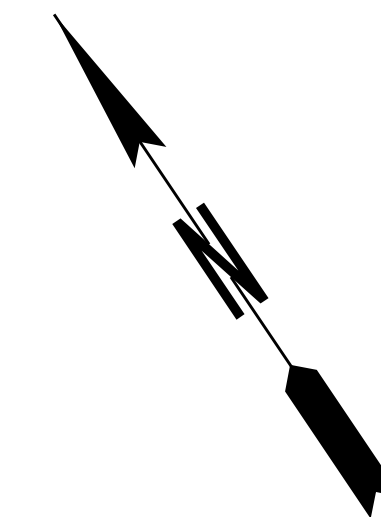
Appendix D: Area Plans



LOCATION MAP

DEPARTMENT OF TRANSPORTATION GWINNETT COUNTY

PLAN AND PROFILE OF PROPOSED NORTH BOGAN ROAD AT THOMPSON MILL ROAD INTERSECTION IMPROVEMENT PROJECT NO. M-1059-01



FUNCTIONAL CLASSIFICATION:
THOMPSON MILL ROAD: RURAL - MAJOR COLLECTOR/LOCAL ROAD
NORTH BOGAN ROAD: RURAL - MAJOR COLLECTOR/LOCAL ROAD
THIS PROJECT IS 100% IN
GWINNETT COUNTY AND IS
100% IN CONG. DIST. NO. 7.
PROJECT DESIGNATION:
DESIGNED IN ENGLISH UNITS
POSTED SPEED - THOMPSON MILL ROAD: 45 MPH
POSTED SPEED - NORTH BOGAN ROAD: 40 MPH
DESIGN SPEED - THOMPSON MILL ROAD: 45 MPH
DESIGN SPEED - NORTH BOGAN ROAD: 40 MPH
COMMISSION DISTRICT #4
DESIGN DATA:
EST. TRAFFIC ADT- THOMPSON MILL ROAD (2018): 8150 VPD
EST. TRAFFIC ADT- NORTH BOGAN ROAD (2018): 6300 VPD

MID-POINT COORDINATES
STA 107+39.43
N 1498037.3243
E 2357580.6639

LAND LOT: 263, 264
LAND DISTRICT: 6
GMD: 550

SIGHT DISTANCE CERTIFICATION:

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THE PROPOSED DRIVEWAYS AND SIDE STREETS FOR THIS PROJECT ARE DESIGNED WITH ADEQUATE SIGHT DISTANCE FOR EACH DRIVEWAY OR SIDE STREET APPROACHING A PUBLIC ROADWAY. THE REGULATED SPEED LIMIT IS 45 MPH ON THOMPSON MILL ROAD AND 40 MPH ON NORTH BOGAN ROAD. THE MAXIMUM CORNER SIGHT DISTANCE AT EACH DRIVEWAY OR SIDE STREET IS EQUAL TO OR EXCEEDS TEN (10) TIMES THE REGULATED SPEED OF THE INTERSECTING ROADWAY PER THE GWINNETT COUNTY DEVELOPMENT REGULATIONS.

SIGNED _____ DATE _____

THE DATA TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANYWAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE SPECIFICATIONS.

LIMIT OF CONSTRUCTION
STA 211+00.00
NORTH BOGAN ROAD
N 1498563.1878
E 2357909.1015
BEGIN CONSTRUCTION
STA 98+03.82
THOMPSON MILL ROAD
N 1498363.4074
E 2356711.5805

BEGIN PROJECT
STA 97+90.00
THOMPSON MILL ROAD
N 1498368.9995
E 2356699.0316

THOMPSON MILL ROAD
N 1498368.9995
E 2356699.0316

LIMIT OF CONSTRUCTION
STA 200+50.00
NORTH BOGAN ROAD
N 1497693.7856
E 2357348.7408

INTERSECTION
STA 107+39.43
THOMPSON MILL ROAD
STA 204+78.14
NORTH BOGAN ROAD

SCALE IN FEET
0 100 200

LENGTH OF PROJECT
COUNTY: GWINNETT
NET LENGTH OF ROADWAY
NET LENGTH OF BRIDGES
NET LENGTH OF PROJECT
NET LENGTH OF EXCEPTIONS
GROSS LENGTH OF PROJECT

COUNTY No. 135
MILES
0.381
0.000
0.381
0.000
0.381

THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983/94 WEST ZONE, AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

PREPARED BY: William R. Renwick, P.E.
KECK & WOOD, INC.

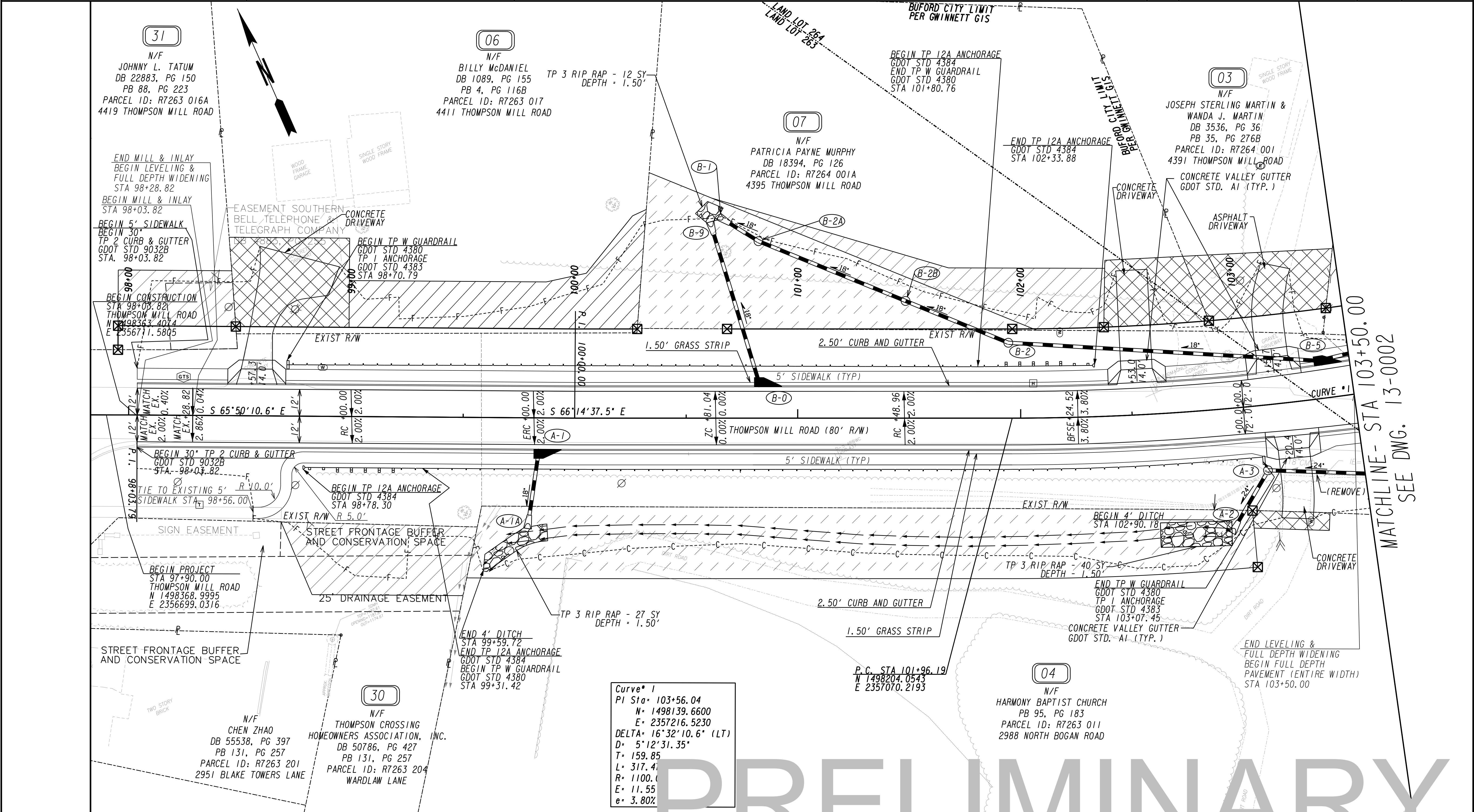
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Duluth, GA 30097
(678) 417-4000
keckwood.com

EXISTING TRAVEL LANES	2 EA
NEW TRAVEL LANES	0 EA
EXISTING TURN LANES	0 EA
NEW TURN LANES	0 EA
EXISTING SIDEWALK	77 FT
NEW SIDEWALK	4652 FT
EXISTING CURB AND GUTTER	0 FT
NEW CURB AND GUTTER	5312 FT
EXISTING * OF TRAFFIC SIGNALS	0 EA
NEW TRAFFIC SIGNAL INSTALLATIONS	0 EA

PLANS COMPLETED
REVISIONS

DRAWING No.

01-0001



PROPERTY AND EXISTING R/W LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES

EASEMENT FOR CONSTR OF SLOPES

EASEMENT FOR CONSTR OF DRIVES

EASEMENT FOR CONSTR & MAINTENANCE OF DRAINAGE

BEGIN LIMIT OF ACCESS.....BLA

END LIMIT OF ACCESS.....ELA

LIMIT OF ACCESS

ORANGE BARRIER FENCE

ESA - ENV. SENSITIVE AREA (SEE ERIT TABLE)

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SCALE IN FEET

REVISION	DATE

GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN

NORTH BOGAN ROAD AT THOMPSON MILL ROAD
INTERSECTION IMPROVEMENTS

CHECKED: DATE:

BACKCHECKED: DATE:

CORRECTED: DATE:

VERIFIED: DATE:

DRAWING No.
13-0001

Curve* 3
PI Sta= 108+81.29
N= 1497927.2243
E= 2357669.7553
DELTA= 5°20'52.0" (RT)
D= 5°43'46.48"
T= 46.70
L= 93.34
R= 1000.00
E= 1.09
e= MATCH CIRCULATORY ROAD

Curve* 5
PI Sta= 202+75.42
N= 1497890.2212
E= 2357440.5439
DELTA= 15°54'49.7" (RT)
D= 10°42'34.17"
T= 74.78
L= 148.60
R= 535.00
E= 5.20
e= 4.00%

05
N/F
OBIDIAH LOTT
DB 17717, PG 173
PB 50, PG 115
PARCEL ID: R7264 059
4389 THOMPSON MILL ROAD

02
N/F
CECILIO A PALACIOS
SILVIA PALACIOS
DB 52848, PG 689
PARCEL ID: R7264 003
3018 NORTH BOGAN ROAD

01
N/F
CECILIO A PALACIOS
SILVIA PALACIOS
DB 56297, PG 48
PARCEL ID: R7264 002
4379 THOMPSON MILL ROAD

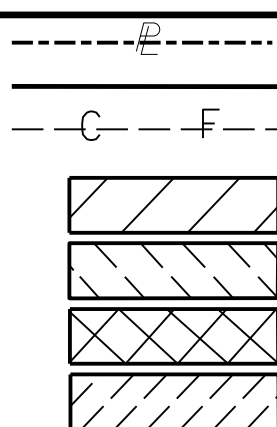
08
N/F
HIENG UNG
DB 48572, PG 538
PB 33, PG 187
PARCEL ID: R7264 016
4363 NORTH BOGAN ROAD

09
N/F
9 SYU ZHANG
DB 52566, PG 617
PARCEL ID: R7264 017
4355 THOMPSON MILL ROAD
BEGIN 4" DITCH
STA 107+71.22
2.50' CURB AND
GUTTER
TP 7, 6" HEADER
CURB

Curve* 1
PI Sta= 103+56.04
N= 1498139.6600
E= 2357216.5230
DELTA= 16°32'10.6" (LT)
D= 5°12'31.35"
T= 159.85
L= 317.47
R= 1100.00
E= 11.55
e= 3.80%

Curve* 2
PI Sta= 106+07.84
N= 1498107.7349
E= 2357468.5296
DELTA= 20°54'25.2" (RT)
D= 19°05'54.94"
T= 55.35
L= 109.47
R= 300.00
E= 5.06
e= MATCH CIRCULATORY ROAD

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
EASEMENT FOR CONSTR
& MAINTENANCE OF DRAINAGE

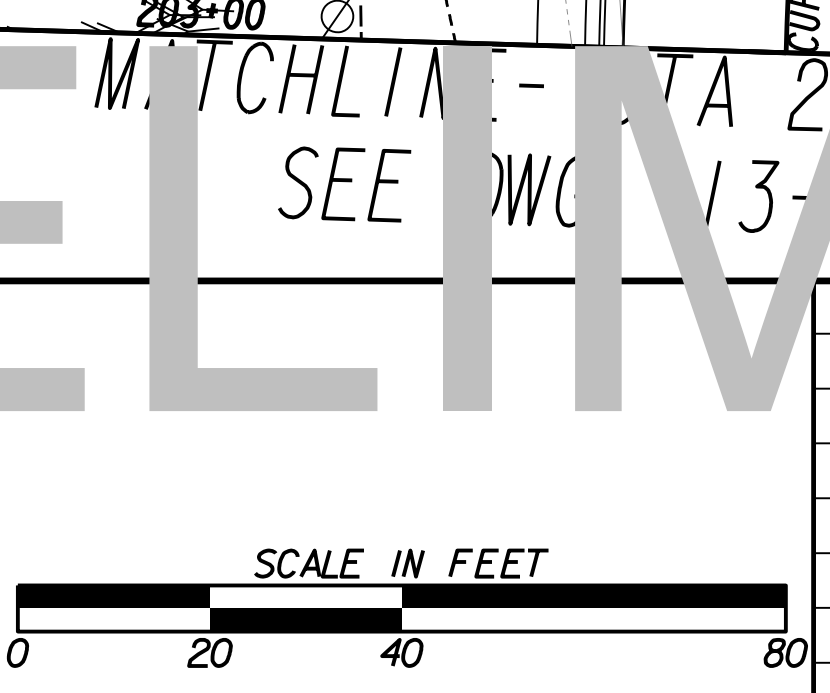


BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)

LAND LOT 264
LAND LOT 263



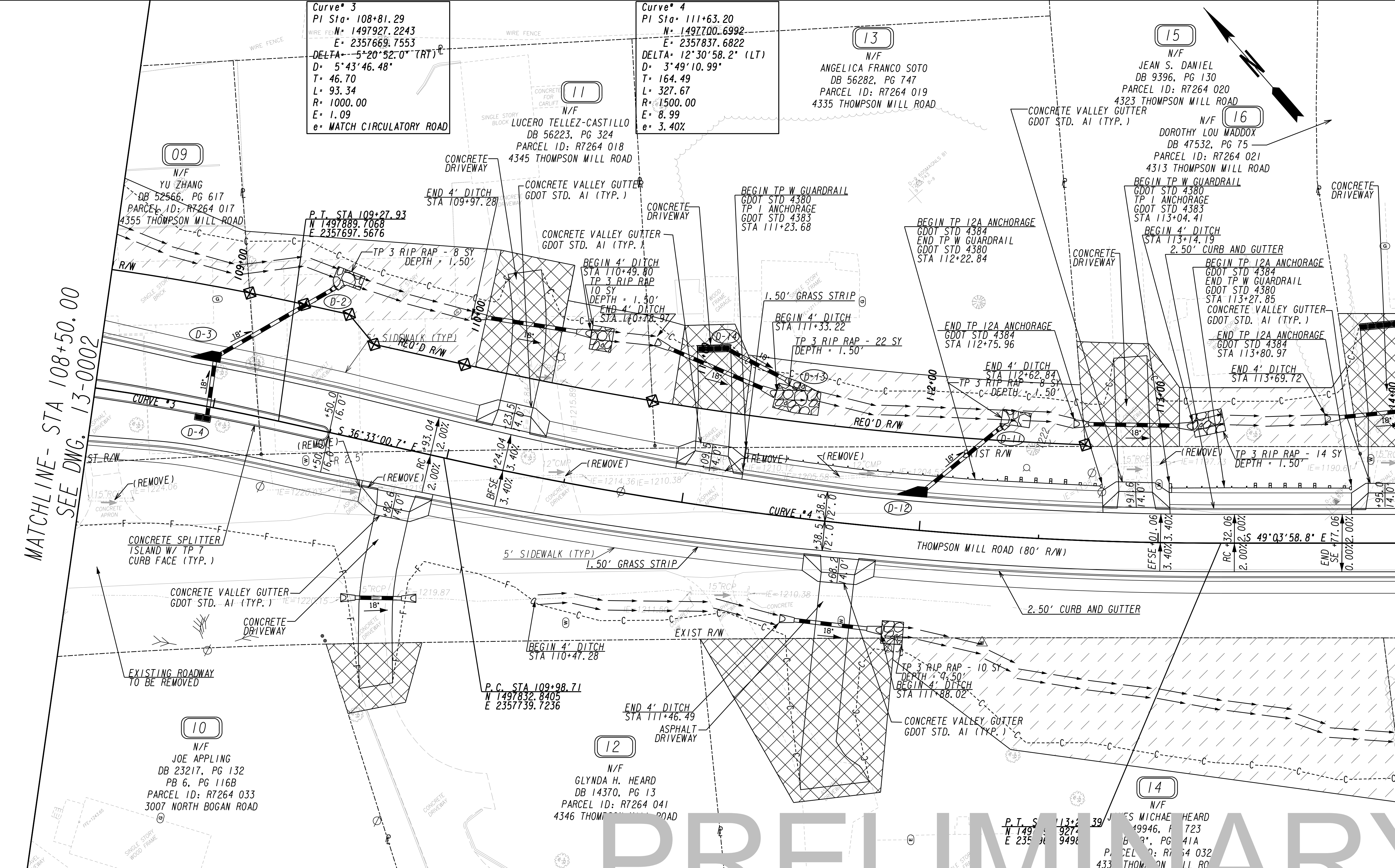
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Duluth, GA 30097
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REVISIONS

GWINNETT COUNTY DEPARTMENT OF TRANSPORTATION	
CONSTRUCTION PLAN	
NORTH BOGAN ROAD AT THOMPSON MILL ROAD INTERSECTION IMPROVEMENTS	
CHECKED:	DATE:
BACKCHECKED:	DATE:
CORRECTED:	DATE:
VERIFIED:	DATE:
DRAWING No. 13-0002	

PRELIMINARY



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
EASEMENT FOR CONSTR
& MAINTENANCE OF DRAINAGE

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)

10/23/2015 GPN

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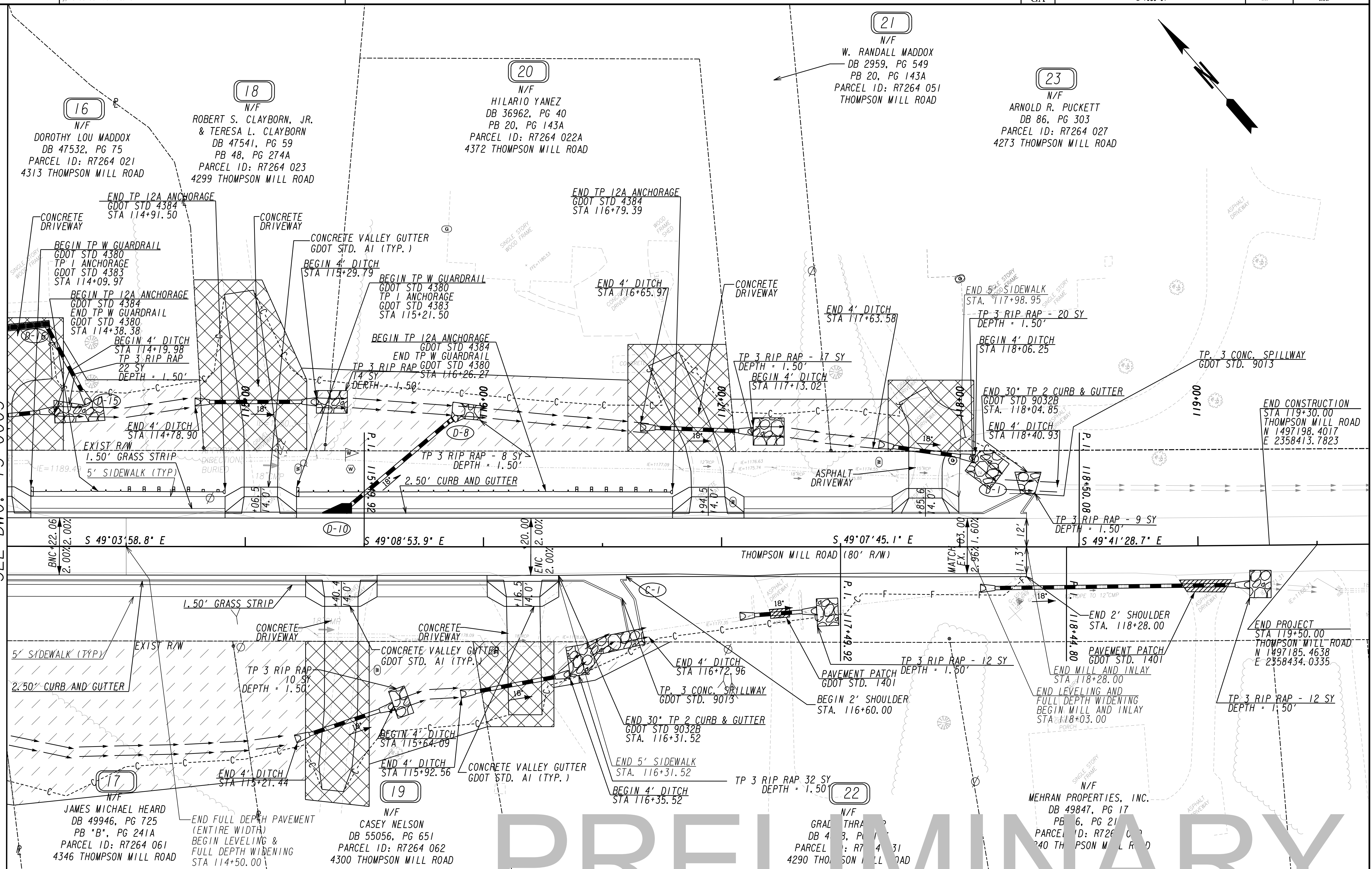
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REVISION	DATE	DESCRIPTION

GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLAN
NORTH BOGAN ROAD AT THOMPSON MILL ROAD
INTERSECTION IMPROVEMENTS

CHECKED:	DATE:	DRAWING No. 13-0003
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

MATCHLINE- STA 114+00.00
SEE DWG. 13-0003



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
EASEMENT FOR CONSTR
& MAINTENANCE OF DRAINAGE

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)

10/23/2015
GPLN

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(678) 417-4000
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SCALE IN FEET
0 20 40 80

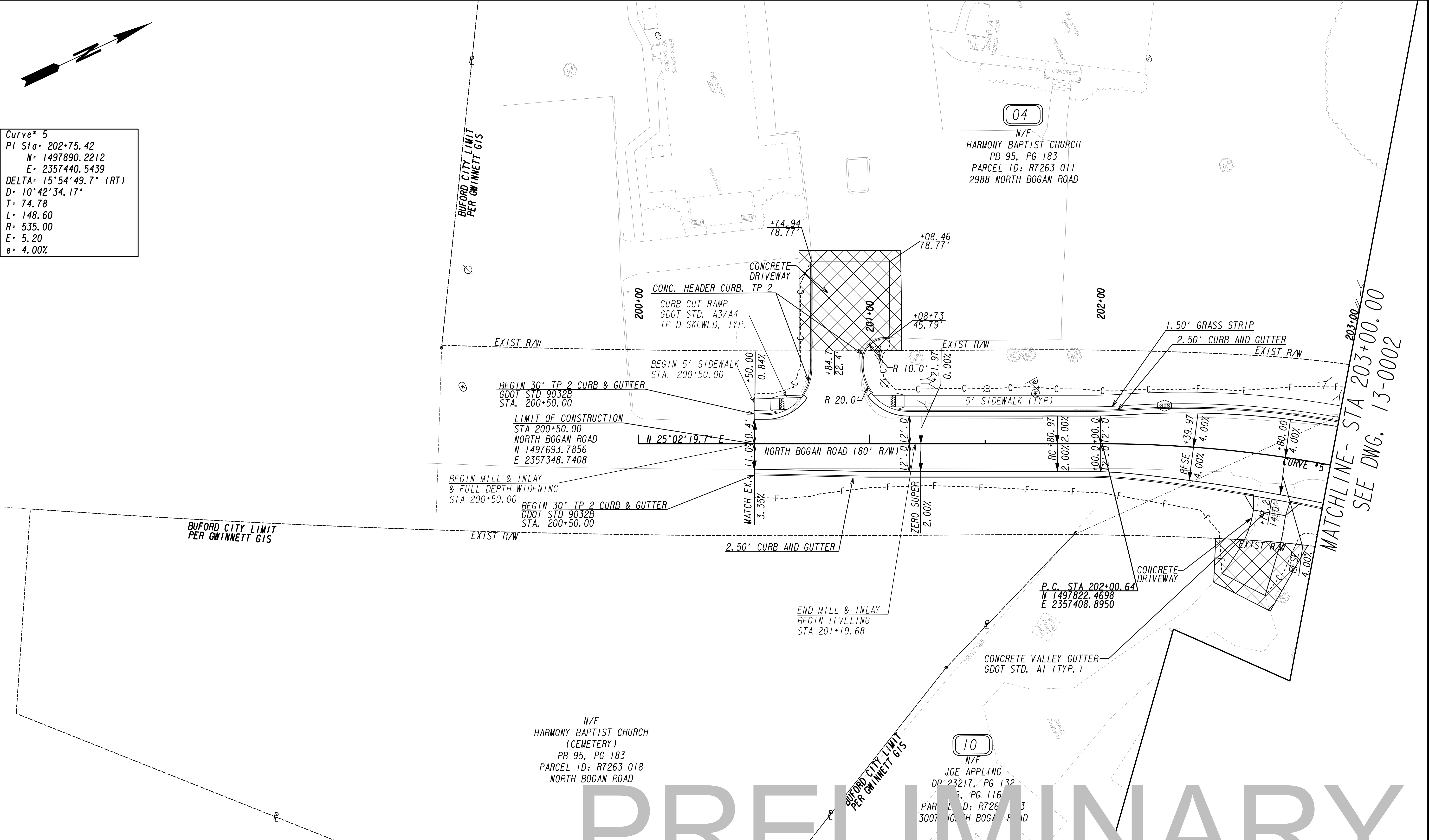
REVISIONS

NO.	DATE	DESCRIPTION

GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLAN
NORTH BOGAN ROAD AT THOMPSON MILL ROAD
INTERSECTION IMPROVEMENTS

CHECKED:	DATE:	DRAWING No.
BACKCHECKED:	DATE:	13-0004
CORRECTED:	DATE:	
VERIFIED:	DATE:	

Curve* 5
PI Sta* 202+75.42
N* 1497890.2212
E* 2357440.5439
DELTA* 15°54'49.7" (RT)
D* 10°42'34.17"
T* 74.78
L* 148.60
R* 535.00
E* 5.20
e* 4.00%



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
EASEMENT FOR CONSTR
& MAINTENANCE OF DRAINAGE

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)

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keckwood.com

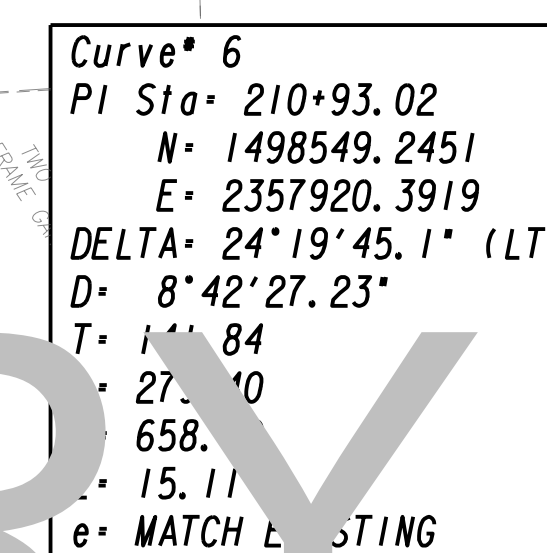
Gwinnett

SCALE IN FEET
0 20 40 80

REVISIONS	
NO.	DESCRIPTION

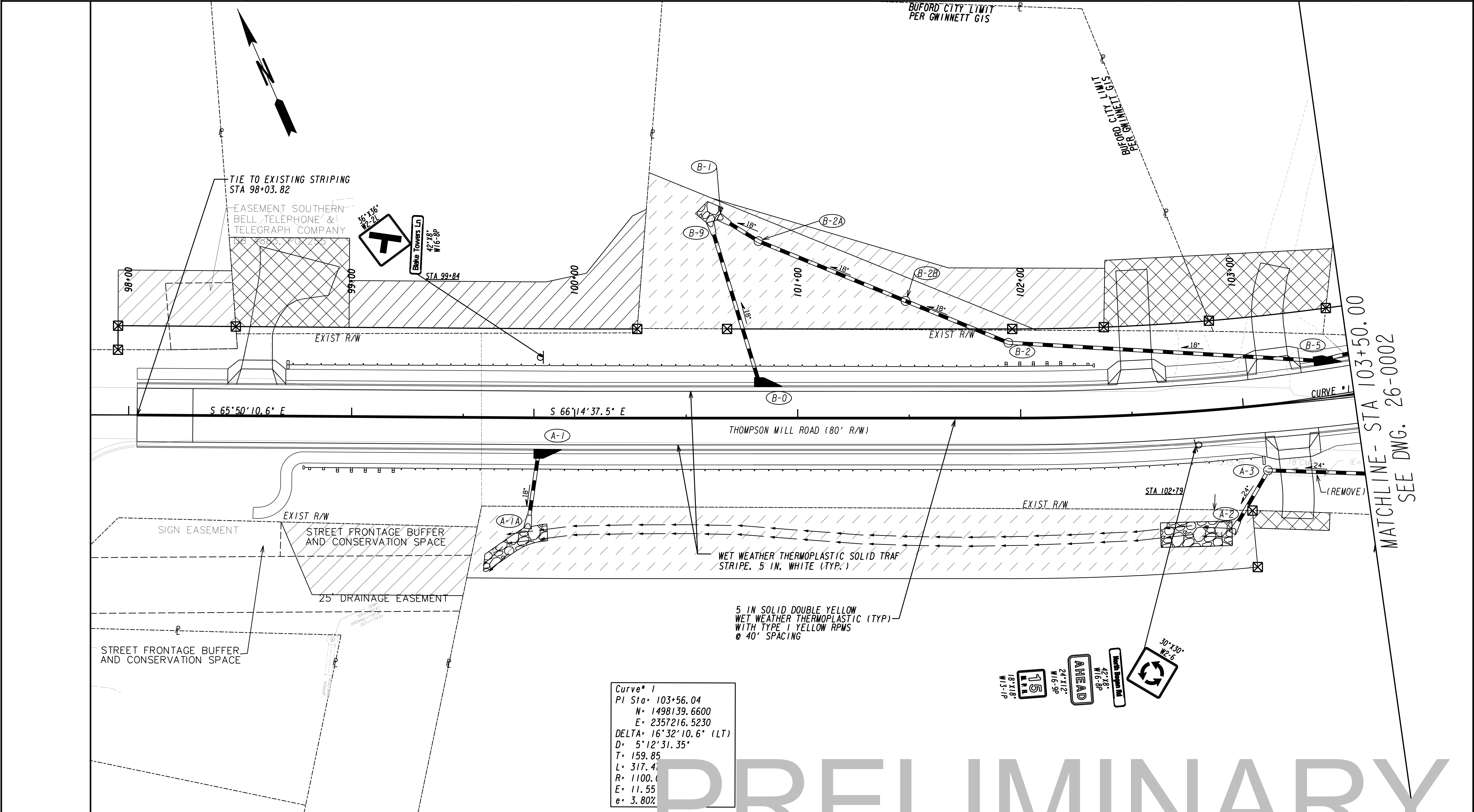
GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLAN
NORTH BOGAN ROAD AT THOMPSON MILL ROAD
INTERSECTION IMPROVEMENTS

CHECKED:	DATE:	DRAWING No. 13-0005
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	



DRAWING No.

13-000



10/23/2015
GPLN

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
EASEMENT FOR CONSTR
& MAINTENANCE OF DRAINAGE

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)

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(678) 417-4000
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Gwinnett

REVISION	DATE

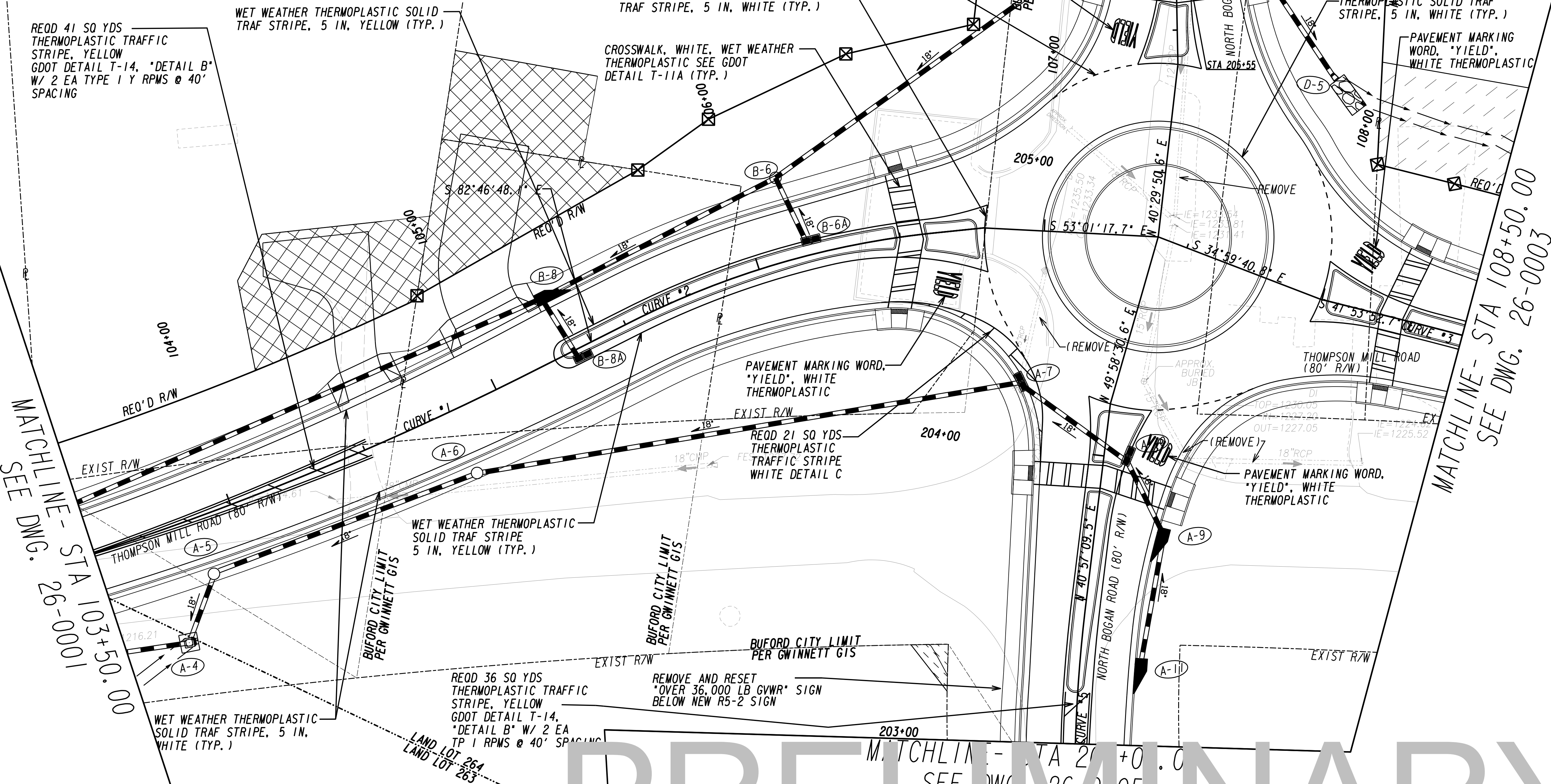
SCALE IN FEET
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DEPARTMENT OF TRANSPORTATION
SIGNING AND MARKING PLANS
NORTH BOGAN ROAD AT THOMPSON MILL ROAD
INTERSECTION IMPROVEMENTS

CHECKED:	DATE:	DRAWING No. 26-0001
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

Curve 3
PI Sta= 108+81.29
N= 1497927.2243
E= 2357669.7553
DELTA= 5°20'52.0" (RT)
D= 5°43'46.48"
T= 46.70
L= 93.34
R= 1000.00
E= 1.09
e= MATCH CIRCULATORY ROAD

Curve 5
PI Sta= 202+75.42
N= 1497890.2212
E= 2357440.5439
DELTA= 15°54'49.7" (RT)
D= 10°42'34.17"
T= 74.78
L= 148.60
R= 535.00
E= 5.20
e= 4.00%



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
EASEMENT FOR CONSTR
& MAINTENANCE OF DRAINAGE

-----P-----

-----C-----F-----

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)

Keck+Wood

COLLABORATION BY DESIGN

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Duluth, GA 30097
(678) 417-4000 keckwood.com

Gwinnett

SCALE IN FEET

0

20

40

80

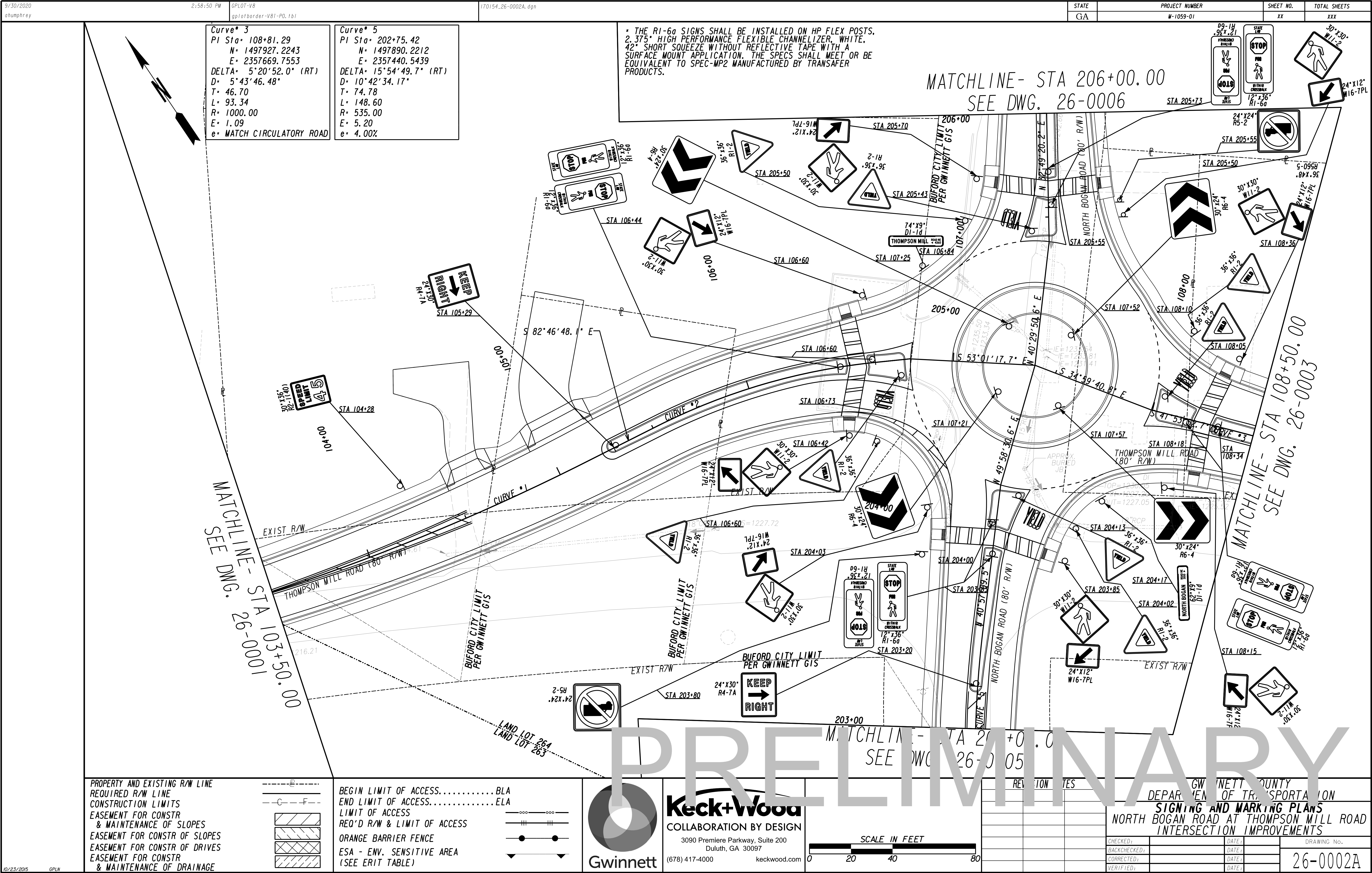
REVISIONS

NO.	DESCRIPTION	DATE

DEPARTMENT OF TRANSPORTATION
SIGNING AND MARKING PLANS
NORTH BOGAN ROAD AT THOMPSON MILL ROAD
INTERSECTION IMPROVEMENTS

CHECKED: DATE:
BACKCHECKED: DATE:
CORRECTED: DATE:
VERIFIED: DATE:

DRAWING No.
26-0002



MATCHLINE- STA 108+50.00
SEE DWG. 26-0002

MATCHLINE- STA 114+00.00
SEE DWG. 26-0004

Curve* 3
PI Sta* 108+81.29
N* 1497927.2243
E* 2357669.7553
DELTA* 5°20'52.0" (RT)
D* 5°43'46.48"
T* 46.70
L* 93.34
R* 1000.00
E* 1.09
e* MATCH CIRCULATORY ROAD

Curve* 4
PI Sta* 111+63.20
N* 1497700.6992
E* 2357837.6822
DELTA* 12°30'58.2" (LT)
D* 3°49'10.99"
T* 164.49
L* 327.67
R* 1500.00
E* 8.99
e* 3.40%

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
EASEMENT FOR CONSTR
& MAINTENANCE OF DRAINAGE

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)

Keck+Wood
COLLABORATION BY DESIGN
3090 Premiere Parkway, Suite 200
Duluth, GA 30097
(678) 417-4000 keckwood.com

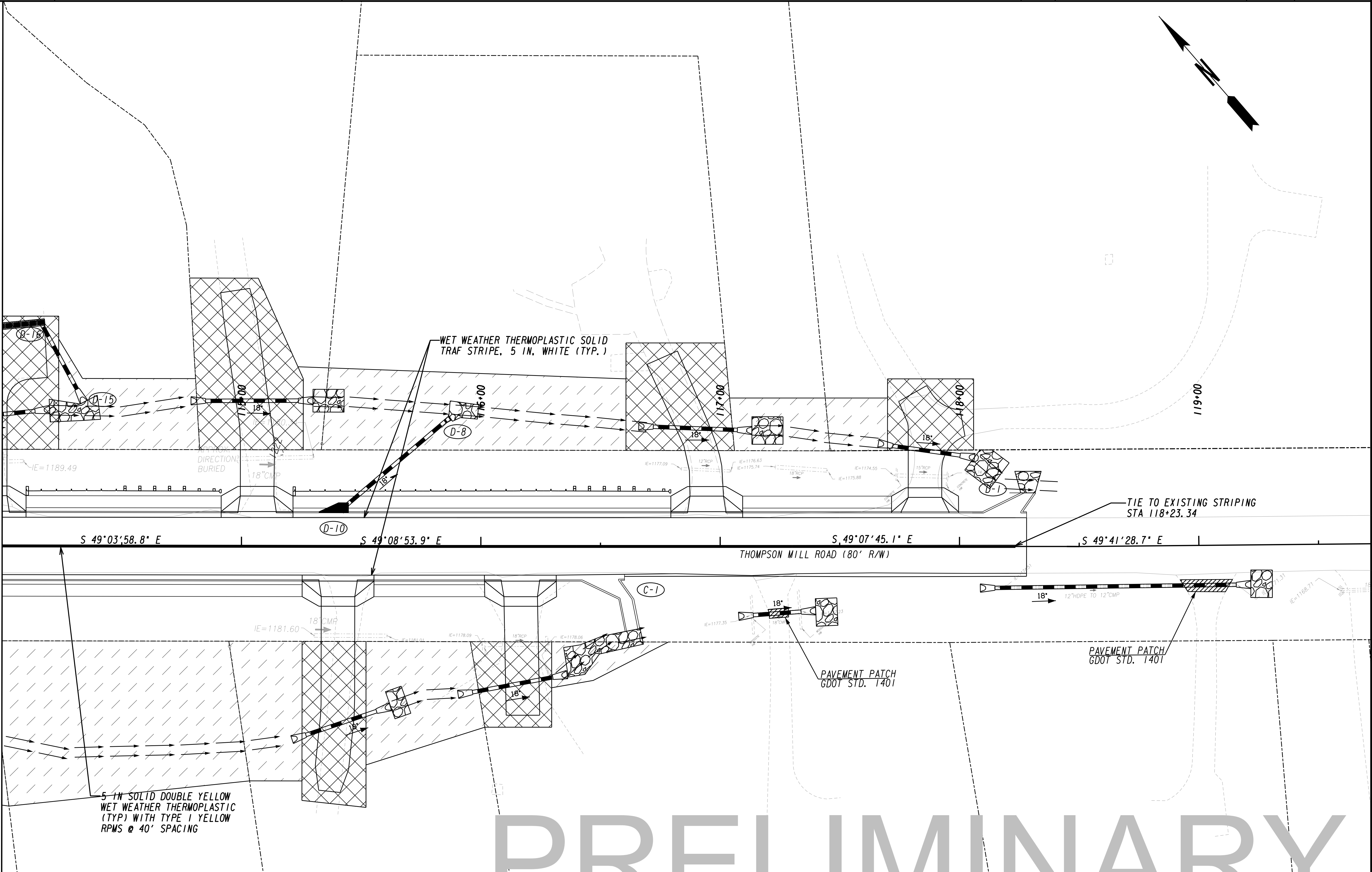
SCALE IN FEET

REVISIONS	

CHECKED:	DATE:
BACKCHECKED:	DATE:
CORRECTED:	DATE:
VERIFIED:	DATE:

GWINNETT COUNTY DEPARTMENT OF TRANSPORTATION SIGNING AND MARKING PLANS NORTH BOGAN ROAD AT THOMPSON MILL ROAD INTERSECTION IMPROVEMENTS	
DRAWING No. 26-0003	

MATCHLINE- STA 114+00.00
SEE DWG. 26-0003



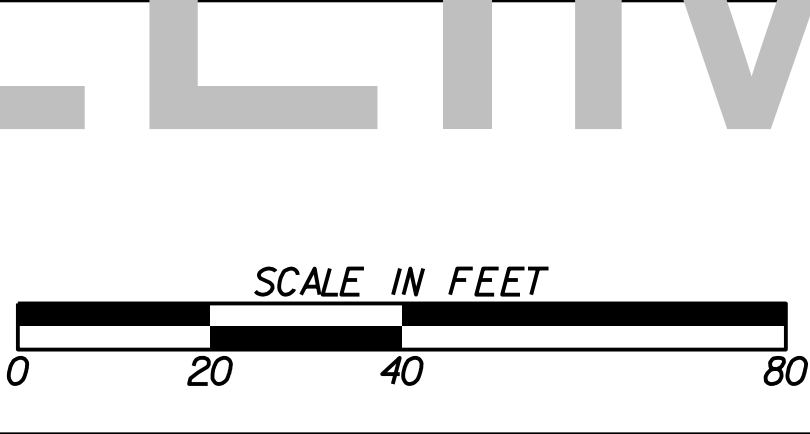
PRELIMINARY

PROPERTY AND EXISTING R/W LINE	---
REQUIRED R/W LINE	---
CONSTRUCTION LIMITS	---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	---
EASEMENT FOR CONSTR OF SLOPES	---
EASEMENT FOR CONSTR OF DRIVES	---
EASEMENT FOR CONSTR & MAINTENANCE OF DRAINAGE	---

BEGIN LIMIT OF ACCESS.....BLA	---
END LIMIT OF ACCESS.....ELA	---
LIMIT OF ACCESS	---
REQ'D R/W & LIMIT OF ACCESS	---
ORANGE BARRIER FENCE	---
ESA - ENV. SENSITIVE AREA (SEE ERIT TABLE)	---

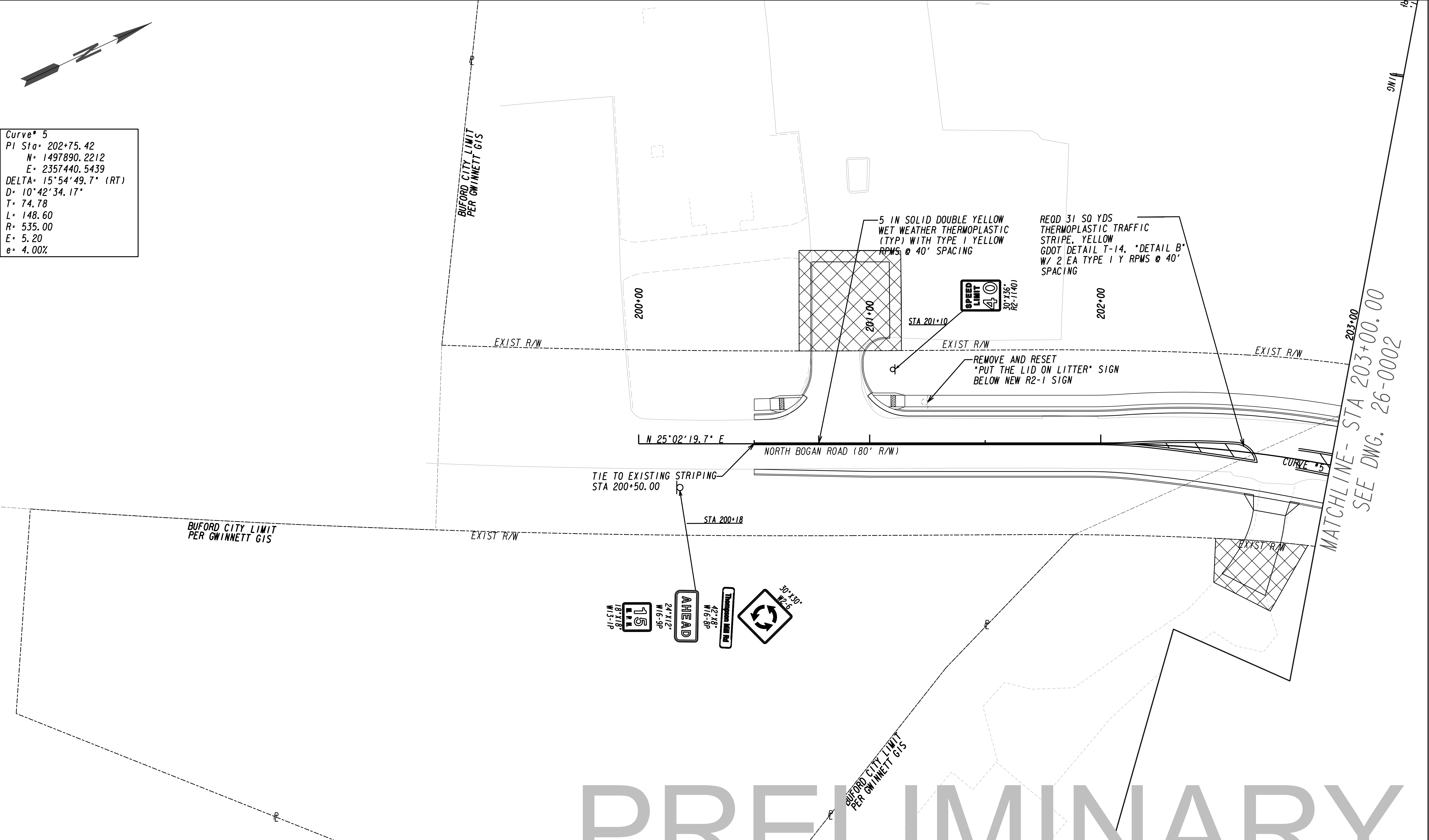


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REVISIONS	GWINNETT COUNTY DEPARTMENT OF TRANSPORTATION SIGNING AND MARKING PLANS NORTH BOGAN ROAD AT THOMPSON MILL ROAD INTERSECTION IMPROVEMENTS	
CHECKED:	DATE:	DRAWING No.
BACKCHECKED:	DATE:	26-0004
CORRECTED:	DATE:	
VERIFIED:	DATE:	

Curve* 5
PI Sta* 202+75.42
N* 1497890.2212
E* 2357440.5439
DELTA* 15°54'49.7" (RT)
D* 10°42'34.17"
T* 74.78
L* 148.60
R* 535.00
E* 5.20
e* 4.00%



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
EASEMENT FOR CONSTR
& MAINTENANCE OF DRAINAGE

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)

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SCALE IN FEET

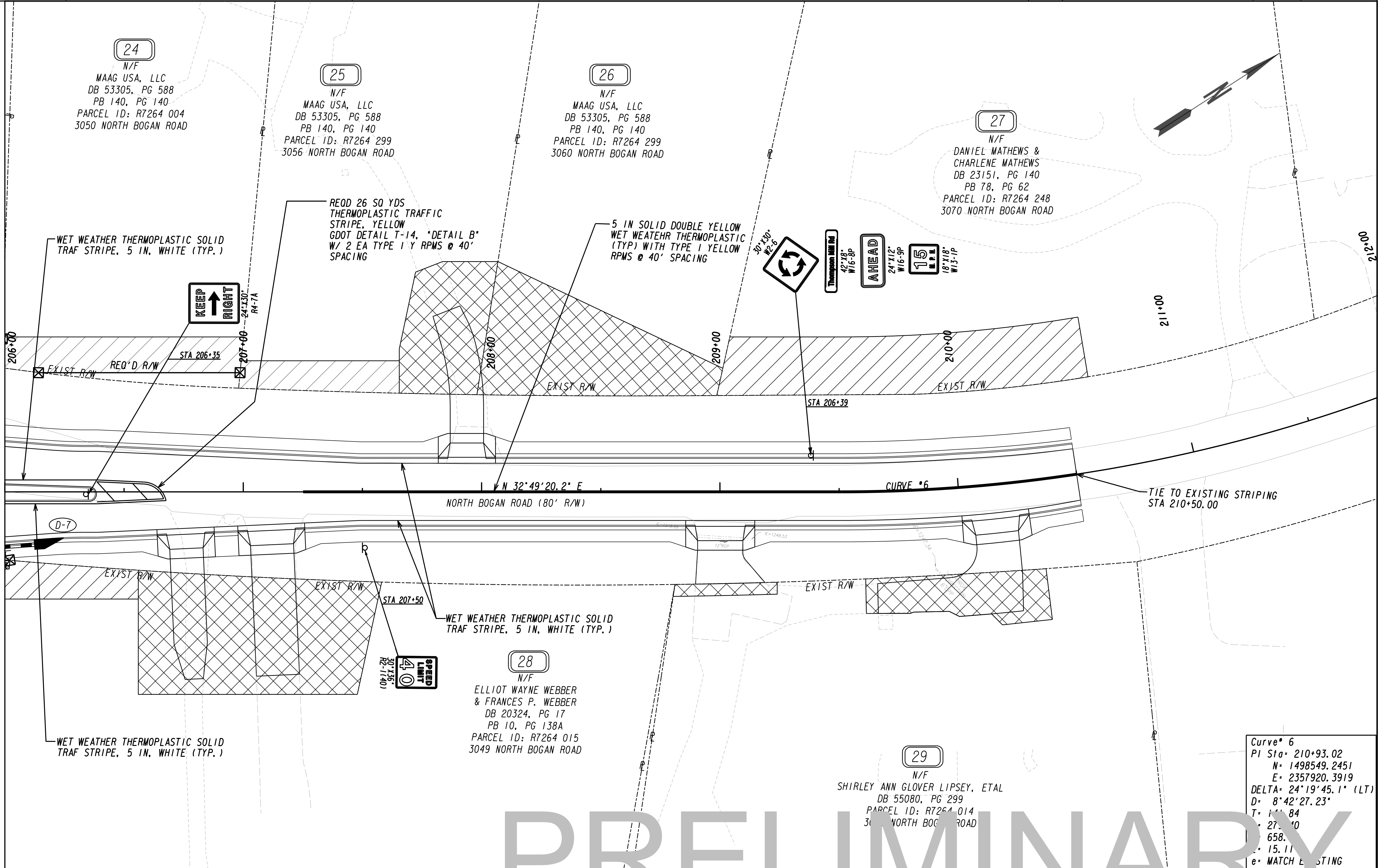
REVISION		DATE

GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION
SIGNING AND MARKING PLANS
NORTH BOGAN ROAD AT THOMPSON MILL ROAD
INTERSECTION IMPROVEMENTS

CHECKED:	DATE:
BACKCHECKED:	DATE:
CORRECTED:	DATE:
VERIFIED:	DATE:

DRAWING No.
26-0005

MATCHLINE- STA 206+00.00
SEE DWG. 26-0002



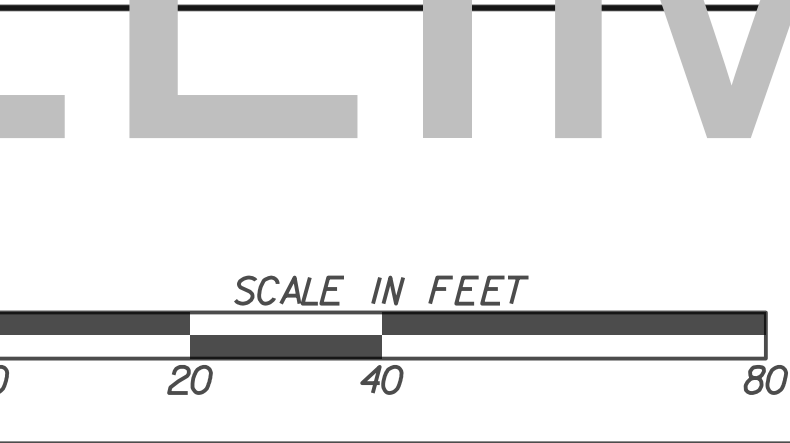
PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
EASEMENT FOR CONSTR
& MAINTENANCE OF DRAINAGE

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)



COLLABORATION BY DESIGN

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REVISIONS		GWINNETT COUNTY DEPARTMENT OF TRANSPORTATION	
		SIGNING AND MARKING PLANS NORTH BOGAN ROAD AT THOMPSON MILL ROAD INTERSECTION IMPROVEMENTS	
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	26-0006	
CORRECTED:	DATE:		
VERIFIED:	DATE:		

Curve* 6
PI Sta= 210+93.02
N= 1498549.2451
E= 2357920.3919
DELTA= 24°19'45.1" (LT)
D= 8°42'27.23"
T= 111.84
L= 273.10
e= 658.11
e= MATCH EXISTING

Preferred Interchange Concept

Par-Clo B (3 Quadrant)

- No Design Variances/ Exceptions anticipated
- Existing bridge retained; widened to the north
- 17 acres of ROW

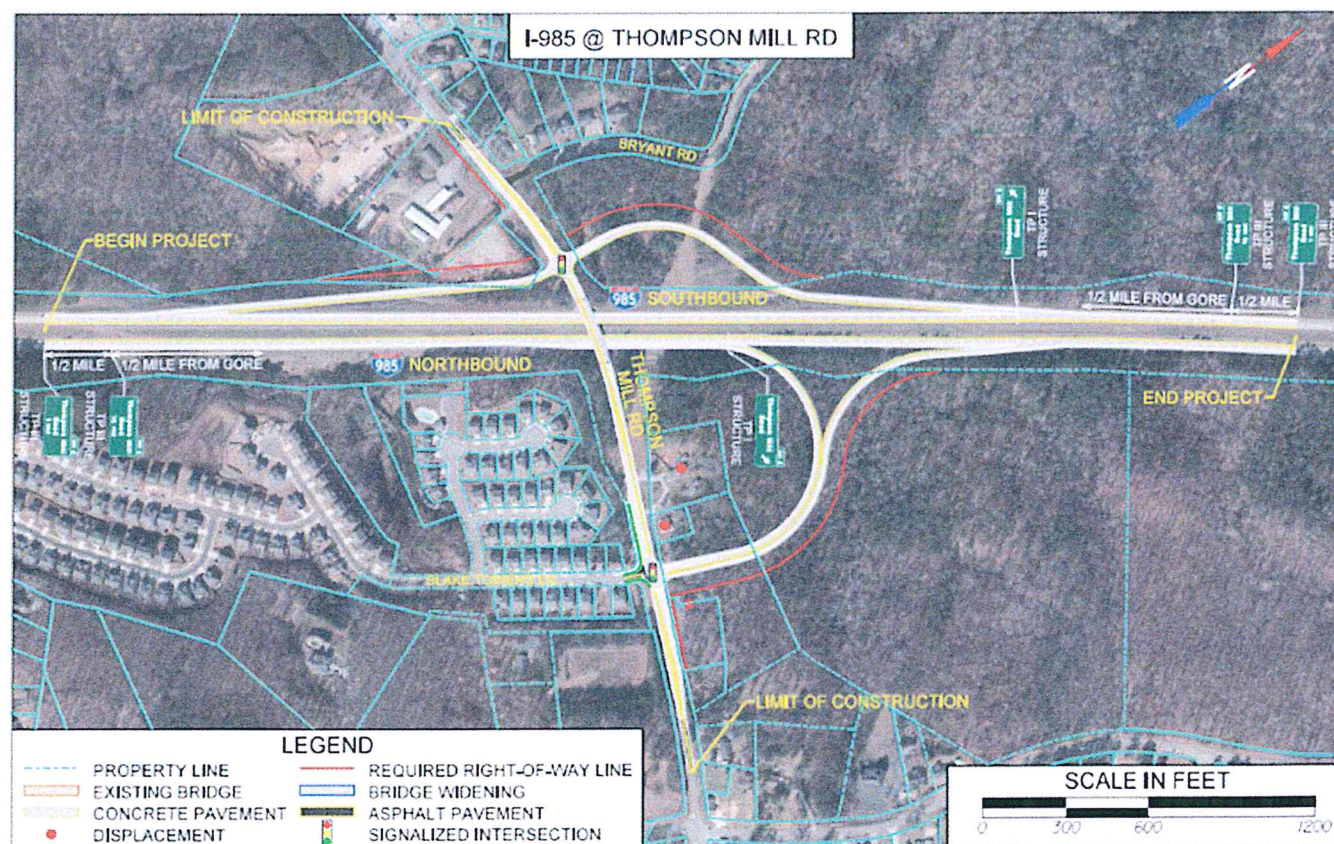


Figure 6-3: 2030 Build Opening Year AADT

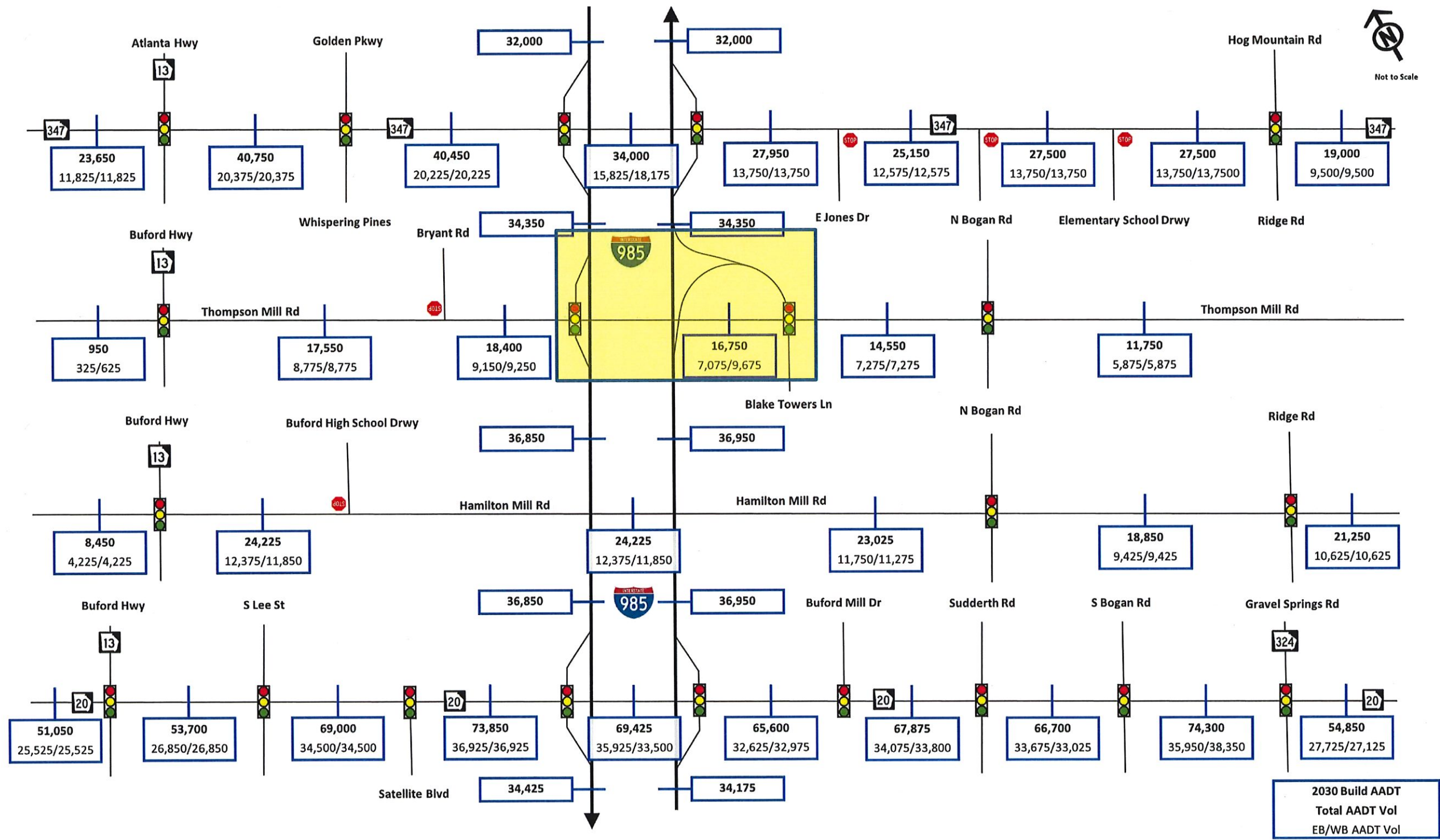


Figure 6-4: 2030 Build Opening Year DHV

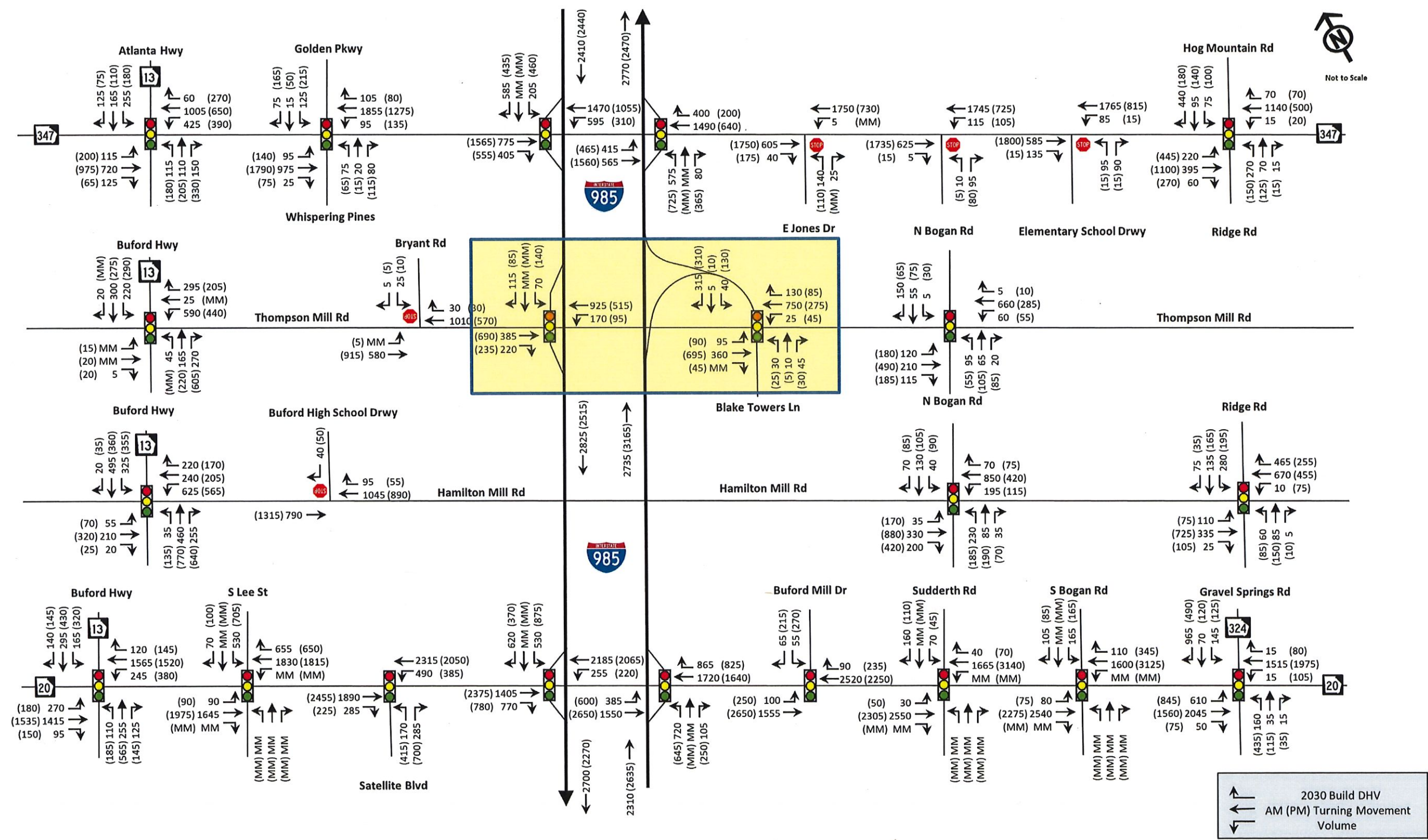


Figure 6-5: 2050 Build Design Year AADT

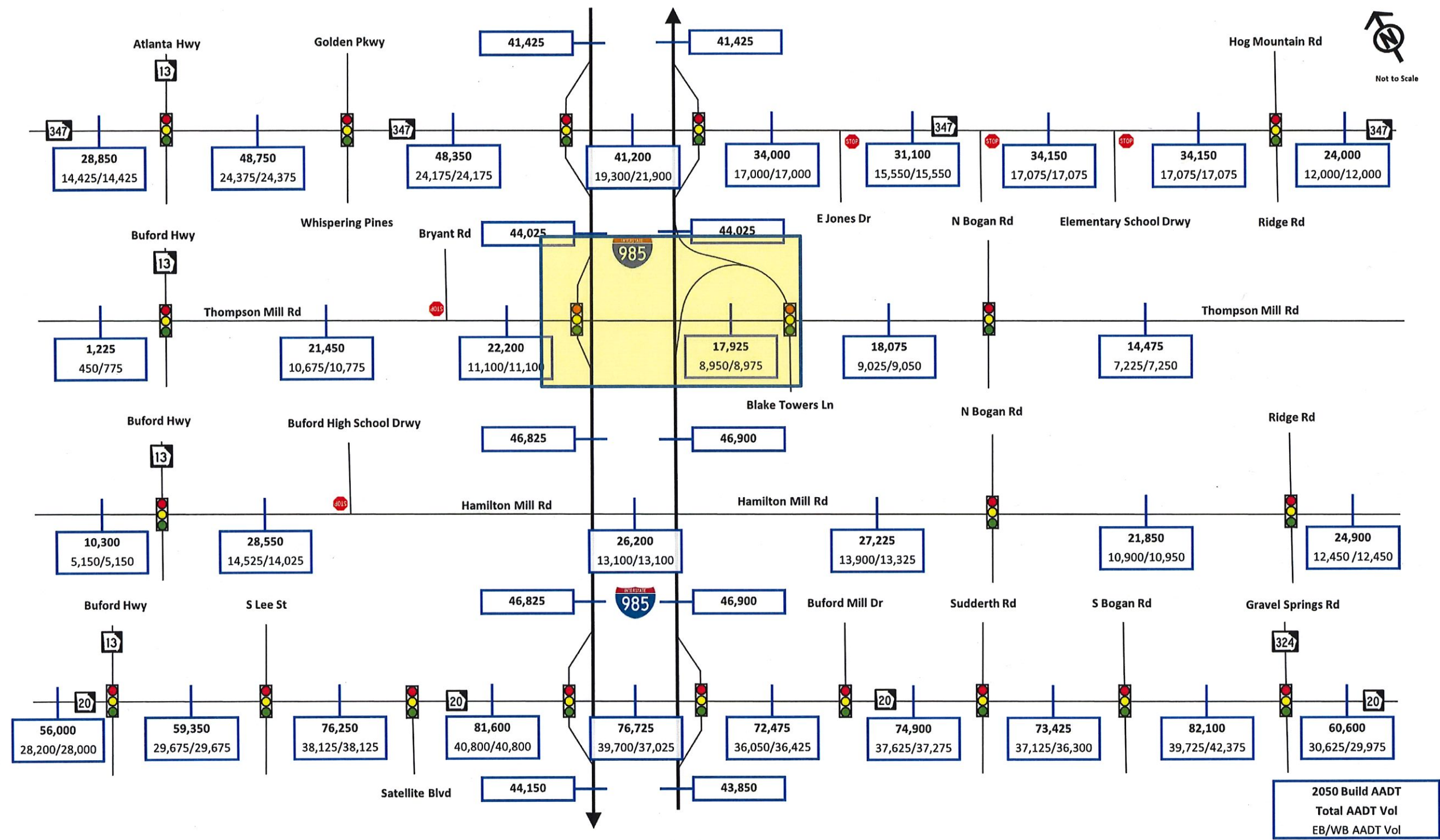
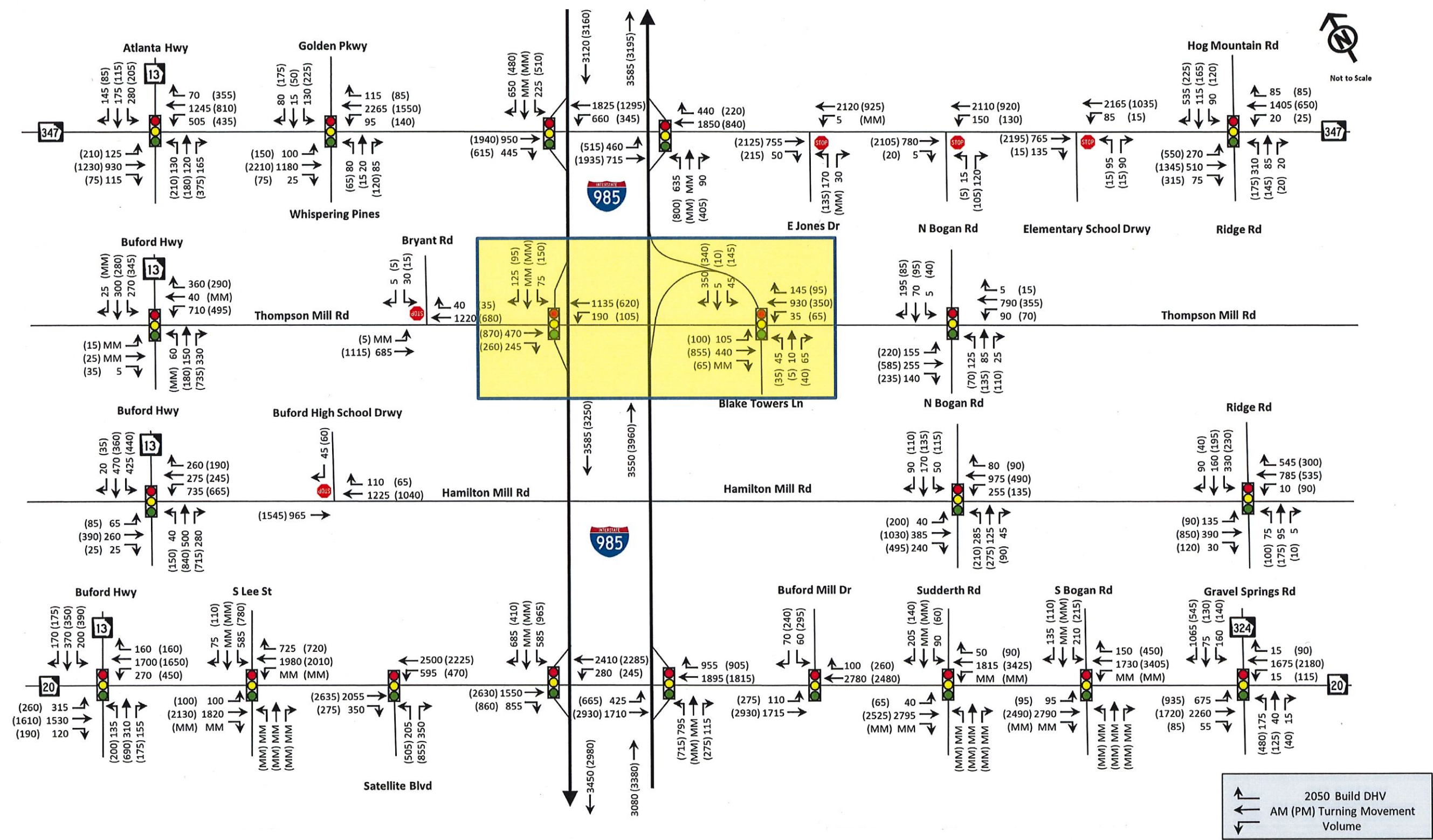


Figure 6-6: 2050 Build Design Year DHV



Appendix E: Trip Generation Supplement

Warehousing (150)

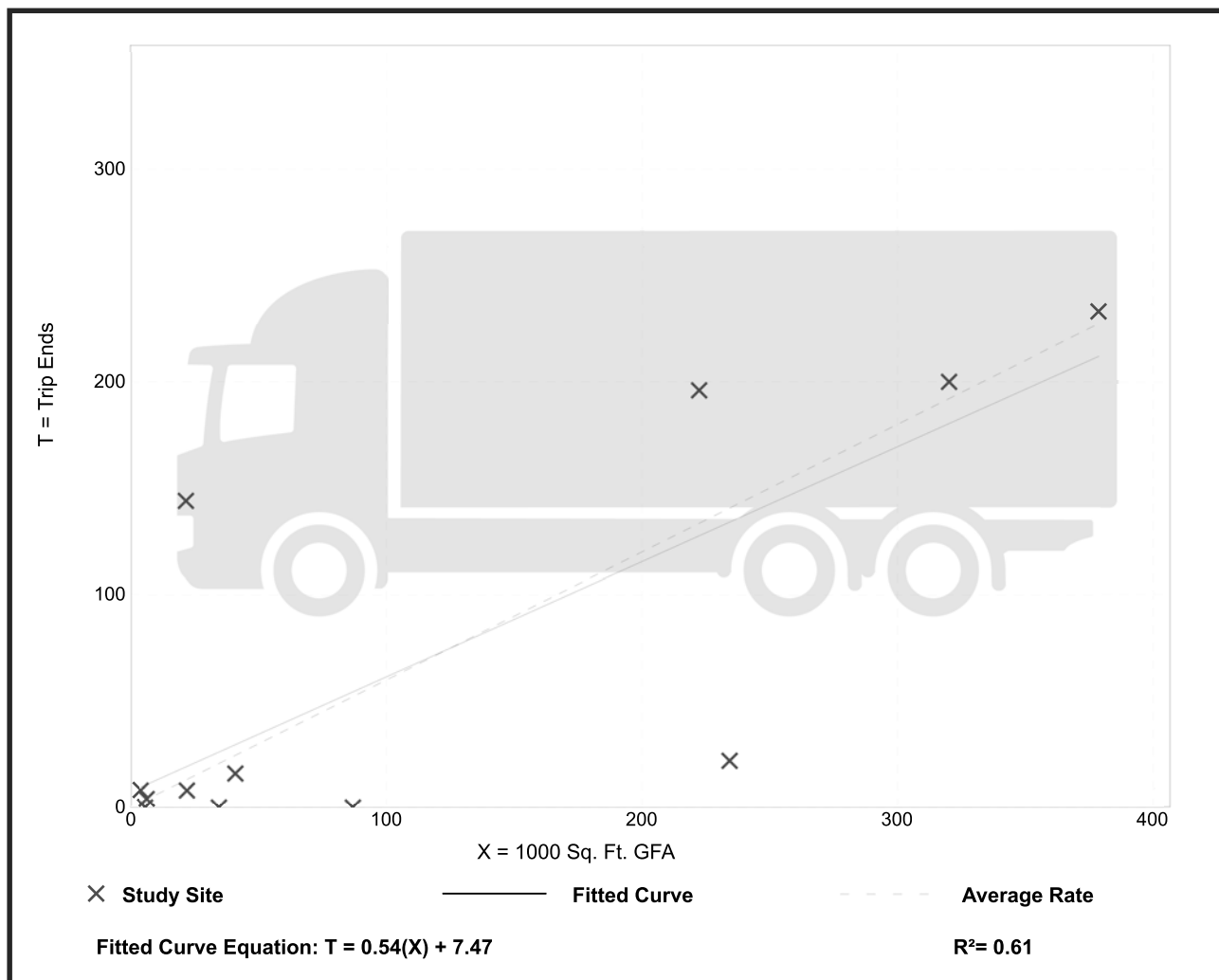
Truck Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 12
Avg. 1000 Sq. Ft. GFA: 115
Directional Distribution: 50% entering, 50% exiting

Truck Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.60	0.00 - 6.66	0.86

Data Plot and Equation



Trip Gen Manual, 10th Ed + Supplement • Institute of Transportation Engineers

Warehousing (150)

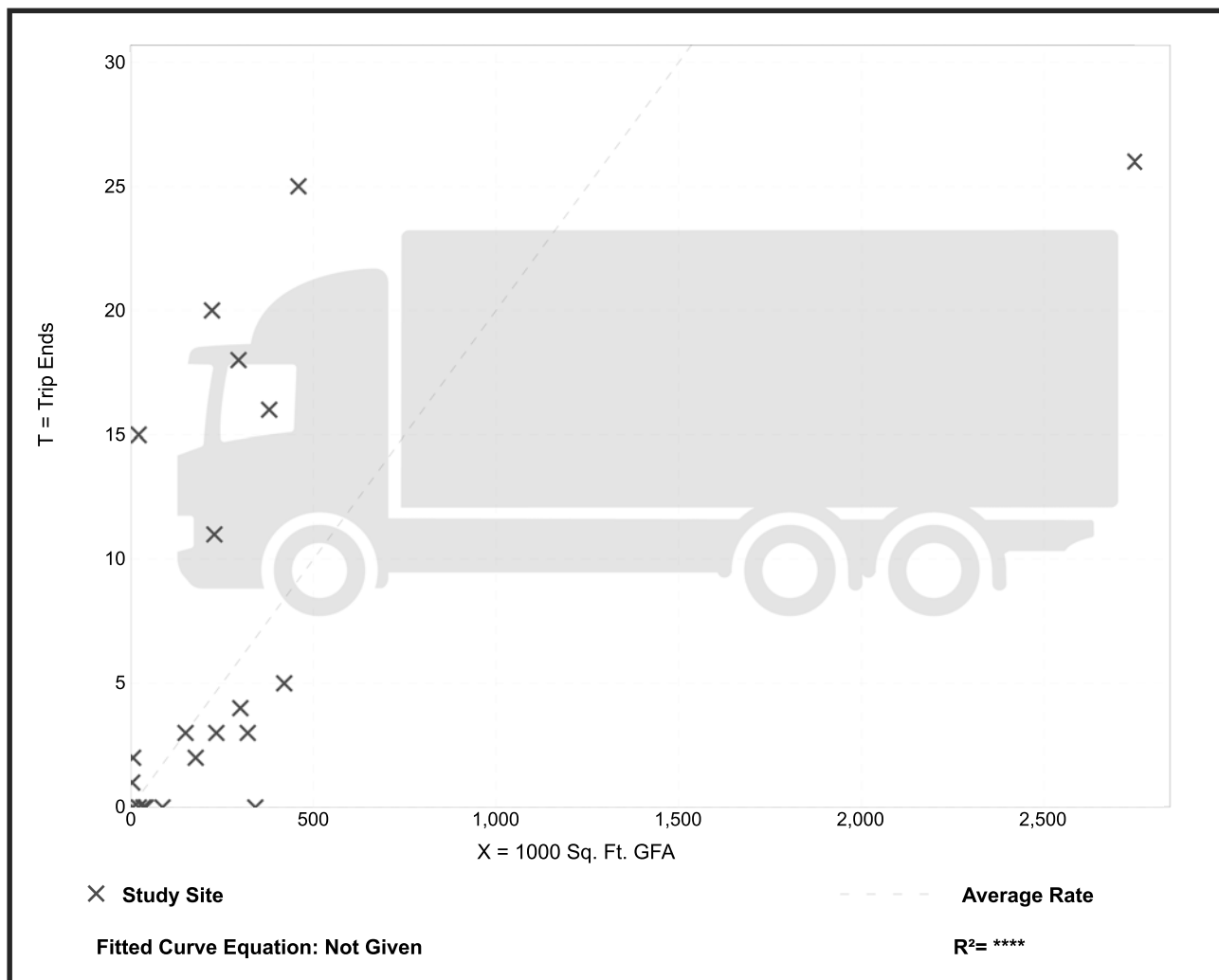
Truck Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban
 Number of Studies: 21
 Avg. 1000 Sq. Ft. GFA: 309
 Directional Distribution: 52% entering, 48% exiting

Truck Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.02	0.00 - 0.69	0.05

Data Plot and Equation



Warehousing (150)

Truck Trip Ends vs: 1000 Sq. Ft. GFA

**On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.**

Setting/Location: General Urban/Suburban

Number of Studies: 23

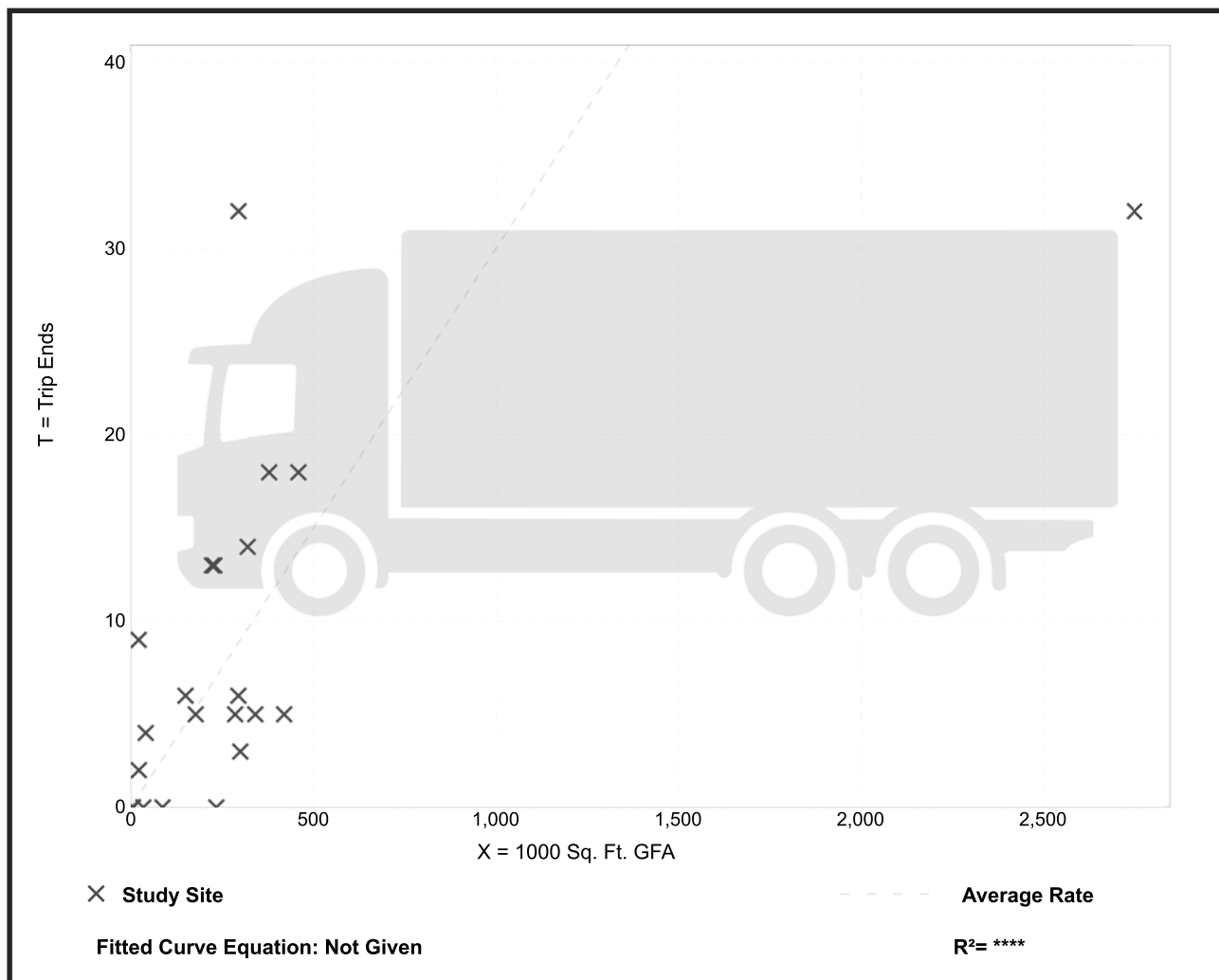
Avg. 1000 Sq. Ft. GFA: 308

Directional Distribution: 52% entering, 48% exiting

Truck Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.03	0.00 - 0.42	0.03

Data Plot and Equation



Appendix F: AASHTO Turning Radius

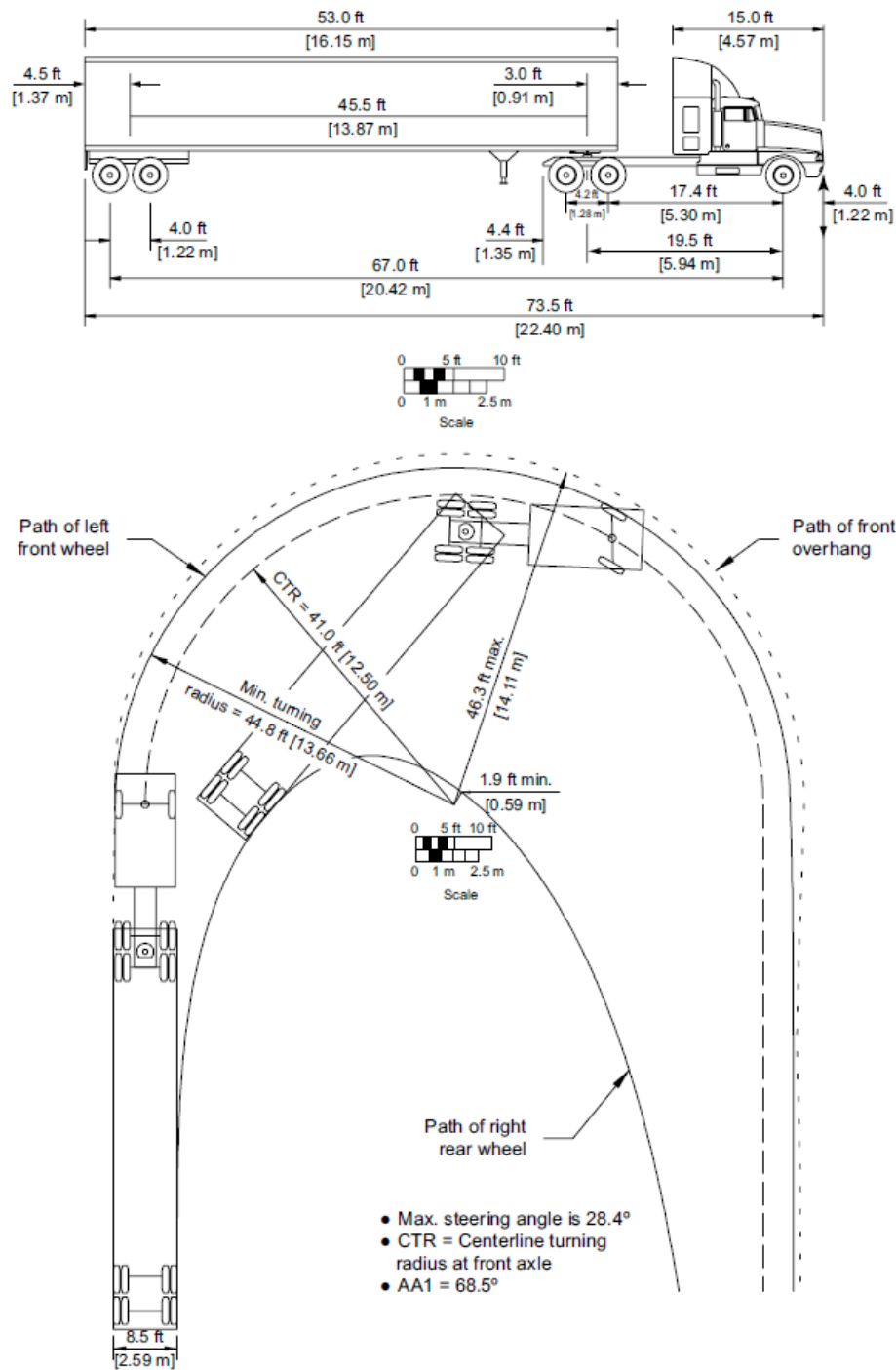


Figure 2-24. Minimum Turning Path for Interstate Semitrailer (WB-67 [WB-20]) Design Vehicle