RESOLUTION 2021___

A RESOLUTION ADOPTING THE "NORTH BRYAN TRANSPORTATION STUDY SUPPLEMENTAL TIA"

WHEREAS, in 2018, Bryan County engaged Thomas and Hutton to prepare a transportation study for North Bryan County. The purpose of the transportation study was to establish baseline transportation conditions, i.e., existing conditions, existing levels of service, identify anticipated increases in traffic volumes through the horizon year of 2040, and identify potential transportation improvements based on traffic movements and development patterns during the same horizon year;

WHEREAS, due to the anticipated growth in North Bryan, in particular along the US 80 and US 280 corridors, and in conjunction with the newly formed North Bryan Industrial Development Region (IDR), Thomas and Hutton has been engaged to prepare a supplemental Transportation Impact Analysis (TIA) which identifies specific recommendations for transportation improvements at the US 80 and US 280 intersection and also along their respective corridors;

WHEREAS, the improvements identified in the TIA serve as the basis for the individual Transportation Improvement Contribution Agreements that are required as part of the development review process in the North Bryan IDR;

WHEREAS, Thomas and Hutton has presented the final draft of the Study;

BE IT THEREFORE RESOLVED, that Bryan County does hereby approve and adopt the North Bryan Transportation Study Supplemental TIA.

ADOPTED THIS 13th DAY OF JULY, 2021.

BRYAN COUNTY BOARD OF COMMISSIONERS

(SEAL)

By: Carter Infinger
Carter Infinger Chairman

Attest: Charlene Butler
Charlene Butler, Deputy County Clerk

THOMAS & HUTTON

NORTH BRYAN TRANSPORTATION STUDY

SUPPLEMENTAL TIA

BRYAN COUNTY, GEORGIA

PREPARED FOR:
BRYAN COUNTY

J – 28432.0000, J–28681.0000,
J–28698.000, J – 28699.0000

JUNE 8, 2021

thomasandhutton.com

TABLE OF CONTENTS

FIGURES

APPENDICES

1. INTRODUCTION

Bryan County prepared a Transportation Study for the North Bryan County area in 2018 ("2018 Study"). The 2018 Study established baseline conditions and identified potential transportation improvements for the horizon year of 2040 based on anticipated future development for the area. Since the 2018 Study was prepared additional commercial/industrial development has been approved for the North Bryan County area. These new developments are located near the I-16/US 280 interchange as well as the area along US Highway 80 between the US 280 intersection and Olive Branch Road. This supplement updates the information included in the 2018 Study to assess potential impacts from the approved developments for the area.

Several warehouse facilities are proposed in northern Bryan County, Georgia (**Figure 1**). Warehouse buildings on seven different tracts are expected to be constructed, with a total building footprint of approximately 19,487,530 square feet. Buildout of the sites is anticipated over the next ten to fifteen years. This study looks at a twenty–year growth horizon (2040) for the area as well as improvements that may be needed in the interim to service the expected growth. A twenty–year growth horizon is typical for a regional traffic study, and it is more of a "worse case" study than a fifteen–year horizon since it assumes more background traffic growth.

The major access to the sites will be from US 80, US 280, and I–16. Other significant access roads include SR 119 and SR 46. A preliminary site plan is shown in **Figure 2**.

Several access points for the proposed warehouse buildings are proposed. This study does not evaluate individual access points; instead, it takes a broader look at traffic conditions in the general vicinity of the project. The access points are labeled on the drawing as intersections 6,7, and 8. Based on the number of access points and size of the facilities proposed, it is assumed each of the main access points will need left and right turn lanes to service the facilities. During the development process for the individual sites they will each have to complete an Intersection Control Evaluation (ICE) study for submittal to GDOT as a part of their access permit. At that time a detailed study of those access points will be completed based on the proposed development plan. Several of the facilities will utilize Warnell Farm Road for access. The intersection of Warnell Farm Road and US 80 will need to be realigned to better accommodate the truck traffic from the facilities. Also Warnell Farm Road is a County facility that was not designed to accommodate the truck traffic from the proposed developments. It will need to be widened and the pavement section improved to accommodate the increase in traffic.

Morning and afternoon peak hour traffic conditions are evaluated at the following intersections in the area. The intersection descriptions are followed by the intersection number shown in brackets [ ] that correspond to the attached maps:

US 280 and Olive Branch Road [1]
US 280 and I–16 Eastbound Ramps [2]
US 280 and I–16 Westbound Ramps [3]
US 280 and Interstate Centre Blvd/Oracal Parkway [4]
US 280 and US 80(SR 26)/Eldora Road [5]
Olive Branch Road and US 80(SR 26) [9]
US 80(SR 26) and SR 119 (located in Bulloch County) [10]
SR 119 and Old Highway 46/Butler Drive (located in Bulloch County) [11]

In addition to studying peak hour projections for the Build Out condition, ADTs for the No Build and Build conditions are projected. ADTs for the interim improvement scenario are also developed. The Build Out ADT projections are developed to identify generalized roadway capacity issues within the existing road network. The interim ADT projections are developed to help determine when the full improvements may be needed for the area.

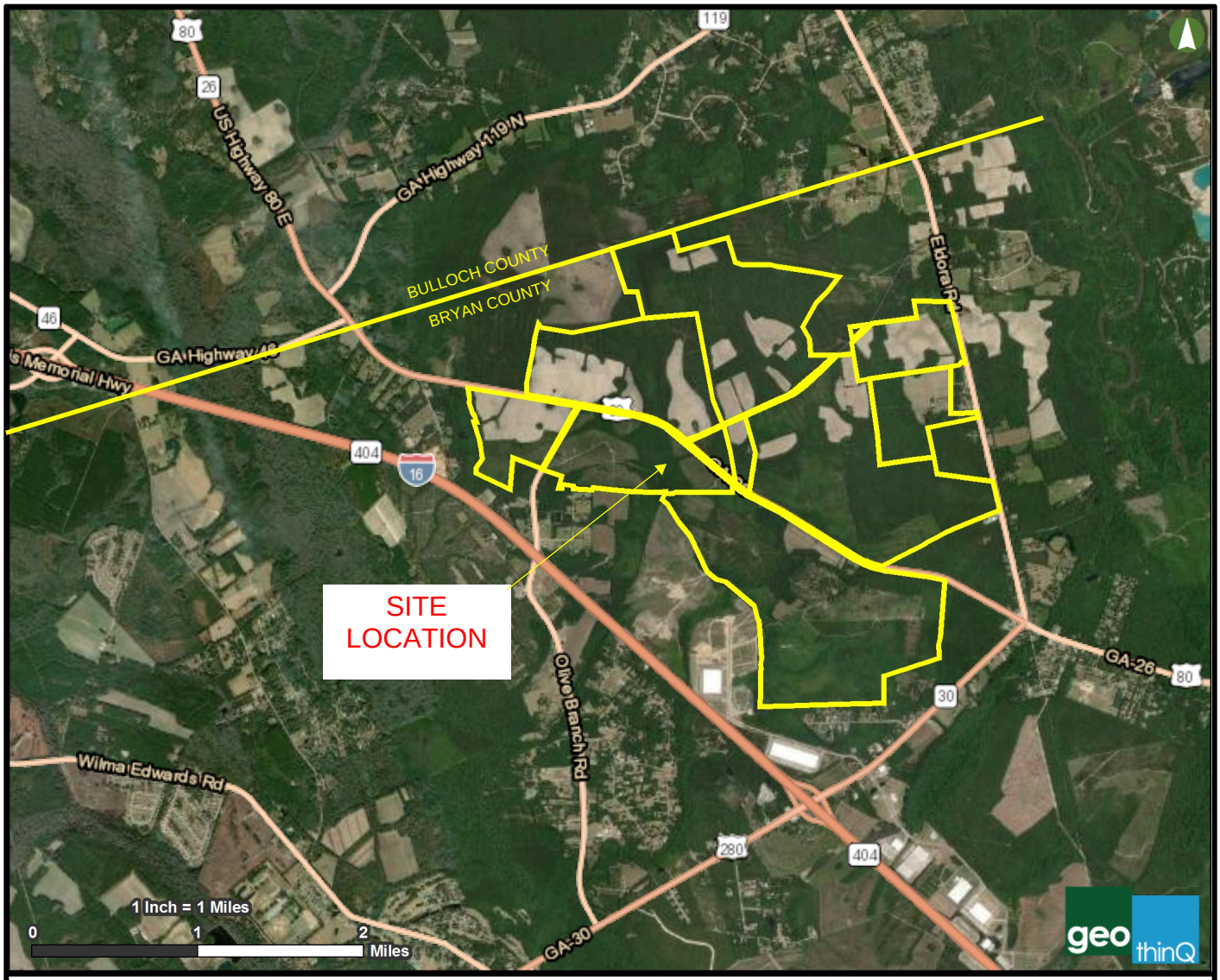

FIGURE 1

SITE LOCATION MAP

NORTH BRYAN INDUSTRIAL PARK

Bryan County, Georgia

J 28699.0000

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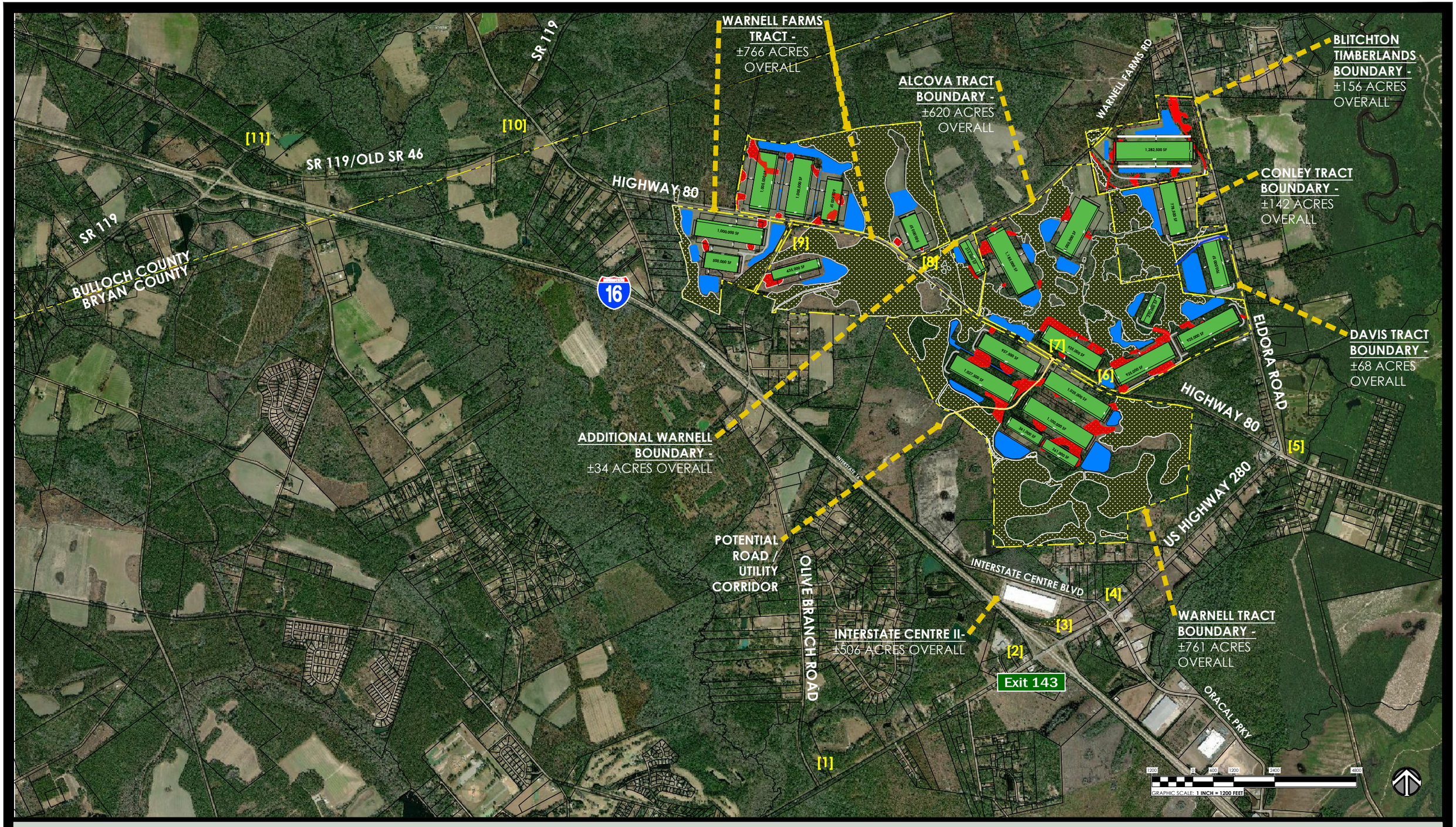

PREPARED FOR:

Figure 2

CONCEPTUAL MASTERPLAN

US HWY 80 NORTH BRYAN COUNTY INDUSTRIAL TRACTS

BRYAN COUNTY / GA

MARCH 8, 2021

242

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2. EXISTING CONDITIONS

Roadway Conditions

West of the I–16 interchange, US 280/SR 30 (US 280) is a north–south, two–lane roadway with a 55–mph posted speed limit. In the vicinity of its interchange with I–16, US 280 has two through lanes in each direction, and auxiliary left turn lanes. At the intersection with Interstate Centre Blvd/Oracal Parkway Circle, US 280 has auxiliary left and right turn lanes. East of this intersection, US 280 is a two–lane roadway with a posted speed limit of 55 mph. The Geocounts website shows an AADT of 7,760 just north of Olive Branch Road, and an AADT of 9,220 north of Oracal Parkway/Interstate Centre Blvd. 24 hour counts by Thomas and Hutton showed 15,906 vehicles on US 280 between the eastbound and westbound I–16 ramps in September 2020.

US 80/SR 26 (US 80) is an east–west two–lane undivided roadway. Through the study area, the posted speed limit on US 80 is 55 mph, except near the intersection with US 280, where the posted speed limit is 45 mph. To the east, US 80 provides access to I–95 and the Savannah ports. The AADT on US 80 west of US 280 is 4,630, and the AADT east of US 280 is 11,500. Currently a significant number of trucks utilize US 80 east of US 280 to access the port of Savannah. This trend is likely to continue into the future with or without the development of the project. This section of US 80 east of US 280 will need to be widened by GDOT as this growth into the future continues. Currently there are over 300 left turning vehicles in the peak hour from US 80 onto US 280 headed towards I–16. As growth continues dual lefts and some improvements on US 280 will likely be needed to accommodate the continued growth at the port and the use of this popular route to I–16 for truck traffic.

I–16 is a four–lane divided limited access Interstate highway with a posted speed limit of 70 mph. I–16 provides unimpeded access to I–95 and the Savannah ports. The AADT on I–16 is 34,600 east of the US 280 Exit.

Old Highway 46 is a two–lane undivided roadway with no posted speed limit between I–16 and US 80. In Georgia, the assumed speed limit for this roadway is 55 mph. In Bulloch County, the AADT on Old Highway 46 is 2,700.

SR 119 is a two–lane roadway with a posted speed limit of 55 mph. To the north and west of the project site, SR 119 provides access to I–16.

Warnell Farm Road is a two-lane County maintained roadway with a posted speed limit of 55-mph. This roadway serves a few residences as well as access for large unimproved tracts of land currently being used for agricultural purposes. It has little existing traffic utilizing this route.

Olive Branch Road is a two-lane County maintained roadway with no posted speed limit. In Georgia, the assumed speed limit for this roadway is 55 mph. This roadway connects US 80 crosses I-95 via overpass and connects to US 280 south of the I-16/280 interchange. The AADT on Olive Branch ranges from approximately 450 to 1100 depending on location along the roadway.

Traffic Conditions

Traffic operations at intersections are typically evaluated in terms of "Level of Service" or LOS. The LOS is a measurement of delay incurred at an intersection or for a particular movement. LOS is defined by the Transportation Research Board's Highway Capacity Manual (HCM) from which LOS A represents free flow conditions with minimal delays; LOS F represents congested conditions. All of the access roads with the exception of Olive Branch Road and Warnell Farm Road are Georgia Department of Transportation state routes. Based on GDOT guidelines, a LOS D or better is generally considered acceptable.

Table 1 shows the HCM criteria for both unsignalized and signalized intersections.

Table 1. Level of Service definitions

LEVEL OF SERVICE	Control Delay per Vehicle (seconds)	
	Unsignalized Intersection	Signalized Intersection
A	≤ 10	≤ 10
B	>10 and ≤ 15	>10 and ≤ 20
C	>15 and ≤ 25	>20 and ≤ 35
D	>25 and ≤ 35	>35 and ≤ 55
E	>35 and ≤ 50	>55 and ≤ 80
F	>50	>80

Traffic counts were taken at the study intersections on Wednesday, September 23, 2020, and included in Appendix A.

To determine the impacts of Covid 19 on traffic volumes at the time of the counts, traffic volumes on Wednesdays in September 2019 and September 2020 at the GDOT continuous count station on I–16 were compared. The 2020 ADT volumes were 4.7% lower than the 2019 volumes. In addition, turning movement counts at US 280 and Oracal Parkway/Interstate Centre Boulevard that were collected in early March 2020 were compared to the September 2020 counts. For the 7:00 – 9:00 AM and 4:00 – 6:00 PM hours, the two counts differed by less than 1 %. (This information is included in Appendix C.) Based on these comparisons of traffic volumes; the September 2020 counts were increased by 5% to account for impacts from Covid 19. The 2020 base morning and afternoon peak hour volumes are shown in **Figure 3**. Capacity analyses were completed based on the base volumes; results are shown in Table 2 and included in Appendix B.

Table 2. Current Levels of Service (2020)

Intersection **[#]**	Control	2020 AM Peak Hour		2020 PM Peak Hour	
		LOS	DELAY (sec)	LOS	DELAY (sec)
US 280 and Olive Branch Rd **[1]**	Stop				
EB approach (Olive Branch Rd)		C	16	C	18
Northbound lefts (US 280)		A	8	A	9
US 280 and I–16 Eastbound Ramps **[2]**	Stop				
EB approach (I–16)		E	43	F	83
SB lefts (US 280)		A	9	A	8
US 280 and I–16 Westbound Ramps **[3]**	Stop				
WB approach (I–16)		B	14	E	46
NB lefts (US 280)		A	9	A	9
US 280 and Interstate Centre/Oracal Pkwy**[4]**	Stop				
WB approach (Oracal)		C	21	E	35
EB approach (Interstate Centre)		C	19	C	20
NB lefts (US 280)		A	8	A	9
SB lefts (US 280)		A	9	A	9
US 80 and US 280/Eldora Road **[5]**	Signal				
EB approach (US 80)		B	16	B	16
WB approach (US 80)		A	8	A	8
NB approach (US 280)		B	14	B	14
SB approach (Eldora Road)		B	15	B	14
Overall Intersection		**B**	**12**	**B**	**11**
US 80 and Olive Branch Road **[9]**	Stop				
NB approach (Olive Branch Rd)		A	8	A	8
WB lefts (US 80)		A	10	B	12
US 80 and SR 119 *(Bulloch Co)* **[10]**	Stop				
NB approach (SR 119)		B	12	B	13
WB lefts (US 80)		A	8	A	8
SR 119/Old Hwy 46 and SR 119 *(Bulloch Co)* **[11]**	Stop				
EB lefts (Old Hwy 46)		A	0	A	0
WB lefts (SR 119)		A	8	A	7
NB approach (SR 119)		A	9	B	10
SB approach (Butler)		A	9	B	12

With the exception of the intersections of US 280 and the I–16 EB and WB ramps along with the WB approach for Oracal Pkwy, the study intersections currently operate at acceptable levels of service. The eastbound off ramp approaching US 280 operates at level of service E and F in the AM and PM peak hours, respectively. The westbound off ramp approaching US 280 operates at level of service E in the PM peak hour. A project to install roundabouts at both ramp termini with US 280 is programmed by GDOT. The westbound approach from Oracal Parkway to US 280 operates at a level of service E in the PM peak hour. A traffic signal, installed when warrants are met, will provide acceptable levels of service at this intersection.

3. NO BUILD VOLUMES

To estimate No Build traffic conditions in 2040, 1% annual background growth is applied to the 2020 base peak hour volumes, resulting in a factor of 1.22 being applied to the base traffic volumes. (One percent growth is selected due to the length of time the growth is applied; over twenty years, a higher growth rate is not likely every year.) The no–build volumes are shown in **Figure 4**.

4. TRIP GENERATION

Trips generated by the proposed industrial/warehouse parks are estimated using the standard rates and equations from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. The development includes 19,487,530 square feet of building space. Trip generation is shown in Table 3, and the calculations are included in Appendix C.

Table 3. Trip Generation

ITE Category	Land Use	Daily	AM Peak		PM Peak	
			Enter	Exit	Enter	Exit
150	Warehousing 19,487.53 ksf	33,908	2,551	763	1,000	2,704

5. TRIP DISTRIBUTION

The access points for the majority of the proposed warehouse facilities exit onto US Highway 80. This study does not look at the individual access points but looks at the main intersections on a more regional level. These individual access points will be evaluated in the future as a part of the encroachment permit process with GDOT for the various access locations. The primary site trip distribution patterns are assumed to split in accordance with the directional patterns observed in the recent counts, the surrounding road network, and the site layout. For this study, the general distribution assumptions entering and exiting the project area are as follows:

- 45% to/from the east on US 80
- 34% to/from the west on I–16
- 7% to/from the east on I–16
- 4% to/ from the southwest on US 280
- 10% to/from the northwest on US 80

The proposed industrial developments cover a large area which results in different buildings having slightly different trip distribution routes. The trips for all of the sites ultimately exit onto US Highway 80. A small percentage of trips will utilize Olive Branch Road to access US Highway 80 while several tracts will utilize Warnell Farm Road to access US Highway 80. A breakdown of trip distribution for various zones within the North Bryan Industrial Park is provided in Appendix C, and the external trip distribution assignments are shown in **Figure 5**. The site–generated trips are assigned to the study intersections and access points based on the trip distribution assumptions. Site generated trips are shown in **Figure 5**.

6. FUTURE (NO–BUILD/BUILD OUT) CONDITIONS

The site generated volumes (Figure 5) are added to the no build volumes (**Figure 4**) to determine the morning and afternoon peak hour build out volumes (**Figure 6**). Table 4 shows the intersection Levels of Service with and without the proposed development. Synchro reports for the no–build volumes are included in Appendix D. Synchro/HCS reports for the build out volumes are included in Appendix E.

Table 4. Future Levels of Service (2040)

Intersection **[#]**	Control	2040 AM Peak Hour		2040 PM Peak Hour	
		No–Build (LOS/DELAY)	Build Out (LOS/DELAY)	No–Build (LOS/DELAY)	Build Out (LOS/DELAY)
US 280 and Olive Branch Rd **[1]**	Stop				
EB approach (Olive Branch Rd)		C / 20	C / 25	C / 24	D / 29
Northbound lefts (US 280)		A / 8	A / 8	B / 10	B / 11
US 280 and I–16 Eastbound Ramps **[2]**	Roundabout	See	GDOT	Study	
US 280 and I–16 Westbound Ramps **[3]**	Roundabout	See	GDOT	Study	
US 280 & Interstate Centre/Oracal Parkway **[4]**	Stop				
WB approach (Oracal)		D / 29	F / 78	F / 102	F / +
EB approach (Interstate Centre)		D / 27	F / 259	D / 32	F / +
NB lefts (US 280)		A / 8	A / 9	A / 9	B / 11
SB lefts (US 280)		A / 9	B / 11	A / 9	A / 10
US 80 and US 280/Eldora Road **[5]**	Signal				
EB approach (US 80)		B / 18	E / 59	B / 20	F / +
WB approach (US 80)		B / 10	F / 222	A / 9	F / 116
NB approach (US 280)		B / 15	F / 183	B / 17	F / 112
SB approach (Eldora Rd)		B / 17	D / 35	B / 17	E / 63
Overall Intersection		**B / 14**	**F / 163**	**B / 12**	**F / 200**
US 80 and Olive Branch Road **[9]**	Stop				
NB approach (Olive Branch Rd)		A / 8	F / 59	A / 8	F / 121
WB lefts (US 80)		B / 10	B / 14	B / 13	A / 10
US 80 and SR 119–*Bulloch Co* **[10]**	Stop				
NB approach (SR 119)		B / 13	F / +	B / 15	D / 29
WB lefts (US 80)		A / 8	B / 10	A / 8	D / 30
SR 119/Old Hwy 46 and SR 119–*Bulloch Co* **[11]**	Stop				
EB lefts (Old Hwy 46)		A / 0	A / 0	A / 0	A / 0
WB lefts (SR 119)		A / 8	A / 8	A / 8	B / 11
NB approach (SR 119)		A / 9	F / 72	B / 11	F / +
SB approach (Butler)		A / 10	F / +	B / 13	F / +

+ indicates delay exceeds 300 seconds per vehicle

In the No Build scenarios, three of the eight study intersections are projected to operate at unacceptable levels of service during the AM and PM peak hours. At build out, seven of the eight study intersections are projected to have unacceptable levels of service in the build out without improvements scenario.

Changes to traffic control and roadway widening options are evaluated to determine the best means of improving levels of service in the interim and 2040 build out condition.

Signal Warrant Analysis

To justify installation of a traffic signal, warrant criteria contained in the Manual of Uniform Traffic Control Devices for Streets and Highways (MUTCD), 2009, are evaluated. For this concept–level analysis, the eighth–highest hourly method is used from the GDOT Design Policy Manual section 13.5.3 for the study intersections. The GDOT Design Policy Manual states, "The eighth–highest volume can be estimated as representing 5.6% of the daily volume."

Table 5 shows the projected ADT, and the eighth highest hour volume of streets at existing unsignalized intersections within the study area. Based on MUTCD warrants, the table shows whether signal warrants are expected to be met at build out. For the individual site access locations left and right turn lanes are assumed to be provided. For similar type facilities on similar roadways, it is likely the access points will require a signal in the future. As a part of their encroachment permit process with GDOT for the accesses, an ICE analysis will be required. As a part of this analysis signal warrants will be included and evaluated at that time.

Table 5. Traffic Signal Warrant Summary

Intersection [#]	Projected ADT	8th Highest Hour	Number of Lanes	Warrant Met
US 280 and Olive Branch Road **[1]**				No
US 280 NB & SB	10,824	606	1	
Olive Branch Rd EB	765	43	1	
US 280 & Interstate Centre/Oracal **[4]**				Yes
US 280 NB & SB	20,693	1,159	2	
Oracal Parkway lefts	2997	167	1	
US 80 and Olive Branch Road **[9]**				Yes
US 80 (estimated)	19,050	1,067	2	
Olive Branch Road lefts	2036	114	1	
*US 80 and SR 119–*Bulloch Co* **[10]**				Yes
US 80 EB & WB	15,668	877	1	
SR 119 NB	6,193	346	1	
*SR 119/Old Hwy 46 & SR 119–*Bulloch Co* **[11]**				Yes
SR 119/Old Hwy 46 EB & WB	9,500	532	1	
SR 119 NB Lefts	440	25	1	

* *These two intersections are proposed as roundabouts in the future recommendations section.*

GDOT currently has a project to install roundabouts at the I–16 interstate ramp intersections with US 280. Based on continued growth and development, areas accessing US 80 for intersections 6,7, and 8 (Warnell Farm Road) will likely meet signal warrants in the future. This will be verified in their individual submittals with their encroachment permits to GDOT.

Projected ADT's were developed for roadways in and around the site to assist in determining roadway widening requirements. Since GDOT does not have published guidelines for corridor lanes, volumes and LOS, the roadway widening requirements were based on values in the FDOT Quality/Level of Service Handbook. Projected ADT volumes were developed by adding the existing ADT, background growth, and the ADT generated by the project. The base year and projected ADT volumes are shown in Table 6. ADT volumes are a guide to assist with lane requirements; however, the presence of traffic signals and driveways/intersecting streets influences required roadway geometry. GDOT would be responsible for widening US 80 and US 280 when warranted. Detailed analysis would be included with those future projects.

Table 6. AADT and Lane Requirements (2040)

Roadway	Base (Current) ADT	Projected 2040 Build Out ADT	Existing # of Lanes	Projected # of Lanes Req'd
US 280, Olive Branch to I–16*	7,760	10,824	2	2
US 280, I–16 to Interstate Centre/Oracal	15,906	22,991	4 + Left	4 + Aux
US 280, Interstate Centre/Oracal to US 80	9,220	17,242	2 + Aux	4 + Aux
US 80, East of US 280	11,500	28,688	2	4 + Aux
US 80, SR 119 to US 280	4,470	26,707	2	4 + Aux
Olive Branch Road, northern section	460	738	2	2
Olive Branch Road, southern section	1,110	1,530	2	2
SR 119	2,700	12,386	2	2 + Aux
I–16, east of Exit 143	34,600	44,600	4	4
I–16, between Exits 143 and 137	32,700	42,500	4	4
I–16, west of Exit 137	32,400	45,900	4	4

*This does not include traffic from the newly purchased State Megasite. This will likely be 4-lanes once that traffic is added.

Projected ADT traffic volumes within the study area are shown in **Figure 7**.

Synchro and HCS Streets are used to analyze the peak hour conditions with roadway widening and signalization in place. Table 7 summarizes levels of service for the 2040 build out condition without improvements and the 2040 build out condition with improvements.

Table 7. Future Levels of Service, with improvements (2040)

Intersection [#]	Control	2040 AM Peak Hour		2040 PM Peak Hour	
		Build Out (LOS/DELAY)	**Build Out w/Improvement** (LOS/DELAY)	**Build Out** (LOS/DELAY)	**Build Out w/ Improvement** (LOS/DELAY)
US 280 and Olive Branch Rd **[1]**	Stop				
EB approach (Olive Branch Rd)		C / 25	Not required	D / 29	Not required
Northbound lefts (US 280)		A / 8	–	B / 11	–
US 280 and I–16 Eastbound Ramps **[2]**	Roundabout	See	GDOT	Study	
US 280 and I–16 Westbound Ramps **[3]**	Roundabout	See	GDOT	Study	
US 280 & Interstate Centre/Oracal Parkway **[4]**	Signal				
WB approach (Oracal)		F / 78	B / 12	F / +	B / 19.5
EB approach (Interstate Centre)		F / 259	A/ 10	F / +	C / 27
NB (US 280)		–	C / 23	–	C / 27
SB (US 280)		–	C / 23	–	B / 17
Overall Intersection			**B / 12**		**C / 24**
US 80 and US 280/Eldora Road **[5]**	Signal				
EB approach (US 80)		E / 59	C / 28	F / +	D / 40
WB approach (US 80)		F / 222	C / 30	F / 116	C / 29
NB approach (US 280)		F / 183	D / 42	F / 112	E / 69
SB approach (Eldora Rd)		D / 35	D / 36	E / 63	E / 67
Overall Intersection		**F / 163**	**C / 32**	**F / 200**	**D / 40**
US 80 and Olive Branch Road **[9]**	Signal				
NB approach (Olive Branch Rd)		F / 59	B / 16	F / 121	C / 22
WB (US 80)		B / 14	A / 9	A / 10	C / 21
EB (US 80)		–	A / 5	–	A / 7
SB approach (Industrial)		–	B / 16	–	C / 32
Overall Intersection			**A / 7**		**B / 18**
(Table continued on next page)					

Table 7 Continued. Future Levels of Service, with improvements (2040)

Intersection [#]	Control	2040 AM Peak Hour		2040 PM Peak Hour	
		Build Out (LOS/DELAY)	**Build Out w/Improvement** (LOS/DELAY)	**Build Out** (LOS/DELAY	**Build Out w/ Improvement** (LOS/DELAY)
US 80 and SR 119–*Bulloch Co* **[10]**	Stop				
NB approach (SR 119)		F / +	F / 100	D / 29	F / + ++
WB lefts (US 80)		B / 10	B / 10	D / 30	D / 30
	Roundabout				
EB approach (SR 119)		–	A / 9	–	E / 40
WB approach (US 80)		–	A / 6	–	B / 11
NB approach (US 80)		–	A / 1	–	A / 1
Overall Roundabout		–	**A / 4**	–	**C / 17**
SR 119/Old Hwy 46 and SR 119–*Bulloch Co* **[11]**	Stop				
EB lefts (Old Hwy 46)		A / 0	A / 0	A / 0	A / 0
WB lefts (SR 119)		A / 8	A / 8	B / 11	B / 11
NB approach (SR 119)		F / 72	E / 44	F / +	F / 109
SB approach (Butler)		F / +	F / +	F / +	F / 264
	Roundabout				
EB approach (Old Hwy 46)			A / 4		A / 9
WB approach (SR 119)			A / 6		C / 21
NB approach (SR 119)			C / 20		A / 7
SB approach (Butler)			A / 4		A / 9
Overall Roundabout		–	**C / 16**	–	**C / 16**

+ indicates delay exceeds 300 seconds per vehicle

++ Right turns are free, higher delay per vehicle is due to only left turn delay counted

Following is a summary of the improvements, by intersection, for the 20–year build condition with improvements.

1. US 280 and Olive Branch Rd **[1]** – no improvements are required.
2. US 280 and I–16 westbound ramp **[2]** – GDOT currently implementing a roundabout project at the ramp termini.
3. US 280 and I–16 eastbound ramp **[3]** – GDOT currently implementing a roundabout project at the ramp termini
4. US 280 and Oracal Pkwy/Interstate Centre **[4]** – when warranted, installation of a traffic signal improves LOS to acceptable.
5. US 280 and US 80 **[5]** – roadway widening on the eastbound (two through lanes, a left turn lanes, & a right turn lane), westbound (two through lanes, dual left turn lanes, & a right turn lane) and northbound (two through lanes and dual left turn lanes) approaches improves LOS to acceptable. A multi-lane roundabout is likely

the preferred improvement alternative at this location. This will be validated as a part of a future GDOT ICE evaluation for the intersection.

6. US 80 and Warnell Farm Road **[8]** – This intersection will be realigned and turn lanes added as a part of the access improvements from the developments. US 80 will be widened to four lanes with auxiliary turn lanes replaced and a traffic signal installed.
7. US 80 and Olive Branch **[9]** – widening of US 80 to four lanes, constructing auxiliary turn lanes (EB left and WB right on Olive Branch Rd), and installing a traffic signal improves LOS to B, from LOS F.
8. US 80 and SR 119–*Bulloch County* **[10]**– revising traffic control to a 2–lane roundabout improves LOS to C.
9. SR 119 and Old Hwy 46–*Bulloch County* **[11]** – revising traffic control to a 1–lane roundabout improves LOS to C.

7. INTERIM CONDITIONS

The North Bryan Industrial Park will be built out over the next ten to fifteen years. During that time there are some reasonable interim improvements that will need to be implemented in order to continue to have the transportation network operate at acceptable levels of service (and before the full improvements to the roadway network can be made). The following improvements should be implemented as the industrial park area is developed:

- Install a traffic signal, when warranted, at the intersection of US 280 and Oracal Parkway/Interstate Centre Blvd.

- The US 80/280 intersection is currently signalized and the desired future configuration would be a multi-lane roundabout. There are two interim options for improvements to the intersection. One option would be to modify the intersection and signal to accommodate dual left turn lanes on US 80 westbound (This westbound peak hour left turn volume currently exceeds 300 vehicles per hour.) and widen a portion of US 280 to accept the dual left turn lanes. A second option would be the installation of a roundabout at the intersection. Due to the number of left turn from US 80 onto US 280 currently at the intersection, a modified single lane roundabout would be proposed for this location. There would be two approach lanes from US 80 westbound and one of the lanes would continue straight on 80 while the other would turn onto US 280. There would also be bypass lanes to accommodate the right turning vehicles on three of the four approaches (Eldora Rd approach would not require a bypass lane). One of these improvement should be implemented as soon as enough funds are available to complete the work. The alternative implemented will need to be approved by GDOT. GDOT has recently completed a safety audit for the area and a roundabout was one alternative considered to improve this intersection.

- Installation of individual accesses (intersections 6, 7 ,8 & 9) for the various development shall be completed by the developers as the projects move through the approval process. Each developer will be responsible for paying for improvements associated with their access. These improvements will likely be left and right turn lanes at the access locations. These will be determined during the encroachment permit process with GDOT for their access.

- Improvements to Warnell Farm Road will be required as a part of the developments that will utilize this roadway for access to their facilities. The existing roadway will need to be widened to accommodate the vehicles generated by the developments as well as a paved shoulder. A general section showing what the roadway may look like has been attached. This work will be completed by the developer as they develop their sites.

- Install separate northbound right turn and westbound left turn lanes at the intersection of US 80 and SR 119 (Bulloch County). GDOT committed to install these improvements as a maintenance project. This should be requested as soon as the first development begins construction.

- Install separate northbound right turn and westbound left turn lanes at the intersection of SR 119 and Old Hwy 46 (Bulloch County). GDOT committed to install these improvements as a maintenance project. This should be requested as soon as the first development begins construction.

8. SUMMARY / CONCLUSIONS

A warehouse/industrial park is in the preliminary planning stages for several parcels in northern Bryan County, Georgia. Approximately 19,487,530 square feet of building space is expected for various tracts of land. The project is anticipated to be built out over the next ten to fifteen years. This evaluation looks at a 20–year horizon as well as some interim improvements at the various intersections in the area.

Driveway access to the proposed buildings is anticipated from US 80, Warnell Farm Road, and from internal roads within the overall site. This study does not evaluate individual access points; however, based on the type of development and sizes of the proposed buildings, left and right turn lanes are expected to be warranted at all full access points. Improvements will be needed on Warnell Farm Road to accommodate the developments and the intersection of Warnell Farm Road and US 80 will need to be realigned to accommodate the development. These improvements will be completed by the developers of the site.

This study evaluates regional access to the proposed warehouse/industrial park area. With this in mind, access to the area is available from several roads, including US 80 to the east; US 280 and I–16 to the south and west; and US 80 via I–16 and GA 26 and GA 46 to the west.

Unacceptable levels of service at seven of the eight study intersections are projected during either the AM or PM peak hour during the 20–year horizon. With construction of roundabouts (currently planned by GDOT), traffic signalization, traffic control changes, and roadway widening, acceptable levels of service are achieved.

Based upon the Synchro/HCS results and the projected ADT's, widening requirements were determined for the roadways, as shown in Table 6. These additional lanes are a result of regional growth in the area (as the port of Savannah continues to grow and megasite is developed south of I-16)) and something the Georgia Department of Transportation should take the lead in implementing. Roadway widening is proposed as follows:

- US 280 from two through lanes to four through lanes plus left turn lanes as needed from the I–16 Exits to the US 80 intersection (Approx. 1.6 miles). GDOT will fund this project in the future. County should request the District, by copy of this study, add this project to the State Transportation Plan.

- US 80 from two through lanes to a five–lane section from the SR 119 intersection to the US 280 intersection (Approx. 4.7 miles). GDOT will fund this project in the future. County should request the District, by copy of this study, add this project to the State Transportation Plan.

- US 80 from two through lanes to a five–lane section from the US 280 intersection to tie into the existing widened section near SR 17 (Approx. 6.9 miles). As port growth continues and other development occurs in this area, the section of US 80 from US 280 to SR 17 will need to be widened from two lanes to a 5–lane section. This widening would be an extension of the existing widened US 80 section and should be programmed by GDOT to accommodate the regional growth (Bulloch, Bryan & Effingham Counties) expected in the area. County should request the District, by copy of this study, add this project to the State Transportation Plan.

Traffic control changes are also recommended to accommodate the area growth through the 2040 study horizon. These changes are listed below:

- Installation of a traffic signal, when warranted, at the intersection of US 280 and Oracal Parkway/Interstate Centre. County to fund this project with fees already collected from current developments on Interstate Centre Drive and Oracal Parkway.

- Installation of a roundabout or revise the signal at the intersection of US 80 and US 280 to accommodate dual left turn lanes on US 80 westbound and US 280 northbound. Funds for this work may be a combination of development agreement fees and GDOT funds.

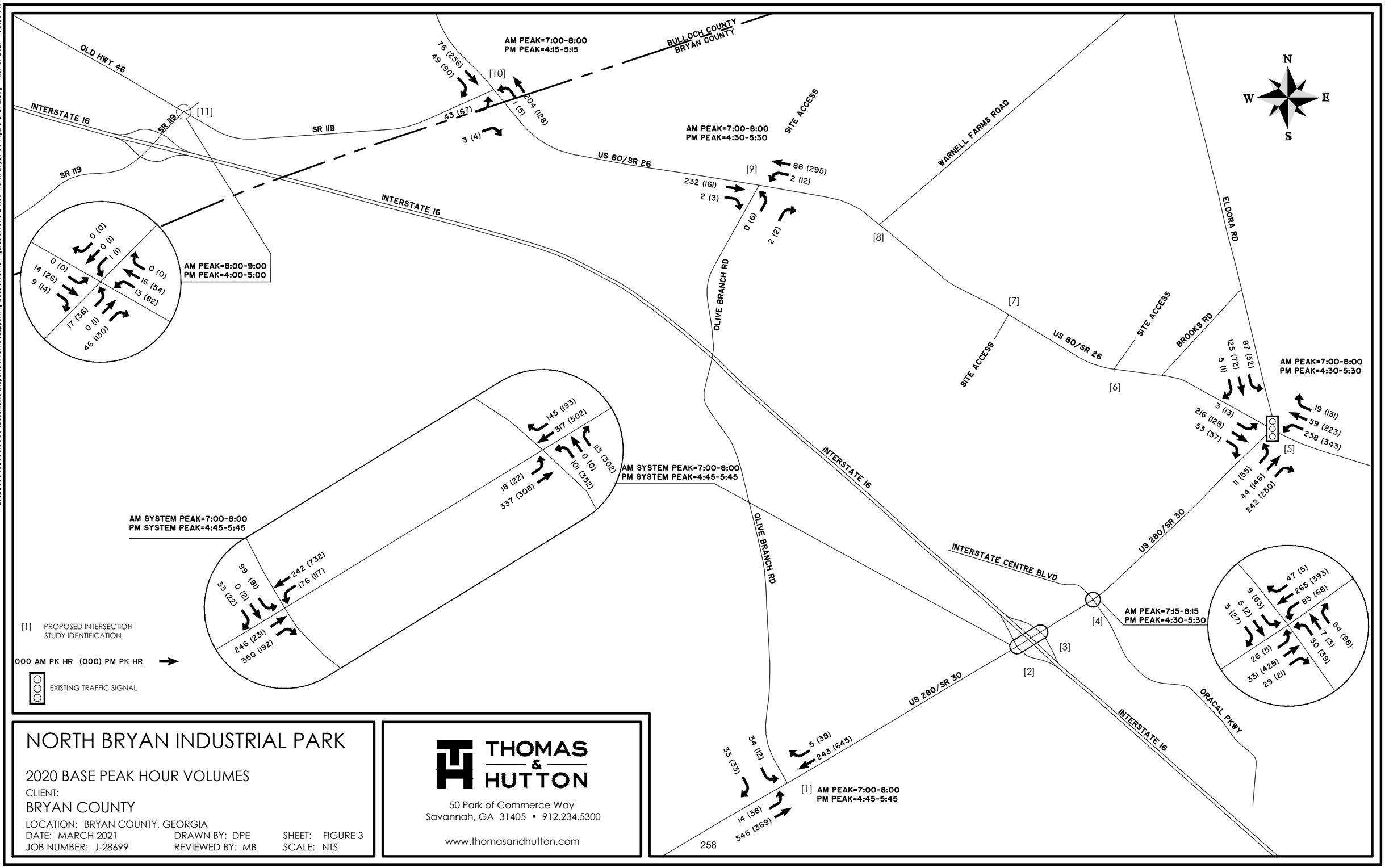
- Installing a two–lane roundabout at the intersection of US 80 and SR 119 (once US 80 is widened). GDOT to fund as a part of the US 80 widening project.

- Installing a one–lane roundabout at the intersection of SR 119 and Old Hwy 46. GDOT to fund as a future project.

The recommendations are summarized, with the corresponding number of lanes and types of traffic control shown graphically in **Figure 8**. Below is a chart (Table 8) showing a description of the improvement and the responsible party to implement the improvement. Also attached is a map showing the full access and right–in and right–out access location.

Table 8–Improvement Summary

Intersection/ Improvement	Initial (within 10 years)	Future (by 2040)
US 280/I–16 Ramp Termini **[2 &3]**	Roundabouts (GDOT)	———
US 280/Oracle Pkwy/ Interstate Center **[4]**	Signal–when warranted (County)	Add lanes to accommodate US 280 widening (GDOT)
US 280 widening (I–16 to US 80)	———	4–lane divided section (GDOT)
US 280/US 80 Intersection Improvements **[5]**	Roundabout or Dual left turns as soon as funds available (County/GDOT)	Add lanes to accommodate US 80 widening and/or roundabout (GDOT)
US 80 Widening (SR 119 to SR 17)	———	5–lane section (GDOT)
Full Access 1 **[6]**	Left/Right turn lanes–with development and signal if warranted (Developer)	5–lane section with signal when warranted (GDOT)
Full Access 2 **[7]**	Left/Right turn lanes–with development and signal if warranted (Developer)	5–lane section with signal when warranted (GDOT)
Full Access 3 (Warnell Farm Rd/US 80) **[8]**	Re–align Rd–Left/Right turn lanes–with development and signal if warranted (Developer)	5–lane section with signal when warranted (GDOT)
Warnell Farm Road Improvements	Widen and overlay–with development (Developer)	
Full Access 4 (Olive Branch Road) **[9]**	Left/Right turn lanes–with development and signal if warranted (Developer)	5–lane section with signal when warranted (GDOT)
US 80/SR 119 Intersection Improvements (Bulloch Co) **[10]**	Left/Right turn lanes (GDOT)	Multi–lane roundabout with US 80 widening (GDOT)
SR 119/Old 46 Intersection Improvements (Bulloch Co) **[11]**	Left/Right turn lanes (GDOT)	Single–lane roundabout (GDOT)



[1] PROPOSED INTERSECTION STUDY IDENTIFICATION

000 AM PK HR (000) PM PK HR

EXISTING TRAFFIC SIGNAL

NORTH BRYAN INDUSTRIAL PARK

2020 BASE PEAK HOUR VOLUMES

CLIENT:
BRYAN COUNTY

LOCATION: BRYAN COUNTY, GEORGIA
DATE: MARCH 2021 DRAWN BY: DPE SHEET: FIGURE 3
JOB NUMBER: J-28699 REVIEWED BY: MB SCALE: NTS

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Savannah, GA 31405 • 912.234.5300
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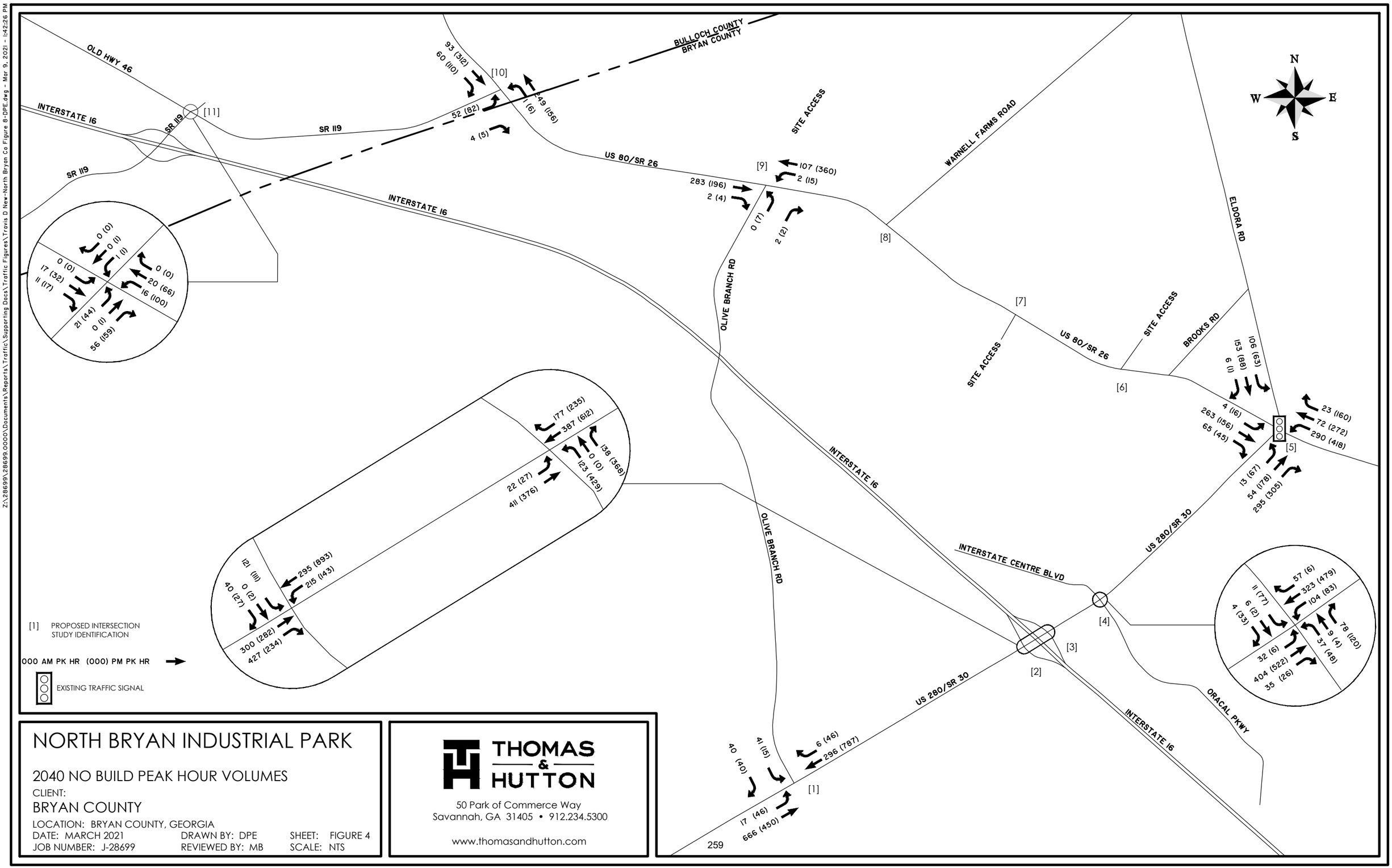

NORTH BRYAN INDUSTRIAL PARK

2040 NO BUILD PEAK HOUR VOLUMES

CLIENT:
BRYAN COUNTY

LOCATION: BRYAN COUNTY, GEORGIA
DATE: MARCH 2021 DRAWN BY: DPE SHEET: FIGURE 4
JOB NUMBER: J-28699 REVIEWED BY: MB SCALE: NTS

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OLD HWY 46
INTERSTATE 16
SR 119
BULLOCH COUNTY
BRYAN COUNTY
US 80/SR 26
SITE ACCESS
WARNELL FARMS ROAD
ELDORA RD
OLIVE BRANCH RD
BROOKS RD
INTERSTATE CENTRE BLVD
US 280/SR 30
ORACAL PKWY

[1] PROPOSED INTERSECTION STUDY IDENTIFICATION

AM PEAK HOUR
ENTER = 2551
EXIT = 762
PM PEAK HOUR
ENTER = 1000
EXIT = 2703

INBOUND %
OUTBOUND %
000 AM PK HR (000) PM PK HR
EXISTING TRAFFIC SIGNAL

NORTH BRYAN INDUSTRIAL PARK

SITE GENERATED PEAK HOUR TRIPS

CLIENT:
BRYAN COUNTY
LOCATION: BRYAN COUNTY, GEORGIA
DATE: MARCH 2021 DRAWN BY: DPE SHEET: FIGURE 5
JOB NUMBER: J-28699 REVIEWED BY: MB SCALE: NTS

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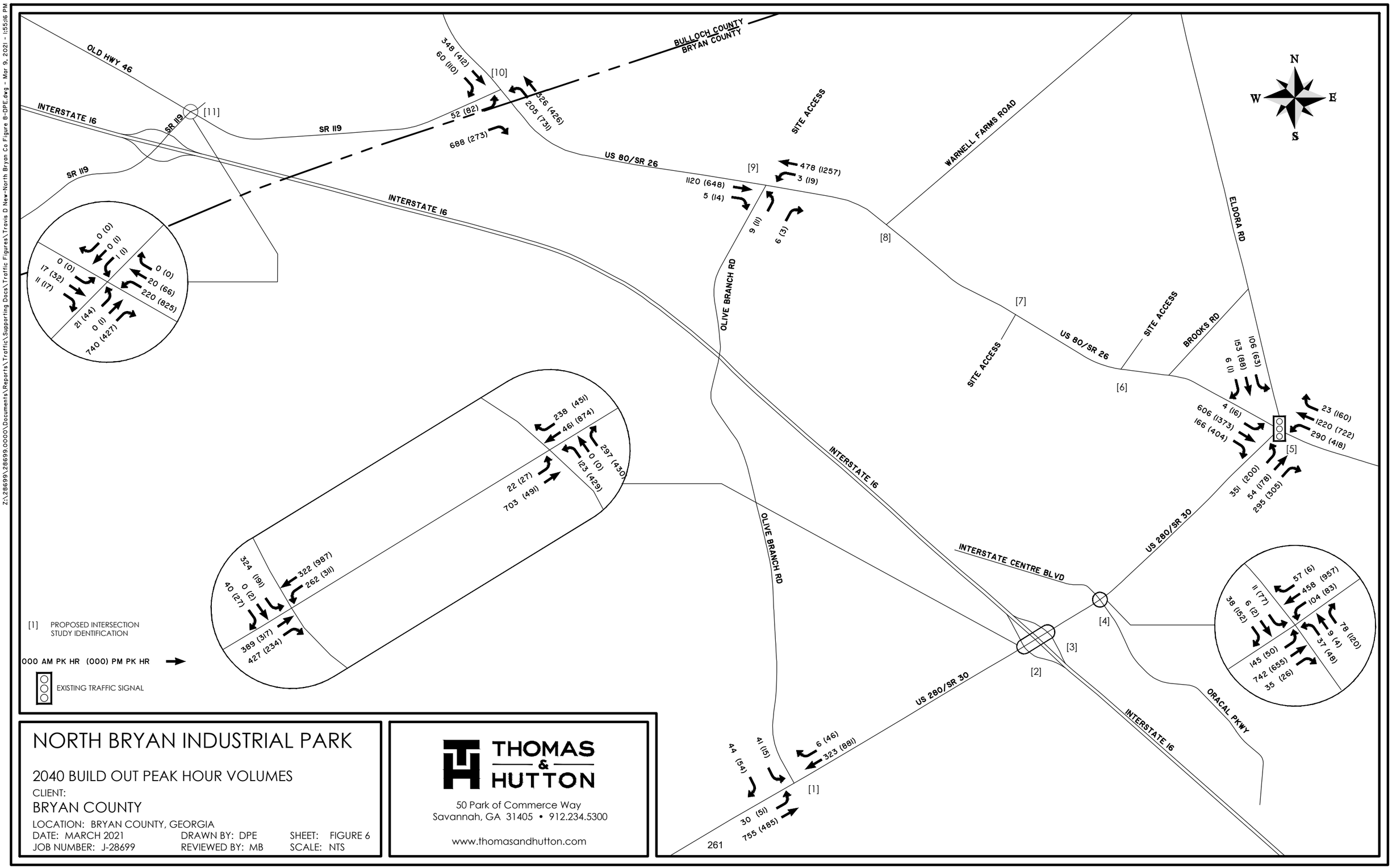

[1] PROPOSED INTERSECTION STUDY IDENTIFICATION

000 AM PK HR (000) PM PK HR

EXISTING TRAFFIC SIGNAL

NORTH BRYAN INDUSTRIAL PARK

2040 BUILD OUT PEAK HOUR VOLUMES

CLIENT:
BRYAN COUNTY

LOCATION: BRYAN COUNTY, GEORGIA
DATE: MARCH 2021 DRAWN BY: DPE SHEET: FIGURE 6
JOB NUMBER: J-28699 REVIEWED BY: MB SCALE: NTS

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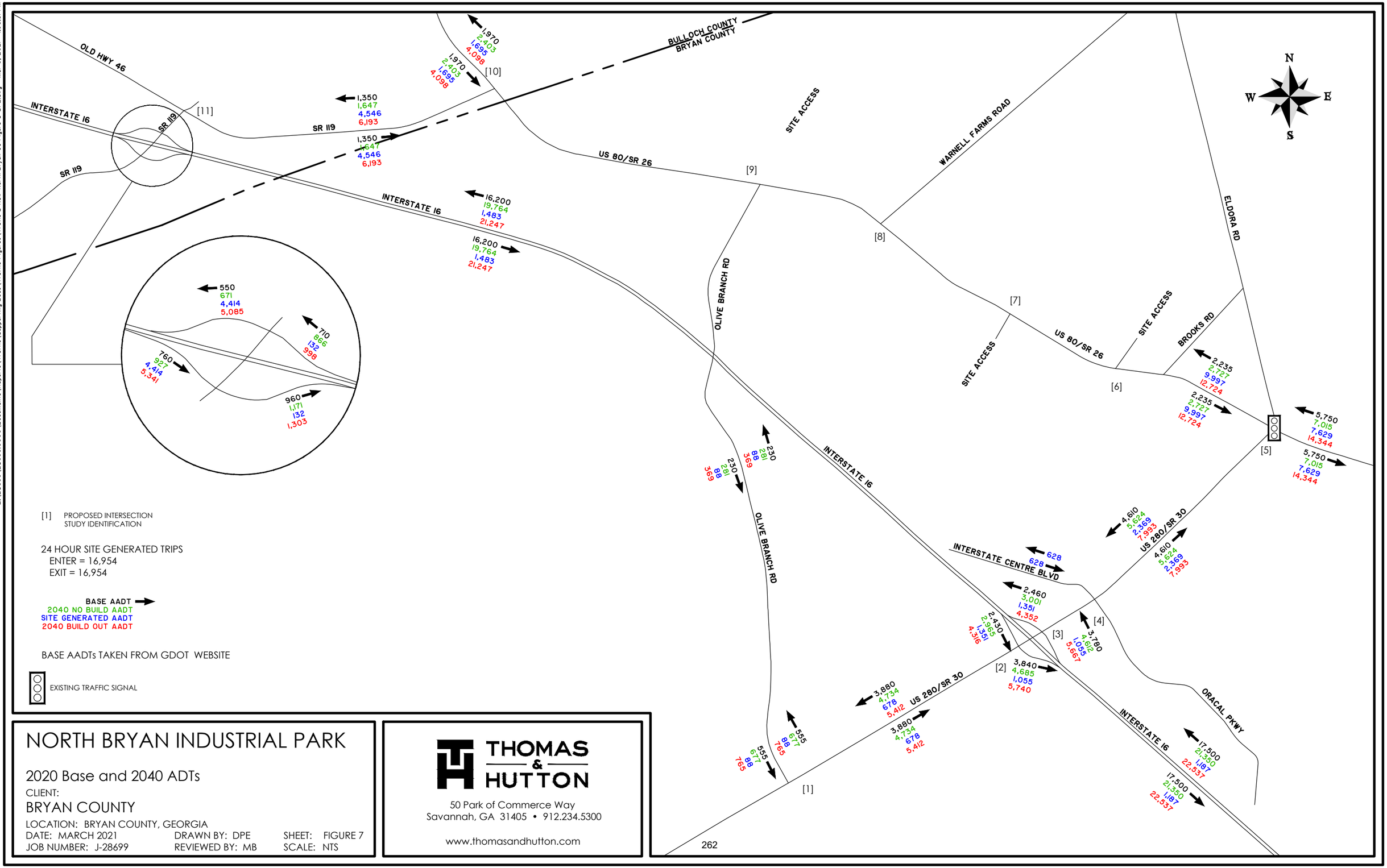

[1] PROPOSED INTERSECTION STUDY IDENTIFICATION

24 HOUR SITE GENERATED TRIPS
ENTER = 16,954
EXIT = 16,954

BASE AADT →
2040 NO BUILD AADT
SITE GENERATED AADT
2040 BUILD OUT AADT

BASE AADTs TAKEN FROM GDOT WEBSITE

EXISTING TRAFFIC SIGNAL

NORTH BRYAN INDUSTRIAL PARK

2020 Base and 2040 ADTs

CLIENT:
BRYAN COUNTY

LOCATION: BRYAN COUNTY, GEORGIA
DATE: MARCH 2021 DRAWN BY: DPE SHEET: FIGURE 7
JOB NUMBER: J-28699 REVIEWED BY: MB SCALE: NTS

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OLD HWY 46
INTERSTATE 16
SR 119
SR 119
SR 119
INTERSTATE 16
BULLOCH COUNTY
BRYAN COUNTY
RIGHTS YIELD
SLIP LANE
US 80/SR 26
SITE ACCESS
WARNELL FARMS ROAD
ELDORA RD
OLIVE BRANCH RD
PRIVATE OUTLET
SITE ACCESS
US 80/SR 26
SITE ACCESS
BROOKS RD
INTERSTATE 16
OLIVE BRANCH RD
US 280/SR 30
INTERSTATE CENTRE BLVD
US 280/SR 30
INTERSTATE 16
ORACAL PKWY

N
W
E
S

NOTES:
1. INSTALL TWO LANES FOR ±500' AND THEN TAPER BACK TO EXISTING.
2. PHASE 1 LANE CONFIGURATION IS THE SAME AS THE 2040 LANE CONFIGURATION.
3. FUTURE DEVELOPMENT ACCESS TO BE ALIGNED WITH THE INTERSECTION.
4. GDOT ROUNDABOUT PROJECT @ RAMP TERMINI (2023)

EXISTING LANE CONFIGURATION
PROPOSED PHASE 1 LANE CONFIGURATION
PROPOSED 2040 LANE CONFIGURATION

① PROPOSED INTERSECTION STUDY IDENTIFICATION
EXISTING TRAFFIC SIGNAL
PROPOSED TRAFFIC SIGNAL
PROPOSED ROUNDABOUT

NORTH BRYAN INDUSTRIAL PARK

2040 BUILD OUT PEAK REQUIRED LANES

CLIENT:
BRYAN COUNTY

LOCATION: BRYAN COUNTY, GEORGIA
DATE: MARCH 2021 DRAWN BY: DPE SHEET: FIGURE 8
JOB NUMBER: J-28699 REVIEWED BY: MB SCALE: NTS

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NORTH BRYAN TRANSPORATION SUTDY

NORTH BRYAN INDUSTRIAL PARK

APPENDIX A

EXISTING TRAFFIC COUNTS

J – 2832.0000, J-28681.0000,
J-28698.0000, J-28699.0000

July 2021

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

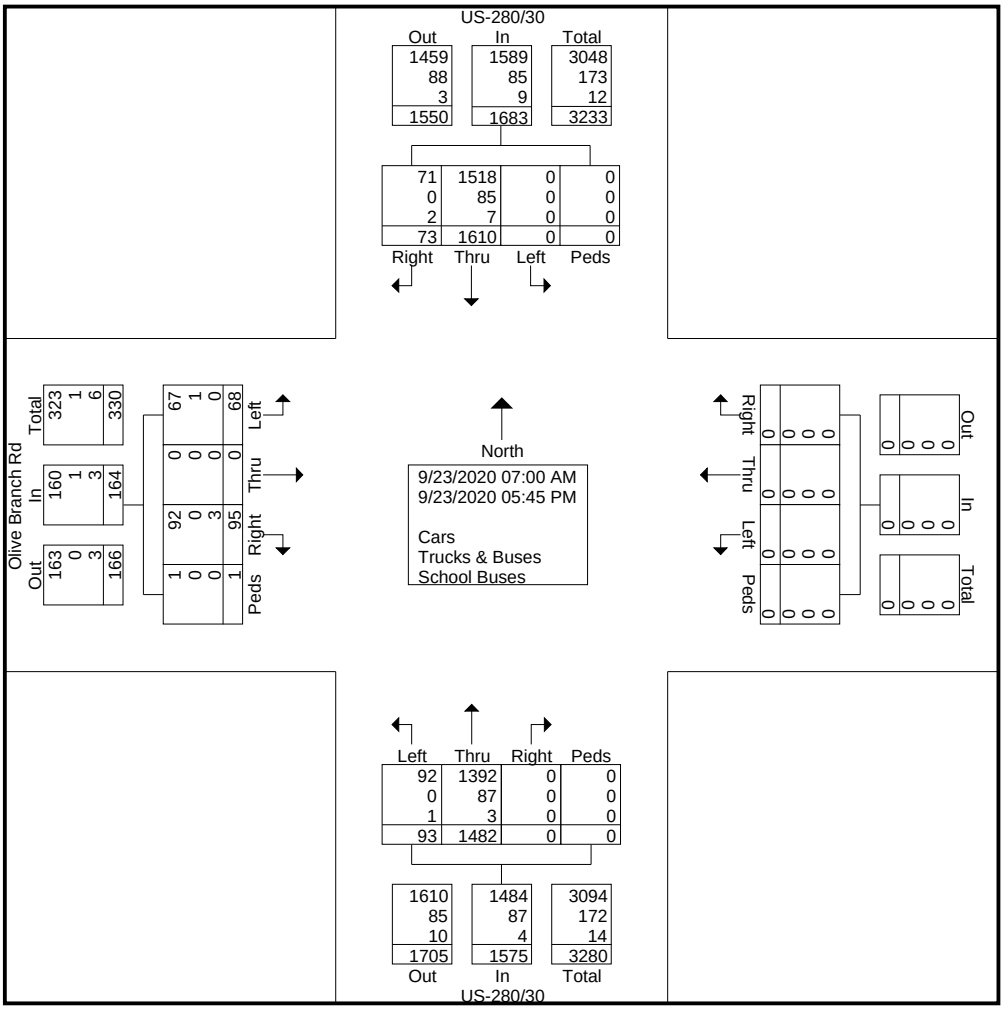
Counter: T-2291
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-01
Site Code : 02000601
Start Date : 9/23/2020
Page No : 1

Groups Printed- Cars - Trucks & Buses - School Buses

	US-280/30 Northbound					US-280/30 Southbound					Olive Branch Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	125	0	0	127	0	60	1	0	61	12	0	7	0	19	0	0	0	0	0	207
07:15 AM	4	129	0	0	133	0	49	0	0	49	7	0	7	0	14	0	0	0	0	0	196
07:30 AM	4	149	0	0	153	0	68	2	0	70	6	0	7	0	13	0	0	0	0	0	236
07:45 AM	3	117	0	0	120	0	54	2	0	56	7	0	10	0	17	0	0	0	0	0	193
Total	13	520	0	0	533	0	231	5	0	236	32	0	31	0	63	0	0	0	0	0	832
08:00 AM	2	101	0	0	103	0	48	1	0	49	4	0	4	0	8	0	0	0	0	0	160
08:15 AM	1	94	0	0	95	0	49	4	0	53	2	0	1	0	3	0	0	0	0	0	151
08:30 AM	6	80	0	0	86	0	41	1	0	42	5	0	1	0	6	0	0	0	0	0	134
08:45 AM	0	60	0	0	60	0	44	1	0	45	3	0	4	0	7	0	0	0	0	0	112
Total	9	335	0	0	344	0	182	7	0	189	14	0	10	0	24	0	0	0	0	0	557
BREAK																					
04:00 PM	6	59	0	0	65	0	143	9	0	152	6	0	4	0	10	0	0	0	0	0	227
04:15 PM	8	78	0	0	86	0	146	9	0	155	1	0	8	1	10	0	0	0	0	0	251
04:30 PM	10	80	0	0	90	0	132	3	0	135	2	0	8	0	10	0	0	0	0	0	235
04:45 PM	9	79	0	0	88	0	143	11	0	154	6	0	6	0	12	0	0	0	0	0	254
Total	33	296	0	0	329	0	564	32	0	596	15	0	26	1	42	0	0	0	0	0	967
05:00 PM	11	84	0	0	95	0	160	6	0	166	1	0	4	0	5	0	0	0	0	0	266
05:15 PM	6	93	0	0	99	0	152	12	0	164	1	0	11	0	12	0	0	0	0	0	275
05:30 PM	10	95	0	0	105	0	159	7	0	166	3	0	10	0	13	0	0	0	0	0	284
05:45 PM	11	59	0	0	70	0	162	4	0	166	2	0	3	0	5	0	0	0	0	0	241
Total	38	331	0	0	369	0	633	29	0	662	7	0	28	0	35	0	0	0	0	0	1066
Grand Total	93	1482	0	0	1575	0	1610	73	0	1683	68	0	95	1	164	0	0	0	0	0	3422
Apprch %	5.9	94.1	0	0		0	95.7	4.3	0		41.5	0	57.9	0.6		0	0	0	0		
Total %	2.7	43.3	0	0	46	0	47	2.1	0	49.2	2	0	2.8	0	4.8	0	0	0	0	0	
Cars	92	1392	0	0	1484	0	1518	71	0	1589	67	0	92	1	160	0	0	0	0	0	3233
% Cars	98.9	93.9	0	0	94.2	0	94.3	97.3	0	94.4	98.5	0	96.8	100	97.6	0	0	0	0	0	94.5
Trucks & Buses	0	87	0	0	87	0	85	0	0	85	1	0	0	0	1	0	0	0	0	0	173
% Trucks & Buses	0	5.9	0	0	5.5	0	5.3	0	0	5.1	1.5	0	0	0	0.6	0	0	0	0	0	5.1
School Buses	1	3	0	0	4	0	7	2	0	9	0	0	3	0	3	0	0	0	0	0	16
% School Buses	1.1	0.2	0	0	0.3	0	0.4	2.7	0	0.5	0	0	3.2	0	1.8	0	0	0	0	0	0.5

File Name : 20006-01
Site Code : 02000601
Start Date : 9/23/2020
Page No : 2

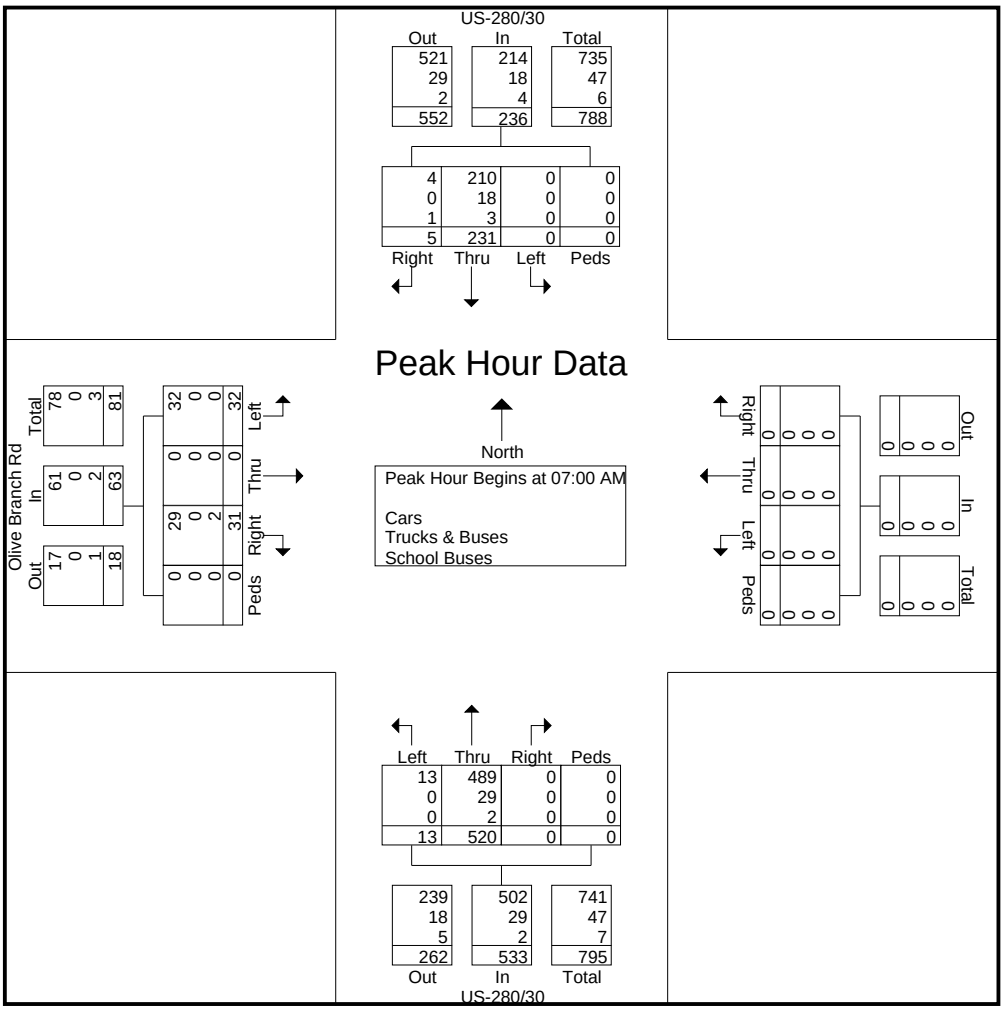


TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-01
Site Code : 02000601
Start Date : 9/23/2020
Page No : 3

	US-280/30 Northbound					US-280/30 Southbound					Olive Branch Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	2	125	0	0	127	0	60	1	0	61	**12**	0	7	0	**19**	0	0	0	0	0	207
07:15 AM	**4**	129	0	0	133	0	49	0	0	49	7	0	7	0	14	0	0	0	0	0	196
07:30 AM	4	**149**	0	0	**153**	0	**68**	**2**	0	**70**	6	0	7	0	13	0	0	0	0	0	**236**
07:45 AM	3	117	0	0	120	0	54	2	0	56	7	0	**10**	0	17	0	0	0	0	0	193
Total Volume	13	520	0	0	533	0	231	5	0	236	32	0	31	0	63	0	0	0	0	0	832
% App. Total	2.4	97.6	0	0		0	97.9	2.1	0		50.8	0	49.2	0		0	0	0	0		
PHF	.813	.872	.000	.000	.871	.000	.849	.625	.000	.843	.667	.000	.775	.000	.829	.000	.000	.000	.000	.000	.881
Cars	13	489	0	0	502	0	210	4	0	214	32	0	29	0	61	0	0	0	0	0	777
% Cars	100	94.0	0	0	94.2	0	90.9	80.0	0	90.7	100	0	93.5	0	96.8	0	0	0	0	0	93.4
Trucks & Buses																					
% Trucks & Buses	0	5.6	0	0	5.4	0	7.8	0	0	7.6	0	0	0	0	0	0	0	0	0	0	5.6
School Buses	0	2	0	0	2	0	3	1	0	4	0	0	2	0	2	0	0	0	0	0	8
% School Buses	0	0.4	0	0	0.4	0	1.3	20.0	0	1.7	0	0	6.5	0	3.2	0	0	0	0	0	1.0

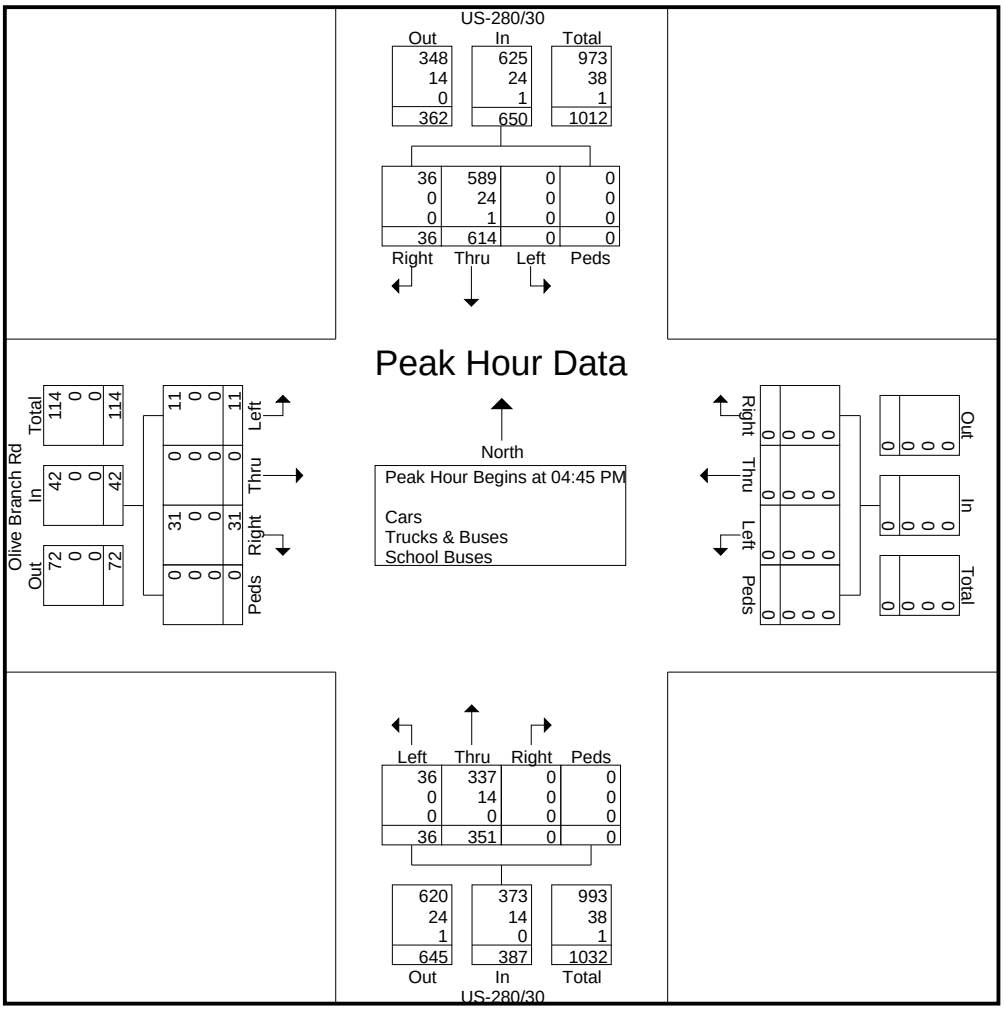


TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-01
Site Code : 02000601
Start Date : 9/23/2020
Page No : 4

	US-280/30 Northbound					US-280/30 Southbound					Olive Branch Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	9	79	0	0	88	0	143	11	0	154	**6**	0	6	0	12	0	0	0	0	0	254
05:00 PM	**11**	84	0	0	95	0	**160**	6	0	**166**	1	0	4	0	5	0	0	0	0	0	266
05:15 PM	6	93	0	0	99	0	152	**12**	0	164	1	0	**11**	0	12	0	0	0	0	0	275
05:30 PM	10	**95**	0	0	**105**	0	159	7	0	166	3	0	10	0	**13**	0	0	0	0	0	**284**
Total Volume	36	351	0	0	387	0	614	36	0	650	11	0	31	0	42	0	0	0	0	0	1079
% App. Total	9.3	90.7	0	0		0	94.5	5.5	0		26.2	0	73.8	0		0	0	0	0		
PHF	.818	.924	.000	.000	.921	.000	.959	.750	.000	.979	.458	.000	.705	.000	.808	.000	.000	.000	.000	.000	.950
Cars	36	337	0	0	373	0	589	36	0	625	11	0	31	0	42	0	0	0	0	0	1040
% Cars	100	96.0	0	0	96.4	0	95.9	100	0	96.2	100	0	100	0	100	0	0	0	0	0	96.4
Trucks & Buses																					
% Trucks & Buses	0	4.0	0	0	3.6	0	3.9	0	0	3.7	0	0	0	0	0	0	0	0	0	0	3.5
School Buses	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% School Buses	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0.1



TMC Location: 20006-01 GA Hwy 30 at Olive Branch Rd
Location: Bryan County, GA
Survey Count Times: 7-9am & 4-6pm

Site Code: 2000602
Station ID: 02
Location 1: SB 280/30
Location 2: NB 280/30
Location 3:
Location 4:

TRAFFIC DATA CONNECTION
PO Box 445 Abbeville, GA 31001
ph (843) 412-6222

Comment 1: Counter:33033
Comment 2: Counted By: GWM
Comment 3: Weather: Mild
Comment 4: Client: T&H
Latitude: 0.000000
Longitude: 0.000000

9/23/2020 Time	Direction 1, SB 280/30	Direction 2, NB 280/30	Total
12:00 AM	13	6	19
12:15	18	5	23
12:30	15	3	18
12:45	7	2	9
1:00	3	6	9
1:15	10	3	13
1:30	8	6	14
1:45	8	0	8
2:00	6	7	13
2:15	6	4	10
2:30	5	2	7
2:45	8	8	16
3:00	5	4	9
3:15	5	21	26
3:30	8	15	23
3:45	5	8	13
4:00	9	19	28
4:15	8	36	44
4:30	7	38	45
4:45	12	45	57
5:00	9	65	74
5:15	13	95	108
5:30	16	101	117
5:45	15	92	107
6:00	28	138	166
6:15	40	176	216
6:30	32	172	204
6:45	57	157	214
7:00	59	141	200
7:15	45	135	180
7:30	75	152	227
7:45	62	127	189
8:00	43	111	154
8:15	52	97	149
8:30	45	87	132
8:45	47	65	112
9:00	60	75	135
9:15	45	67	112
9:30	43	71	114
9:45	55	81	136
10:00	53	68	121
10:15	49	67	116
10:30	53	82	135
10:45	56	68	124
11:00	55	60	115
11:15	71	69	140
11:30	71	76	147
11:45	69	70	139
Total	1484	3003	4487
Percent	33.1%	66.9%	
Peak	11:00	6:15	6:15
Volume	266	646	834
Peak Factor	0.937	0.918	0.965

Site Code: 2000602
Station ID: 02
Location 1: SB 280/30
Location 2: NB 280/30
Location 3:
Location 4:

TRAFFIC DATA CONNECTION
PO Box 445 Abbeville, GA 31001
ph (843) 412-6222

Comment 1: Counter:33033
Comment 2: Counted By: GWM
Comment 3: Weather: Mild
Comment 4: Client: T&H
Latitude: 0.000000
Longitude: 0.000000

9/23/2020 Time	Direction 1, SB 280/30	Direction 2, NB 280/30	Total
12:00 PM	76	59	135
12:15	64	87	151
12:30	58	78	136
12:45	65	67	132
1:00	62	80	142
1:15	71	93	164
1:30	75	63	138
1:45	70	59	129
2:00	82	75	157
2:15	94	73	167
2:30	88	51	139
2:45	81	67	148
3:00	97	69	166
3:15	109	82	191
3:30	120	77	197
3:45	127	77	204
4:00	159	66	225
4:15	162	81	243
4:30	136	88	224
4:45	156	88	244
5:00	166	87	253
5:15	161	98	259
5:30	168	106	274
5:45	171	64	235
6:00	153	74	227
6:15	132	57	189
6:30	100	64	164
6:45	89	57	146
7:00	72	44	116
7:15	65	38	103
7:30	73	46	119
7:45	82	43	125
8:00	59	59	118
8:15	66	41	107
8:30	58	23	81
8:45	57	43	100
9:00	57	18	75
9:15	36	20	56
9:30	30	18	48
9:45	27	22	49
10:00	27	10	37
10:15	22	15	37
10:30	24	15	39
10:45	23	12	35
11:00	16	8	24
11:15	8	7	15
11:30	15	8	23
11:45	14	9	23
Total	3923	2586	6509
Percent	60.3%	39.7%	
Peak	5:00	4:45	4:45
Volume	666	379	1030
Peak Factor	0.974	0.894	0.940
Grand Total	5407	5589	10996
Percent	49.2%	50.8%	
AADT		ADT: 10,996	AADT: 10,996

Date: 09-23-2020
TDC Job No: 20006-02

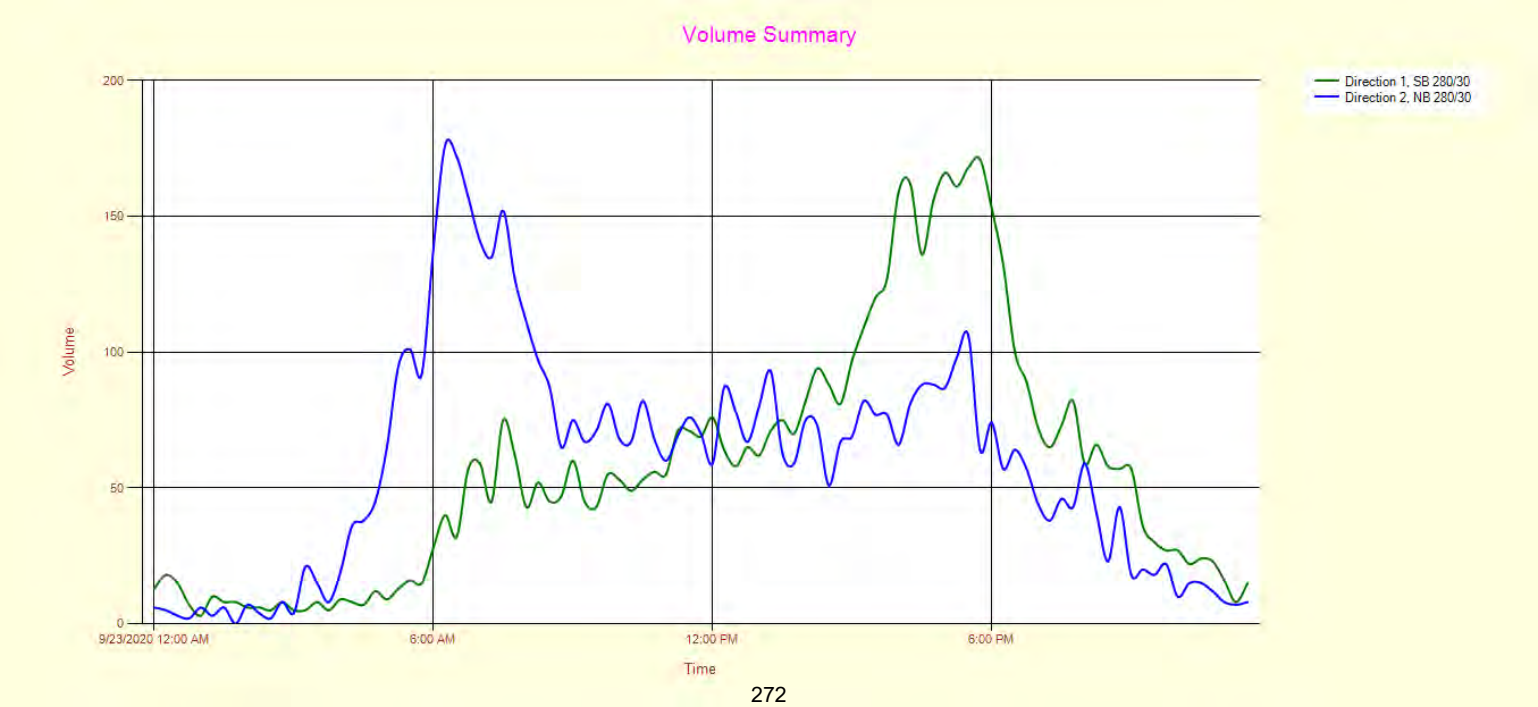
Location: **ATR-02** (GA 280/30 north of Olive Branch Rd) Bryan County, GA

Direction 1: SB 280/30

Date (* = partial day)	AM Peak Time	AM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	AM Peak Hour Factor	PM Peak Time	PM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	PM Peak Hour Factor
9/23/2020	11:15 - 12:14	287	12:00 - 12:14	76	0.944	05:00 - 05:59	666	05:45 - 05:59	171	0.974

Direction 2: NB 280/30

Date (* = partial day)	AM Peak Time	AM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	AM Peak Hour Factor	PM Peak Time	PM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	PM Peak Hour Factor
9/23/2020	06:15 - 07:14	646	06:15 - 06:29	176	0.918	04:45 - 05:44	379	05:30 - 05:44	106	0.894



TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: T-2291
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-03
Site Code : 02000603
Start Date : 9/23/2020
Page No : 1

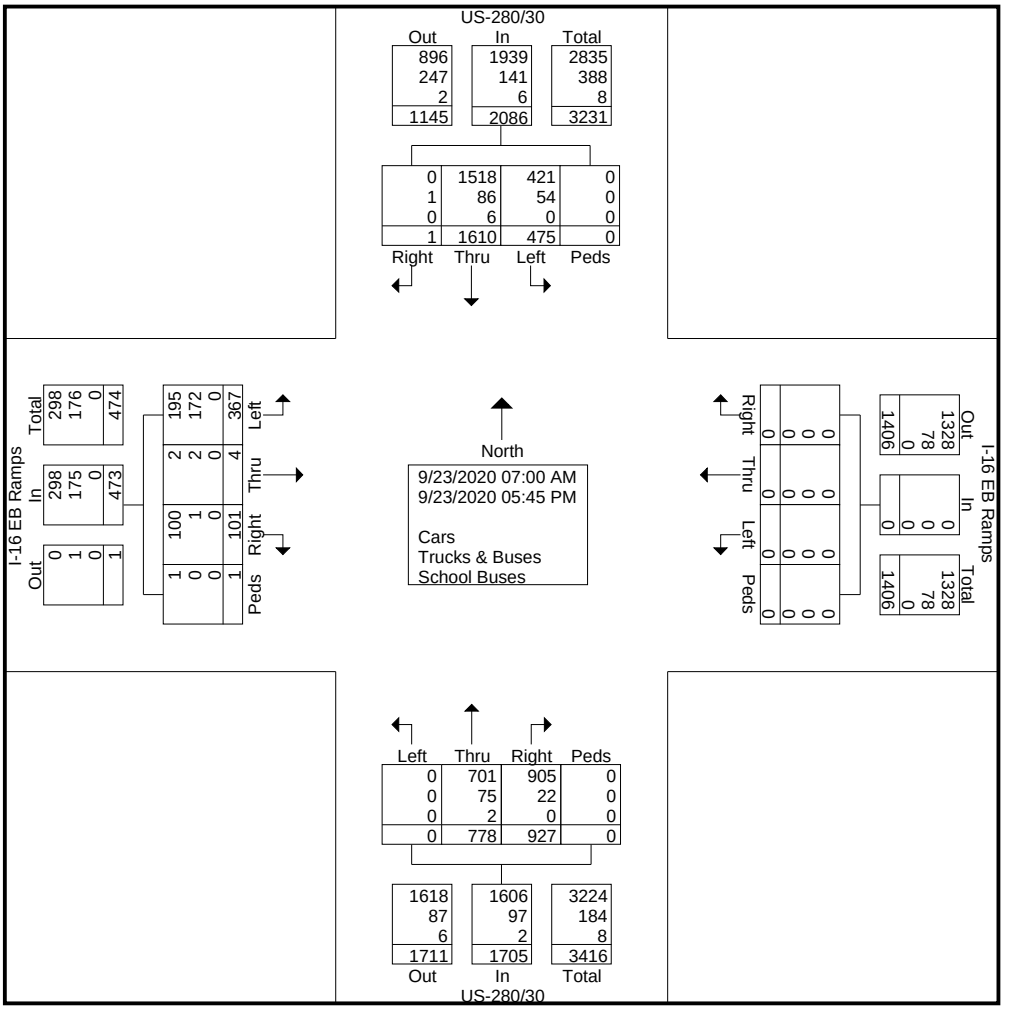
Groups Printed- Cars - Trucks & Buses - School Buses

	US-280/30 Northbound					US-280/30 Southbound					I-16 EB Ramps Eastbound					I-16 EB Ramps Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	52	94	0	146	36	53	0	0	89	27	0	9	0	36	0	0	0	0	0	271
07:15 AM	0	57	95	0	152	44	42	0	0	86	25	0	9	0	34	0	0	0	0	0	272
07:30 AM	0	80	96	0	176	48	72	0	0	120	16	0	17	0	33	0	0	0	0	0	329
07:45 AM	0	46	75	0	121	25	62	0	0	87	29	0	3	0	32	0	0	0	0	0	240
Total	0	235	360	0	595	153	229	0	0	382	97	0	38	0	135	0	0	0	0	0	1112
08:00 AM	0	51	67	0	118	41	41	0	0	82	27	0	2	0	29	0	0	0	0	0	229
08:15 AM	0	38	62	0	100	23	45	0	0	68	26	0	5	0	31	0	0	0	0	0	199
08:30 AM	0	32	66	0	98	40	43	0	0	83	18	0	2	0	20	0	0	0	0	0	201
08:45 AM	0	27	40	0	67	21	39	0	0	60	26	0	5	0	31	0	0	0	0	0	158
Total	0	148	235	0	383	125	168	0	0	293	97	0	14	0	111	0	0	0	0	0	787
BREAK																					
04:00 PM	0	39	32	0	71	22	147	0	0	169	16	0	6	0	22	0	0	0	0	0	262
04:15 PM	0	39	42	0	81	18	156	0	0	174	18	1	8	1	28	0	0	0	0	0	283
04:30 PM	0	51	44	0	95	38	127	0	0	165	25	1	6	0	32	0	0	0	0	0	292
04:45 PM	0	48	49	0	97	17	162	0	0	179	21	1	4	0	26	0	0	0	0	0	302
Total	0	177	167	0	344	95	592	0	0	687	80	3	24	1	108	0	0	0	0	0	1139
05:00 PM	0	55	35	0	90	26	149	0	0	175	20	1	4	0	25	0	0	0	0	0	290
05:15 PM	0	59	38	0	97	35	145	1	0	181	21	0	7	0	28	0	0	0	0	0	306
05:30 PM	0	58	61	0	119	21	167	0	0	188	25	0	6	0	31	0	0	0	0	0	338
05:45 PM	0	46	31	0	77	20	160	0	0	180	27	0	8	0	35	0	0	0	0	0	292
Total	0	218	165	0	383	102	621	1	0	724	93	1	25	0	119	0	0	0	0	0	1226
Grand Total	0	778	927	0	1705	475	1610	1	0	2086	367	4	101	1	473	0	0	0	0	0	4264
Apprch %	0	45.6	54.4	0		22.8	77.2	0	0		77.6	0.8	21.4	0.2		0	0	0	0		
Total %	0	18.2	21.7	0	40	11.1	37.8	0	0	48.9	8.6	0.1	2.4	0	11.1	0	0	0	0	0	
Cars	0	701	905	0	1606	421	1518	0	0	1939	195	2	100	1	298	0	0	0	0	0	3843
% Cars	0	90.1	97.6	0	94.2	88.6	94.3	0	0	93	53.1	50	99	100	63	0	0	0	0	0	90.1
Trucks & Buses	0	75	22	0	97	54	86	1	0	141	172	2	1	0	175	0	0	0	0	0	413
% Trucks & Buses	0	9.6	2.4	0	5.7	11.4	5.3	100	0	6.8	46.9	50	1	0	37	0	0	0	0	0	9.7
School Buses	0	2	0	0	2	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	8
% School Buses	0	0.3	0	0	0.1	0	0.4	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0.2

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-03
Site Code : 02000603
Start Date : 9/23/2020
Page No : 2

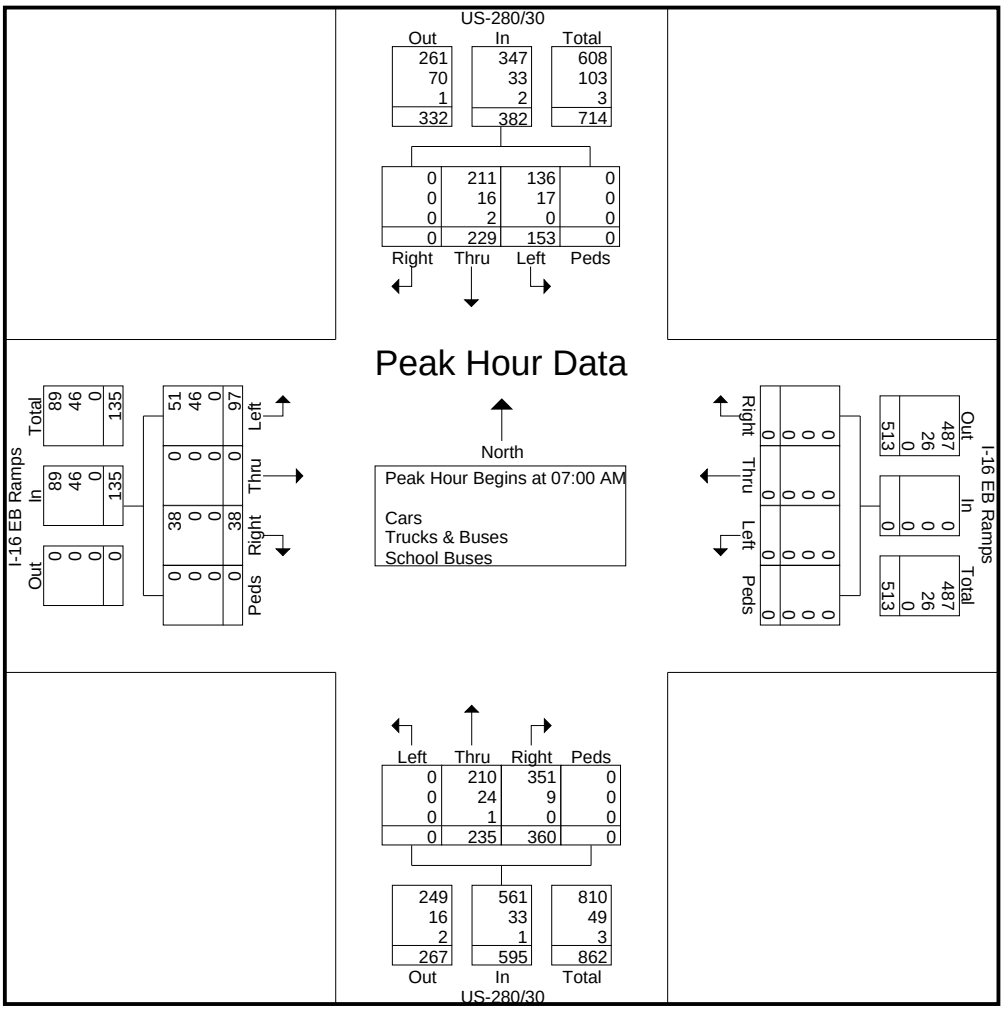


TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-03
Site Code : 02000603
Start Date : 9/23/2020
Page No : 3

	US-280/30 Northbound					US-280/30 Southbound					I-16 EB Ramps Eastbound					I-16 EB Ramps Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	52	94	0	146	36	53	0	0	89	27	0	9	0	**36**	0	0	0	0	0	271
07:15 AM	0	57	95	0	152	44	42	0	0	86	25	0	9	0	34	0	0	0	0	0	272
07:30 AM	0	**80**	**96**	0	**176**	**48**	**72**	0	0	**120**	16	0	**17**	0	33	0	0	0	0	0	**329**
07:45 AM	0	46	75	0	121	25	62	0	0	87	**29**	0	3	0	32	0	0	0	0	0	240
Total Volume	0	235	360	0	595	153	229	0	0	382	97	0	38	0	135	0	0	0	0	0	1112
% App. Total	0	39.5	60.5	0		40.1	59.9	0	0		71.9	0	28.1	0		0	0	0	0		
PHF	.000	.734	.938	.000	.845	.797	.795	.000	.000	.796	.836	.000	.559	.000	.938	.000	.000	.000	.000	.000	.845
Cars	0	210	351	0	561	136	211	0	0	347	51	0	38	0	89	0	0	0	0	0	997
% Cars	0	89.4	97.5	0	94.3	88.9	92.1	0	0	90.8	52.6	0	100	0	65.9	0	0	0	0	0	89.7
Trucks & Buses																					
% Trucks & Buses	0	10.2	2.5	0	5.5	11.1	7.0	0	0	8.6	47.4	0	0	0	34.1	0	0	0	0	0	10.1
School Buses	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
% School Buses	0	0.4	0	0	0.2	0	0.9	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0.3



AM System Peak Hour:

07:15 AM	0	57	95	0	152	44	42	0	0	86	25	0	9	0	34	0	0	0	0	0	272
07:30 AM	0	80	96	0	176	48	72	0	0	120	16	0	17	0	33	0	0	0	0	0	329
07:45 AM	0	46	75	0	121	25	62	0	0	87	29	0	3	0	32	0	0	0	0	0	240
Total	0	235	360	0	595	153	229	0	0	382	97	0	38	0	135	0	0	0	0	0	1112
08:00 AM	0	51	67	0	118	41	41	0	0	82	27	0	2	0	29	0	0	0	0	0	229
		234	333			158	217				97		31								1070

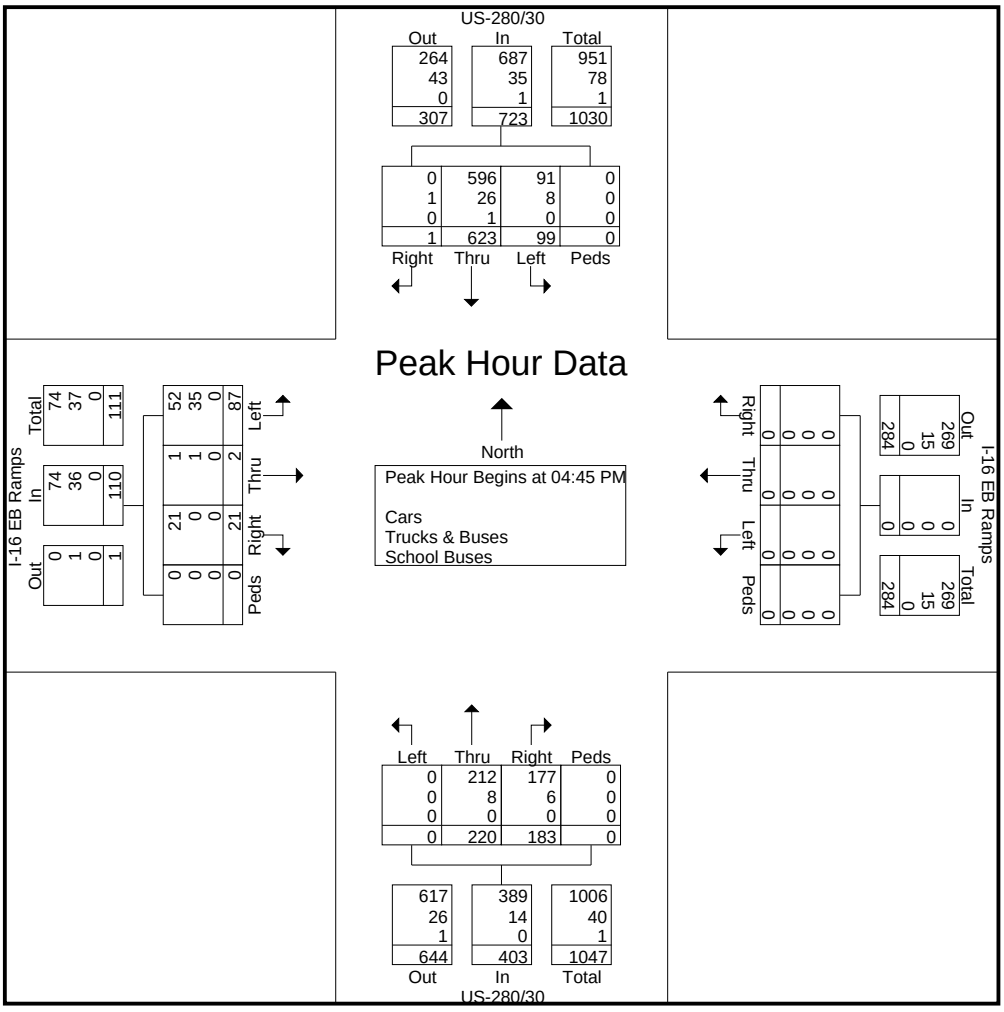
phf = 0.81

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-03
Site Code : 02000603
Start Date : 9/23/2020
Page No : 4

	US-280/30 Northbound					US-280/30 Southbound					I-16 EB Ramps Eastbound					I-16 EB Ramps Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	48	49	0	97	17	162	0	0	179	21	**1**	4	0	26	0	0	0	0	0	302
05:00 PM	0	55	35	0	90	26	149	0	0	175	20	1	4	0	25	0	0	0	0	0	290
05:15 PM	0	**59**	38	0	97	**35**	145	**1**	0	181	21	0	**7**	0	28	0	0	0	0	0	306
05:30 PM	0	58	**61**	0	**119**	21	**167**	0	0	**188**	**25**	0	6	0	**31**	0	0	0	0	0	**338**
Total Volume	0	220	183	0	403	99	623	1	0	723	87	2	21	0	110	0	0	0	0	0	1236
% App. Total	0	54.6	45.4	0		13.7	86.2	0.1	0		79.1	1.8	19.1	0		0	0	0	0		
PHF	.000	.932	.750	.000	.847	.707	.933	.250	.000	.961	.870	.500	.750	.000	.887	.000	.000	.000	.000	.000	.914
Cars	0	212	177	0	389	91	596	0	0	687	52	1	21	0	74	0	0	0	0	0	1150
% Cars	0	96.4	96.7	0	96.5	91.9	95.7	0	0	95.0	59.8	50.0	100	0	67.3	0	0	0	0	0	93.0
Trucks & Buses																					
% Trucks & Buses	0	3.6	3.3	0	3.5	8.1	4.2	100	0	4.8	40.2	50.0	0	0	32.7	0	0	0	0	0	6.9
School Buses	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% School Buses	0	0	0	0	0	0	0.2	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1



TMC Location: 20006-03 GA Hwy 30 at EBnd I-16 Ramps
Location: Bryan County, GA
Survey Count Times: 7-9am & 4-6pm

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: TU-2462
Counted By: BCE
Weather: Mild
Other: T&H

File Name : 20006-04
Site Code : 02000604
Start Date : 9/23/2020
Page No : 1

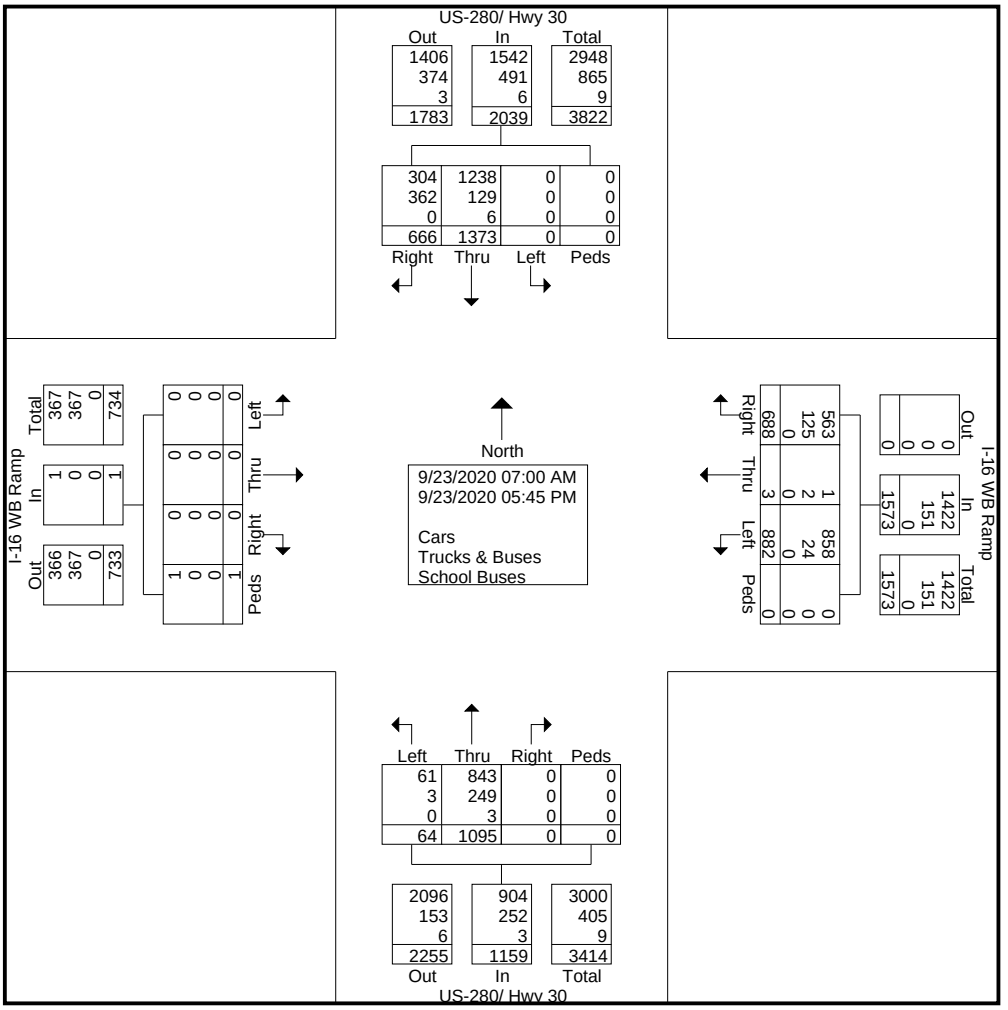
Groups Printed- Cars - Trucks & Buses - School Buses

	US-280/ Hwy 30 Southbound					I-16 WB Ramp Westbound					US-280/ Hwy 30 Northbound					I-16 WB Ramp Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	66	38	0	104	29	0	22	0	51	5	72	0	0	77	0	0	0	0	0	232
07:15 AM	0	74	27	0	101	17	0	18	0	35	3	83	0	0	86	0	0	0	0	0	222
07:30 AM	0	93	34	0	127	34	0	27	0	61	7	83	0	0	90	0	0	0	0	0	278
07:45 AM	0	63	28	0	91	28	0	35	0	63	3	81	0	0	84	0	0	0	0	0	238
Total	0	296	127	0	423	108	0	102	0	210	18	319	0	0	337	0	0	0	0	0	970
08:00 AM	0	72	49	0	121	17	0	28	0	45	4	74	0	0	78	0	0	0	0	0	244
08:15 AM	0	54	37	0	91	23	0	19	0	42	4	58	0	0	62	0	0	0	0	0	195
08:30 AM	0	62	37	0	99	21	0	25	0	46	0	49	0	0	49	0	0	0	0	0	194
08:45 AM	0	35	39	0	74	28	1	17	0	46	0	55	0	0	55	0	0	0	0	0	175
Total	0	223	162	0	385	89	1	89	0	179	8	236	0	0	244	0	0	0	0	0	808
BREAK																					
04:00 PM	0	90	53	0	143	88	1	49	0	138	5	57	0	0	62	0	0	0	0	0	343
04:15 PM	0	100	52	0	152	89	1	41	0	131	3	53	0	0	56	0	0	0	1	1	340
04:30 PM	0	98	47	0	145	72	0	54	0	126	4	70	0	0	74	0	0	0	0	0	345
04:45 PM	0	90	44	0	134	89	0	50	0	139	2	71	0	0	73	0	0	0	0	0	346
Total	0	378	196	0	574	338	2	194	0	534	14	251	0	0	265	0	0	0	1	1	1374
05:00 PM	0	137	51	0	188	81	0	72	0	153	6	69	0	0	75	0	0	0	0	0	416
05:15 PM	0	132	53	0	185	73	0	88	0	161	3	79	0	0	82	0	0	0	0	0	428
05:30 PM	0	114	36	0	150	92	0	78	0	170	10	74	0	0	84	0	0	0	0	0	404
05:45 PM	0	93	41	0	134	101	0	65	0	166	5	67	0	0	72	0	0	0	0	0	372
Total	0	476	181	0	657	347	0	303	0	650	24	289	0	0	313	0	0	0	0	0	1620
Grand Total	0	1373	666	0	2039	882	3	688	0	1573	64	1095	0	0	1159	0	0	0	1	1	4772
Apprch %	0	67.3	32.7	0		56.1	0.2	43.7	0		5.5	94.5	0	0		0	0	0	100		
Total %	0	28.8	14	0	42.7	18.5	0.1	14.4	0	33	1.3	22.9	0	0	24.3	0	0	0	0	0	
Cars	0	1238	304	0	1542	858	1	563	0	1422	61	843	0	0	904	0	0	0	1	1	3869
% Cars	0	90.2	45.6	0	75.6	97.3	33.3	81.8	0	90.4	95.3	77	0	0	78	0	0	0	100	100	81.1
Trucks & Buses	0	129	362	0	491	24	2	125	0	151	3	249	0	0	252	0	0	0	0	0	894
% Trucks & Buses	0	9.4	54.4	0	24.1	2.7	66.7	18.2	0	9.6	4.7	22.7	0	0	21.7	0	0	0	0	0	18.7
School Buses	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	9
% School Buses	0	0.4	0	0	0.3	0	0	0	0	0	0	0.3	0	0	0.3	0	0	0	0	0	0.2

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-04
Site Code : 02000604
Start Date : 9/23/2020
Page No : 2

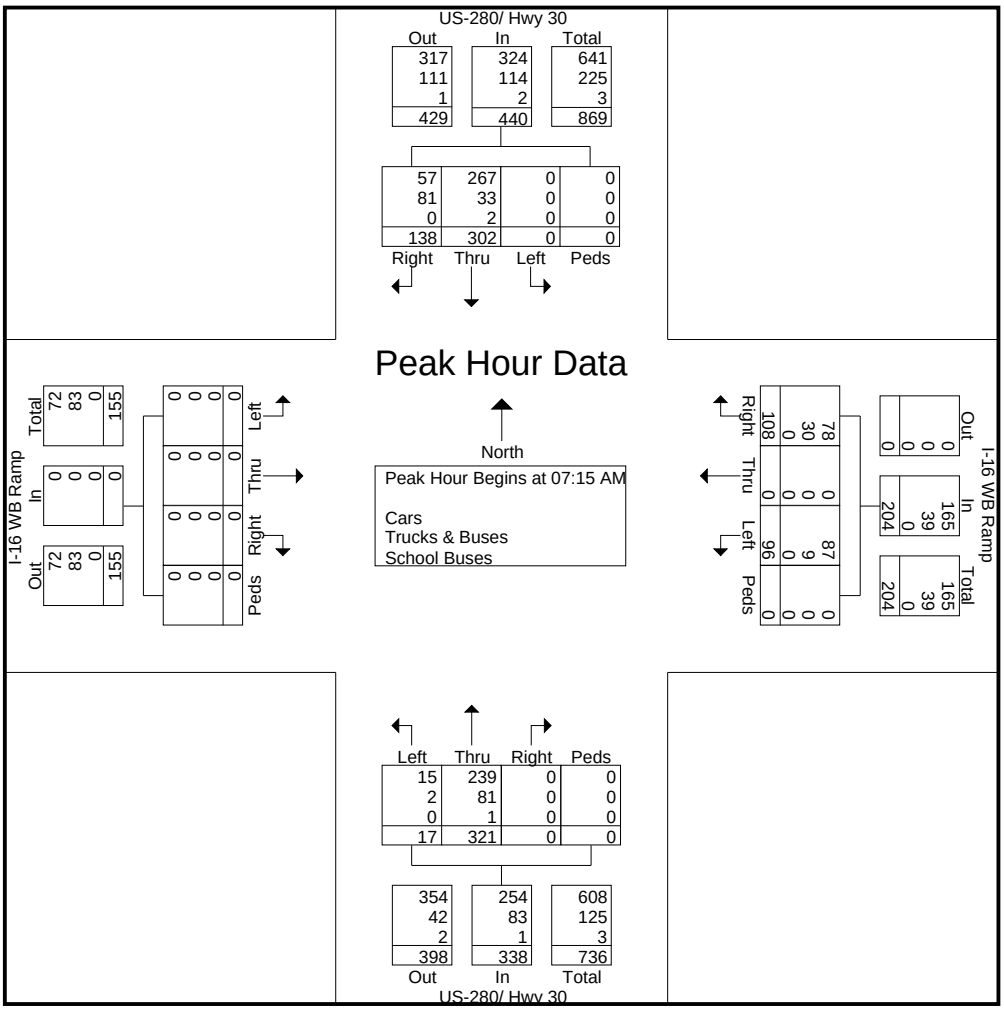


TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-04
Site Code : 02000604
Start Date : 9/23/2020
Page No : 3

	US-280/ Hwy 30 Southbound					I-16 WB Ramp Westbound					US-280/ Hwy 30 Northbound					I-16 WB Ramp Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	74	27	0	101	17	0	18	0	35	3	**83**	0	0	86	0	0	0	0	0	222
07:30 AM	0	**93**	34	0	**127**	**34**	0	27	0	61	**7**	83	0	0	**90**	0	0	0	0	0	**278**
07:45 AM	0	63	28	0	91	28	0	**35**	0	**63**	3	81	0	0	84	0	0	0	0	0	238
08:00 AM	0	72	**49**	0	121	17	0	28	0	45	4	74	0	0	78	0	0	0	0	0	244
Total Volume	0	302	138	0	440	96	0	108	0	204	17	321	0	0	338	0	0	0	0	0	982
% App. Total	0	68.6	31.4	0		47.1	0	52.9	0		5	95	0	0		0	0	0	0		
PHF	.000	.812	.704	.000	.866	.706	.000	.771	.000	.810	.607	.967	.000	.000	.939	.000	.000	.000	.000	.000	.883
Cars	0	267	57	0	324	87	0	78	0	165	15	239	0	0	254	0	0	0	0	0	743
% Cars	0	88.4	41.3	0	73.6	90.6	0	72.2	0	80.9	88.2	74.5	0	0	75.1	0	0	0	0	0	75.7
Trucks & Buses																					
% Trucks & Buses	0	10.9	58.7	0	25.9	9.4	0	27.8	0	19.1	11.8	25.2	0	0	24.6	0	0	0	0	0	24.0
School Buses	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
% School Buses	0	0.7	0	0	0.5	0	0	0	0	0	0	0.3	0	0	0.3	0	0	0	0	0	0.3

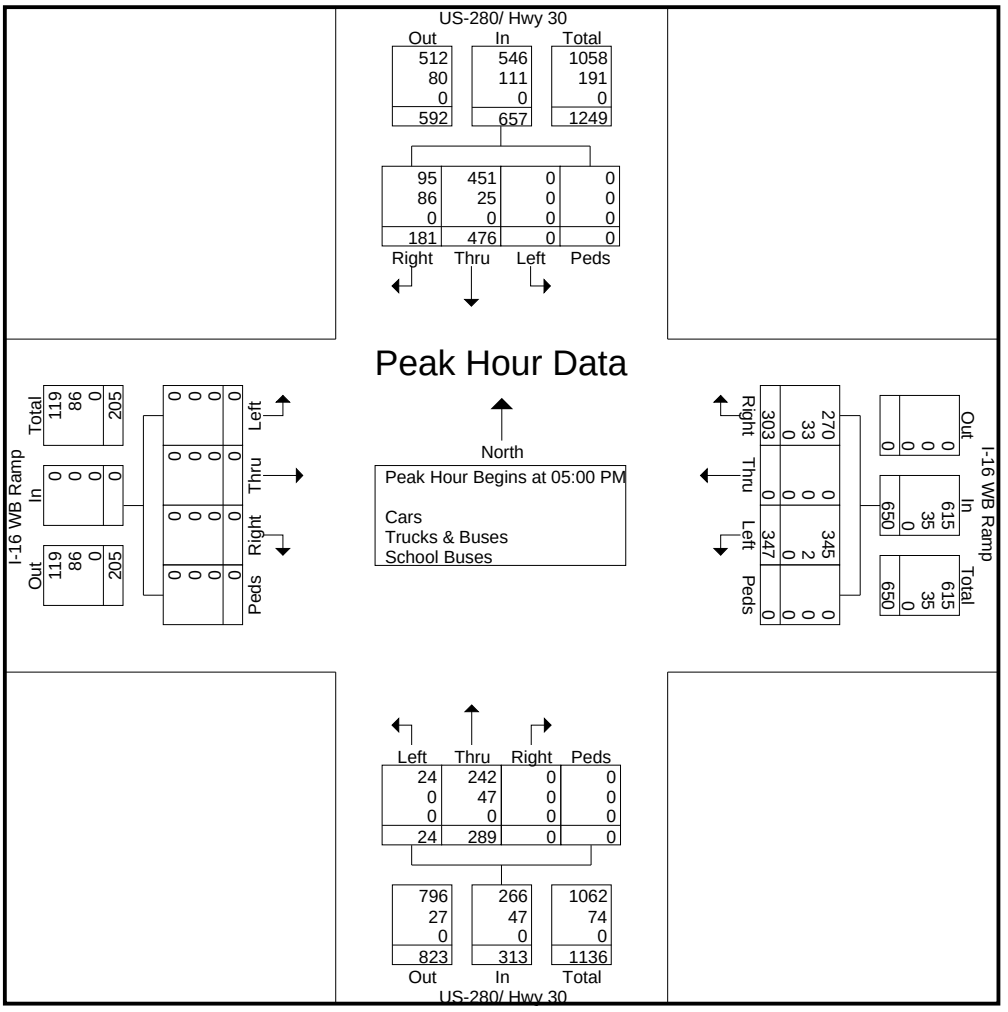


TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-04
Site Code : 02000604
Start Date : 9/23/2020
Page No : 4

	US-280/ Hwy 30 Southbound					I-16 WB Ramp Westbound					US-280/ Hwy 30 Northbound					I-16 WB Ramp Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	**137**	51	0	**188**	81	0	72	0	153	6	69	0	0	75	0	0	0	0	0	416
05:15 PM	0	132	**53**	0	185	73	0	**88**	0	161	3	**79**	0	0	82	0	0	0	0	0	**428**
05:30 PM	0	114	36	0	150	92	0	78	0	**170**	**10**	74	0	0	**84**	0	0	0	0	0	404
05:45 PM	0	93	41	0	134	**101**	0	65	0	166	5	67	0	0	72	0	0	0	0	0	372
Total Volume	0	476	181	0	657	347	0	303	0	650	24	289	0	0	313	0	0	0	0	0	1620
% App. Total	0	72.5	27.5	0		53.4	0	46.6	0		7.7	92.3	0	0		0	0	0	0		
PHF	.000	.869	.854	.000	.874	.859	.000	.861	.000	.956	.600	.915	.000	.000	.932	.000	.000	.000	.000	.000	.946
Cars	0	451	95	0	546	345	0	270	0	615	24	242	0	0	266	0	0	0	0	0	1427
% Cars	0	94.7	52.5	0	83.1	99.4	0	89.1	0	94.6	100	83.7	0	0	85.0	0	0	0	0	0	88.1
Trucks & Buses																					
% Trucks & Buses	0	5.3	47.5	0	16.9	0.6	0	10.9	0	5.4	0	16.3	0	0	15.0	0	0	0	0	0	11.9
School Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% School Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



PM System Peak Hour:

04:45 PM	0	90	44	0	134	89	0	50	0	139	2	71	0	0	73	0	0	0	0	0	346
Total	0	378	196	0	574	338	2	194	0	534	14	251	0	0	265	0	0	0	1	1	1374
05:00 PM	0	137	51	0	188	81	0	72	0	153	6	69	0	0	75	0	0	0	0	0	416
05:15 PM	0	132	53	0	185	73	0	88	0	161	3	79	0	0	82	0	0	0	0	0	428
05:30 PM	0	114	36	0	150	92	0	78	0	170	10	74	0	0	84	0	0	0	0	0	404
		473	184			335		288			21	293									1594

phf = 0.93

TMC Location: 20006-04 GA Hwy 30 at WBnd I-16 Ramps
Location: Bryan County, GA
Survey Count Times: 7-9am & 4-6pm

TRAFFIC DATA CONNECTION
PO Box 445 Abbeville, GA 31001
ph (843) 412-6222

Site Code: 2000605
Station ID: 05 280/30 N of I-16
Location 1: NB 280/30
Location 2: SB 280/30
Location 3:
Location 4:

Comment 1: Counter: 33035
Comment 2: Counted By: GWM
Comment 3: Weather: Mild
Comment 4: Client: T&H
Latitude: 0.000000
Longitude: 0.000000

9/23/2020 Time	Direction 1, NB 280/30	Direction 2, SB 280/30	Total
12:00 AM	24	27	51
12:15	14	31	45
12:30	15	18	33
12:45	11	27	38
1:00	14	13	27
1:15	17	23	40
1:30	14	23	37
1:45	17	19	36
2:00	20	19	39
2:15	21	24	45
2:30	16	30	46
2:45	21	14	35
3:00	20	29	49
3:15	41	42	83
3:30	20	36	56
3:45	19	48	67
4:00	11	38	49
4:15	41	32	73
4:30	38	42	80
4:45	38	48	86
5:00	40	52	92
5:15	79	46	125
5:30	71	52	123
5:45	84	75	159
6:00	96	95	191
6:15	120	98	218
6:30	145	128	273
6:45	159	94	253
7:00	112	115	227
7:15	124	131	255
7:30	132	148	280
7:45	130	115	245
8:00	131	161	292
8:15	92	131	223
8:30	91	141	232
8:45	93	116	209
9:00	96	130	226
9:15	82	147	229
9:30	76	134	210
9:45	95	118	213
10:00	98	126	224
10:15	98	124	222
10:30	92	124	216
10:45	90	132	222
11:00	91	131	222
11:15	113	135	248
11:30	99	131	230
11:45	96	135	231
Total	3257	3848	7105
Percent	45.8%	54.2%	
Peak	6:30	7:15	7:15
Volume	540	555	1072
Peak Factor	0.849	0.862	0.918

Site Code: 2000605
Station ID: 05 280/30 N of I-16
Location 1: NB 280/30
Location 2: SB 280/30
Location 3:
Location 4:

TRAFFIC DATA CONNECTION
PO Box 445 Abbeville, GA 31001
ph (843) 412-6222

Comment 1: Counter: 33035
Comment 2: Counted By: GWM
Comment 3: Weather: Mild
Comment 4: Client: T&H
Latitude: 0.000000
Longitude: 0.000000

9/23/2020 Time	Direction 1, NB 280/30	Direction 2, SB 280/30	Total
12:00 PM	114	139	253
12:15	100	126	226
12:30	101	121	222
12:45	114	119	233
1:00	88	134	222
1:15	94	100	194
1:30	98	161	259
1:45	106	104	210
2:00	95	116	211
2:15	97	120	217
2:30	101	135	236
2:45	94	133	227
3:00	98	130	228
3:15	98	144	242
3:30	127	160	287
3:45	128	151	279
4:00	122	158	280
4:15	97	170	267
4:30	124	171	295
4:45	148	134	282
5:00	132	194	326
5:15	169	207	376
5:30	163	154	317
5:45	134	149	283
6:00	129	139	268
6:15	108	124	232
6:30	98	104	202
6:45	92	86	178
7:00	70	73	143
7:15	62	78	140
7:30	68	52	120
7:45	52	76	128
8:00	68	63	131
8:15	65	59	124
8:30	41	60	101
8:45	43	53	96
9:00	51	60	111
9:15	33	40	73
9:30	35	42	77
9:45	40	32	72
10:00	32	36	68
10:15	30	23	53
10:30	32	39	71
10:45	34	42	76
11:00	16	23	39
11:15	15	20	35
11:30	18	27	45
11:45	30	16	46
Total	4004	4797	8801
Percent	45.5%	54.5%	
Peak	4:45	4:30	5:00
Volume	612	706	1302
Peak Factor	0.905	0.853	0.866
Grand Total	7261	8645	15906
Percent	45.6%	54.4%	
AADT		ADT: 15,906	AADT: 15,906

Date: 09-23-2020
TDC Job No: 20006-05

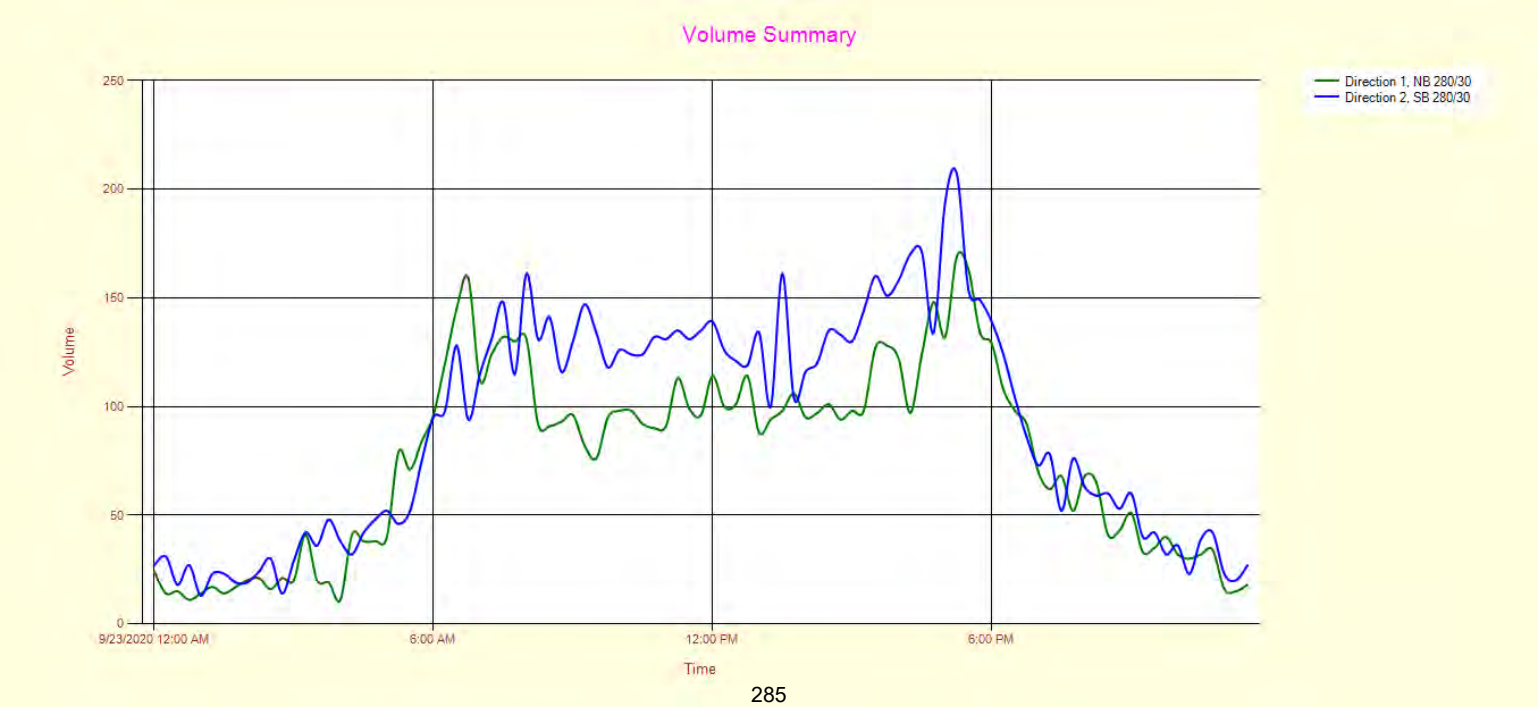
Location: **ATR-05** (GA 280/30 north of I-16 WBnd Ramps) Bryan County, GA

Direction 1: NB 280/30

Date (* = partial day)	AM Peak Time	AM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	AM Peak Hour Factor	PM Peak Time	PM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	PM Peak Hour Factor
9/23/2020	06:30 - 07:29	540	06:45 - 06:59	159	0.849	04:45 - 05:44	612	05:15 - 05:29	169	0.905

Direction 2: SB 280/30

Date (* = partial day)	AM Peak Time	AM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	AM Peak Hour Factor	PM Peak Time	PM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	PM Peak Hour Factor
9/23/2020	07:15 - 08:14	555	08:00 - 08:14	161	0.862	04:30 - 05:29	706	05:15 - 05:29	207	0.853



TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter:TU-2917
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-06
Site Code : 02000606
Start Date : 9/23/2020
Page No : 1

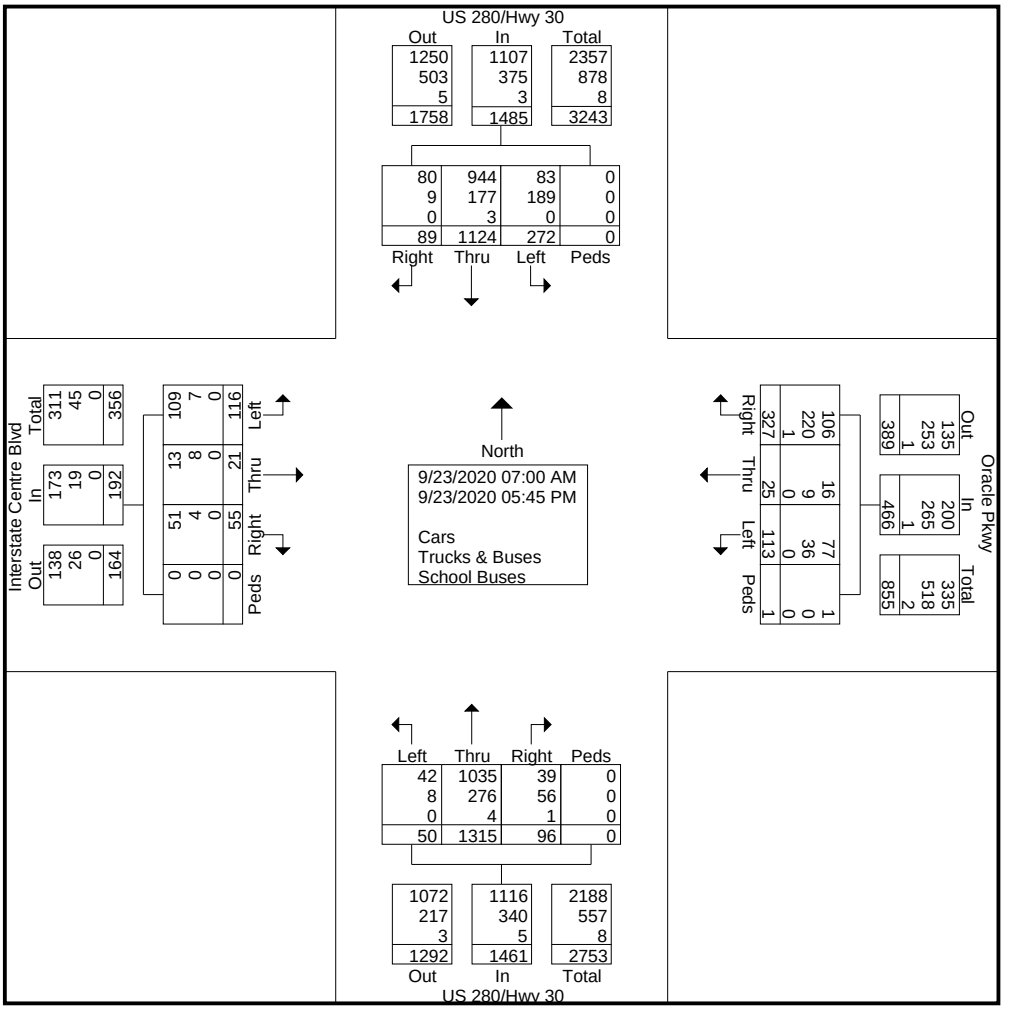
Groups Printed- Cars - Trucks & Buses - School Buses

	US 280/Hwy 30 Northbound					US 280/Hwy 30 Southbound					Interstate Centre Blvd Eastbound					Oracle Pkwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	6	80	6	0	92	11	56	12	0	79	7	3	5	0	15	4	2	8	0	14	200
07:15 AM	4	71	5	0	80	17	65	14	0	96	3	1	1	0	5	5	0	15	0	20	201
07:30 AM	8	90	7	0	105	21	61	11	0	93	2	0	2	0	4	12	2	12	0	26	228
07:45 AM	10	65	11	0	86	27	58	14	0	99	2	3	0	0	5	2	2	11	0	15	205
Total	28	306	29	0	363	76	240	51	0	367	14	7	8	0	29	23	6	46	0	75	834
08:00 AM	3	89	5	0	97	16	68	6	0	90	2	1	0	0	3	10	3	23	0	36	226
08:15 AM	2	69	6	0	77	13	47	7	0	67	0	1	1	0	2	2	2	15	0	19	165
08:30 AM	6	63	5	0	74	24	36	4	0	64	3	3	0	0	6	4	4	22	0	30	174
08:45 AM	2	48	10	0	60	13	51	2	0	66	0	2	1	0	3	7	4	24	0	35	164
Total	13	269	26	0	308	66	202	19	0	287	5	7	2	0	14	23	13	84	0	120	729
BREAK																					
04:00 PM	0	83	4	0	87	26	69	2	0	97	15	3	7	0	25	5	1	37	0	43	252
04:15 PM	1	96	8	0	105	7	65	2	0	74	2	0	2	0	4	11	1	20	1	33	216
04:30 PM	0	104	4	0	108	11	94	0	0	105	15	2	6	0	23	5	1	21	0	27	263
04:45 PM	2	105	2	0	109	22	87	2	0	111	2	0	0	0	2	9	1	12	0	22	244
Total	3	388	18	0	409	66	315	6	0	387	34	5	15	0	54	30	4	90	1	125	975
05:00 PM	0	94	11	0	105	10	95	2	0	107	25	0	13	0	38	15	0	36	0	51	301
05:15 PM	3	105	3	0	111	22	98	1	0	121	18	0	7	0	25	8	1	24	0	33	290
05:30 PM	2	69	5	0	76	16	91	5	0	112	12	1	8	0	21	8	0	27	0	35	244
05:45 PM	1	84	4	0	89	16	83	5	0	104	8	1	2	0	11	6	1	20	0	27	231
Total	6	352	23	0	381	64	367	13	0	444	63	2	30	0	95	37	2	107	0	146	1066
Grand Total	50	1315	96	0	1461	272	1124	89	0	1485	116	21	55	0	192	113	25	327	1	466	3604
Apprch %	3.4	90	6.6	0		18.3	75.7	6	0		60.4	10.9	28.6	0		24.2	5.4	70.2	0.2		
Total %	1.4	36.5	2.7	0	40.5	7.5	31.2	2.5	0	41.2	3.2	0.6	1.5	0	5.3	3.1	0.7	9.1	0	12.9	
Cars	42	1035	39	0	1116	83	944	80	0	1107	109	13	51	0	173	77	16	106	1	200	2596
% Cars	84	78.7	40.6	0	76.4	30.5	84	89.9	0	74.5	94	61.9	92.7	0	90.1	68.1	64	32.4	100	42.9	72
Trucks & Buses	8	276	56	0	340	189	177	9	0	375	7	8	4	0	19	36	9	220	0	265	999
% Trucks & Buses	16	21	58.3	0	23.3	69.5	15.7	10.1	0	25.3	6	38.1	7.3	0	9.9	31.9	36	67.3	0	56.9	27.7
School Buses	0	4	1	0	5	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	9
% School Buses	0	0.3	1	0	0.3	0	0.3	0	0	0.2	0	0	0	0	0	0	0	0.3	0	0.2	0.2

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-06
Site Code : 02000606
Start Date : 9/23/2020
Page No : 2

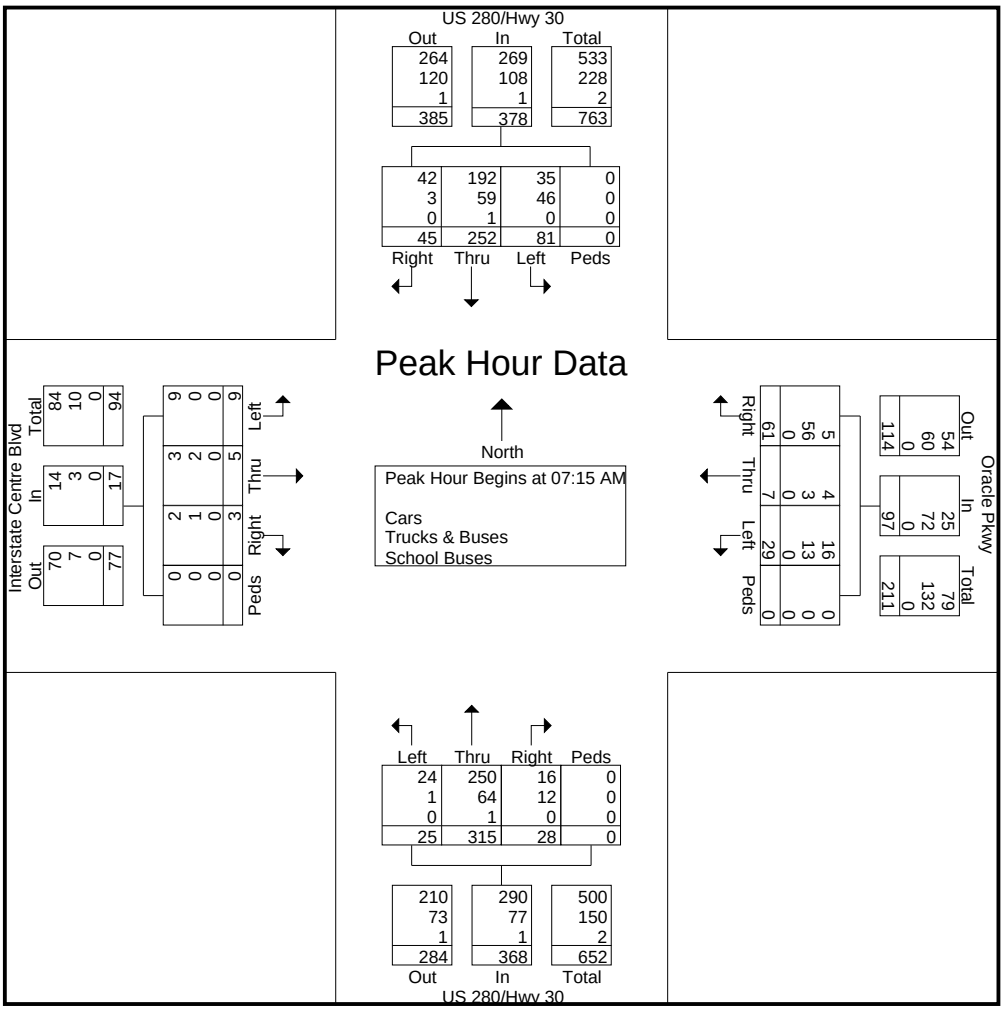


TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-06
Site Code : 02000606
Start Date : 9/23/2020
Page No : 3

	US 280/Hwy 30 Northbound					US 280/Hwy 30 Southbound					Interstate Centre Blvd Eastbound					Oracle Pkwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	4	71	5	0	80	17	65	**14**	0	96	**3**	1	1	0	**5**	5	0	15	0	20	201
07:30 AM	8	**90**	7	0	**105**	21	61	11	0	93	2	0	**2**	0	4	**12**	2	12	0	26	**228**
07:45 AM	**10**	65	**11**	0	86	**27**	58	14	0	**99**	2	**3**	0	0	5	2	2	11	0	15	205
08:00 AM	3	89	5	0	97	16	**68**	6	0	90	2	1	0	0	3	10	**3**	**23**	0	**36**	226
Total Volume	25	315	28	0	368	81	252	45	0	378	9	5	3	0	17	29	7	61	0	97	860
% App. Total	6.8	85.6	7.6	0		21.4	66.7	11.9	0		52.9	29.4	17.6	0		29.9	7.2	62.9	0		
PHF	.625	.875	.636	.000	.876	.750	.926	.804	.000	.955	.750	.417	.375	.000	.850	.604	.583	.663	.000	.674	.943
Cars	24	250	16	0	290	35	192	42	0	269	9	3	2	0	14	16	4	5	0	25	598
% Cars	96.0	79.4	57.1	0	78.8	43.2	76.2	93.3	0	71.2	100	60.0	66.7	0	82.4	55.2	57.1	8.2	0	25.8	69.5
Trucks & Buses																					
% Trucks & Buses	4.0	20.3	42.9	0	20.9	56.8	23.4	6.7	0	28.6	0	40.0	33.3	0	17.6	44.8	42.9	91.8	0	74.2	30.2
School Buses	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
% School Buses	0	0.3	0	0	0.3	0	0.4	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0.2

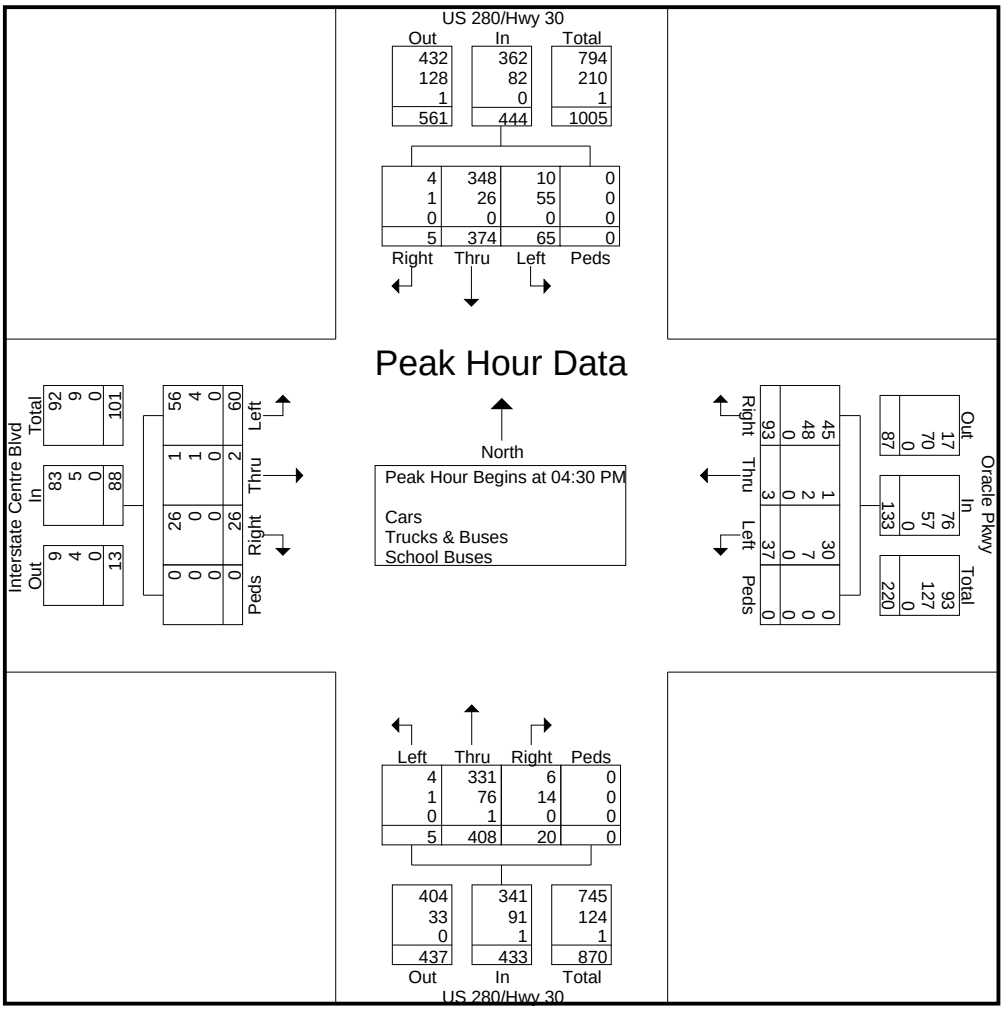


TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

File Name : 20006-06
Site Code : 02000606
Start Date : 9/23/2020
Page No : 4

	US 280/Hwy 30 Northbound					US 280/Hwy 30 Southbound					Interstate Centre Blvd Eastbound					Oracle Pkwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	104	4	0	108	11	94	0	0	105	15	**2**	6	0	23	5	**1**	21	0	27	263
04:45 PM	2	**105**	2	0	109	**22**	87	**2**	0	111	2	0	0	0	2	9	1	12	0	22	244
05:00 PM	0	94	**11**	0	105	10	95	2	0	107	**25**	0	**13**	0	**38**	**15**	0	**36**	0	**51**	**301**
05:15 PM	**3**	105	3	0	**111**	22	**98**	1	0	**121**	18	0	7	0	25	8	1	24	0	33	290
Total Volume	5	408	20	0	433	65	374	5	0	444	60	2	26	0	88	37	3	93	0	133	1098
% App. Total	1.2	94.2	4.6	0		14.6	84.2	1.1	0		68.2	2.3	29.5	0		27.8	2.3	69.9	0		
PHF	.417	.971	.455	.000	.975	.739	.954	.625	.000	.917	.600	.250	.500	.000	.579	.617	.750	.646	.000	.652	.912
Cars	4	331	6	0	341	10	348	4	0	362	56	1	26	0	83	30	1	45	0	76	862
% Cars	80.0	81.1	30.0	0	78.8	15.4	93.0	80.0	0	81.5	93.3	50.0	100	0	94.3	81.1	33.3	48.4	0	57.1	78.5
Trucks & Buses																					
% Trucks & Buses	20.0	18.6	70.0	0	21.0	84.6	7.0	20.0	0	18.5	6.7	50.0	0	0	5.7	18.9	66.7	51.6	0	42.9	21.4
School Buses	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% School Buses	0	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1



TMC Location: 20006-06 GA Hwy 30 at Interstate Center Blvd
Location: Bryan County, GA
Survey Count Times: 7-9am & 4-6pm

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: TU-2462
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-07
Site Code : 20006-07
Start Date : 9/23/2020
Page No : 1

Groups Printed- Cars - Trucks & Buses - School Buses

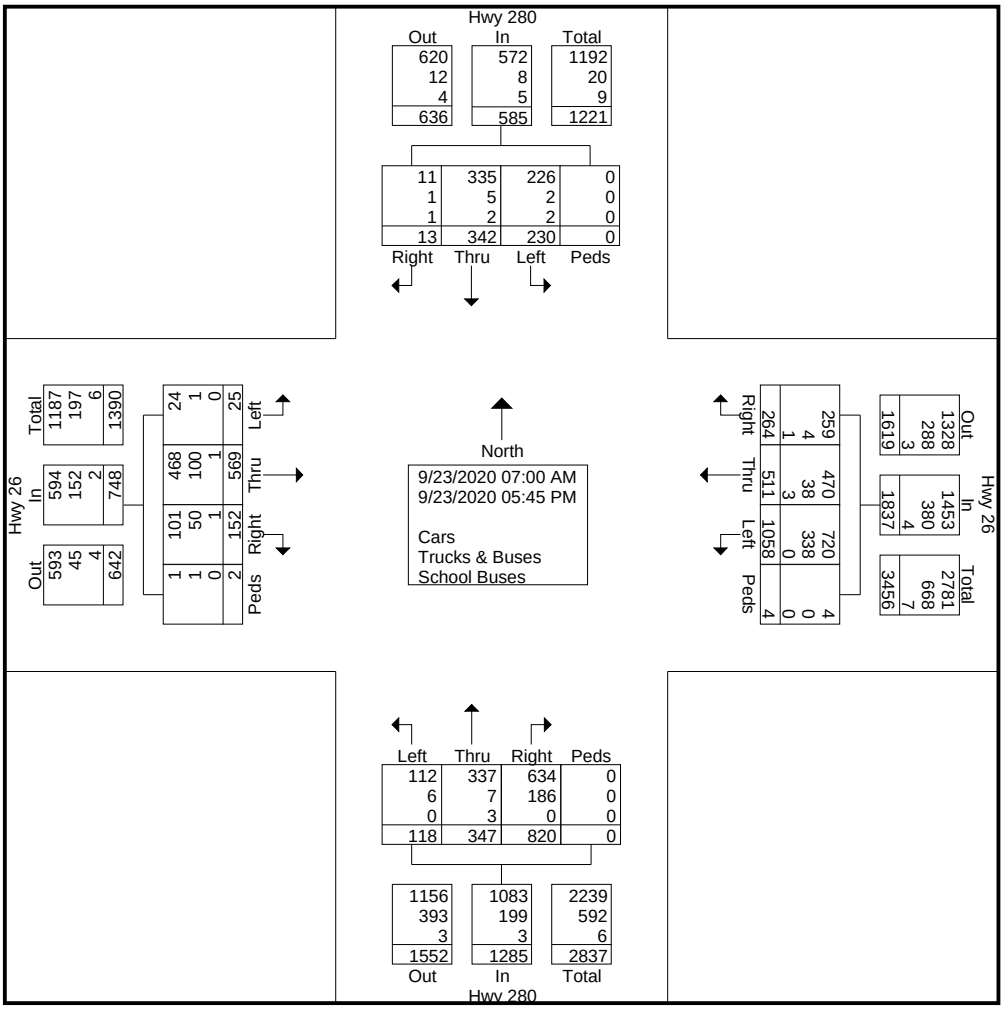
	Hwy 280 Northbound					Hwy 280 Southbound					Hwy 26 Eastbound					Hwy 26 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	13	55	0	70	26	28	0	0	54	0	50	12	0	62	63	16	4	0	83	269
07:15 AM	5	10	62	0	77	23	34	0	0	57	2	68	10	0	80	42	14	8	0	64	278
07:30 AM	0	10	59	0	69	21	33	2	0	56	0	59	18	0	77	64	16	4	0	84	286
07:45 AM	3	9	54	0	66	13	24	3	0	40	1	29	10	0	40	58	10	2	0	70	216
Total	10	42	230	0	282	83	119	5	0	207	3	206	50	0	259	227	56	18	0	301	1049
08:00 AM	5	17	52	0	74	15	24	1	0	40	2	37	10	0	49	60	8	2	0	70	233
08:15 AM	2	10	41	0	53	12	28	1	0	41	2	44	8	0	54	50	9	5	0	64	212
08:30 AM	3	11	33	0	47	13	18	0	0	31	0	27	10	0	37	40	8	2	0	50	165
08:45 AM	2	8	43	0	53	13	21	0	0	34	0	30	7	0	37	51	11	4	0	66	190
Total	12	46	169	0	227	53	91	2	0	146	4	138	35	0	177	201	36	13	0	250	800
BREAK																					
04:00 PM	11	27	38	0	76	14	15	2	0	31	0	25	8	0	33	83	58	24	2	167	307
04:15 PM	7	28	34	0	69	15	17	1	0	33	0	29	7	0	36	85	68	29	0	182	320
04:30 PM	10	38	61	0	109	6	20	1	0	27	8	26	7	0	41	82	46	32	0	160	337
04:45 PM	8	32	52	0	92	13	20	0	0	33	2	27	11	0	40	80	57	27	0	164	329
Total	36	125	185	0	346	48	72	4	0	124	10	107	33	0	150	330	229	112	2	673	1293
05:00 PM	18	30	62	0	110	13	13	0	0	26	0	33	10	1	44	79	45	38	0	162	342
05:15 PM	16	39	63	0	118	17	16	0	0	33	2	36	7	0	45	86	64	28	1	179	375
05:30 PM	16	33	61	0	110	6	13	1	0	20	5	31	7	1	44	69	47	29	0	145	319
05:45 PM	10	32	50	0	92	10	18	1	0	29	1	18	10	0	29	66	34	26	1	127	277
Total	60	134	236	0	430	46	60	2	0	108	8	118	34	2	162	300	190	121	2	613	1313
Grand Total	118	347	820	0	1285	230	342	13	0	585	25	569	152	2	748	1058	511	264	4	1837	4455
Apprch %	9.2	27	63.8	0		39.3	58.5	2.2	0		3.3	76.1	20.3	0.3		57.6	27.8	14.4	0.2		
Total %	2.6	7.8	18.4	0	28.8	5.2	7.7	0.3	0	13.1	0.6	12.8	3.4	0	16.8	23.7	11.5	5.9	0.1	41.2	
Cars	112	337	634	0	1083	226	335	11	0	572	24	468	101	1	594	720	470	259	4	1453	3702
% Cars	94.9	97.1	77.3	0	84.3	98.3	98	84.6	0	97.8	96	82.2	66.4	50	79.4	68.1	92	98.1	100	79.1	83.1
Trucks & Buses	6	7	186	0	199	2	5	1	0	8	1	100	50	1	152	338	38	4	0	380	739
% Trucks & Buses	5.1	2	22.7	0	15.5	0.9	1.5	7.7	0	1.4	4	17.6	32.9	50	20.3	31.9	7.4	1.5	0	20.7	16.6
School Buses	0	3	0	0	3	2	2	1	0	5	0	1	1	0	2	0	3	1	0	4	14
% School Buses	0	0.9	0	0	0.2	0.9	0.6	7.7	0	0.9	0	0.2	0.7	0	0.3	0	0.6	0.4	0	0.2	0.3

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: TU-2462
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-07
Site Code : 20006-07
Start Date : 9/23/2020
Page No : 2



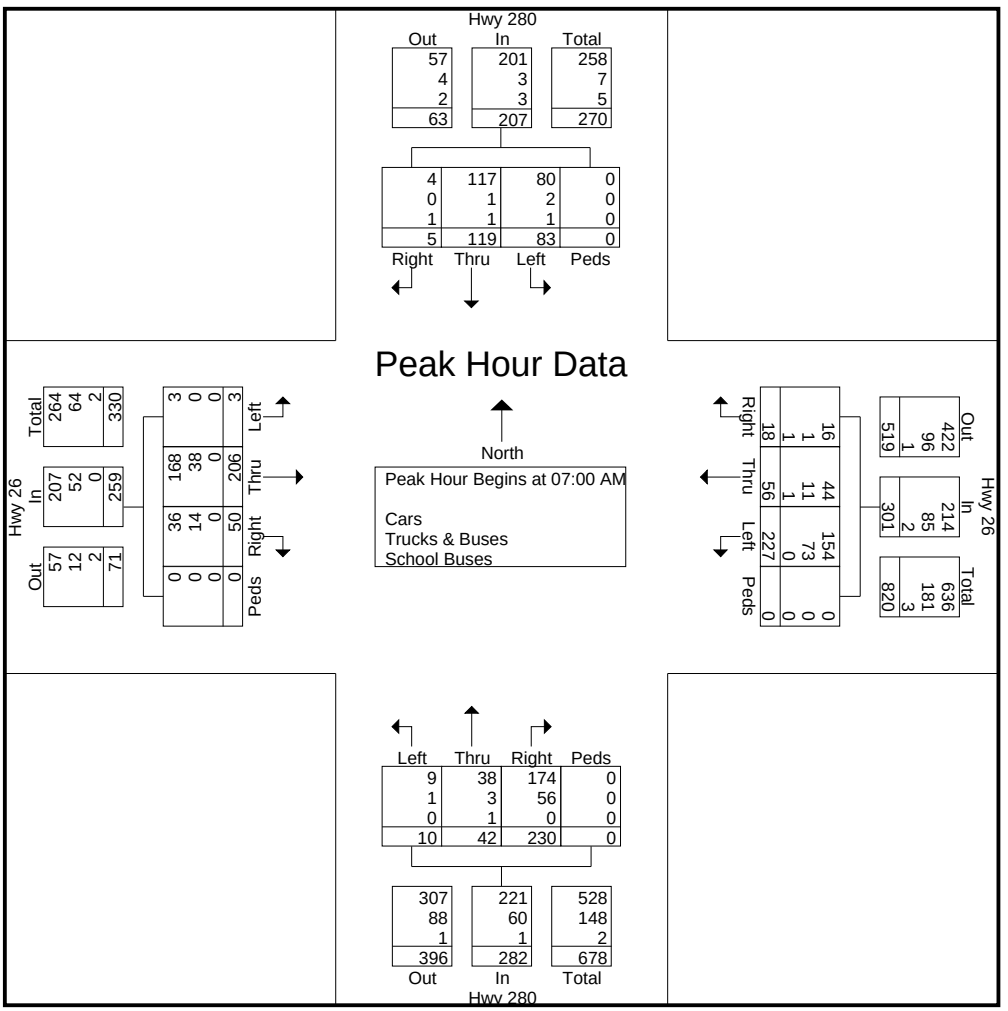
TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: TU-2462
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-07
Site Code : 20006-07
Start Date : 9/23/2020
Page No : 3

	Hwy 280 Northbound					Hwy 280 Southbound					Hwy 26 Eastbound					Hwy 26 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	2	**13**	55	0	70	**26**	28	0	0	54	0	50	12	0	62	63	**16**	4	0	83	269
07:15 AM	**5**	10	**62**	0	**77**	23	**34**	0	0	**57**	**2**	**68**	10	0	**80**	42	14	**8**	0	64	278
07:30 AM	0	10	59	0	69	21	33	2	0	56	0	59	**18**	0	77	**64**	16	4	0	**84**	**286**
07:45 AM	3	9	54	0	66	13	24	**3**	0	40	1	29	10	0	40	58	10	2	0	70	216
Total Volume	10	42	230	0	282	83	119	5	0	207	3	206	50	0	259	227	56	18	0	301	1049
% App. Total	3.5	14.9	81.6	0		40.1	57.5	2.4	0		1.2	79.5	19.3	0		75.4	18.6	6	0		
PHF	.500	.808	.927	.000	.916	.798	.875	.417	.000	.908	.375	.757	.694	.000	.809	.887	.875	.563	.000	.896	.917
Cars	9	38	174	0	221	80	117	4	0	201	3	168	36	0	207	154	44	16	0	214	843
% Cars	90.0	90.5	75.7	0	78.4	96.4	98.3	80.0	0	97.1	100	81.6	72.0	0	79.9	67.8	78.6	88.9	0	71.1	80.4
Trucks & Buses																					
% Trucks & Buses	10.0	7.1	24.3	0	21.3	2.4	0.8	0	0	1.4	0	18.4	28.0	0	20.1	32.2	19.6	5.6	0	28.2	19.1
School Buses	0	1	0	0	1	1	1	1	0	3	0	0	0	0	0	0	1	1	0	2	6
% School Buses	0	2.4	0	0	0.4	1.2	0.8	20.0	0	1.4	0	0	0	0	0	0	1.8	5.6	0	0.7	0.6



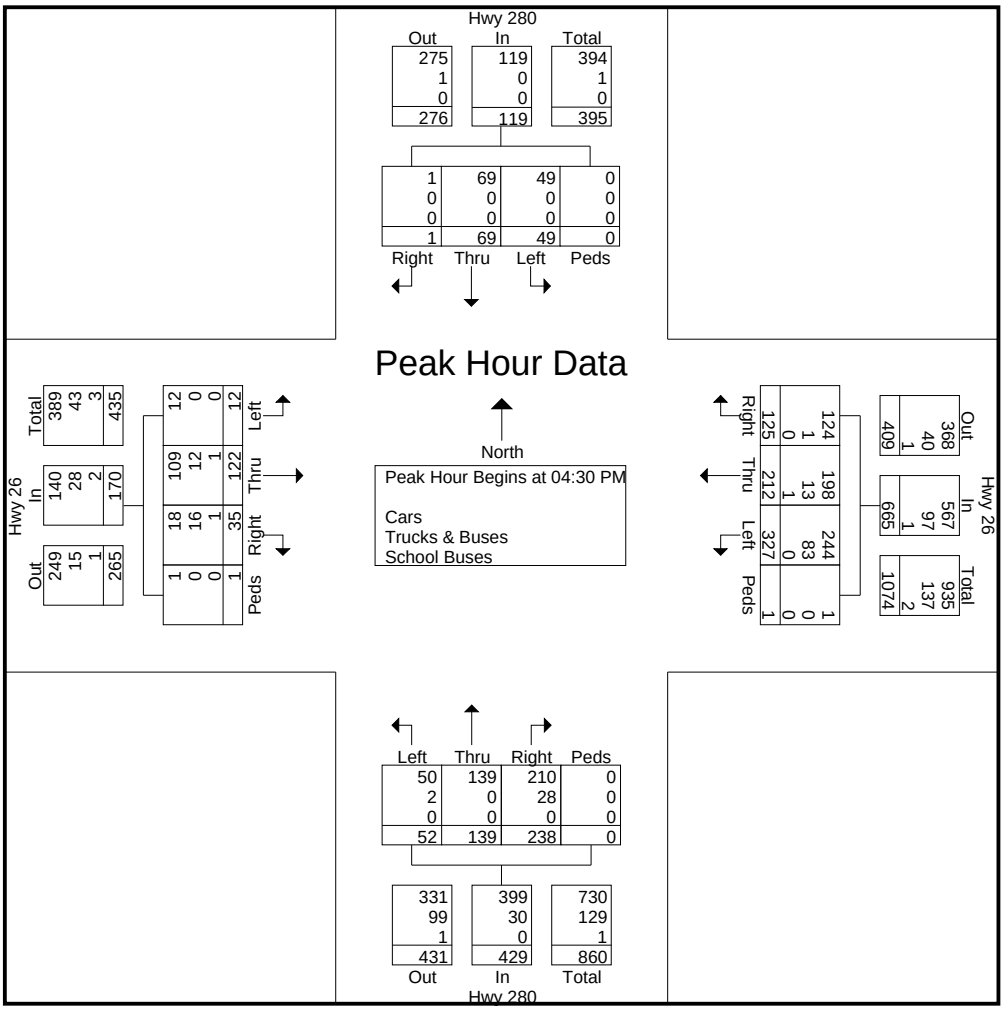
TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: TU-2462
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-07
Site Code : 20006-07
Start Date : 9/23/2020
Page No : 4

	Hwy 280 Northbound					Hwy 280 Southbound					Hwy 26 Eastbound					Hwy 26 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	10	38	61	0	109	6	**20**	**1**	0	27	**8**	26	7	0	41	82	46	32	0	160	337
04:45 PM	8	32	52	0	92	13	20	0	0	**33**	2	27	**11**	0	40	80	57	27	0	164	329
05:00 PM	**18**	30	62	0	110	13	13	0	0	26	0	33	10	**1**	44	79	45	**38**	0	162	342
05:15 PM	16	**39**	**63**	0	**118**	**17**	16	0	0	33	2	**36**	7	0	**45**	**86**	**64**	28	**1**	**179**	**375**
Total Volume	52	139	238	0	429	49	69	1	0	119	12	122	35	1	170	327	212	125	1	665	1383
% App. Total	12.1	32.4	55.5	0		41.2	58	0.8	0		7.1	71.8	20.6	0.6		49.2	31.9	18.8	0.2		
PHF	.722	.891	.944	.000	.909	.721	.863	.250	.000	.902	.375	.847	.795	.250	.944	.951	.828	.822	.250	.929	.922
Cars	50	139	210	0	399	49	69	1	0	119	12	109	18	1	140	244	198	124	1	567	1225
% Cars	96.2	100	88.2	0	93.0	100	100	100	0	100	100	89.3	51.4	100	82.4	74.6	93.4	99.2	100	85.3	88.6
Trucks & Buses																					
% Trucks & Buses	3.8	0	11.8	0	7.0	0	0	0	0	0	0	9.8	45.7	0	16.5	25.4	6.1	0.8	0	14.6	11.2
School Buses	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	3
% School Buses	0	0	0	0	0	0	0	0	0	0	0	0.8	2.9	0	1.2	0	0.5	0	0	0.2	0.2



TMC Location: 20006-07 US Hwy 80 at GA Hwy 30
Location: Bryan County, GA
Survey Count Times: 7-9am & 4-6pm

Site Code: 2000608
Station ID: 08
Location 1: WB Hwy 26
Location 2: EB Hwy 26
Location 3:
Location 4:

TRAFFIC DATA CONNECTION
PO Box 445 Abbeville, GA 31001
ph (843) 412-6222

Comment 1: Counter: 33040
Comment 2: Counted By: GWM
Comment 3: Weather: Mild
Comment 4: Client: T&H
Latitude: 0.000000
Longitude: 0.000000

9/23/2020 Time	Direction 1, WB Hwy 26	Direction 2, EB Hwy 26	Total
12:00 AM	6	1	7
12:15	4	1	5
12:30	4	2	6
12:45	2	4	6
1:00	3	0	3
1:15	1	0	1
1:30	5	2	7
1:45	2	1	3
2:00	8	3	11
2:15	1	4	5
2:30	6	3	9
2:45	3	1	4
3:00	5	5	10
3:15	2	6	8
3:30	1	5	6
3:45	4	8	12
4:00	1	15	16
4:15	1	11	12
4:30	0	16	16
4:45	4	25	29
5:00	9	41	50
5:15	5	43	48
5:30	13	50	63
5:45	3	38	41
6:00	11	50	61
6:15	8	75	83
6:30	7	61	68
6:45	16	62	78
7:00	21	50	71
7:15	23	73	96
7:30	19	61	80
7:45	13	39	52
8:00	17	49	66
8:15	17	41	58
8:30	14	37	51
8:45	17	31	48
9:00	17	49	66
9:15	14	27	41
9:30	17	37	54
9:45	13	34	47
10:00	19	21	40
10:15	31	34	65
10:30	16	25	41
10:45	18	31	49
11:00	21	36	57
11:15	21	29	50
11:30	20	26	46
11:45	24	24	48
Total	507	1287	1794
Percent	28.3%	71.7%	
Peak	10:15	6:00	6:45
Volume	86	248	325
Peak Factor	0.694	0.827	0.846

TRAFFIC DATA CONNECTION
PO Box 445 Abbeville, GA 31001
ph (843) 412-6222

Site Code: 2000608
Station ID: 08
Location 1: WB Hwy 26
Location 2: EB Hwy 26
Location 3:
Location 4:

Comment 1: Counter: 33040
Comment 2: Counted By: GWM
Comment 3: Weather: Mild
Comment 4: Client: T&H
Latitude: 0.000000
Longitude: 0.000000

9/23/2020 Time	Direction 1, WB Hwy 26	Direction 2, EB Hwy 26	Total
12:00 PM	38	23	61
12:15	27	28	55
12:30	33	26	59
12:45	29	31	60
1:00	33	24	57
1:15	30	26	56
1:30	31	31	62
1:45	29	33	62
2:00	40	33	73
2:15	40	26	66
2:30	24	37	61
2:45	37	27	64
3:00	26	21	47
3:15	47	27	74
3:30	52	30	82
3:45	53	26	79
4:00	73	28	101
4:15	91	27	118
4:30	63	34	97
4:45	71	32	103
5:00	66	41	107
5:15	79	42	121
5:30	69	23	92
5:45	51	18	69
6:00	67	32	99
6:15	56	32	88
6:30	42	18	60
6:45	31	19	50
7:00	27	24	51
7:15	31	20	51
7:30	18	13	31
7:45	18	10	28
8:00	15	7	22
8:15	13	13	26
8:30	10	7	17
8:45	11	5	16
9:00	10	6	16
9:15	8	4	12
9:30	7	6	13
9:45	1	4	5
10:00	12	3	15
10:15	6	7	13
10:30	6	3	9
10:45	3	2	5
11:00	4	1	5
11:15	4	2	6
11:30	9	4	13
11:45	4	2	6
Total	1545	938	2483
Percent	62.2%	37.8%	
Peak	4:00	4:30	4:30
Volume	298	149	428
Peak Factor	0.819	0.887	0.884
Grand Total	2052	2225	4277
Percent	48.0%	52.0%	
AADT		ADT: 4,277	AADT: 4,277

Date: 09-23-2020
TDC Job No: 20006-08

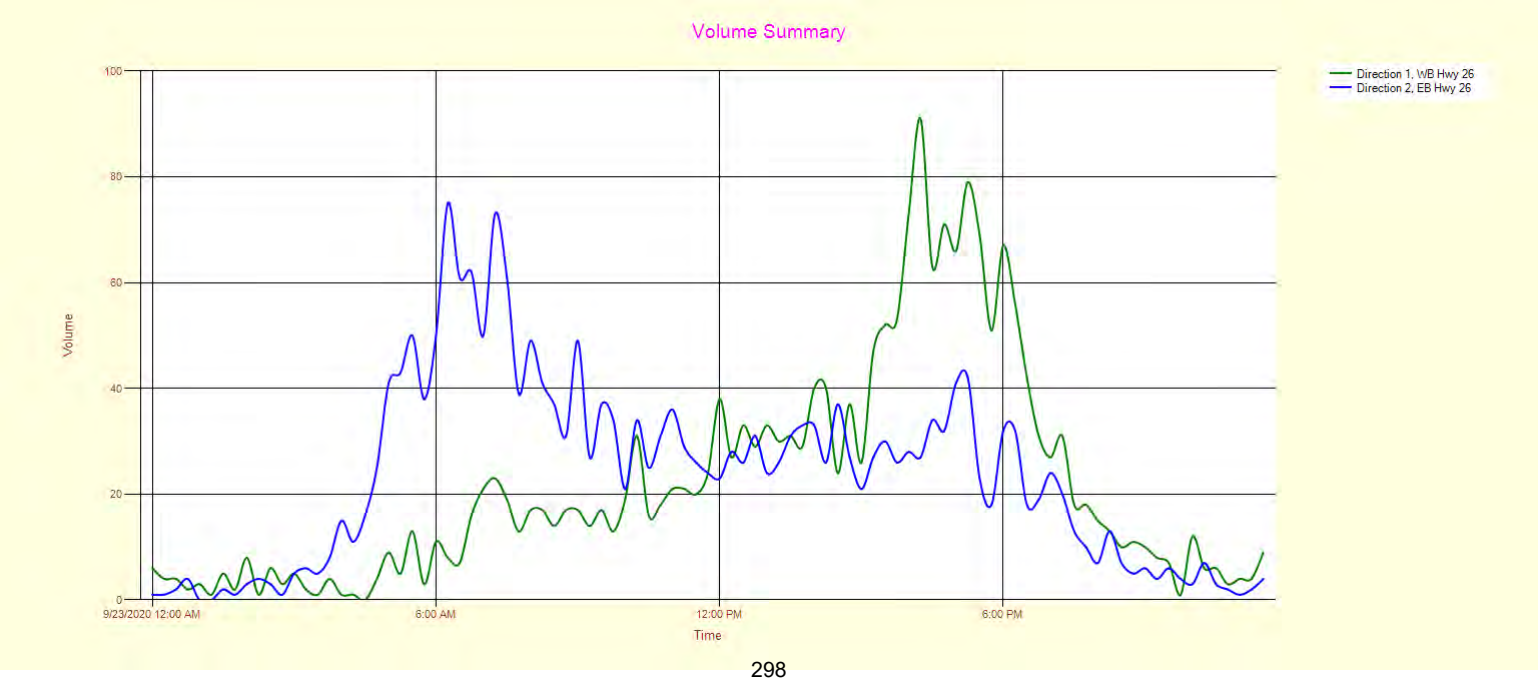
Location: **ATR-08** (GA US Hwy 80 west of GA Hwy 30) Bryan County, GA

Direction 1: WB Hwy 80

Date (* = partial day)	AM Peak Time	AM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	AM Peak Hour Factor	PM Peak Time	PM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	PM Peak Hour Factor
9/23/2020	11:45 - 12:44	122	12:00 - 12:14	38	0.803	04:00 - 04:59	298	04:15 - 04:29	91	0.819

Direction 2: EB Hwy 80

Date (* = partial day)	AM Peak Time	AM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	AM Peak Hour Factor	PM Peak Time	PM Volume	Largest 15 Minute Interval Volume	Largest 15 Minute Interval Volume	PM Peak Hour Factor
9/23/2020	06:00 - 06:59	248	06:15 - 06:29	75	0.827	04:30 - 05:29	149	05:15 - 05:29	42	0.887



TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: CC-001
Counted By: GWM
Weather: Mild
Other: T&H

File Name : 20006-09
Site Code : 20006-09
Start Date : 9/23/2020
Page No : 1

Groups Printed- Cars - Trucks & Buses - School Buses

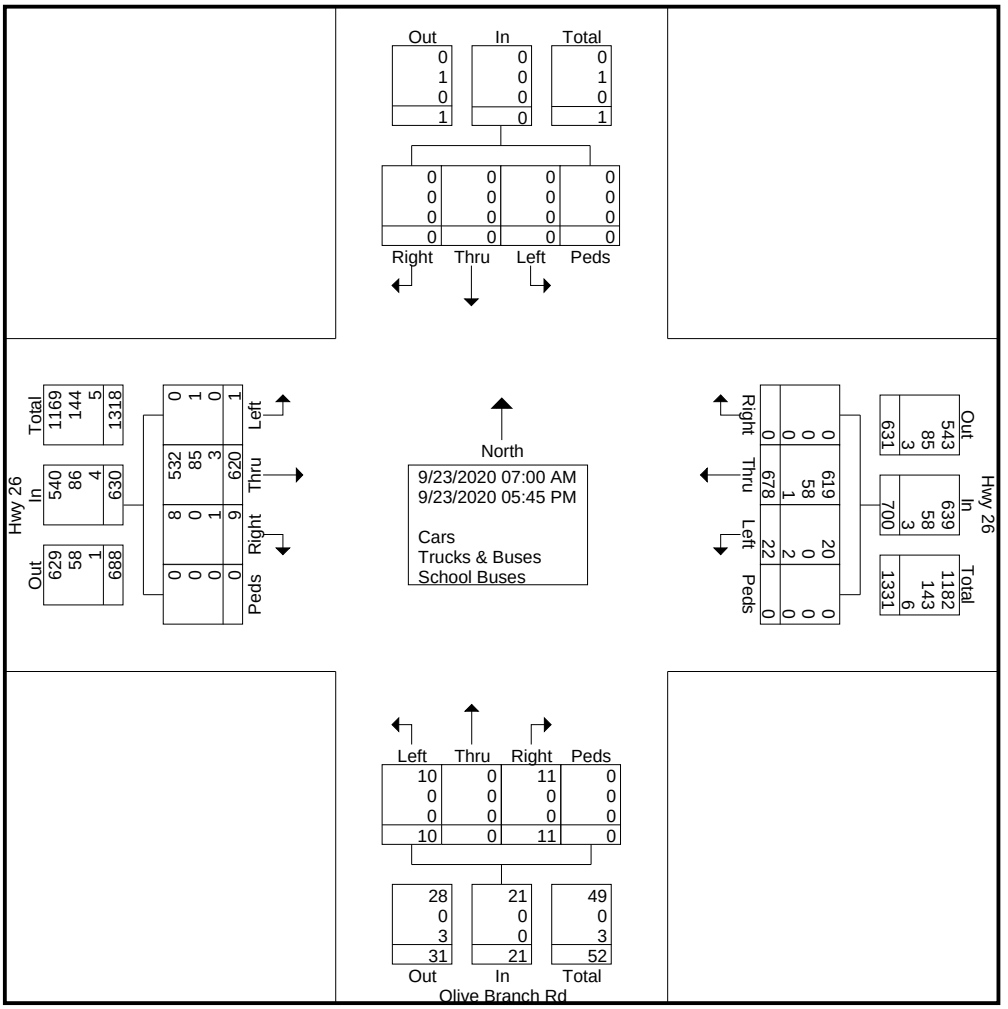
	Olive Branch Rd Northbound					Southbound					Hwy 26 Eastbound					Hwy 26 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	2	0	2	0	0	0	0	0	1	43	0	0	44	0	28	0	0	28	74
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	76	0	0	76	0	22	0	0	22	98
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	56	0	0	56	1	19	0	0	20	76
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	46	2	0	48	1	15	0	0	16	64
Total	0	0	2	0	2	0	0	0	0	0	1	221	2	0	224	2	84	0	0	86	312
08:00 AM	0	0	2	0	2	0	0	0	0	0	0	41	0	0	41	0	10	0	0	10	53
08:15 AM	0	0	1	0	1	0	0	0	0	0	0	42	0	0	42	0	22	0	0	22	65
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	33	0	0	33	0	12	0	0	12	45
08:45 AM	1	0	0	0	1	0	0	0	0	0	0	36	0	0	36	0	14	0	0	14	51
Total	1	0	3	0	4	0	0	0	0	0	0	152	0	0	152	0	58	0	0	58	214
BREAK																					
04:00 PM	0	0	3	0	3	0	0	0	0	0	0	23	1	0	24	0	71	0	0	71	98
04:15 PM	2	0	1	0	3	0	0	0	0	0	0	29	0	0	29	3	71	0	0	74	106
04:30 PM	3	0	1	0	4	0	0	0	0	0	0	31	1	0	32	2	72	0	0	74	110
04:45 PM	1	0	1	0	2	0	0	0	0	0	0	31	1	0	32	2	64	0	0	66	100
Total	6	0	6	0	12	0	0	0	0	0	0	114	3	0	117	7	278	0	0	285	414
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	44	0	0	44	0	69	0	0	69	114
05:15 PM	1	0	0	0	1	0	0	0	0	0	0	47	1	0	48	7	76	0	0	83	132
05:30 PM	1	0	0	0	1	0	0	0	0	0	0	16	2	0	18	2	63	0	0	65	84
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	26	1	0	27	4	50	0	0	54	81
Total	3	0	0	0	3	0	0	0	0	0	0	133	4	0	137	13	258	0	0	271	411
Grand Total	10	0	11	0	21	0	0	0	0	0	1	620	9	0	630	22	678	0	0	700	1351
Apprch %	47.6	0	52.4	0		0	0	0	0		0.2	98.4	1.4	0		3.1	96.9	0	0		
Total %	0.7	0	0.8	0	1.6	0	0	0	0	0	0.1	45.9	0.7	0	46.6	1.6	50.2	0	0	51.8	
Cars	10	0	11	0	21	0	0	0	0	0	0	532	8	0	540	20	619	0	0	639	1200
% Cars	100	0	100	0	100	0	0	0	0	0	0	85.8	88.9	0	85.7	90.9	91.3	0	0	91.3	88.8
Trucks & Buses	0	0	0	0	0	0	0	0	0	0	1	85	0	0	86	0	58	0	0	58	144
% Trucks & Buses	0	0	0	0	0	0	0	0	0	0	100	13.7	0	0	13.7	0	8.6	0	0	8.3	10.7
School Buses	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	2	1	0	0	3	7
% School Buses	0	0	0	0	0	0	0	0	0	0	0	0.5	11.1	0	0.6	9.1	0.1	0	0	0.4	0.5

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: CC-001
Counted By: GWM
Weather: Mild
Other: T&H

File Name : 20006-09
Site Code : 20006-09
Start Date : 9/23/2020
Page No : 2



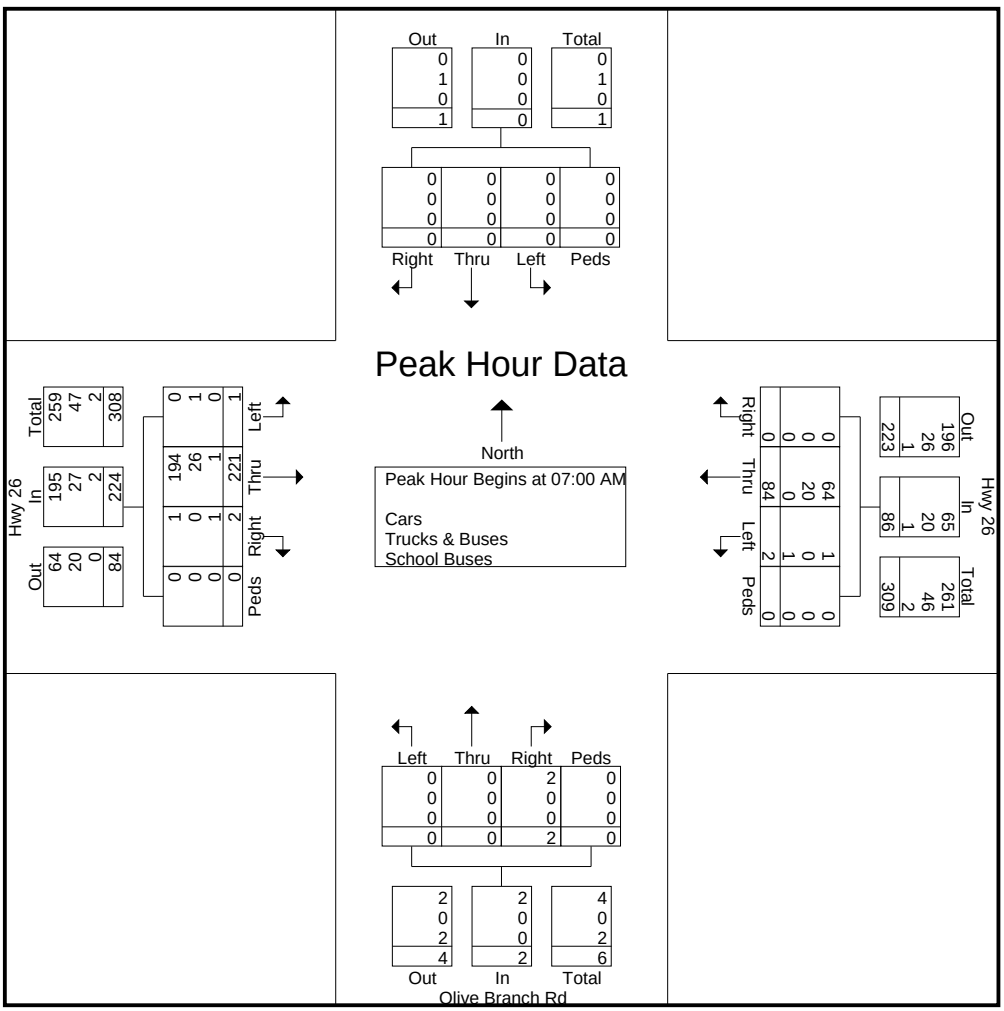
TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: CC-001
Counted By: GWM
Weather: Mild
Other: T&H

File Name : 20006-09
Site Code : 20006-09
Start Date : 9/23/2020
Page No : 3

	Olive Branch Rd Northbound					Southbound					Hwy 26 Eastbound					Hwy 26 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	**2**	0	**2**	0	0	0	0	0	**1**	43	0	0	44	0	**28**	0	0	**28**	74
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	**76**	0	0	**76**	0	22	0	0	22	**98**
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	56	0	0	56	**1**	19	0	0	20	76
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	46	**2**	0	48	1	15	0	0	16	64
Total Volume	0	0	2	0	2	0	0	0	0	0	1	221	2	0	224	2	84	0	0	86	312
% App. Total	0	0	100	0		0	0	0	0		0.4	98.7	0.9	0		2.3	97.7	0	0		
PHF	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.727	.250	.000	.737	.500	.750	.000	.000	.768	.796
Cars	0	0	2	0	2	0	0	0	0	0	0	194	1	0	195	1	64	0	0	65	262
% Cars	0	0	100	0	100	0	0	0	0	0	0	87.8	50.0	0	87.1	50.0	76.2	0	0	75.6	84.0
Trucks & Buses																					
% Trucks & Buses	0	0	0	0	0	0	0	0	0	0	100	11.8	0	0	12.1	0	23.8	0	0	23.3	15.1
School Buses	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	3
% School Buses	0	0	0	0	0	0	0	0	0	0	0	0.5	50.0	0	0.9	50.0	0	0	0	1.2	1.0



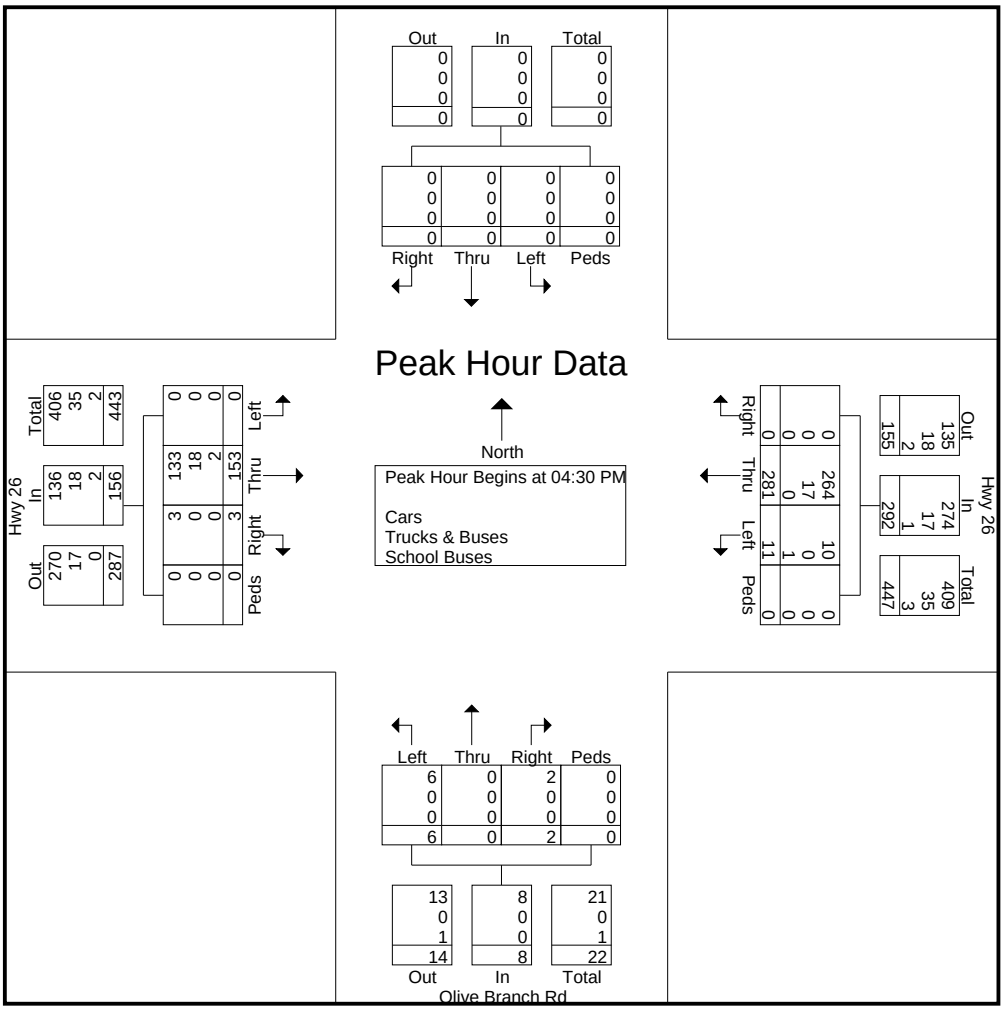
TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: CC-001
Counted By: GWM
Weather: Mild
Other: T&H

File Name : 20006-09
Site Code : 20006-09
Start Date : 9/23/2020
Page No : 4

	Olive Branch Rd Northbound					Southbound					Hwy 26 Eastbound					Hwy 26 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	**3**	0	**1**	0	**4**	0	0	0	0	0	0	31	**1**	0	32	2	72	0	0	74	110
04:45 PM	1	0	1	0	2	0	0	0	0	0	0	31	1	0	32	2	64	0	0	66	100
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	44	0	0	44	0	69	0	0	69	114
05:15 PM	1	0	0	0	1	0	0	0	0	0	0	**47**	1	0	**48**	**7**	**76**	0	0	**83**	**132**
Total Volume	6	0	2	0	8	0	0	0	0	0	0	153	3	0	156	11	281	0	0	292	456
% App. Total	75	0	25	0		0	0	0	0		0	98.1	1.9	0		3.8	96.2	0	0		
PHF	.500	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.814	.750	.000	.813	.393	.924	.000	.000	.880	.864
Cars	6	0	2	0	8	0	0	0	0	0	0	133	3	0	136	10	264	0	0	274	418
% Cars	100	0	100	0	100	0	0	0	0	0	0	86.9	100	0	87.2	90.9	94.0	0	0	93.8	91.7
Trucks & Buses																					
% Trucks & Buses	0	0	0	0	0	0	0	0	0	0	0	11.8	0	0	11.5	0	6.0	0	0	5.8	7.7
School Buses	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	3
% School Buses	0	0	0	0	0	0	0	0	0	0	0	1.3	0	0	1.3	9.1	0	0	0	0.3	0.7



TMC Location: 20006-09 US Hwy 80 at Olive Branch Rd
Location: Bryan County, GA
Survey Count Times: 7-9am & 4-6pm

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: TU-2462
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-10
Site Code : 20006-10
Start Date : 9/23/2020
Page No : 1

Groups Printed- Cars - Trucks - Buses

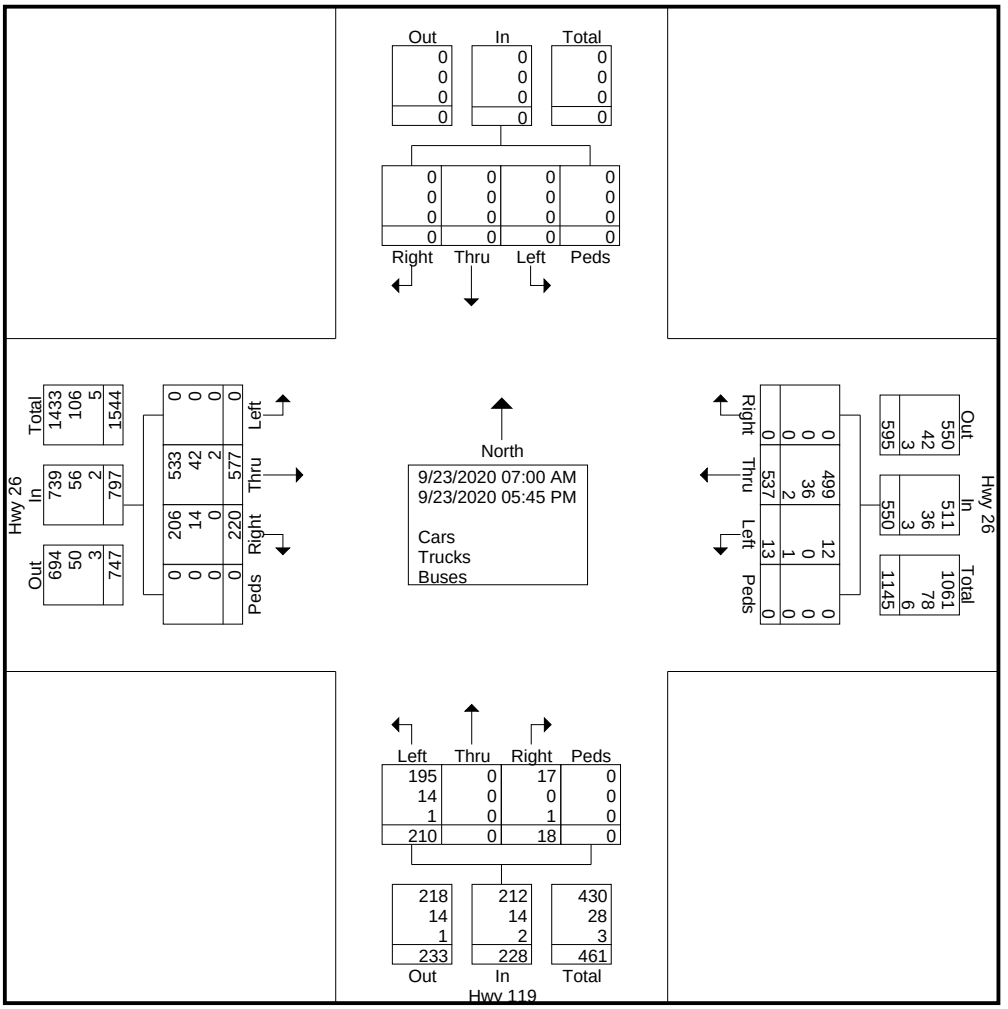
	Hwy 119 Northbound					Southbound					Hwy 26 Eastbound					Hwy 26 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	9	0	0	0	9	0	0	0	0	0	0	14	11	0	25	0	48	0	0	48	82
07:15 AM	14	0	1	0	15	0	0	0	0	0	0	23	15	0	38	0	62	0	0	62	115
07:30 AM	9	0	2	0	11	0	0	0	0	0	0	22	10	0	32	0	47	0	0	47	90
07:45 AM	9	0	0	0	9	0	0	0	0	0	0	13	11	0	24	1	37	0	0	38	71
Total	41	0	3	0	44	0	0	0	0	0	0	72	47	0	119	1	194	0	0	195	358
08:00 AM	11	0	1	0	12	0	0	0	0	0	0	6	7	0	13	1	32	0	0	33	58
08:15 AM	15	0	0	0	15	0	0	0	0	0	0	19	4	0	23	0	39	0	0	39	77
08:30 AM	15	0	0	0	15	0	0	0	0	0	0	14	10	0	24	3	33	0	0	36	75
08:45 AM	11	0	1	0	12	0	0	0	0	0	0	12	7	0	19	1	23	0	0	24	55
Total	52	0	2	0	54	0	0	0	0	0	0	51	28	0	79	5	127	0	0	132	265
BREAK																					
04:00 PM	14	0	2	0	16	0	0	0	0	0	0	34	13	0	47	2	27	0	0	29	92
04:15 PM	21	0	1	0	22	0	0	0	0	0	0	55	25	0	80	0	31	0	0	31	133
04:30 PM	18	0	1	0	19	0	0	0	0	0	0	70	27	0	97	1	29	0	0	30	146
04:45 PM	12	0	2	0	14	0	0	0	0	0	0	55	21	0	76	2	23	0	0	25	115
Total	65	0	6	0	71	0	0	0	0	0	0	214	86	0	300	5	110	0	0	115	486
05:00 PM	13	0	0	0	13	0	0	0	0	0	0	64	13	0	77	2	39	0	0	41	131
05:15 PM	15	0	3	0	18	0	0	0	0	0	0	56	16	0	72	0	29	0	0	29	119
05:30 PM	10	0	3	0	13	0	0	0	0	0	0	67	17	0	84	0	22	0	0	22	119
05:45 PM	14	0	1	0	15	0	0	0	0	0	0	53	13	0	66	0	16	0	0	16	97
Total	52	0	7	0	59	0	0	0	0	0	0	240	59	0	299	2	106	0	0	108	466
Grand Total	210	0	18	0	228	0	0	0	0	0	0	577	220	0	797	13	537	0	0	550	1575
Apprch %	92.1	0	7.9	0		0	0	0	0		0	72.4	27.6	0		2.4	97.6	0	0		
Total %	13.3	0	1.1	0	14.5	0	0	0	0	0	0	36.6	14	0	50.6	0.8	34.1	0	0	34.9	
Cars	195	0	17	0	212	0	0	0	0	0	0	533	206	0	739	12	499	0	0	511	1462
% Cars	92.9	0	94.4	0	93	0	0	0	0	0	0	92.4	93.6	0	92.7	92.3	92.9	0	0	92.9	92.8
Trucks	14	0	0	0	14	0	0	0	0	0	0	42	14	0	56	0	36	0	0	36	106
% Trucks	6.7	0	0	0	6.1	0	0	0	0	0	0	7.3	6.4	0	7	0	6.7	0	0	6.5	6.7
Buses	1	0	1	0	2	0	0	0	0	0	0	2	0	0	2	1	2	0	0	3	7
% Buses	0.5	0	5.6	0	0.9	0	0	0	0	0	0	0.3	0	0	0.3	7.7	0.4	0	0	0.5	0.4

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: TU-2462
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-10
Site Code : 20006-10
Start Date : 9/23/2020
Page No : 2



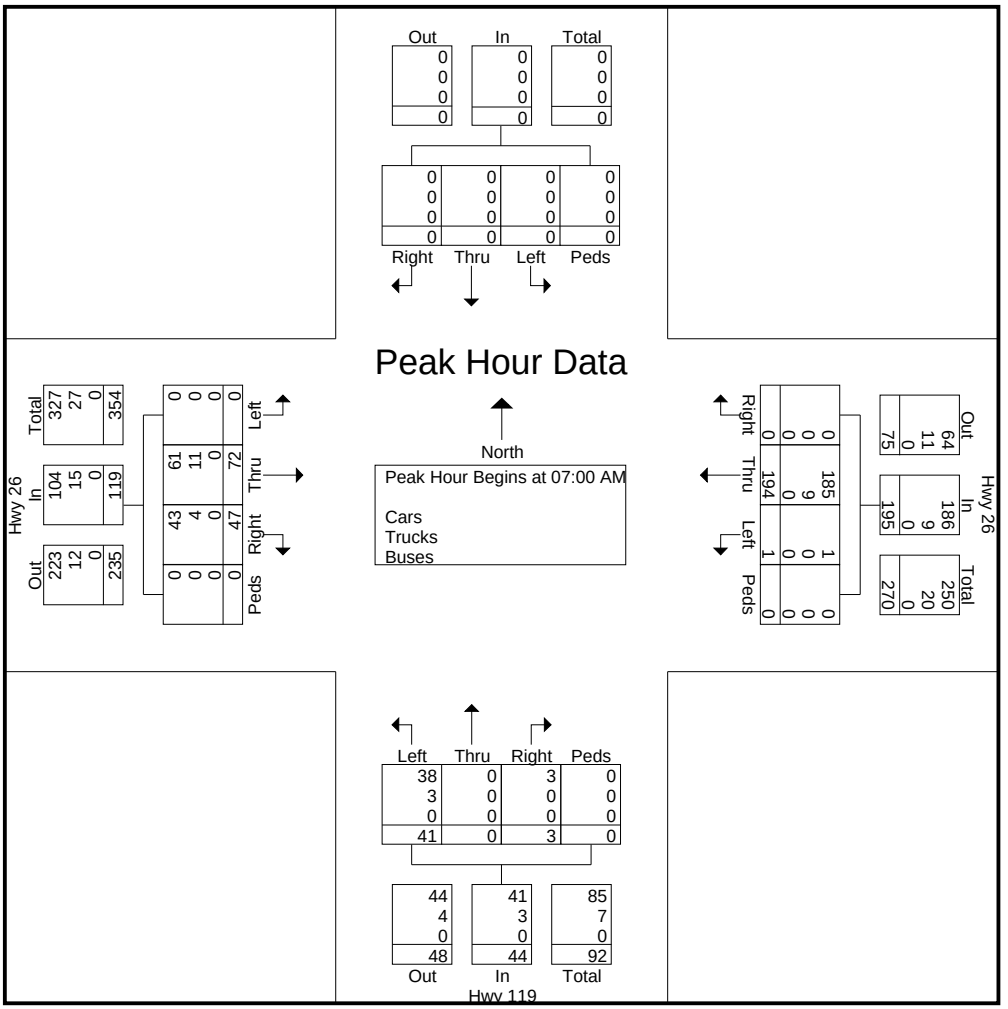
TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: TU-2462
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-10
Site Code : 20006-10
Start Date : 9/23/2020
Page No : 3

	Hwy 119 Northbound					Southbound					Hwy 26 Eastbound					Hwy 26 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	9	0	0	0	9	0	0	0	0	0	0	14	11	0	25	0	48	0	0	48	82
07:15 AM	**14**	0	1	0	**15**	0	0	0	0	0	0	**23**	**15**	0	**38**	0	**62**	0	0	**62**	**115**
07:30 AM	9	0	**2**	0	11	0	0	0	0	0	0	22	10	0	32	0	47	0	0	47	90
07:45 AM	9	0	0	0	9	0	0	0	0	0	0	13	11	0	24	**1**	37	0	0	38	71
Total Volume	41	0	3	0	44	0	0	0	0	0	0	72	47	0	119	1	194	0	0	195	358
% App. Total	93.2	0	6.8	0		0	0	0	0		0	60.5	39.5	0		0.5	99.5	0	0		
PHF	.732	.000	.375	.000	.733	.000	.000	.000	.000	.000	.000	.783	.783	.000	.783	.250	.782	.000	.000	.786	.778
Cars	38	0	3	0	41	0	0	0	0	0	0	61	43	0	104	1	185	0	0	186	331
% Cars	92.7	0	100	0	93.2	0	0	0	0	0	0	84.7	91.5	0	87.4	100	95.4	0	0	95.4	92.5
Trucks	3	0	0	0	3	0	0	0	0	0	0	11	4	0	15	0	9	0	0	9	27
% Trucks	7.3	0	0	0	6.8	0	0	0	0	0	0	15.3	8.5	0	12.6	0	4.6	0	0	4.6	7.5
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



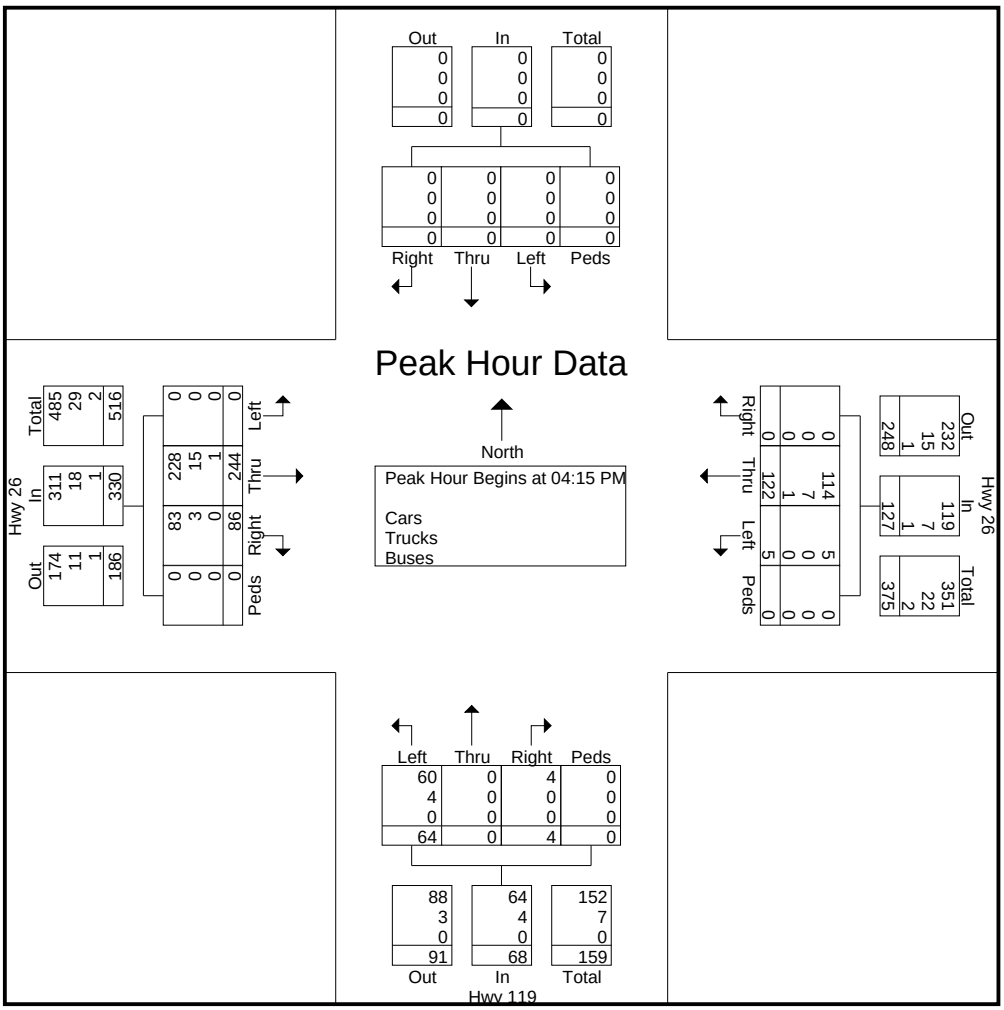
TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: TU-2462
Counted By: LME
Weather: Mild
Other: T&H

File Name : 20006-10
Site Code : 20006-10
Start Date : 9/23/2020
Page No : 4

	Hwy 119 Northbound					Southbound					Hwy 26 Eastbound					Hwy 26 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	**21**	0	1	0	**22**	0	0	0	0	0	0	55	25	0	80	0	31	0	0	31	133
04:30 PM	18	0	1	0	19	0	0	0	0	0	0	**70**	**27**	0	**97**	1	29	0	0	30	**146**
04:45 PM	12	0	**2**	0	14	0	0	0	0	0	0	55	21	0	76	**2**	23	0	0	25	115
05:00 PM	13	0	0	0	13	0	0	0	0	0	0	64	13	0	77	2	**39**	0	0	**41**	131
Total Volume	64	0	4	0	68	0	0	0	0	0	0	244	86	0	330	5	122	0	0	127	525
% App. Total	94.1	0	5.9	0		0	0	0	0		0	73.9	26.1	0		3.9	96.1	0	0		
PHF	.762	.000	.500	.000	.773	.000	.000	.000	.000	.000	.000	.871	.796	.000	.851	.625	.782	.000	.000	.774	.899
Cars	60	0	4	0	64	0	0	0	0	0	0	228	83	0	311	5	114	0	0	119	494
% Cars	93.8	0	100	0	94.1	0	0	0	0	0	0	93.4	96.5	0	94.2	100	93.4	0	0	93.7	94.1
Trucks	4	0	0	0	4	0	0	0	0	0	0	15	3	0	18	0	7	0	0	7	29
% Trucks	6.3	0	0	0	5.9	0	0	0	0	0	0	6.1	3.5	0	5.5	0	5.7	0	0	5.5	5.5
Buses	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	2
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0.3	0	0.8	0	0	0.8	0.4



TMC Location: 20006-10 SR 119 Hwy 30 at GA Hwy 26
Location: Bryan County, GA
Survey Count Times: 7-9am & 4-6pm

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: CC-001
Counted By: GWM
Weather: Mild
Other: T&H

File Name : 20006-11
Site Code : 20006-11
Start Date : 9/23/2020
Page No : 1

Groups Printed- Cars - Trucks & Buses - School Buses

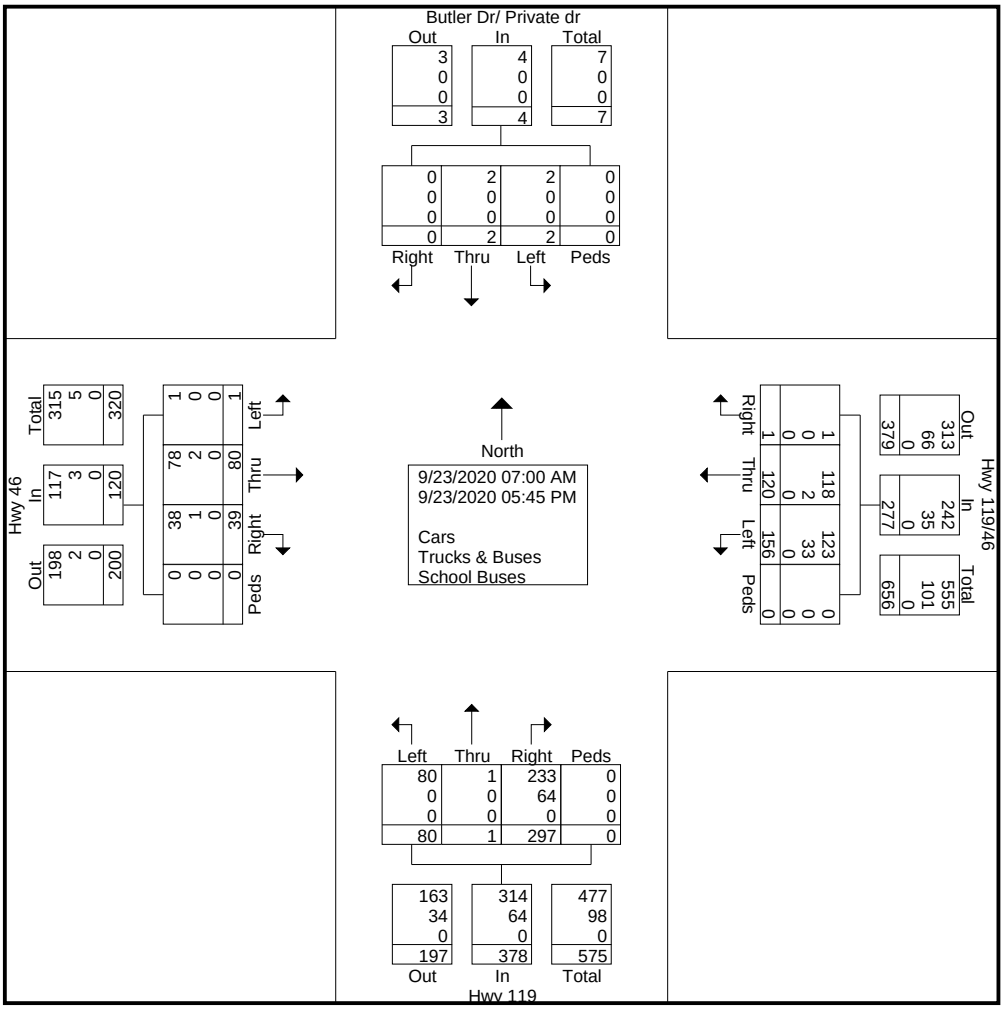
	Hwy 119 Northbound					Butler Dr/ Private dr Southbound					Hwy 46 Eastbound					Hwy 119/46 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	0	16	0	17	0	0	0	0	0	0	5	3	0	8	1	4	0	0	5	30
07:15 AM	6	0	9	0	15	0	0	0	0	0	0	7	0	0	7	2	3	0	0	5	27
07:30 AM	3	0	19	0	22	0	0	0	0	0	0	2	1	0	3	1	2	0	0	3	28
07:45 AM	1	0	6	0	7	0	0	0	0	0	0	6	5	0	11	3	3	0	0	6	24
Total	11	0	50	0	61	0	0	0	0	0	0	20	9	0	29	7	12	0	0	19	109
08:00 AM	3	0	11	0	14	0	0	0	0	0	0	4	1	0	5	0	3	0	0	3	22
08:15 AM	5	0	10	0	15	0	0	0	0	0	0	0	2	0	2	3	1	0	0	4	21
08:30 AM	3	0	14	0	17	0	0	0	0	0	0	5	3	0	8	4	7	0	0	11	36
08:45 AM	5	0	9	0	14	1	0	0	0	1	0	4	3	0	7	5	4	0	0	9	31
Total	16	0	44	0	60	1	0	0	0	1	0	13	9	0	22	12	15	0	0	27	110
BREAK																					
04:00 PM	15	1	25	0	41	0	1	0	0	1	0	3	3	0	6	28	16	0	0	44	92
04:15 PM	5	0	33	0	38	0	0	0	0	0	0	10	4	0	14	17	11	0	0	28	80
04:30 PM	9	0	30	0	39	0	0	0	0	0	0	4	4	0	8	15	12	0	0	27	74
04:45 PM	5	0	36	0	41	1	0	0	0	1	0	8	2	0	10	18	12	0	0	30	82
Total	34	1	124	0	159	1	1	0	0	2	0	25	13	0	38	78	51	0	0	129	328
05:00 PM	9	0	29	0	38	0	0	0	0	0	0	6	1	0	7	18	10	0	0	28	73
05:15 PM	5	0	21	0	26	0	0	0	0	0	1	8	2	0	11	13	11	0	0	24	61
05:30 PM	2	0	18	0	20	0	1	0	0	1	0	4	1	0	5	9	9	1	0	19	45
05:45 PM	3	0	11	0	14	0	0	0	0	0	0	4	4	0	8	19	12	0	0	31	53
Total	19	0	79	0	98	0	1	0	0	1	1	22	8	0	31	59	42	1	0	102	232
Grand Total	80	1	297	0	378	2	2	0	0	4	1	80	39	0	120	156	120	1	0	277	779
Apprch %	21.2	0.3	78.6	0		50	50	0	0		0.8	66.7	32.5	0		56.3	43.3	0.4	0		
Total %	10.3	0.1	38.1	0	48.5	0.3	0.3	0	0	0.5	0.1	10.3	5	0	15.4	20	15.4	0.1	0	35.6	
Cars	80	1	233	0	314	2	2	0	0	4	1	78	38	0	117	123	118	1	0	242	677
% Cars	100	100	78.5	0	83.1	100	100	0	0	100	100	97.5	97.4	0	97.5	78.8	98.3	100	0	87.4	86.9
Trucks & Buses	0	0	64	0	64	0	0	0	0	0	0	2	1	0	3	33	2	0	0	35	102
% Trucks & Buses	0	0	21.5	0	16.9	0	0	0	0	0	0	2.5	2.6	0	2.5	21.2	1.7	0	0	12.6	13.1
School Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% School Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: CC-001
Counted By: GWM
Weather: Mild
Other: T&H

File Name : 20006-11
Site Code : 20006-11
Start Date : 9/23/2020
Page No : 2



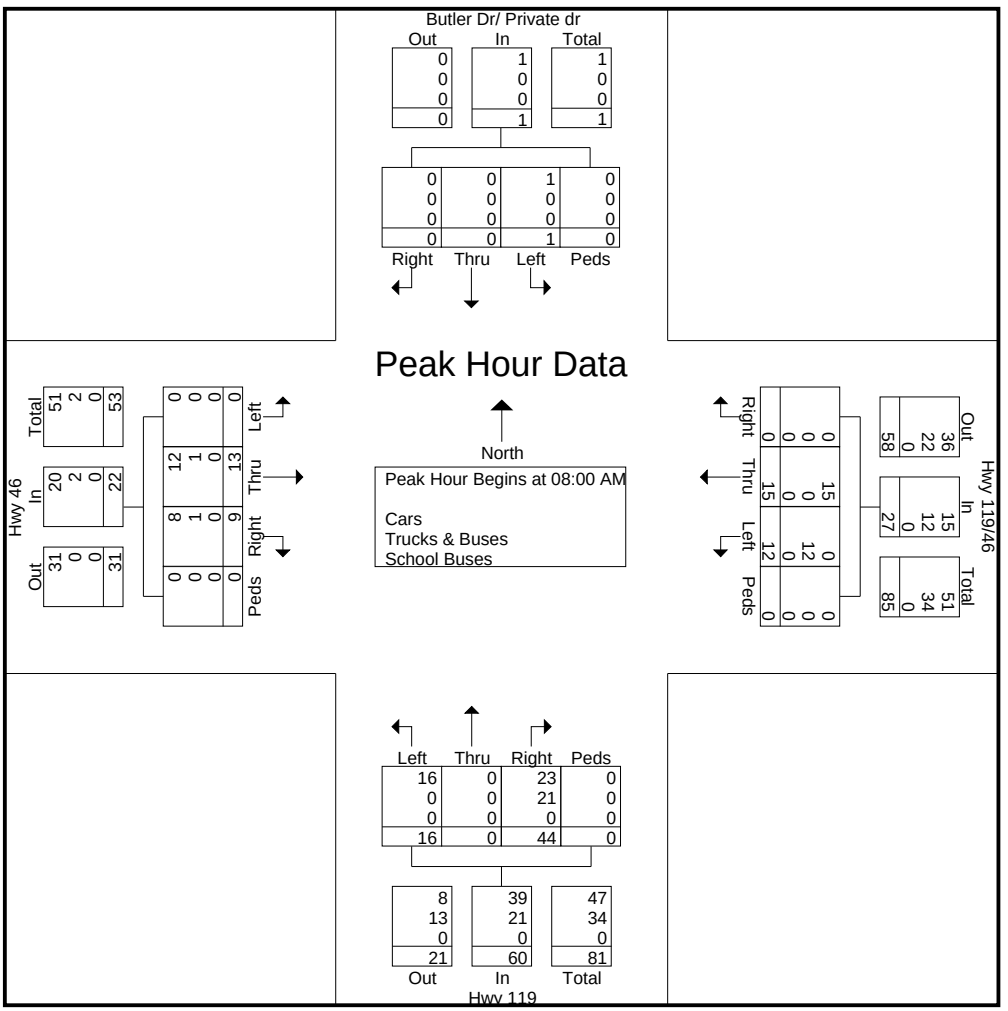
TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: CC-001
Counted By: GWM
Weather: Mild
Other: T&H

File Name : 20006-11
Site Code : 20006-11
Start Date : 9/23/2020
Page No : 3

	Hwy 119 Northbound					Butler Dr/ Private dr Southbound					Hwy 46 Eastbound					Hwy 119/46 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	3	0	11	0	14	0	0	0	0	0	0	4	1	0	5	0	3	0	0	3	22
08:15 AM	**5**	0	10	0	15	0	0	0	0	0	0	0	2	0	2	3	1	0	0	4	21
08:30 AM	3	0	**14**	0	**17**	0	0	0	0	0	0	**5**	**3**	0	**8**	4	**7**	0	0	**11**	**36**
08:45 AM	5	0	9	0	14	**1**	0	0	0	**1**	0	4	3	0	7	**5**	4	0	0	9	31
Total Volume	16	0	44	0	60	1	0	0	0	1	0	13	9	0	22	12	15	0	0	27	110
% App. Total	26.7	0	73.3	0		100	0	0	0		0	59.1	40.9	0		44.4	55.6	0	0		
PHF	.800	.000	.786	.000	.882	.250	.000	.000	.000	.250	.000	.650	.750	.000	.688	.600	.536	.000	.000	.614	.764
Cars	16	0	23	0	39	1	0	0	0	1	0	12	8	0	20	0	15	0	0	15	75
% Cars	100	0	52.3	0	65.0	100	0	0	0	100	0	92.3	88.9	0	90.9	0	100	0	0	55.6	68.2
Trucks & Buses																					
% Trucks & Buses	0	0	47.7	0	35.0	0	0	0	0	0	0	7.7	11.1	0	9.1	100	0	0	0	44.4	31.8
School Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% School Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



TRAFFIC DATA CONNECTION

PO Box 445 Abbeville, GA 31001 | ph (843) 412-6222

Counter: CC-001
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File Name : 20006-11
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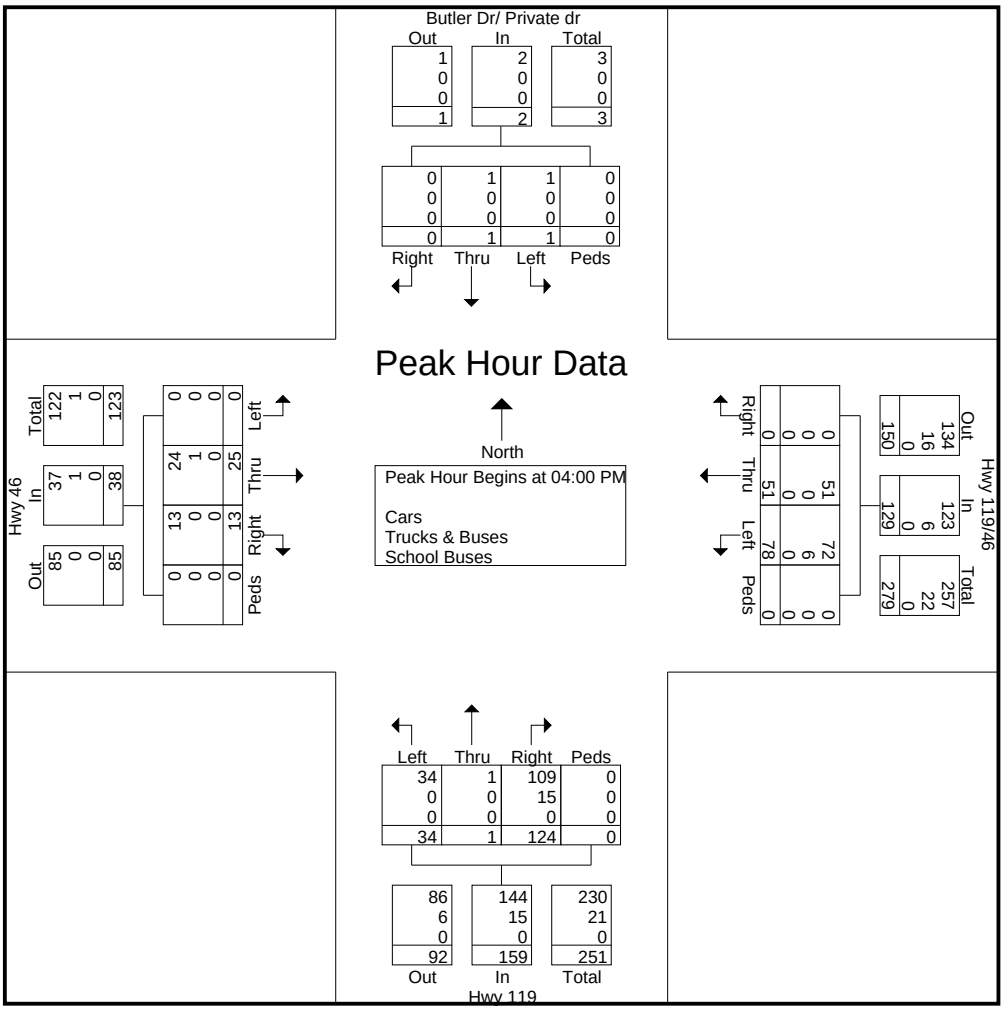
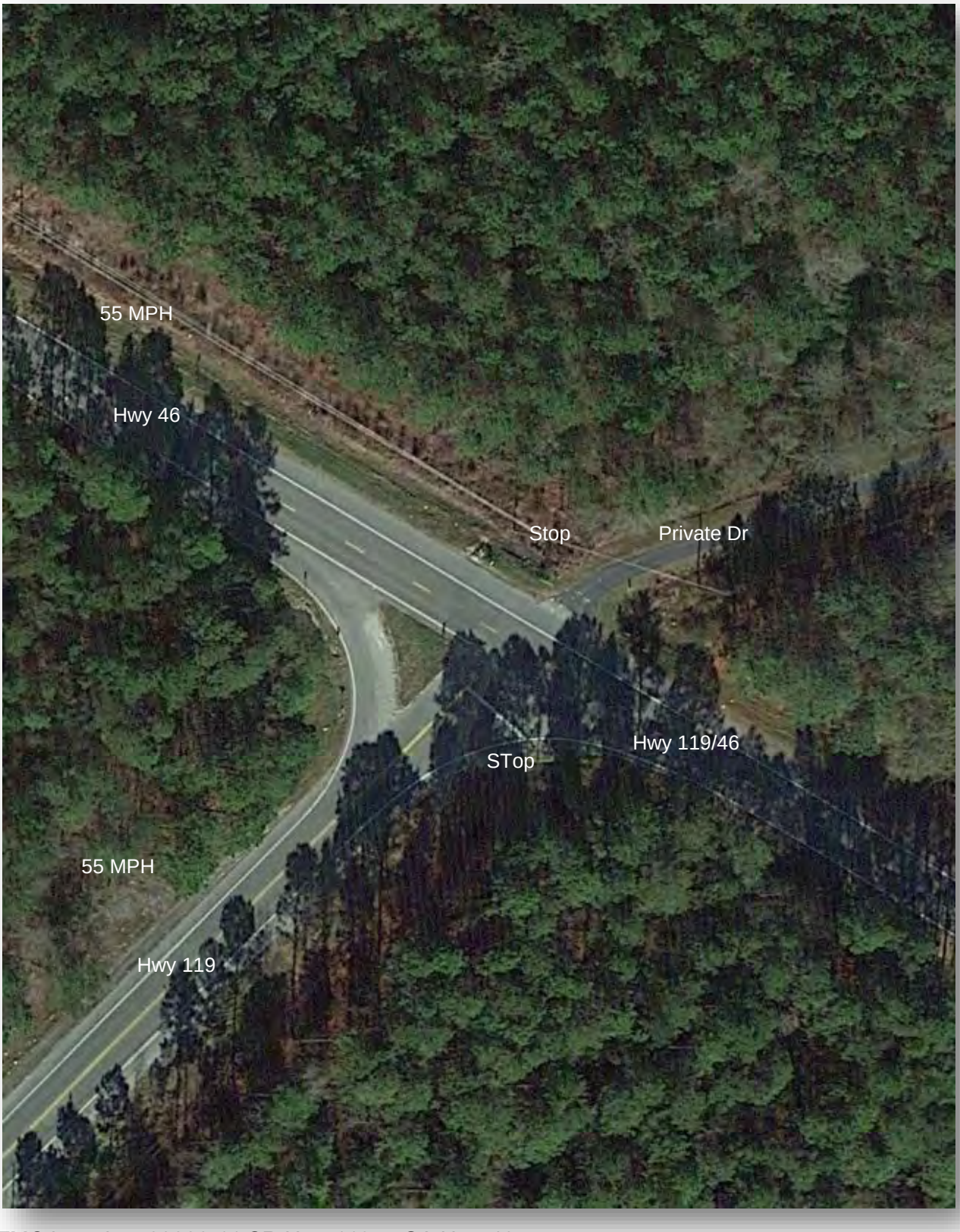
Start Date : 9/23/2020
Page No : 4

	Hwy 119 Northbound					Butler Dr/ Private dr Southbound					Hwy 46 Eastbound					Hwy 119/46 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	**15**	**1**	25	0	**41**	0	**1**	0	0	**1**	0	3	3	0	6	**28**	**16**	0	0	**44**	**92**
04:15 PM	5	0	33	0	38	0	0	0	0	0	0	**10**	**4**	0	**14**	17	11	0	0	28	80
04:30 PM	9	0	30	0	39	0	0	0	0	0	0	4	4	0	8	15	12	0	0	27	74
04:45 PM	5	0	**36**	0	41	**1**	0	0	0	1	0	8	2	0	10	18	12	0	0	30	82
Total Volume	34	1	124	0	159	1	1	0	0	2	0	25	13	0	38	78	51	0	0	129	328
% App. Total	21.4	0.6	78	0		50	50	0	0		0	65.8	34.2	0		60.5	39.5	0	0		
PHF	.567	.250	.861	.000	.970	.250	.250	.000	.000	.500	.000	.625	.813	.000	.679	.696	.797	.000	.000	.733	.891
Cars	34	1	109	0	144	1	1	0	0	2	0	24	13	0	37	72	51	0	0	123	306
% Cars	100	100	87.9	0	90.6	100	100	0	0	100	0	96.0	100	0	97.4	92.3	100	0	0	95.3	93.3
Trucks & Buses																					
% Trucks & Buses	0	0	12.1	0	9.4	0	0	0	0	0	0	4.0	0	0	2.6	7.7	0	0	0	4.7	6.7
School Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% School Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





TMC Location: 20006-11 SR Hwy 119 at GA Hwy 46
Location: Bryan County, GA
Survey Count Times: 7-9am & 4-6pm

THOMAS & HUTTON

NORTH BRYAN TRANSPORTATION STUDY

NORTH BRYAN INDUSTRIAL PARK

APPENDIX B

SYNCHRO HCM 6th ANALYSIS
2020 BASE PEAK HOUR VOLUMES

J – 2832.0000, J-28681.0000,
J-28698.0000, J-28699.0000

July 2021

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	546	243	5	34	33
Future Vol, veh/h	14	546	243	5	34	33
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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	6	6	9	9	3	3
Mvmt Flow	16	620	276	6	39	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	282	0	-	0	931	279
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	652	-
Critical Hdwy	4.16	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.254	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1258	-	-	-	295	757
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	517	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1258	-	-	-	289	757
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	517	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1258	-	-	-	416
HCM Lane V/C Ratio	0.013	-	-	-	0.183
HCM Control Delay (s)	7.9	0	-	-	15.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	38	369	645	38	12	33
Future Vol, veh/h	38	369	645	38	12	33
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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	1	1
Mvmt Flow	40	388	679	40	13	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	719	0	-	0	1167	699
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	4.14	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.236	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	873	-	-	-	215	442
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	873	-	-	-	203	442
Mov Cap-2 Maneuver	-	-	-	-	203	-
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	632	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	17.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	873	-	-	-	336
HCM Lane V/C Ratio	0.046	-	-	-	0.141
HCM Control Delay (s)	9.3	0	-	-	17.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	246	350	176	242	0	0	0	0	99	0	33
Future Vol, veh/h	0	246	350	176	242	0	0	0	0	99	0	33
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	-	-	Yield
Storage Length	-	-	25	110	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	6	6	6	9	9	9	2	2	2	34	34	34
Mvmt Flow	0	304	432	217	299	0	0	0	0	122	0	41

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	304	0	0			885	1037	150
Stage 1	-	-	-	-	-	-			733	733	-
Stage 2	-	-	-	-	-	-			152	304	-
Critical Hdwy	-	-	-	4.28	-	-			7.48	7.18	7.58
Critical Hdwy Stg 1	-	-	-	-	-	-			6.48	6.18	-
Critical Hdwy Stg 2	-	-	-	-	-	-			6.48	6.18	-
Follow-up Hdwy	-	-	-	2.29	-	-			3.84	4.34	3.64
Pot Cap-1 Maneuver	0	-	-	1205	-	0			230	184	777
Stage 1	0	-	-	-	-	0			361	355	-
Stage 2	0	-	-	-	-	0			772	588	-
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	1205	-	-			189	0	777
Mov Cap-2 Maneuver	-	-	-	-	-	-			189	0	-
Stage 1	-	-	-	-	-	-			361	0	-
Stage 2	-	-	-	-	-	-			633	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	3.6	42.6
HCM LOS			E

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1205	-	189	777
HCM Lane V/C Ratio	-	-	0.18	-	0.647	0.052
HCM Control Delay (s)	-	-	8.6	-	53.5	9.9
HCM Lane LOS	-	-	A	-	F	A
HCM 95th %tile Q(veh)	-	-	0.7	-	3.8	0.2

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	231	192	117	732	0	0	0	0	91	2	22
Future Vol, veh/h	0	231	192	117	732	0	0	0	0	91	2	22
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	-	-	Yield
Storage Length	-	-	25	110	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	4	4	4	5	5	5	2	2	2	33	33	33
Mvmt Flow	0	254	211	129	804	0	0	0	0	100	2	24

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	254	0	0			1189	1316	402
Stage 1	-	-	-	-	-	-			1062	1062	-
Stage 2	-	-	-	-	-	-			127	254	-
Critical Hdwy	-	-	-	4.2	-	-			7.46	7.16	7.56
Critical Hdwy Stg 1	-	-	-	-	-	-			6.46	6.16	-
Critical Hdwy Stg 2	-	-	-	-	-	-			6.46	6.16	-
Follow-up Hdwy	-	-	-	2.25	-	-			3.83	4.33	3.63
Pot Cap-1 Maneuver	0	-	-	1287	-	0			141	121	519
Stage 1	0	-	-	-	-	0			233	239	-
Stage 2	0	-	-	-	-	0			800	625	-
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	1287	-	-			127	0	519
Mov Cap-2 Maneuver	-	-	-	-	-	-			127	0	-
Stage 1	-	-	-	-	-	-			233	0	-
Stage 2	-	-	-	-	-	-			720	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	1.1	83.1
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1287	-	127	519
HCM Lane V/C Ratio	-	-	0.1	-	0.805	0.047
HCM Control Delay (s)	-	-	8.1	-	99.8	12.3
HCM Lane LOS	-	-	A	-	F	B
HCM 95th %tile Q(veh)	-	-	0.3	-	4.8	0.1

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	337	0	0	317	145	101	0	113	0	0	0
Future Vol, veh/h	18	337	0	0	317	145	101	0	113	0	0	0
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	-	-	None	-	-	Yield	-	-	Yield	-	-	None
Storage Length	110	-	-	-	-	25	-	-	25	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	25	25	25	26	26	26	19	19	19	2	2	2
Mvmt Flow	20	383	0	0	360	165	115	0	128	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	360	0	-	-	-	0	603	783	192
Stage 1	-	-	-	-	-	-	423	423	-
Stage 2	-	-	-	-	-	-	180	360	-
Critical Hdwy	4.6	-	-	-	-	-	7.18	6.88	7.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.88	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.88	-
Follow-up Hdwy	2.45	-	-	-	-	-	3.69	4.19	3.49
Pot Cap-1 Maneuver	1046	-	0	0	-	-	393	293	767
Stage 1	-	-	0	0	-	-	582	545	-
Stage 2	-	-	0	0	-	-	784	584	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	1046	-	-	-	-	-	386	0	767
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	0	-
Stage 1	-	-	-	-	-	-	571	0	-
Stage 2	-	-	-	-	-	-	784	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.4	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	386	767	1046	-	-	-
HCM Lane V/C Ratio	0.297	0.167	0.02	-	-	-
HCM Control Delay (s)	18.2	10.6	8.5	-	-	-
HCM Lane LOS	C	B	A	-	-	-
HCM 95th %tile Q(veh)	1.2	0.6	0.1	-	-	-

Intersection	
Int Delay, s/veh	17.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	308	0	0	502	193	352	0	302	0	0	0
Future Vol, veh/h	22	308	0	0	502	193	352	0	302	0	0	0
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	-	-	None	-	-	Yield	-	-	Yield	-	-	None
Storage Length	110	-	-	-	-	25	-	-	25	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	15	15	15	17	17	17	5	5	5	2	2	2
Mvmt Flow	24	331	0	0	540	208	378	0	325	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	540	0	-	-	-	0	649	919	166
Stage 1	-	-	-	-	-	-	379	379	-
Stage 2	-	-	-	-	-	-	270	540	-
Critical Hdwy	4.4	-	-	-	-	-	6.9	6.6	7
Critical Hdwy Stg 1	-	-	-	-	-	-	5.9	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.9	5.6	-
Follow-up Hdwy	2.35	-	-	-	-	-	3.55	4.05	3.35
Pot Cap-1 Maneuver	940	-	0	0	-	-	396	265	840
Stage 1	-	-	0	0	-	-	653	605	-
Stage 2	-	-	0	0	-	-	742	512	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	940	-	-	-	-	-	386	0	840
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	0	-
Stage 1	-	-	-	-	-	-	636	0	-
Stage 2	-	-	-	-	-	-	742	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.6	0	45.5
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	386	840	940	-	-	-
HCM Lane V/C Ratio	0.981	0.387	0.025	-	-	-
HCM Control Delay (s)	74.3	12	8.9	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	11.5	1.8	0.1	-	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	9	5	3	30	7	64	26	331	29	85	265	47
Future Vol, veh/h	9	5	3	30	7	64	26	331	29	85	265	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Free	-	-	Free
Storage Length	-	-	100	-	-	0	245	-	315	200	-	310
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	18	18	18	74	74	74	21	21	21	29	29	29
Mvmt Flow	10	5	3	32	7	68	28	352	31	90	282	50

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	874	870	282	873	870	352	282	0	-	352	0	0
Stage 1	462	462	-	408	408	-	-	-	-	-	-	-
Stage 2	412	408	-	465	462	-	-	-	-	-	-	-
Critical Hdwy	7.28	6.68	6.38	7.84	7.24	6.94	4.31	-	-	4.39	-	-
Critical Hdwy Stg 1	6.28	5.68	-	6.84	6.24	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.28	5.68	-	6.84	6.24	-	-	-	-	-	-	-
Follow-up Hdwy	3.662	4.162	3.462	4.166	4.666	3.966	2.389	-	-	2.461	-	-
Pot Cap-1 Maneuver	253	273	720	205	224	556	1179	-	0	1071	-	0
Stage 1	550	539	-	499	490	-	-	-	0	-	-	0
Stage 2	587	570	-	462	460	-	-	-	0	-	-	0
Platoon blocked, %								-			-	
Mov Cap-1 Maneuver	198	244	720	185	200	556	1179	-	-	1071	-	-
Mov Cap-2 Maneuver	198	244	-	185	200	-	-	-	-	-	-	-
Stage 1	537	494	-	487	478	-	-	-	-	-	-	-
Stage 2	495	556	-	417	421	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	21	18.6	0.6	2.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NWLn1	NWLn2	SELn1	SELn2	SWL	SWT
Capacity (veh/h)	1179	-	188	556	212	720	1071	-
HCM Lane V/C Ratio	0.023	-	0.209	0.122	0.07	0.004	0.084	-
HCM Control Delay (s)	8.1	-	29.2	12.4	23.3	10	8.7	-
HCM Lane LOS	A	-	D	B	C	B	A	-
HCM 95th %tile Q(veh)	0.1	-	0.8	0.4	0.2	0	0.3	-

Intersection	
Int Delay, s/veh	5.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	63	2	27	39	3	98	5	428	21	68	393	5
Future Vol, veh/h	63	2	27	39	3	98	5	428	21	68	393	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Free	-	-	Free
Storage Length	-	-	100	-	-	0	245	-	315	200	-	310
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	6	6	6	43	43	43	21	21	21	19	19	19
Mvmt Flow	67	2	29	41	3	104	5	455	22	72	418	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1029	1027	418	1028	1027	455	418	0	-	455	0	0
Stage 1	562	562	-	465	465	-	-	-	-	-	-	-
Stage 2	467	465	-	563	562	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.53	6.93	6.63	4.31	-	-	4.29	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.53	5.93	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.53	5.93	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.887	4.387	3.687	2.389	-	-	2.371	-	-
Pot Cap-1 Maneuver	208	231	626	179	199	528	1046	-	0	1022	-	0
Stage 1	505	503	-	507	500	-	-	-	0	-	-	0
Stage 2	569	556	-	445	449	-	-	-	0	-	-	0
Platoon blocked, %								-			-	
Mov Cap-1 Maneuver	155	214	626	160	184	528	1046	-	-	1022	-	-
Mov Cap-2 Maneuver	155	214	-	160	184	-	-	-	-	-	-	-
Stage 1	502	468	-	504	498	-	-	-	-	-	-	-
Stage 2	452	553	-	393	418	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	35.2	20.1	0.1	1.3
HCM LOS	E	C		

Minor Lane/Major Mvmt	NEL	NET	NWLn1	NWLn2	SELn1	SELn2	SWL	SWT
Capacity (veh/h)	1046	-	162	528	156	626	1022	-
HCM Lane V/C Ratio	0.005	-	0.276	0.197	0.443	0.046	0.071	-
HCM Control Delay (s)	8.5	-	35.5	13.5	45.3	11	8.8	-
HCM Lane LOS	A	-	E	B	E	B	A	-
HCM 95th %tile Q(veh)	0	-	1.1	0.7	2	0.1	0.2	-

HCM 6th Signalized Intersection Summary
5: US 280/Eldora Rd & US 80

2020 Base Volumes AM Peak Hour
AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	3	216	53	238	59	19	11	44	242	87	125	5
Future Volume (veh/h)	3	216	53	238	59	19	11	44	242	87	125	5
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	1604	1604	1604	1470	1470	1470	1574	1574	1574	1856	1856	1856
Adj Flow Rate, veh/h	3	235	0	259	64	21	12	48	0	95	136	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	20	20	20	29	29	29	22	22	22	3	3	3
Cap, veh/h	431	331		503	779	661	301	262		387	296	11
Arrive On Green	0.21	0.21	0.00	0.17	0.53	0.53	0.17	0.17	0.00	0.17	0.17	0.17
Sat Flow, veh/h	1125	1604	1359	1400	1470	1246	1050	1574	1334	1347	1778	65
Grp Volume(v), veh/h	3	235	0	259	64	21	12	48	0	95	0	141
Grp Sat Flow(s),veh/h/ln	1125	1604	1359	1400	1470	1246	1050	1574	1334	1347	0	1844
Q Serve(g_s), s	0.1	4.9	0.0	4.7	0.8	0.3	0.4	1.0	0.0	2.4	0.0	2.5
Cycle Q Clear(g_c), s	0.1	4.9	0.0	4.7	0.8	0.3	2.9	1.0	0.0	3.3	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	431	331		503	779	661	301	262		387	0	307
V/C Ratio(X)	0.01	0.71		0.52	0.08	0.03	0.04	0.18		0.25	0.00	0.46
Avail Cap(c_a), veh/h	757	796		551	1257	1065	647	781		832	0	915
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	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.4	13.4	0.0	8.1	4.2	4.1	14.9	13.0	0.0	14.4	0.0	13.6
Incr Delay (d2), s/veh	0.0	2.8	0.0	0.8	0.0	0.0	0.1	0.3	0.0	0.3	0.0	1.1
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	1.5	0.0	0.8	0.1	0.0	0.1	0.3	0.0	0.6	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	16.2	0.0	8.9	4.2	4.1	15.0	13.3	0.0	14.7	0.0	14.7
LnGrp LOS	B	B		A	A	A	B	B		B	A	B
Approach Vol, veh/h		238	A		344			60	A		236	
Approach Delay, s/veh		16.1			7.7			13.7			14.7	
Approach LOS		B			A			B			B	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		11.5	11.7	13.0		11.5		24.7				
Change Period (Y+Rc), s		5.5	5.5	5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.0	7.5	18.0		18.0		31.0				
Max Q Clear Time (g_c+I1), s		4.9	6.7	6.9		5.3		2.8				
Green Ext Time (p_c), s		0.1	0.1	0.9		0.7		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			12.3									
HCM 6th LOS			B									

Notes

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

HCM 6th Signalized Intersection Summary
5: US 280/Eldora Rd & US 80

2020 Base Volumes PM Peak Hour
PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	13	128	37	343	223	131	55	146	250	52	72	1
Future Volume (veh/h)	13	128	37	343	223	131	55	146	250	52	72	1
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	1633	1633	1633	1678	1678	1678	1796	1796	1796	1885	1885	1885
Adj Flow Rate, veh/h	14	139	0	373	242	142	60	159	0	57	78	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	18	18	18	15	15	15	7	7	7	1	1	1
Cap, veh/h	329	243		609	853	723	391	336		333	347	4
Arrive On Green	0.15	0.15	0.00	0.21	0.51	0.51	0.19	0.19	0.00	0.19	0.19	0.19
Sat Flow, veh/h	873	1633	1384	1598	1678	1422	1268	1796	1522	1237	1857	24
Grp Volume(v), veh/h	14	139	0	373	242	142	60	159	0	57	0	79
Grp Sat Flow(s),veh/h/ln	873	1633	1384	1598	1678	1422	1268	1796	1522	1237	0	1881
Q Serve(g_s), s	0.5	2.9	0.0	6.5	3.0	2.0	1.5	2.9	0.0	1.6	0.0	1.3
Cycle Q Clear(g_c), s	0.5	2.9	0.0	6.5	3.0	2.0	2.8	2.9	0.0	4.4	0.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	329	243		609	853	723	391	336		333	0	352
V/C Ratio(X)	0.04	0.57		0.61	0.28	0.20	0.15	0.47		0.17	0.00	0.22
Avail Cap(c_a), veh/h	634	814		609	1440	1220	786	895		718	0	937
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	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.3	14.3	0.0	8.6	5.1	4.8	13.7	13.1	0.0	15.1	0.0	12.5
Incr Delay (d2), s/veh	0.1	2.1	0.0	1.8	0.2	0.1	0.2	1.0	0.0	0.2	0.0	0.3
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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.9	0.0	1.4	0.4	0.2	0.3	0.9	0.0	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	16.4	0.0	10.5	5.3	5.0	13.8	14.1	0.0	15.3	0.0	12.8
LnGrp LOS	B	B		B	A	A	B	B		B	A	B
Approach Vol, veh/h		153	A		757			219	A		136	
Approach Delay, s/veh		16.2			7.8			14.1			13.8	
Approach LOS		B			A			B			B	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		12.3	13.0	10.9		12.3		23.9				
Change Period (Y+Rc), s		5.5	5.5	5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.0	7.5	18.0		18.0		31.0				
Max Q Clear Time (g_c+I1), s		4.9	8.5	4.9		6.4		5.0				
Green Ext Time (p_c), s		0.7	0.0	0.5		0.3		1.7				
Intersection Summary												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									

Notes

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

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	232	2	2	88	0	2
Future Vol, veh/h	232	2	2	88	0	2
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	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	13	13	25	25	1	1
Mvmt Flow	290	3	3	110	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	293	0	408	292
Stage 1	-	-	-	-	292	-
Stage 2	-	-	-	-	116	-
Critical Hdwy	-	-	4.35	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.425	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	1148	-	601	750
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	911	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1148	-	599	750
Mov Cap-2 Maneuver	-	-	-	-	599	-
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	750	-	-	1148	-
HCM Lane V/C Ratio	0.003	-	-	0.002	-
HCM Control Delay (s)	9.8	-	-	8.1	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	161	3	12	295	6	2
Future Vol, veh/h	161	3	12	295	6	2
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	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	13	13	6	6	1	1
Mvmt Flow	187	3	14	343	7	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	190	0	560	189
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	371	-
Critical Hdwy	-	-	4.16	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.254	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	1360	-	491	855
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	700	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1360	-	485	855
Mov Cap-2 Maneuver	-	-	-	-	485	-
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	544	-	-	1360	-
HCM Lane V/C Ratio	0.017	-	-	0.01	-
HCM Control Delay (s)	11.7	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	3	1	204	76	49
Future Vol, veh/h	43	3	1	204	76	49
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	78	78	78	78	78	78
Heavy Vehicles, %	7	7	13	13	5	5
Mvmt Flow	55	4	1	262	97	63

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	393	129	160	0	-	0
Stage 1	129	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.47	6.27	4.23	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.363	2.317	-	-	-
Pot Cap-1 Maneuver	602	908	1355	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	601	908	1355	-	-	-
Mov Cap-2 Maneuver	601	-	-	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	769	-	-	-	-	-

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)	1355	-	615	-	-
HCM Lane V/C Ratio	0.001	-	0.096	-	-
HCM Control Delay (s)	7.7	0	11.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	67	4	5	128	256	90
Future Vol, veh/h	67	4	5	128	256	90
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	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	74	4	6	142	284	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	488	334	384	0	-	0
Stage 1	334	-	-	-	-	-
Stage 2	154	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.254	-	-	-
Pot Cap-1 Maneuver	532	699	1153	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	529	699	1153	-	-	-
Mov Cap-2 Maneuver	529	-	-	-	-	-
Stage 1	713	-	-	-	-	-
Stage 2	864	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1153	-	536	-	-
HCM Lane V/C Ratio	0.005	-	0.147	-	-
HCM Control Delay (s)	8.1	0	12.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	14	9	13	16	0	17	0	46	1	0	0
Future Vol, veh/h	0	14	9	13	16	0	17	0	46	1	0	0
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	-	-	125	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	9	9	9	44	44	44	35	35	35	1	1	1
Mvmt Flow	0	18	12	17	21	0	22	0	61	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	21	0	0	18	0	0	73	73	18	104	73	21
Stage 1	-	-	-	-	-	-	18	18	-	55	55	-
Stage 2	-	-	-	-	-	-	55	55	-	49	18	-
Critical Hdwy	4.19	-	-	4.54	-	-	7.45	6.85	6.55	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.45	5.85	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.45	5.85	-	6.11	5.51	-
Follow-up Hdwy	2.281	-	-	2.596	-	-	3.815	4.315	3.615	3.509	4.009	3.309
Pot Cap-1 Maneuver	1550	-	-	1364	-	-	843	758	973	878	819	1059
Stage 1	-	-	-	-	-	-	922	819	-	960	851	-
Stage 2	-	-	-	-	-	-	880	788	-	967	882	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1550	-	-	1364	-	-	835	748	973	815	808	1059
Mov Cap-2 Maneuver	-	-	-	-	-	-	835	748	-	815	808	-
Stage 1	-	-	-	-	-	-	922	819	-	960	840	-
Stage 2	-	-	-	-	-	-	869	778	-	907	882	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0	3.4	9.2	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	931	1550	-	-	1364	-	-	815
HCM Lane V/C Ratio	0.089	-	-	-	0.013	-	-	0.002
HCM Control Delay (s)	9.2	0	-	-	7.7	0	-	9.4
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	26	14	82	54	0	36	1	130	1	1	0
Future Vol, veh/h	0	26	14	82	54	0	36	1	130	1	1	0
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	-	-	125	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	5	5	5	9	9	9	1	1	1
Mvmt Flow	0	29	16	92	61	0	40	1	146	1	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	61	0	0	29	0	0	275	274	29	348	274	61
Stage 1	-	-	-	-	-	-	29	29	-	245	245	-
Stage 2	-	-	-	-	-	-	246	245	-	103	29	-
Critical Hdwy	4.13	-	-	4.15	-	-	7.19	6.59	6.29	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.19	5.59	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.19	5.59	-	6.11	5.51	-
Follow-up Hdwy	2.227	-	-	2.245	-	-	3.581	4.081	3.381	3.509	4.009	3.309
Pot Cap-1 Maneuver	1536	-	-	1565	-	-	663	621	1026	608	635	1007
Stage 1	-	-	-	-	-	-	970	857	-	761	705	-
Stage 2	-	-	-	-	-	-	742	691	-	905	873	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1536	-	-	1565	-	-	631	583	1026	496	596	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	631	583	-	496	596	-
Stage 1	-	-	-	-	-	-	970	857	-	761	662	-
Stage 2	-	-	-	-	-	-	696	649	-	775	873	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0	4.5	10.1	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	900	1536	-	-	1565	-	-	541
HCM Lane V/C Ratio	0.208	-	-	-	0.059	-	-	0.004
HCM Control Delay (s)	10.1	0	-	-	7.4	0	-	11.7
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.2	-	-	0

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NORTH BRYAN TRANSPORTATION STUDY

NORTH BRYAN INDUSTRIAL PARIK

APPENDIX C

TRIP GENERATION CALCULATIONS

J – 2832.0000, J-28681.0000,
J-28698.0000, J-28699.0000

July 2021

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NORTH BRYAN INDUSTRIAL PARK
ADJUSTMENT OF SEPTEMBER 2020 COUNTS DUE TO COVID

1 Compare Continuous Count Station Data from Sept 2020 to Sept 2019:

GDOT Count Site 290189 - I-16 North of GA 30/US 280
Comparison of Wednesdays in September 2019 to Wednesdays in September 2020

2020		2019	
9-Sep	30591	11-Sep	31863
16-Sep	30008	18-Sep	31852
23-Sep	30929	23-Sep	32324
Average	30509	Average	32013

2020 is 4.7% lower than 2019
(Note: Labor Day week is excluded from the comparison)

2 Compare US 280 through volume count from March 2020 to Sept 2020:

US 280 Traffic Count Comparison - March 2020 to September 2020

		AM 7 - 9	PM 4 - 6	Total
Thurs 3/12	US 280 N-S	1311	1124	2435
Wed. 9/23	US 280 N-S	1303	1156	2459

Monthly Factors
March = 0.98 and September = 0.99
Daily Factors
Thur = 0.95 Wed = 0.99
March 12 Factor = 0.93
Sept. 23 Factor = 0.98

Annualized Peak Hr Volumes:	Total Pk Periods
From March Count	2265
From Sept Count	2410

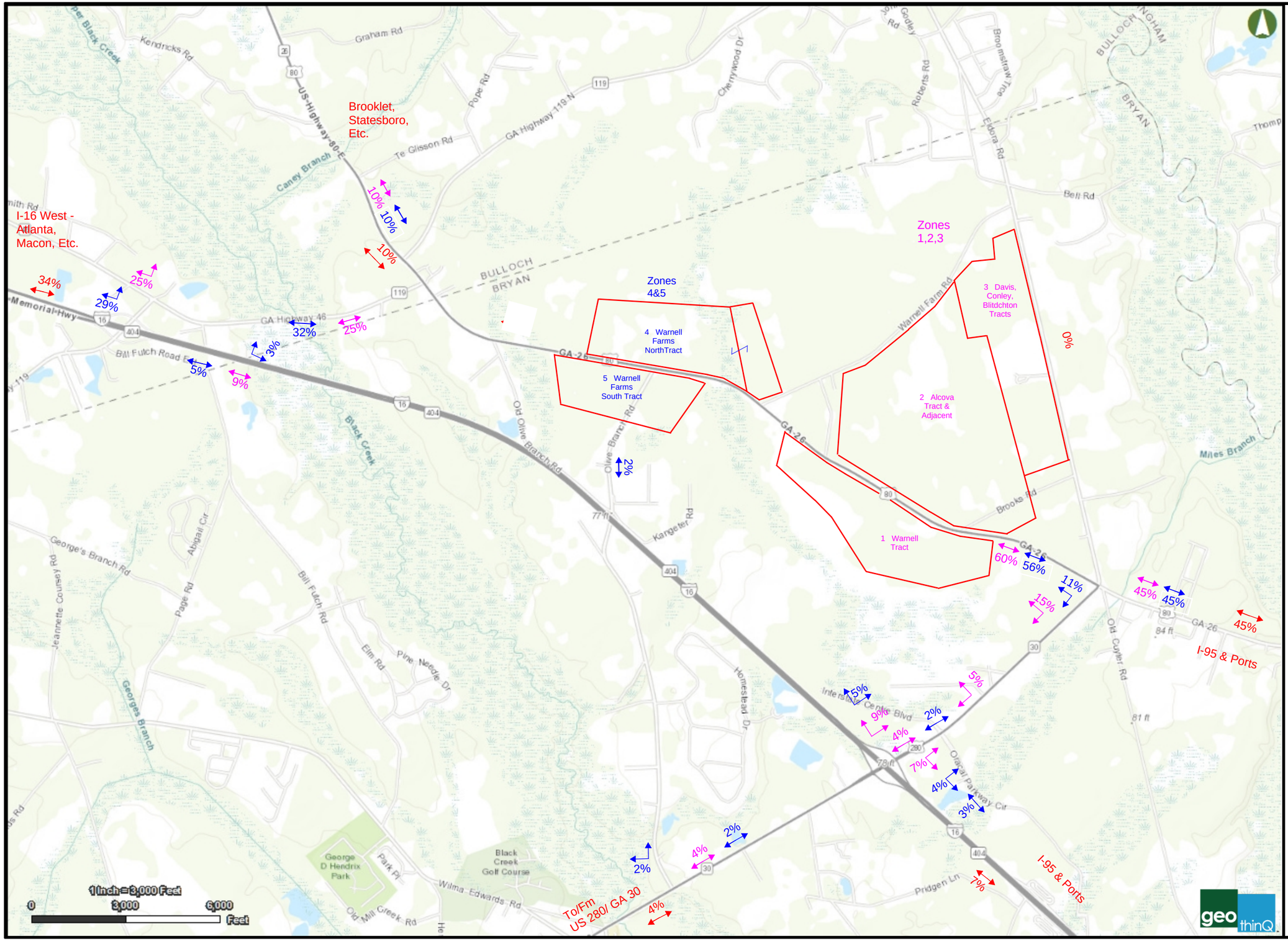
No Adjustment to count would be necessary based on the turning movement counts in March and September 2020.

Conclusion:
Increase September 2020 counts by 5% to account for Covid

TRIP GENERATION CALCULATIONS
NORTH BRYAN INDUSTRIAL, BRYAN COUNTY, GA

Oct-20 J28699.0000

LAND USE	LAND USE DESCRIPTION	"X"	SIZE	AM PEAK HOUR		PM PEAK HOUR		ADT	
150	**Warehousing**	**ksf**	**19487.53**	**T = 0.17(X)**		**T = 0.19(X)**		**T = 1.74(X)**	
				T = 0.17(19487.53)		**T = 0.19(19487.53)**		**T = 1.74(19487.53)**	
				T = 3313		**T = 3703**		**T = 33908**	
				Enter	**Exit**	**Enter**	**Exit**	**Enter**	**Exit**
	Total Project			**77%**	**23%**	**27%**	**73%**	**50%**	**50%**
	(Breakdown Below)			**2551**	**762**	**1000**	**2703**	**16954**	**16954**
150	Warehousing	ksf	6398.03	T = 0.17(X)		T = 0.19(X)		T = 1.74(X)	
				T = 0.17(6398.03)		T = 0.19(6398.03)		T = 1.74(6398.03)	
				T = 1088		T = 1216		T = 11133	
				Enter	Exit	Enter	Exit	Enter	Exit
				77%	23%	27%	73%	50%	50%
	Warnell Tract			838	250	328	888	5567	5566
150	Warehousing	ksf	5280	T = 0.17(X)		T = 0.19(X)		T = 1.74(X)	
				T = 0.17(5280)		T = 0.19(5280)		T = 1.74(5280)	
				T = 898		T = 1003		T = 9187	
				Enter	Exit	Enter	Exit	Enter	Exit
	Alcova Tract &			77%	23%	27%	73%	50%	50%
	Adjacent Property			691	207	271	732	4593	4594
150	Warehousing	ksf	2761	T = 0.17(X)		T = 0.19(X)		T = 1.74(X)	
				T = 0.17(2761)		T = 0.19(2761)		T = 1.74(2761)	
				T = 469		T = 525		T = 4804	
				Enter	Exit	Enter	Exit	Enter	Exit
	Davis, Conley,			77%	23%	27%	73%	50%	50%
	Blichton Tracts			361	108	142	383	2402	2402
150	Warehousing	ksf	1935	T = 0.17(X)		T = 0.19(X)		T = 1.74(X)	
				T = 0.17(1935)		T = 0.19(1935)		T = 1.74(1935)	
				T = 329		T = 368		T = 3367	
				Enter	Exit	Enter	Exit	Enter	Exit
	Warnell Farms			77%	23%	27%	73%	50%	50%
	South			253	76	99	269	1684	1683
150	Warehousing	ksf	3113.5	T = 0.17(X)		T = 0.19(X)		T = 1.74(X)	
				T = 0.17(3113.5)		T = 0.19(3113.5)		T = 1.74(3113.5)	
				T = 529		T = 592		T = 5417	
				Enter	Exit	Enter	Exit	Enter	Exit
	Warnell Farms			77%	23%	27%	73%	50%	50%
	North			407	122	160	432	2708	2709



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NORTH BRYAN INDUSTRIAL PARK

DISTRIBUTION OF SITE GENERATED TRIPS BY ZONE

% Distribution of trips for Zones 1, 2, & 3

% Distribution of trips for Zones 4 & 5

% Distribution of trips for All Zones

J 28699.0000

THOMAS & HUTTON

NORTH BRYAN TRANSPORTATION STUDY

NORTH BRYAN INDUSTRIAL PARK

APPENDIX D

SYNCHRO HCM 6th ANALYSIS
2040 NO–BUILD PEAK HOUR VOLUMES

J – 2832.0000, J-28681.0000,
J-28698.0000, J-28699.0000

July 2021

thomasandhutton.com

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	666	296	6	41	40
Future Vol, veh/h	17	666	296	6	41	40
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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	6	6	9	9	3	3
Mvmt Flow	19	757	336	7	47	45

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	343	0	-	0	1135	340
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	795	-
Critical Hdwy	4.16	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.254	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1194	-	-	-	223	700
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	443	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1194	-	-	-	217	700
Mov Cap-2 Maneuver	-	-	-	-	217	-
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	443	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	20.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1194	-	-	-	329
HCM Lane V/C Ratio	0.016	-	-	-	0.28
HCM Control Delay (s)	8.1	0	-	-	20.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	46	450	787	46	15	40
Future Vol, veh/h	46	450	787	46	15	40
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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	1	1
Mvmt Flow	48	474	828	48	16	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	876	0	-	0	1422	852
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	570	-
Critical Hdwy	4.14	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.236	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	762	-	-	-	151	361
Stage 1	-	-	-	-	420	-
Stage 2	-	-	-	-	568	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	762	-	-	-	138	361
Mov Cap-2 Maneuver	-	-	-	-	138	-
Stage 1	-	-	-	-	384	-
Stage 2	-	-	-	-	568	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	23.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	762	-	-	-	251
HCM Lane V/C Ratio	0.064	-	-	-	0.231
HCM Control Delay (s)	10	0	-	-	23.6
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9

Intersection	
Int Delay, s/veh	18.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑						↓	↱
Traffic Vol, veh/h	0	300	427	215	295	0	0	0	0	121	0	40
Future Vol, veh/h	0	300	427	215	295	0	0	0	0	121	0	40
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	-	-	Yield
Storage Length	-	-	25	110	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	6	6	6	9	9	9	2	2	2	34	34	34
Mvmt Flow	0	370	527	265	364	0	0	0	0	149	0	49

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	370	0	0			1079	1264	182
Stage 1	-	-	-	-	-	-			894	894	-
Stage 2	-	-	-	-	-	-			185	370	-
Critical Hdwy	-	-	-	4.28	-	-			7.48	7.18	7.58
Critical Hdwy Stg 1	-	-	-	-	-	-			6.48	6.18	-
Critical Hdwy Stg 2	-	-	-	-	-	-			6.48	6.18	-
Follow-up Hdwy	-	-	-	2.29	-	-			3.84	4.34	3.64
Pot Cap-1 Maneuver	0	-	-	1136	-	0			168	130	738
Stage 1	0	-	-	-	-	0			291	292	-
Stage 2	0	-	-	-	-	0			740	545	-
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	1136	-	-			~ 129	0	738
Mov Cap-2 Maneuver	-	-	-	-	-	-			~ 129	0	-
Stage 1	-	-	-	-	-	-			291	0	-
Stage 2	-	-	-	-	-	-			568	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	3.9	148.5
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1136	-	129	738
HCM Lane V/C Ratio	-	-	0.234	-	1.158	0.067
HCM Control Delay (s)	-	-	9.1	-	194.2	10.2
HCM Lane LOS	-	-	A	-	F	B
HCM 95th %tile Q(veh)	-	-	0.9	-	8.9	0.2

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

Intersection	
Int Delay, s/veh	27.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑						↓	↱
Traffic Vol, veh/h	0	282	234	143	893	0	0	0	0	111	2	27
Future Vol, veh/h	0	282	234	143	893	0	0	0	0	111	2	27
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	-	-	Yield
Storage Length	-	-	25	110	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	4	4	4	5	5	5	2	2	2	33	33	33
Mvmt Flow	0	310	257	157	981	0	0	0	0	122	2	30

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	310	0	0			1450	1605	491
Stage 1	-	-	-	-	-	-			1295	1295	-
Stage 2	-	-	-	-	-	-			155	310	-
Critical Hdwy	-	-	-	4.2	-	-			7.46	7.16	7.56
Critical Hdwy Stg 1	-	-	-	-	-	-			6.46	6.16	-
Critical Hdwy Stg 2	-	-	-	-	-	-			6.46	6.16	-
Follow-up Hdwy	-	-	-	2.25	-	-			3.83	4.33	3.63
Pot Cap-1 Maneuver	0	-	-	1226	-	0			~ 91	77	448
Stage 1	0	-	-	-	-	0			170	179	-
Stage 2	0	-	-	-	-	0			772	586	-
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	1226	-	-			~ 79	0	448
Mov Cap-2 Maneuver	-	-	-	-	-	-			~ 79	0	-
Stage 1	-	-	-	-	-	-			170	0	-
Stage 2	-	-	-	-	-	-			673	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	1.2	$ 325.6
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1226	-	79	448
HCM Lane V/C Ratio	-	-	0.128	-	1.572	0.066
HCM Control Delay (s)	-	-	8.4	-	$ 400.1	13.6
HCM Lane LOS	-	-	A	-	F	B
HCM 95th %tile Q(veh)	-	-	0.4	-	10.2	0.2

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

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	411	0	0	387	177	123	0	138	0	0	0
Future Vol, veh/h	22	411	0	0	387	177	123	0	138	0	0	0
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	-	-	None	-	-	Yield	-	-	Yield	-	-	None
Storage Length	110	-	-	-	-	25	-	-	25	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	25	25	25	26	26	26	19	19	19	2	2	2
Mvmt Flow	25	467	0	0	440	201	140	0	157	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	440	0	-	-	-	0	737	957	234
Stage 1	-	-	-	-	-	-	517	517	-
Stage 2	-	-	-	-	-	-	220	440	-
Critical Hdwy	4.6	-	-	-	-	-	7.18	6.88	7.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.88	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.88	-
Follow-up Hdwy	2.45	-	-	-	-	-	3.69	4.19	3.49
Pot Cap-1 Maneuver	969	-	0	0	-	-	320	229	718
Stage 1	-	-	0	0	-	-	517	491	-
Stage 2	-	-	0	0	-	-	747	535	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	969	-	-	-	-	-	312	0	718
Mov Cap-2 Maneuver	-	-	-	-	-	-	312	0	-
Stage 1	-	-	-	-	-	-	504	0	-
Stage 2	-	-	-	-	-	-	747	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.4	0	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	312	718	969	-	-	-
HCM Lane V/C Ratio	0.448	0.218	0.026	-	-	-
HCM Control Delay (s)	25.6	11.4	8.8	-	-	-
HCM Lane LOS	D	B	A	-	-	-
HCM 95th %tile Q(veh)	2.2	0.8	0.1	-	-	-

Intersection	
Int Delay, s/veh	58.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	376	0	0	612	235	429	0	368	0	0	0
Future Vol, veh/h	27	376	0	0	612	235	429	0	368	0	0	0
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	-	-	None	-	-	Yield	-	-	Yield	-	-	None
Storage Length	110	-	-	-	-	25	-	-	25	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	15	15	15	17	17	17	5	5	5	2	2	2
Mvmt Flow	29	404	0	0	658	253	461	0	396	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	658	0	-	-	-	0	791	1120	202
Stage 1	-	-	-	-	-	-	462	462	-
Stage 2	-	-	-	-	-	-	329	658	-
Critical Hdwy	4.4	-	-	-	-	-	6.9	6.6	7
Critical Hdwy Stg 1	-	-	-	-	-	-	5.9	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.9	5.6	-
Follow-up Hdwy	2.35	-	-	-	-	-	3.55	4.05	3.35
Pot Cap-1 Maneuver	843	-	0	0	-	-	~ 321	201	796
Stage 1	-	-	0	0	-	-	592	556	-
Stage 2	-	-	0	0	-	-	693	452	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	843	-	-	-	-	-	~ 310	0	796
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 310	0	-
Stage 1	-	-	-	-	-	-	572	0	-
Stage 2	-	-	-	-	-	-	693	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.6	0	150.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	310	796	843	-	-	-
HCM Lane V/C Ratio	1.488	0.497	0.034	-	-	-
HCM Control Delay (s)	267.3	13.9	9.4	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	25.7	2.8	0.1	-	-	-

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

Intersection	
Int Delay, s/veh	5.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	11	6	4	37	9	78	32	404	35	104	323	57
Future Vol, veh/h	11	6	4	37	9	78	32	404	35	104	323	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Free	-	-	Free
Storage Length	-	-	100	-	-	0	245	-	315	200	-	310
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	18	18	18	74	74	74	21	21	21	29	29	29
Mvmt Flow	12	6	4	39	10	83	34	430	37	111	344	61

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1069	1064	344	1067	1064	430	344	0	-	430	0	0
Stage 1	566	566	-	498	498	-	-	-	-	-	-	-
Stage 2	503	498	-	569	566	-	-	-	-	-	-	-
Critical Hdwy	7.28	6.68	6.38	7.84	7.24	6.94	4.31	-	-	4.39	-	-
Critical Hdwy Stg 1	6.28	5.68	-	6.84	6.24	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.28	5.68	-	6.84	6.24	-	-	-	-	-	-	-
Follow-up Hdwy	3.662	4.162	3.462	4.166	4.666	3.966	2.389	-	-	2.461	-	-
Pot Cap-1 Maneuver	186	209	664	147	167	497	1116	-	0	999	-	0
Stage 1	482	483	-	441	442	-	-	-	0	-	-	0
Stage 2	522	519	-	400	408	-	-	-	0	-	-	0
Platoon blocked, %								-			-	
Mov Cap-1 Maneuver	132	180	664	127	144	497	1116	-	-	999	-	-
Mov Cap-2 Maneuver	132	180	-	127	144	-	-	-	-	-	-	-
Stage 1	468	429	-	428	429	-	-	-	-	-	-	-
Stage 2	412	503	-	348	363	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	28.8	26.6	0.6	2.2
HCM LOS	D	D		

Minor Lane/Major Mvmt	NEL	NET	NWLn1	NWLn2	SELn1	SELn2	SWL	SWT
Capacity (veh/h)	1116	-	130	497	146	664	999	-
HCM Lane V/C Ratio	0.031	-	0.376	0.167	0.124	0.006	0.111	-
HCM Control Delay (s)	8.3	-	48.5	13.7	33.1	10.5	9.1	-
HCM Lane LOS	A	-	E	B	D	B	A	-
HCM 95th %tile Q(veh)	0.1	-	1.6	0.6	0.4	0	0.4	-

Intersection	
Int Delay, s/veh	12.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	77	2	33	48	4	120	6	522	26	83	479	6
Future Vol, veh/h	77	2	33	48	4	120	6	522	26	83	479	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Free	-	-	Free
Storage Length	-	-	100	-	-	0	245	-	315	200	-	310
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	6	6	6	43	43	43	21	21	21	19	19	19
Mvmt Flow	82	2	35	51	4	128	6	555	28	88	510	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1255	1253	510	1254	1253	555	510	0	-	555	0	0
Stage 1	686	686	-	567	567	-	-	-	-	-	-	-
Stage 2	569	567	-	687	686	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.53	6.93	6.63	4.31	-	-	4.29	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.53	5.93	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.53	5.93	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.887	4.387	3.687	2.389	-	-	2.371	-	-
Pot Cap-1 Maneuver	146	169	556	123	143	461	965	-	0	936	-	0
Stage 1	431	442	-	443	447	-	-	-	0	-	-	0
Stage 2	500	501	-	377	391	-	-	-	0	-	-	0
Platoon blocked, %								-			-	
Mov Cap-1 Maneuver	95	152	556	105	129	461	965	-	-	936	-	-
Mov Cap-2 Maneuver	95	152	-	105	129	-	-	-	-	-	-	-
Stage 1	428	400	-	440	444	-	-	-	-	-	-	-
Stage 2	356	498	-	318	354	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	101.7	32.2	0.1	1.4
HCM LOS	F	D		

Minor Lane/Major Mvmt	NEL	NET	NWLn1	NWLn2	SELn1	SELn2	SWL	SWT
Capacity (veh/h)	965	-	107	461	96	556	936	-
HCM Lane V/C Ratio	0.007	-	0.517	0.277	0.875	0.063	0.094	-
HCM Control Delay (s)	8.8	-	70.1	15.8	139.2	11.9	9.2	-
HCM Lane LOS	A	-	F	C	F	B	A	-
HCM 95th %tile Q(veh)	0	-	2.4	1.1	4.9	0.2	0.3	-

HCM 6th Signalized Intersection Summary
5: US 280/Eldora Rd & US 80

2040 No-Build Volumes AM Peak Hour
AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	4	263	65	290	72	23	13	54	295	106	153	6
Future Volume (veh/h)	4	263	65	290	72	23	13	54	295	106	153	6
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	1604	1604	1604	1470	1470	1470	1574	1574	1574	1856	1856	1856
Adj Flow Rate, veh/h	4	286	0	315	78	25	14	59	0	115	166	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	20	20	20	29	29	29	22	22	22	3	3	3
Cap, veh/h	436	378		489	810	687	274	286		375	322	14
Arrive On Green	0.24	0.24	0.00	0.18	0.55	0.55	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1107	1604	1359	1400	1470	1246	1020	1574	1334	1333	1768	75
Grp Volume(v), veh/h	4	286	0	315	78	25	14	59	0	115	0	173
Grp Sat Flow(s),veh/h/ln	1107	1604	1359	1400	1470	1246	1020	1574	1334	1333	0	1842
Q Serve(g_s), s	0.1	6.8	0.0	6.4	1.0	0.4	0.5	1.3	0.0	3.3	0.0	3.5
Cycle Q Clear(g_c), s	0.1	6.8	0.0	6.4	1.0	0.4	4.0	1.3	0.0	4.6	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	436	378		489	810	687	274	286		375	0	335
V/C Ratio(X)	0.01	0.76		0.64	0.10	0.04	0.05	0.21		0.31	0.00	0.52
Avail Cap(c_a), veh/h	658	700		489	1106	937	534	688		715	0	805
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	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.1	14.7	0.0	9.0	4.4	4.2	17.0	14.3	0.0	16.3	0.0	15.2
Incr Delay (d2), s/veh	0.0	3.1	0.0	2.9	0.1	0.0	0.1	0.4	0.0	0.5	0.0	1.2
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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	0.0	1.4	0.1	0.0	0.1	0.4	0.0	0.8	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.1	17.8	0.0	11.8	4.4	4.3	17.1	14.7	0.0	16.7	0.0	16.4
LnGrp LOS	B	B		B	A	A	B	B		B	A	B
Approach Vol, veh/h		290	A		418			73	A		288	
Approach Delay, s/veh		17.7			10.0			15.1			16.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		13.0	13.0	15.2		13.0		28.2				
Change Period (Y+Rc), s		5.5	5.5	5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.0	7.5	18.0		18.0		31.0				
Max Q Clear Time (g_c+I1), s		6.0	8.4	8.8		6.6		3.0				
Green Ext Time (p_c), s		0.2	0.0	1.0		0.9		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary
5: US 280/Eldora Rd & US 80

2040 No-Build Volumes PM Peak Hour
PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	16	156	45	418	272	160	67	178	305	63	88	1
Future Volume (veh/h)	16	156	45	418	272	160	67	178	305	63	88	1
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	1633	1633	1633	1678	1678	1678	1796	1796	1796	1885	1885	1885
Adj Flow Rate, veh/h	17	170	0	454	296	174	73	193	0	68	96	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	18	18	18	15	15	15	7	7	7	1	1	1
Cap, veh/h	292	258		648	915	775	365	367		294	380	4
Arrive On Green	0.16	0.16	0.00	0.26	0.55	0.55	0.20	0.20	0.00	0.20	0.20	0.20
Sat Flow, veh/h	806	1633	1384	1598	1678	1422	1247	1796	1522	1199	1862	19
Grp Volume(v), veh/h	17	170	0	454	296	174	73	193	0	68	0	97
Grp Sat Flow(s),veh/h/ln	806	1633	1384	1598	1678	1422	1247	1796	1522	1199	0	1882
Q Serve(g_s), s	0.8	4.3	0.0	9.3	4.3	2.8	2.3	4.2	0.0	2.4	0.0	1.9
Cycle Q Clear(g_c), s	0.8	4.3	0.0	9.3	4.3	2.8	4.2	4.2	0.0	6.6	0.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	292	258		648	915	775	365	367		294	0	384
V/C Ratio(X)	0.06	0.66		0.70	0.32	0.22	0.20	0.53		0.23	0.00	0.25
Avail Cap(c_a), veh/h	495	670		685	1377	1167	622	737		541	0	772
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	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.9	17.4	0.0	9.5	5.5	5.2	16.4	15.6	0.0	18.5	0.0	14.7
Incr Delay (d2), s/veh	0.1	2.8	0.0	3.0	0.2	0.1	0.3	1.2	0.0	0.4	0.0	0.3
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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.5	0.0	2.4	0.8	0.4	0.5	1.4	0.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	20.2	0.0	12.5	5.7	5.3	16.7	16.7	0.0	18.9	0.0	15.0
LnGrp LOS	B	C		B	A	A	B	B		B	A	B
Approach Vol, veh/h		187	A		924			266	A		165	
Approach Delay, s/veh		19.8			9.0			16.7			16.6	
Approach LOS		B			A			B			B	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		14.5	17.0	12.4		14.5		29.4				
Change Period (Y+Rc), s		5.5	5.5	5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.0	12.5	18.0		18.0		36.0				
Max Q Clear Time (g_c+I1), s		6.2	11.3	6.3		8.6		6.3				
Green Ext Time (p_c), s		0.9	0.2	0.7		0.4		2.2				

Intersection Summary	
HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B

Notes

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

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	283	2	2	107	0	2
Future Vol, veh/h	283	2	2	107	0	2
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	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	13	13	25	25	1	1
Mvmt Flow	354	3	3	134	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	357	0	496	356
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	140	-
Critical Hdwy	-	-	4.35	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.425	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	1085	-	535	690
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	889	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1085	-	533	690
Mov Cap-2 Maneuver	-	-	-	-	533	-
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	690	-	-	1085	-
HCM Lane V/C Ratio	0.004	-	-	0.002	-
HCM Control Delay (s)	10.2	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	196	4	15	360	7	2
Future Vol, veh/h	196	4	15	360	7	2
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	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	13	13	6	6	1	1
Mvmt Flow	228	5	17	419	8	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	233	0	684	231
Stage 1	-	-	-	-	231	-
Stage 2	-	-	-	-	453	-
Critical Hdwy	-	-	4.16	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.254	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	1311	-	416	811
Stage 1	-	-	-	-	810	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1311	-	409	811
Mov Cap-2 Maneuver	-	-	-	-	409	-
Stage 1	-	-	-	-	810	-
Stage 2	-	-	-	-	631	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	460	-	-	1311	-
HCM Lane V/C Ratio	0.023	-	-	0.013	-
HCM Control Delay (s)	13	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	4	1	249	93	60
Future Vol, veh/h	52	4	1	249	93	60
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	78	78	78	78	78	78
Heavy Vehicles, %	7	7	13	13	5	5
Mvmt Flow	67	5	1	319	119	77

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	479	158	196	0	-	0
Stage 1	158	-	-	-	-	-
Stage 2	321	-	-	-	-	-
Critical Hdwy	6.47	6.27	4.23	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.363	2.317	-	-	-
Pot Cap-1 Maneuver	536	874	1314	-	-	-
Stage 1	858	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	535	874	1314	-	-	-
Mov Cap-2 Maneuver	535	-	-	-	-	-
Stage 1	857	-	-	-	-	-
Stage 2	724	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1314	-	550	-	-
HCM Lane V/C Ratio	0.001	-	0.131	-	-
HCM Control Delay (s)	7.7	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	82	5	6	156	312	110
Future Vol, veh/h	82	5	6	156	312	110
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	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	91	6	7	173	347	122

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	595	408	469	0	-	0
Stage 1	408	-	-	-	-	-
Stage 2	187	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.254	-	-	-
Pot Cap-1 Maneuver	460	635	1072	-	-	-
Stage 1	663	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	457	635	1072	-	-	-
Mov Cap-2 Maneuver	457	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	835	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1072	-	464	-	-
HCM Lane V/C Ratio	0.006	-	0.208	-	-
HCM Control Delay (s)	8.4	0	14.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	17	11	16	20	0	21	0	56	1	0	0
Future Vol, veh/h	0	17	11	16	20	0	21	0	56	1	0	0
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	-	-	125	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	9	9	9	44	44	44	35	35	35	1	1	1
Mvmt Flow	0	22	14	21	26	0	28	0	74	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	26	0	0	22	0	0	90	90	22	127	90	26
Stage 1	-	-	-	-	-	-	22	22	-	68	68	-
Stage 2	-	-	-	-	-	-	68	68	-	59	22	-
Critical Hdwy	4.19	-	-	4.54	-	-	7.45	6.85	6.55	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.45	5.85	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.45	5.85	-	6.11	5.51	-
Follow-up Hdwy	2.281	-	-	2.596	-	-	3.815	4.315	3.615	3.509	4.009	3.309
Pot Cap-1 Maneuver	1544	-	-	1360	-	-	821	742	967	849	802	1053
Stage 1	-	-	-	-	-	-	918	816	-	945	840	-
Stage 2	-	-	-	-	-	-	866	778	-	955	879	-
Platoon blocked, %			-			-						
Mov Cap-1 Maneuver	1544	-	-	1360	-	-	811	730	967	775	789	1053
Mov Cap-2 Maneuver	-	-	-	-	-	-	811	730	-	775	789	-
Stage 1	-	-	-	-	-	-	918	816	-	945	827	-
Stage 2	-	-	-	-	-	-	852	766	-	882	879	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0	3.4	9.4	9.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	919	1544	-	-	1360	-	-	775
HCM Lane V/C Ratio	0.11	-	-	-	0.015	-	-	0.002
HCM Control Delay (s)	9.4	0	-	-	7.7	0	-	9.7
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	32	17	100	66	0	44	1	159	1	1	0
Future Vol, veh/h	0	32	17	100	66	0	44	1	159	1	1	0
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	-	-	125	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	5	5	5	9	9	9	1	1	1
Mvmt Flow	0	36	19	112	74	0	49	1	179	1	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	74	0	0	36	0	0	335	334	36	424	334	74
Stage 1	-	-	-	-	-	-	36	36	-	298	298	-
Stage 2	-	-	-	-	-	-	299	298	-	126	36	-
Critical Hdwy	4.13	-	-	4.15	-	-	7.19	6.59	6.29	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.19	5.59	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.19	5.59	-	6.11	5.51	-
Follow-up Hdwy	2.227	-	-	2.245	-	-	3.581	4.081	3.381	3.509	4.009	3.309
Pot Cap-1 Maneuver	1519	-	-	1556	-	-	605	575	1017	542	588	990
Stage 1	-	-	-	-	-	-	962	851	-	713	669	-
Stage 2	-	-	-	-	-	-	695	654	-	880	867	-
Platoon blocked, %			-			-						
Mov Cap-1 Maneuver	1519	-	-	1556	-	-	569	532	1017	421	544	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	569	532	-	421	544	-
Stage 1	-	-	-	-	-	-	962	851	-	713	619	-
Stage 2	-	-	-	-	-	-	642	605	-	724	867	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0	4.5	10.6	12.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	866	1519	-	-	1556	-	-	475
HCM Lane V/C Ratio	0.265	-	-	-	0.072	-	-	0.005
HCM Control Delay (s)	10.6	0	-	-	7.5	0	-	12.6
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0	-	-	0.2	-	-	0

THOMAS & HUTTON

NORTH BRYAN TRANSPORTATION STUDY

NORTH BRYAN INDUSTRIAL PARK

APPENDIX E

SYNCHRO HCM 6th ANALYSIS
2040 BUILD OUT PEAK HOUR VOLUMES

J – 2832.0000, J-28681.0000,
J-28698.0000, J-28699.0000

July 2021

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	755	323	6	41	44
Future Vol, veh/h	30	755	323	6	41	44
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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	9	9	10	10	2	2
Mvmt Flow	34	858	367	7	47	50

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	374	0	-	0	1297	371
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	926	-
Critical Hdwy	4.19	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.281	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1147	-	-	-	179	675
Stage 1	-	-	-	-	698	-
Stage 2	-	-	-	-	386	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1147	-	-	-	169	675
Mov Cap-2 Maneuver	-	-	-	-	169	-
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	386	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	24.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1147	-	-	-	276
HCM Lane V/C Ratio	0.03	-	-	-	0.35
HCM Control Delay (s)	8.2	0	-	-	24.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.5

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	485	881	46	15	54
Future Vol, veh/h	51	485	881	46	15	54
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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	5	6	6	1	1
Mvmt Flow	54	511	927	48	16	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	975	0	-	0	1570	951
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	619	-
Critical Hdwy	4.15	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.245	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	696	-	-	-	122	316
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	539	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	696	-	-	-	109	316
Mov Cap-2 Maneuver	-	-	-	-	109	-
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	28.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	696	-	-	-	224
HCM Lane V/C Ratio	0.077	-	-	-	0.324
HCM Control Delay (s)	10.6	0	-	-	28.6
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	1.3

Intersection	
Int Delay, s/veh	326.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑						↓	↱
Traffic Vol, veh/h	0	389	427	262	322	0	0	0	0	324	0	40
Future Vol, veh/h	0	389	427	262	322	0	0	0	0	324	0	40
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	-	-	Yield
Storage Length	-	-	25	110	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	8	8	8	11	11	11	2	2	2	29	29	29
Mvmt Flow	0	480	527	323	398	0	0	0	0	400	0	49

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	480	0	0	1284	1524	199
Stage 1	-	-	-	-	-	-	1044	1044	-
Stage 2	-	-	-	-	-	-	240	480	-
Critical Hdwy	-	-	-	4.32	-	-	7.38	7.08	7.48
Critical Hdwy Stg 1	-	-	-	-	-	-	6.38	6.08	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.38	6.08	-
Follow-up Hdwy	-	-	-	2.31	-	-	3.79	4.29	3.59
Pot Cap-1 Maneuver	0	-	-	1018	-	0	~ 125	91	731
Stage 1	0	-	-	-	-	0	~ 246	252	-
Stage 2	0	-	-	-	-	0	703	490	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1018	-	-	~ 85	0	731
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 85	0	-
Stage 1	-	-	-	-	-	-	~ 246	0	-
Stage 2	-	-	-	-	-	-	480	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	4.6	$ 1574.1
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1018	-	85	731
HCM Lane V/C Ratio	-	-	0.318	-	4.706	0.068
HCM Control Delay (s)	-	-	10.2	$ 1767.2	10.3	
HCM Lane LOS	-	-	B	-	F	B
HCM 95th %tile Q(veh)	-	-	1.4	-	42.9	0.2

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

Intersection	
Int Delay, s/veh	280.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑						↓	↱
Traffic Vol, veh/h	0	317	234	311	987	0	0	0	0	191	2	27
Future Vol, veh/h	0	317	234	311	987	0	0	0	0	191	2	27
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	-	-	Yield
Storage Length	-	-	25	110	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	5	5	5	8	8	8	2	2	2	28	28	28
Mvmt Flow	0	348	257	342	1085	0	0	0	0	210	2	30

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	348	0	0	1943	2117	543
Stage 1	-	-	-	-	-	-	1769	1769	-
Stage 2	-	-	-	-	-	-	174	348	-
Critical Hdwy	-	-	-	4.26	-	-	7.36	7.06	7.46
Critical Hdwy Stg 1	-	-	-	-	-	-	6.36	6.06	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.36	6.06	-
Follow-up Hdwy	-	-	-	2.28	-	-	3.78	4.28	3.58
Pot Cap-1 Maneuver	0	-	-	1165	-	0	~ 42	36	422
Stage 1	0	-	-	-	-	0	~ 92	103	-
Stage 2	0	-	-	-	-	0	766	572	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1165	-	-	~ 30	0	422
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 30	0	-
Stage 1	-	-	-	-	-	-	~ 92	0	-
Stage 2	-	-	-	-	-	-	541	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2.2	$ 2624.4
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1165	-	30	422
HCM Lane V/C Ratio	-	-	0.293	-	7.07	0.07
HCM Control Delay (s)	-	-	9.4	$ 2989.6	14.2	
HCM Lane LOS	-	-	A	-	F	B
HCM 95th %tile Q(veh)	-	-	1.2	-	25.8	0.2

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

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	703	0	0	461	238	123	0	297	0	0	0
Future Vol, veh/h	22	703	0	0	461	238	123	0	297	0	0	0
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	-	-	None	-	-	Yield	-	-	Yield	-	-	None
Storage Length	110	-	-	-	-	25	-	-	25	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	25	25	25	26	26	26	21	21	21	2	2	2
Mvmt Flow	25	799	0	0	524	270	140	0	338	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	524	0	-	-	-	0	1111	1373	400
Stage 1	-	-	-	-	-	-	849	849	-
Stage 2	-	-	-	-	-	-	262	524	-
Critical Hdwy	4.6	-	-	-	-	-	7.22	6.92	7.32
Critical Hdwy Stg 1	-	-	-	-	-	-	6.22	5.92	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.22	5.92	-
Follow-up Hdwy	2.45	-	-	-	-	-	3.71	4.21	3.51
Pot Cap-1 Maneuver	894	-	0	0	-	-	176	123	549
Stage 1	-	-	0	0	-	-	336	334	-
Stage 2	-	-	0	0	-	-	704	483	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	894	-	-	-	-	-	171	0	549
Mov Cap-2 Maneuver	-	-	-	-	-	-	171	0	-
Stage 1	-	-	-	-	-	-	327	0	-
Stage 2	-	-	-	-	-	-	704	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.3	0	39.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	171	549	894	-	-	-
HCM Lane V/C Ratio	0.817	0.615	0.028	-	-	-
HCM Control Delay (s)	82.1	21.5	9.1	-	-	-
HCM Lane LOS	F	C	A	-	-	-
HCM 95th %tile Q(veh)	5.5	4.1	0.1	-	-	-

Intersection	
Int Delay, s/veh	101.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	491	0	0	874	451	429	0	430	0	0	0
Future Vol, veh/h	27	491	0	0	874	451	429	0	430	0	0	0
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	-	-	None	-	-	Yield	-	-	Yield	-	-	None
Storage Length	110	-	-	-	-	25	-	-	25	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	16	16	16	18	18	18	6	6	6	2	2	2
Mvmt Flow	29	528	0	0	940	485	461	0	462	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	940	0	-	-	-	0	1056	1526	264
Stage 1	-	-	-	-	-	-	586	586	-
Stage 2	-	-	-	-	-	-	470	940	-
Critical Hdwy	4.42	-	-	-	-	-	6.92	6.62	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	5.92	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.92	5.62	-
Follow-up Hdwy	2.36	-	-	-	-	-	3.56	4.06	3.36
Pot Cap-1 Maneuver	644	-	0	0	-	-	~ 214	112	722
Stage 1	-	-	0	0	-	-	508	485	-
Stage 2	-	-	0	0	-	-	584	332	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	644	-	-	-	-	-	~ 204	0	722
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 204	0	-
Stage 1	-	-	-	-	-	-	485	0	-
Stage 2	-	-	-	-	-	-	584	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.6	0	$ 318.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	204	722	644	-	-	-
HCM Lane V/C Ratio	2.261	0.64	0.045	-	-	-
HCM Control Delay (s)	$ 620.2	18.4	10.9	-	-	-
HCM Lane LOS	F	C	B	-	-	-
HCM 95th %tile Q(veh)	36.9	4.7	0.1	-	-	-

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

Intersection	
Int Delay, s/veh	23.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	11	6	38	37	9	78	145	742	35	104	458	57
Future Vol, veh/h	11	6	38	37	9	78	145	742	35	104	458	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Free	-	-	Free
Storage Length	-	-	100	-	-	0	245	-	315	200	-	310
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	17	17	17	76	76	76	23	23	23	28	28	28
Mvmt Flow	12	6	40	39	10	83	154	789	37	111	487	61

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1811	1806	487	1809	1806	789	487	0	-	789	0	0
Stage 1	709	709	-	1097	1097	-	-	-	-	-	-	-
Stage 2	1102	1097	-	712	709	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.67	6.37	7.86	7.26	6.96	4.33	-	-	4.38	-	-
Critical Hdwy Stg 1	6.27	5.67	-	6.86	6.26	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.67	-	6.86	6.26	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.153	3.453	4.184	4.684	3.984	2.407	-	-	2.452	-	-
Pot Cap-1 Maneuver	56	73	551	40	52	295	975	-	0	727	-	0
Stage 1	402	415	-	188	214	-	-	-	0	-	-	0
Stage 2	240	272	-	326	343	-	-	-	0	-	-	0
Platoon blocked, %								-			-	
Mov Cap-1 Maneuver	25	52	551	~ 26	37	295	975	-	-	727	-	-
Mov Cap-2 Maneuver	25	52	-	~ 26	37	-	-	-	-	-	-	-
Stage 1	338	352	-	158	180	-	-	-	-	-	-	-
Stage 2	138	229	-	251	291	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	78.1	259.2	1.5	2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NEL	NET	NWLn1	NWLn2	SELn1	SELn2	SWL	SWT
Capacity (veh/h)	975	-	28	295	31	551	727	-
HCM Lane V/C Ratio	0.158	-	1.748	0.281	0.583	0.073	0.152	-
HCM Control Delay (s)	9.4	-	$ 661.6	21.9	225.6	12.1	10.8	-
HCM Lane LOS	A	-	F	C	F	B	B	-
HCM 95th %tile Q(veh)	0.6	-	5.8	1.1	1.9	0.2	0.5	-

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

Intersection	
Int Delay, s/veh	110.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	77	2	152	48	4	120	50	655	26	83	957	6
Future Vol, veh/h	77	2	152	48	4	120	50	655	26	83	957	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Free	-	-	Free
Storage Length	-	-	100	-	-	0	245	-	315	200	-	310
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	6	6	6	43	43	43	21	21	21	20	20	20
Mvmt Flow	82	2	162	51	4	128	53	697	28	88	1018	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1999	1997	1018	1998	1997	697	1018	0	-	697	0	0
Stage 1	1194	1194	-	803	803	-	-	-	-	-	-	-
Stage 2	805	803	-	1195	1194	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.53	6.93	6.63	4.31	-	-	4.3	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.53	5.93	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.53	5.93	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.887	4.387	3.687	2.389	-	-	2.38	-	-
Pot Cap-1 Maneuver	~ 44	59	283	~ 35	47	378	613	-	0	821	-	0
Stage 1	224	255	-	323	343	-	-	-	0	-	-	0
Stage 2	370	390	-	189	218	-	-	-	0	-	-	0
Platoon blocked, %								-			-	
Mov Cap-1 Maneuver	~ 23	48	283	~ 12	38	378	613	-	-	821	-	-
Mov Cap-2 Maneuver	~ 23	48	-	~ 12	38	-	-	-	-	-	-	-
Stage 1	205	228	-	295	314	-	-	-	-	-	-	-
Stage 2	221	356	-	72	195	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	$ 549.4	$ 632.4	0.8	0.8
HCM LOS	F	F		

Minor Lane/Major Mvmt	NEL	NET	NWLn1	NWLn2	SELn1	SELn2	SWL	SWT
Capacity (veh/h)	613	-	13	378	23	283	821	-
HCM Lane V/C Ratio	0.087	-	4.255	0.338	3.654	0.571	0.108	-
HCM Control Delay (s)	11.4	-	$ 2047.2	19.3	$ 1542.2	33.4	9.9	-
HCM Lane LOS	B	-	F	C	F	D	A	-
HCM 95th %tile Q(veh)	0.3	-	7.9	1.5	10.6	3.3	0.4	-

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

HCM 6th Signalized Intersection Summary
5: US 280/Eldora Rd & US 80

2040 Build Out Volumes AM Peak Hour
AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	4	606	166	290	1220	23	351	54	295	106	153	6
Future Volume (veh/h)	4	606	166	290	1220	23	351	54	295	106	153	6
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	1559	1559	1559	1515	1515	1515	1544	1544	1544	1856	1856	1856
Adj Flow Rate, veh/h	4	659	0	315	1326	25	382	59	0	115	166	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	23	23	26	26	26	24	24	24	3	3	3
Cap, veh/h	55	690		249	915	775	296	481		434	551	23
Arrive On Green	0.44	0.44	0.00	0.12	0.60	0.60	0.31	0.31	0.00	0.31	0.31	0.31
Sat Flow, veh/h	337	1559	1321	1443	1515	1284	1001	1544	1309	1333	1768	75
Grp Volume(v), veh/h	4	659	0	315	1326	25	382	59	0	115	0	173
Grp Sat Flow(s),veh/h/ln	337	1559	1321	1443	1515	1284	1001	1544	1309	1333	0	1842
Q Serve(g_s), s	0.0	53.1	0.0	15.5	78.5	1.0	31.2	3.6	0.0	8.8	0.0	9.3
Cycle Q Clear(g_c), s	57.5	53.1	0.0	15.5	78.5	1.0	40.5	3.6	0.0	12.3	0.0	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	55	690		249	915	775	296	481		434	0	574
V/C Ratio(X)	0.07	0.96		1.27	1.45	0.03	1.29	0.12		0.26	0.00	0.30
Avail Cap(c_a), veh/h	55	690		249	915	775	296	481		434	0	574
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	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.0	35.0	0.0	37.7	25.7	10.4	52.3	32.0	0.0	36.4	0.0	34.0
Incr Delay (d2), s/veh	0.5	23.8	0.0	147.8	208.5	0.0	154.3	0.1	0.0	0.3	0.0	0.3
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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	23.5	0.0	13.7	77.8	0.3	22.3	1.3	0.0	2.8	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.5	58.9	0.0	185.5	234.3	10.4	206.6	32.1	0.0	36.8	0.0	34.3
LnGrp LOS	E	E		F	F	B	F	C		D	A	C
Approach Vol, veh/h		663	A		1666			441	A		288	
Approach Delay, s/veh		58.9			221.7			183.2			35.3	
Approach LOS		E			F			F			D	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		46.0	21.0	63.0		46.0		84.0				
Change Period (Y+Rc), s		5.5	5.5	5.5		5.5		5.5				
Max Green Setting (Gmax), s		40.5	15.5	57.5		40.5		78.5				
Max Q Clear Time (g_c+I1), s		42.5	17.5	59.5		14.3		80.5				
Green Ext Time (p_c), s		0.0	0.0	0.0		1.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			163.3									
HCM 6th LOS			F									

Notes

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

HCM 6th Signalized Intersection Summary
5: US 280/Eldora Rd & US 80

2040 Build Out Volumes PM Peak Hour
PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	16	1373	404	418	722	160	200	178	305	63	88	1
Future Volume (veh/h)	16	1373	404	418	722	160	200	178	305	63	88	1
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	1604	1604	1604	1648	1648	1648	1752	1752	1752	1885	1885	1885
Adj Flow Rate, veh/h	17	1492	0	454	785	174	217	193	0	68	96	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	20	20	20	17	17	17	10	10	10	1	1	1
Cap, veh/h	317	914		283	1247	1057	200	298		129	317	3
Arrive On Green	0.57	0.57	0.00	0.15	0.76	0.76	0.17	0.17	0.00	0.17	0.17	0.17
Sat Flow, veh/h	502	1604	1359	1570	1648	1397	1216	1752	1485	1199	1862	19
Grp Volume(v), veh/h	17	1492	0	454	785	174	217	193	0	68	0	97
Grp Sat Flow(s),veh/h/ln	502	1604	1359	1570	1648	1397	1216	1752	1485	1199	0	1882
Q Serve(g_s), s	2.4	85.5	0.0	22.5	33.2	5.2	18.7	15.4	0.0	8.4	0.0	6.8
Cycle Q Clear(g_c), s	7.6	85.5	0.0	22.5	33.2	5.2	25.5	15.4	0.0	23.8	0.0	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	317	914		283	1247	1057	200	298		129	0	320
V/C Ratio(X)	0.05	1.63		1.60	0.63	0.16	1.09	0.65		0.53	0.00	0.30
Avail Cap(c_a), veh/h	317	914		283	1247	1057	200	298		129	0	320
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	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.8	32.3	0.0	55.1	8.5	5.1	67.9	58.1	0.0	69.2	0.0	54.5
Incr Delay (d2), s/veh	0.1	289.5	0.0	286.8	1.0	0.1	88.3	4.8	0.0	4.0	0.0	0.5
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	0.3	104.0	0.0	32.7	10.2	1.3	12.5	7.1	0.0	2.7	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.8	321.8	0.0	341.8	9.5	5.1	156.2	62.9	0.0	73.2	0.0	55.0
LnGrp LOS	B	F		F	A	A	F	E		E	A	E
Approach Vol, veh/h		1509	A		1413			410	A		165	
Approach Delay, s/veh		318.3			115.7			112.3			62.5	
Approach LOS		F			F			F			E	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		31.0	28.0	91.0		31.0		119.0				
Change Period (Y+Rc), s		5.5	5.5	5.5		5.5		5.5				
Max Green Setting (Gmax), s		25.5	22.5	85.5		25.5		113.5				
Max Q Clear Time (g_c+I1), s		27.5	24.5	87.5		25.8		35.2				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		7.1				
Intersection Summary												
HCM 6th Ctrl Delay			200.3									
HCM 6th LOS			F									

Notes

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

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1120	5	3	478	9	6
Future Vol, veh/h	1120	5	3	478	9	6
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	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	22	22	25	25	1	1
Mvmt Flow	1400	6	4	598	11	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1406	0	2009	1403
Stage 1	-	-	-	-	1403	-
Stage 2	-	-	-	-	606	-
Critical Hdwy	-	-	4.35	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.425	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	420	-	65	172
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	546	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	420	-	64	172
Mov Cap-2 Maneuver	-	-	-	-	64	-
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	538	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	59
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	85	-	-	420	-
HCM Lane V/C Ratio	0.221	-	-	0.009	-
HCM Control Delay (s)	59	-	-	13.6	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	0.8	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	648	14	19	1257	11	3
Future Vol, veh/h	648	14	19	1257	11	3
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	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	16	16	16	16	7	7
Mvmt Flow	753	16	22	1462	13	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	769	0	2267	761
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	1506	-
Critical Hdwy	-	-	4.26	-	6.47	6.27
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	-	-	2.344	-	3.563	3.363
Pot Cap-1 Maneuver	-	-	786	-	43	397
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	197	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	786	-	37	397
Mov Cap-2 Maneuver	-	-	-	-	37	-
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	168	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	121.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	46	-	-	786	-
HCM Lane V/C Ratio	0.354	-	-	0.028	-
HCM Control Delay (s)	121.2	-	-	9.7	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	293.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	688	205	326	348	60
Future Vol, veh/h	52	688	205	326	348	60
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	78	78	78	78	78	78
Heavy Vehicles, %	24	24	16	16	21	21
Mvmt Flow	67	882	263	418	446	77

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1429	485	523	0	-	0
Stage 1	485	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Critical Hdwy	6.64	6.44	4.26	-	-	-
Critical Hdwy Stg 1	5.64	-	-	-	-	-
Critical Hdwy Stg 2	5.64	-	-	-	-	-
Follow-up Hdwy	3.716	3.516	2.344	-	-	-
Pot Cap-1 Maneuver	133	~ 540	976	-	-	-
Stage 1	576	-	-	-	-	-
Stage 2	346	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	86	~ 540	976	-	-	-
Mov Cap-2 Maneuver	86	-	-	-	-	-
Stage 1	374	-	-	-	-	-
Stage 2	346	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 663	3.9	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	976	-	394	-	-
HCM Lane V/C Ratio	0.269	-	2.408	-	-
HCM Control Delay (s)	10	0	$ 663	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	1.1	-	74.1	-	-

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

Intersection	
Int Delay, s/veh	15.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	82	273	731	426	412	110
Future Vol, veh/h	82	273	731	426	412	110
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	90	90	90	90	90	90
Heavy Vehicles, %	17	17	18	18	14	14
Mvmt Flow	91	303	812	473	458	122

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2616	519	580	0	-	0
Stage 1	519	-	-	-	-	-
Stage 2	2097	-	-	-	-	-
Critical Hdwy	6.57	6.37	4.28	-	-	-
Critical Hdwy Stg 1	5.57	-	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-	-
Follow-up Hdwy	3.653	3.453	2.362	-	-	-
Pot Cap-1 Maneuver	~ 24	528	920	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	93	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	0	528	920	-	-	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	93	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.3	18.9	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	920	-	528	-	-
HCM Lane V/C Ratio	0.883	-	0.747	-	-
HCM Control Delay (s)	30	0	29.3	-	-
HCM Lane LOS	D	A	D	-	-
HCM 95th %tile Q(veh)	12	-	6.4	-	-

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

Intersection	
Int Delay, s/veh	56.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	17	11	220	20	0	21	0	740	1	0	0
Future Vol, veh/h	0	17	11	220	20	0	21	0	740	1	0	0
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	-	-	125	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	9	9	9	28	28	28	26	26	26	1	1	1
Mvmt Flow	0	22	14	289	26	0	28	0	974	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	26	0	0	22	0	0	626	626	22	1113	626	26
Stage 1	-	-	-	-	-	-	22	22	-	604	604	-
Stage 2	-	-	-	-	-	-	604	604	-	509	22	-
Critical Hdwy	4.19	-	-	4.38	-	-	7.36	6.76	6.46	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.36	5.76	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.36	5.76	-	6.11	5.51	-
Follow-up Hdwy	2.281	-	-	2.452	-	-	3.734	4.234	3.534	3.509	4.009	3.309
Pot Cap-1 Maneuver	1544	-	-	1440	-	-	365	371	990	187	402	1053
Stage 1	-	-	-	-	-	-	938	832	-	487	489	-
Stage 2	-	-	-	-	-	-	446	452	-	549	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1544	-	-	1440	-	-	308	295	990	3	320	1053
Mov Cap-2 Maneuver	-	-	-	-	-	-	308	295	-	3	320	-
Stage 1	-	-	-	-	-	-	938	832	-	487	389	-
Stage 2	-	-	-	-	-	-	355	360	-	9	879	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0	7.5	71.5	$ 1581.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	933	1544	-	-	1440	-	-	3
HCM Lane V/C Ratio	1.073	-	-	-	0.201	-	-	0.439
HCM Control Delay (s)	71.5	0	-	-	8.1	0	-	$ 1581.5
HCM Lane LOS	F	A	-	-	A	A	-	F
HCM 95th %tile Q(veh)	24.1	0	-	-	0.8	-	-	0.6

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

Intersection	
Int Delay, s/veh	328

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	32	17	825	66	0	44	1	427	1	1	0
Future Vol, veh/h	0	32	17	825	66	0	44	1	427	1	1	0
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	-	-	125	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	9	9	9	17	17	17	15	15	15	1	1	1
Mvmt Flow	0	36	19	927	74	0	49	1	480	1	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	74	0	0	36	0	0	1965	1964	36	2205	1964	74
Stage 1	-	-	-	-	-	-	36	36	-	1928	1928	-
Stage 2	-	-	-	-	-	-	1929	1928	-	277	36	-
Critical Hdwy	4.19	-	-	4.27	-	-	7.25	6.65	6.35	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.25	5.65	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.25	5.65	-	6.11	5.51	-
Follow-up Hdwy	2.281	-	-	2.353	-	-	3.635	4.135	3.435	3.509	4.009	3.309
Pot Cap-1 Maneuver	1482	-	-	1483	-	-	~ 44	58	1001	32	63	990
Stage 1	-	-	-	-	-	-	947	840	-	86	114	-
Stage 2	-	-	-	-	-	-	79	105	-	732	867	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1482	-	-	1483	-	-	~ 20	20	1001	8	22	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 20	20	-	8	22	-
Stage 1	-	-	-	-	-	-	947	840	-	86	40	-
Stage 2	-	-	-	-	-	-	~ 27	37	-	381	867	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	0	10.5	$ 961.1	$ 364.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SWLn1
Capacity (veh/h)	176	1482	-	-	1483	-	-	12
HCM Lane V/C Ratio	3.013	-	-	-	0.625	-	-	0.187
HCM Control Delay (s)	$ 961.1	0	-	-	11.4	0	-	$ 364.5
HCM Lane LOS	F	A	-	-	B	A	-	F
HCM 95th %tile Q(veh)	48.4	0	-	-	4.7	-	-	0.5

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

THOMAS & HUTTON

NORTH BRYAN TRANSPORTATION STUDY

NORTH BRYAN INDUSTRIAL PARK

APPENDIX F

SYNCHRO HCM 6TH ANALYSIS
2040 BUILD OUT PEAK HOUR VOLUMES
WITH IMPROVEMENTS

J – 2832.0000, J-28681.0000,
J-28698.0000, J-28699.0000

July 2021

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Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	755	323	6	41	44
Future Vol, veh/h	30	755	323	6	41	44
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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	9	9	10	10	2	2
Mvmt Flow	34	858	367	7	47	50

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	374	0	-	0	1297	371
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	926	-
Critical Hdwy	4.19	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.281	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1147	-	-	-	179	675
Stage 1	-	-	-	-	698	-
Stage 2	-	-	-	-	386	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1147	-	-	-	169	675
Mov Cap-2 Maneuver	-	-	-	-	169	-
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	386	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	24.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1147	-	-	-	276
HCM Lane V/C Ratio	0.03	-	-	-	0.35
HCM Control Delay (s)	8.2	0	-	-	24.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.5

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	485	881	46	15	54
Future Vol, veh/h	51	485	881	46	15	54
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	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	5	6	6	1	1
Mvmt Flow	54	511	927	48	16	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	975	0	-	0	1570	951
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	619	-
Critical Hdwy	4.15	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.245	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	696	-	-	-	122	316
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	539	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	696	-	-	-	109	316
Mov Cap-2 Maneuver	-	-	-	-	109	-
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	28.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	696	-	-	-	224
HCM Lane V/C Ratio	0.077	-	-	-	0.324
HCM Control Delay (s)	10.6	0	-	-	28.6
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	1.3

HCM 6th Signalized Intersection Summary
2: US 280 & I-16 EB Ramp

2040 Build Out Volumes AM Peak Hour
With Improvements

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	389	427	262	322	0	0	0	0	324	0	40
Future Volume (veh/h)	0	389	427	262	322	0	0	0	0	324	0	40
Initial Q (Qb), veh	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
Parking Bus, Adj	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	0	1781	1781	1737	1737	0				1470	1470	1470
Adj Flow Rate, veh/h	0	480	0	323	398	0				400	0	0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81				0.81	0.81	0.81
Percent Heavy Veh, %	0	8	8	11	11	0				29	29	29
Cap, veh/h	0	709		445	1519	0				459	0	
Arrive On Green	0.00	0.21	0.00	0.14	0.46	0.00				0.33	0.00	0.00
Sat Flow, veh/h	0	3474	1510	1654	3387	0				1400	0	1246
Grp Volume(v), veh/h	0	480	0	323	398	0				400	0	0
Grp Sat Flow(s),veh/h/ln	0	1692	1510	1654	1650	0				1400	0	1246
Q Serve(g_s), s	0.0	6.8	0.0	7.5	3.8	0.0				13.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.8	0.0	7.5	3.8	0.0				13.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	709		445	1519	0				459	0	
V/C Ratio(X)	0.00	0.68		0.73	0.26	0.00				0.87	0.00	
Avail Cap(c_a), veh/h	0	1338		445	2132	0				554	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.9	0.0	13.2	8.6	0.0				16.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	5.8	0.1	0.0				12.4	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.0	2.6	0.9	0.0				5.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.0	0.0	19.0	8.7	0.0				28.8	0.0	0.0
LnGrp LOS	A	C		B	A	A				C	A	
Approach Vol, veh/h		480	A		721						400	A
Approach Delay, s/veh		20.0			13.3						28.8	
Approach LOS		C			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	16.4		22.5		29.4						
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5						
Max Green Setting (Gmax), s	7.5	20.5		20.5		33.5						
Max Q Clear Time (g_c+I1), s	9.5	8.8		15.9		5.8						
Green Ext Time (p_c), s	0.0	2.1		1.0		2.3						
Intersection Summary												
HCM 6th Ctrl Delay			19.2									
HCM 6th LOS			B									

Notes

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

HCM 6th Signalized Intersection Summary
2: US 280 & I-16 EB Ramp

2040 Build Out Volumes PM Peak Hour
With Improvements

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	317	234	311	987	0	0	0	0	191	2	27
Future Volume (veh/h)	0	317	234	311	987	0	0	0	0	191	2	27
Initial Q (Qb), veh	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
Parking Bus, Adj	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	0	1826	1826	1781	1781	0				1485	1485	1485
Adj Flow Rate, veh/h	0	348	0	342	1085	0				210	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	5	5	8	8	0				28	28	28
Cap, veh/h	0	623		592	1725	0				296	3	
Arrive On Green	0.00	0.18	0.00	0.19	0.51	0.00				0.21	0.21	0.00
Sat Flow, veh/h	0	3561	1547	1697	3474	0				1402	13	1259
Grp Volume(v), veh/h	0	348	0	342	1085	0				212	0	0
Grp Sat Flow(s),veh/h/ln	0	1735	1547	1697	1692	0				1415	0	1259
Q Serve(g_s), s	0.0	3.6	0.0	5.8	9.1	0.0				5.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	3.6	0.0	5.8	9.1	0.0				5.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	623		592	1725	0				299	0	
V/C Ratio(X)	0.00	0.56		0.58	0.63	0.00				0.71	0.00	
Avail Cap(c_a), veh/h	0	1585		592	2664	0				647	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	14.7	0.0	8.9	7.0	0.0				14.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	1.4	0.4	0.0				3.1	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.0	0.0	1.2	1.2	0.0				1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.5	0.0	10.3	7.4	0.0				17.5	0.0	0.0
LnGrp LOS	A	B		B	A	A				B	A	
Approach Vol, veh/h		348	A		1427						212	A
Approach Delay, s/veh		15.5			8.1						17.5	
Approach LOS		B			A						B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	12.6		13.8		25.6						
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5						
Max Green Setting (Gmax), s	7.5	18.0		18.0		31.0						
Max Q Clear Time (g_c+I1), s	7.8	5.6		7.5		11.1						
Green Ext Time (p_c), s	0.0	1.5		0.8		6.8						
Intersection Summary												
HCM 6th Ctrl Delay			10.4									
HCM 6th LOS			B									

Notes

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

HCM 6th Signalized Intersection Summary
3: I-16 WB Ramp & US 280

2040 Build Out Volumes AM Peak Hour
With Improvements

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	703	0	0	461	238	123	0	297	0	0	0
Future Volume (veh/h)	22	703	0	0	461	238	123	0	297	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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	1530	1530	0	0	1515	1515	1589	1589	1589			
Adj Flow Rate, veh/h	25	799	0	0	524	0	140	0	0			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	25	25	0	0	26	26	21	21	21			
Cap, veh/h	475	1252	0	0	1240		269	0				
Arrive On Green	0.43	0.43	0.00	0.00	0.43	0.00	0.18	0.00	0.00			
Sat Flow, veh/h	718	2983	0	0	2954	1284	1513	0	1346			
Grp Volume(v), veh/h	25	799	0	0	524	0	140	0	0			
Grp Sat Flow(s),veh/h/ln	718	1453	0	0	1439	1284	1513	0	1346			
Q Serve(g_s), s	0.7	6.1	0.0	0.0	3.6	0.0	2.4	0.0	0.0			
Cycle Q Clear(g_c), s	4.3	6.1	0.0	0.0	3.6	0.0	2.4	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	475	1252	0	0	1240		269	0				
V/C Ratio(X)	0.05	0.64	0.00	0.00	0.42		0.52	0.00				
Avail Cap(c_a), veh/h	689	2119	0	0	2099		996	0				
HCM Platoon Ratio	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	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	7.1	6.3	0.0	0.0	5.6	0.0	10.5	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.2	0.0	1.6	0.0	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			
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	0.0	0.2	0.0	0.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.1	6.8	0.0	0.0	5.8	0.0	12.0	0.0	0.0			
LnGrp LOS	A	A	A	A	A		B	A				
Approach Vol, veh/h		824			524	A		140	A			
Approach Delay, s/veh		6.8			5.8			12.0				
Approach LOS		A			A			B				
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		17.6		10.5		17.6						
Change Period (Y+Rc), s		5.5		5.5		5.5						
Max Green Setting (Gmax), s		20.5		18.5		20.5						
Max Q Clear Time (g_c+I1), s		8.1		4.4		5.6						
Green Ext Time (p_c), s		4.0		0.6		2.6						
Intersection Summary												
HCM 6th Ctrl Delay			7.0									
HCM 6th LOS			A									

Notes

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

HCM 6th Signalized Intersection Summary
3: I-16 WB Ramp & US 280

2040 Build Out Volumes PM Peak Hour
With Improvements

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	491	0	0	874	451	429	0	430	0	0	0
Future Volume (veh/h)	27	491	0	0	874	451	429	0	430	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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	1663	1663	0	0	1633	1633	1811	1811	1811			
Adj Flow Rate, veh/h	29	528	0	0	940	0	461	0	0			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	16	16	0	0	18	18	6	6	6			
Cap, veh/h	249	1263	0	0	1241		572	0				
Arrive On Green	0.40	0.40	0.00	0.00	0.40	0.00	0.33	0.00	0.00			
Sat Flow, veh/h	530	3243	0	0	3185	1384	1725	0	1535			
Grp Volume(v), veh/h	29	528	0	0	940	0	461	0	0			
Grp Sat Flow(s),veh/h/ln	530	1580	0	0	1552	1384	1725	0	1535			
Q Serve(g_s), s	2.0	4.9	0.0	0.0	10.7	0.0	10.0	0.0	0.0			
Cycle Q Clear(g_c), s	12.7	4.9	0.0	0.0	10.7	0.0	10.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	249	1263	0	0	1241		572	0				
V/C Ratio(X)	0.12	0.42	0.00	0.00	0.76		0.81	0.00				
Avail Cap(c_a), veh/h	303	1581	0	0	1553		779	0				
HCM Platoon Ratio	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	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	16.1	8.9	0.0	0.0	10.6	0.0	12.5	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	1.7	0.0	4.5	0.0	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			
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.0	0.0	2.2	0.0	3.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.3	9.1	0.0	0.0	12.3	0.0	17.0	0.0	0.0			
LnGrp LOS	B	A	A	A	B		B	A				
Approach Vol, veh/h		557			940	A		461	A			
Approach Delay, s/veh		9.5			12.3			17.0				
Approach LOS		A			B			B				
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		21.9		19.1		21.9						
Change Period (Y+Rc), s		5.5		5.5		5.5						
Max Green Setting (Gmax), s		20.5		18.5		20.5						
Max Q Clear Time (g_c+I1), s		14.7		12.0		12.7						
Green Ext Time (p_c), s		1.6		1.6		3.4						
Intersection Summary												
HCM 6th Ctrl Delay			12.6									
HCM 6th LOS			B									

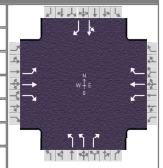
Notes

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

Intersection 4

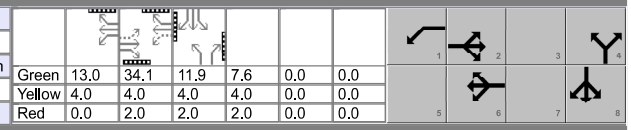
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Thomas and Hutton			Duration, h	0.250
Analyst	MB	Analysis Date	Apr 20, 2017	Area Type	Other
Jurisdiction	Bryan County	Time Period	am peak hour	PHF	0.93
Urban Street	Kelly Tract	Analysis Year	2030 Build	Analysis Period	1> 7:00
Intersection	SR 30 and Oracal Pkwa…	File Name	28334 Bld Ph 2 SR 30 Oracl am 2.xus		
Project Description	Build out Phase 2 am				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	52	335	454	246	434	25	130		66	13	10	15

Signal Information			
Cycle, s	88.6	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	13.0	34.1	11.9	7.6	0.0	0.0						
Yellow	4.0	4.0	4.0	4.0	0.0	0.0						
Red	0.0	2.0	2.0	2.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		4		8
Case Number		5.3	1.0	3.0		9.0		11.0
Phase Duration, s		40.1	17.0	57.1		17.9		13.6
Change Period, (*Y+R c*), s		6.0	4.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.0	2.9	3.0		3.3		3.3
Queue Clearance Time (*g s*), s		32.2	9.9	16.6		6.0		3.4
Green Extension Time (*g e*), s		1.6	0.1	2.8		0.2		0.0
Phase Call Probability		1.00	1.00	1.00		0.99		0.63
Max Out Probability		0.40	0.88	0.00		0.06		0.00

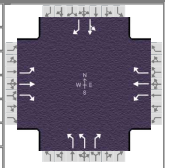
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7		14	3	8	18
Adjusted Flow Rate (*v*), veh/h	56	360	488	265	467	27	140		71		25	16
Adjusted Saturation Flow Rate (*s*), veh/h/ln	794	1604		1584	1663		1620				1531	
Queue Service Time (*g s*), s	4.1	15.8		7.9	14.6		3.5				1.3	
Cycle Queue Clearance Time (*g c*), s	4.1	15.8		7.9	14.6		3.5				1.3	
Green Ratio (*g/C*)	0.38	0.38		0.55	0.58		0.13				0.09	
Capacity (*c*), veh/h	387	617		501	959		436				131	
Volume-to-Capacity Ratio (*X*)	0.145	0.584		0.528	0.487		0.320				0.188	
Back of Queue (*Q*), ft/ln (50 th percentile)	19.6	152		64.2	118.4		36.6				14.8	
Back of Queue (*Q*), veh/ln (50 th percentile)	0.7	5.2		2.3	4.2		1.4				0.5	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.10	0.15		0.32	0.12		0.15				0.01	
Uniform Delay (*d 1*), s/veh	18.0	21.6		13.1	11.1		34.7				37.6	
Incremental Delay (*d 2*), s/veh	0.1	0.4		0.5	0.1		0.2				0.3	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0		0.0	0.0		0.0				0.0	
Control Delay (*d*), s/veh	18.1	22.0	0.0	13.6	11.2	0.0	34.8		0.0		37.9	0.0
Level of Service (LOS)	B	C	A	B	B	A	C		A		D	A
Approach Delay, s/veh / LOS	9.9	A		11.7	B		23.1	C		22.9	C	
Intersection Delay, s/veh / LOS	12.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.27	B	2.07	B	2.30	B	2.32	B
Bicycle LOS Score / LOS	1.98	B	1.74	B		F	0.56	A

 HCS™ Streets Version 7.8.5 Generated: 4/26/2020 1:43:37 PM

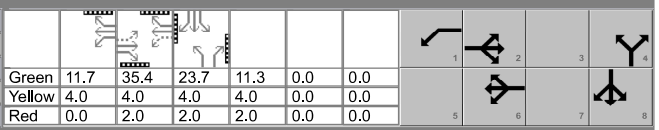
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Thomas and Hutton			Duration, h	0.250
Analyst	MB	Analysis Date	Apr 20, 2017	Area Type	Other
Jurisdiction	Bryan County	Time Period	pm peak hour	PHF	0.93
Urban Street	Kelly Tract	Analysis Year	2030 Build	Analysis Period	1> 7:00
Intersection	SR 30 and Oracal Pkwa…	File Name	28334 Bld Ph 2 SR 30 Oracl pm 2.xus		
Project Description	Build out Phase 2 pm				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	42	474	164	75	464	19	478		248	33	2	55

Signal Information			
Cycle, s	104.2	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	11.7	35.4	23.7	11.3	0.0	0.0						
Yellow	4.0	4.0	4.0	4.0	0.0	0.0						
Red	0.0	2.0	2.0	2.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		4		8
Case Number		5.3	1.0	3.0		9.0		11.0
Phase Duration, s		41.4	15.7	57.2		29.7		17.3
Change Period, (*Y+R c*), s		6.0	4.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.0	2.9	3.0		3.3		3.3
Queue Clearance Time (*g s*), s		34.0	4.9	24.2		21.7		8.0
Green Extension Time (*g e*), s		1.3	0.1	0.0		1.9		0.1
Phase Call Probability		1.00	0.90	1.00		1.00		0.94
Max Out Probability		0.00	0.00	1.00		0.00		0.41

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7		14	3	8	18
Adjusted Flow Rate (*v*), veh/h	45	510	176	81	499	20	514		267		38	59
Adjusted Saturation Flow Rate (*s*), veh/h/ln	771	1604		1612	1693		1305				1531	
Queue Service Time (*g s*), s	4.7	32.0		2.9	22.2		19.7				2.3	
Cycle Queue Clearance Time (*g c*), s	11.1	32.0		2.9	22.2		19.7				2.3	
Green Ratio (*g/C*)	0.34	0.34		0.47	0.49		0.23				0.11	
Capacity (*c*), veh/h	284	546		277	832		594				166	
Volume-to-Capacity Ratio (*X*)	0.159	0.934		0.291	0.600		0.865				0.227	
Back of Queue (*Q*), ft/ln (50 th percentile)	23.6	341.6		27	216.2		201.2				26	
Back of Queue (*Q*), veh/ln (50 th percentile)	0.8	11.8		1.0	7.8		6.4				0.9	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.12	0.34		0.14	0.22		0.80				0.03	
Uniform Delay (*d 1*), s/veh	28.8	33.3		21.5	19.1		38.7				42.5	
Incremental Delay (*d 2*), s/veh	0.1	3.4		0.2	0.9		1.5				0.3	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0		0.0	0.0		0.0				0.0	
Control Delay (*d*), s/veh	28.9	36.6	0.0	21.7	20.0	0.0	40.3		0.0		42.8	0.0
Level of Service (LOS)	C	D	A	C	B	A	D		A		D	A
Approach Delay, s/veh / LOS	27.3	C		19.5	B		26.5	C		16.6	B	
Intersection Delay, s/veh / LOS	24.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.09	B	2.31	B	2.32	B
Bicycle LOS Score / LOS	1.69	B	1.48	A		F	0.65	A

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HCM 6th Signalized Intersection Summary
5: US 280/Eldora Rd & US 80

2040 Build Out Volumes AM Peak Hour
With Improvements

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	4	606	166	290	1220	23	351	54	295	106	153	6
Future Volume (veh/h)	4	606	166	290	1220	23	351	54	295	106	153	6
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	1559	1559	1559	1515	1515	1515	1544	1544	1544	1856	1856	1856
Adj Flow Rate, veh/h	4	659	0	315	1326	25	382	59	0	115	166	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	23	23	26	26	26	24	24	24	3	3	3
Cap, veh/h	120	882		381	1452	648	448	547		262	224	9
Arrive On Green	0.30	0.30	0.00	0.14	0.50	0.50	0.16	0.35	0.00	0.13	0.13	0.13
Sat Flow, veh/h	337	2962	1321	2799	2878	1284	2853	1544	1309	1333	1768	75
Grp Volume(v), veh/h	4	659	0	315	1326	25	382	59	0	115	0	173
Grp Sat Flow(s),veh/h/ln	337	1481	1321	1399	1439	1284	1427	1544	1309	1333	0	1842
Q Serve(g_s), s	0.9	15.7	0.0	8.5	33.0	0.8	10.2	2.0	0.0	6.4	0.0	7.1
Cycle Q Clear(g_c), s	17.7	15.7	0.0	8.5	33.0	0.8	10.2	2.0	0.0	6.4	0.0	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	120	882		381	1452	648	448	547		262	0	234
V/C Ratio(X)	0.03	0.75		0.83	0.91	0.04	0.85	0.11		0.44	0.00	0.74
Avail Cap(c_a), veh/h	127	943		402	1532	684	461	743		424	0	459
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	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	24.7	0.0	32.8	17.7	9.8	32.0	16.9	0.0	32.5	0.0	32.8
Incr Delay (d2), s/veh	0.1	3.1	0.0	12.8	8.5	0.0	14.1	0.1	0.0	1.2	0.0	4.6
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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.3	0.0	3.4	10.5	0.2	4.1	0.7	0.0	2.0	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	27.8	0.0	45.6	26.2	9.8	46.1	17.0	0.0	33.7	0.0	37.3
LnGrp LOS	C	C		D	C	A	D	B		C	A	D
Approach Vol, veh/h		663	A		1666			441	A		288	
Approach Delay, s/veh		27.8			29.6			42.2			35.9	
Approach LOS		C			C			D			D	

Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		33.1	16.1	28.7	17.7	15.4		44.8				
Change Period (Y+Rc), s		5.5	5.5	5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		37.5	11.2	24.8	12.6	19.4		41.5				
Max Q Clear Time (g_c+I1), s		4.0	10.5	19.7	12.2	9.1		35.0				
Green Ext Time (p_c), s		0.2	0.1	1.9	0.1	0.8		4.3				

Intersection Summary			
HCM 6th Ctrl Delay		31.6	
HCM 6th LOS		C	

Notes

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

HCM 6th Signalized Intersection Summary
5: US 280/Eldora Rd & US 80

2040 Build Out Volumes PM Peak Hour
With Improvements

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	16	1373	404	418	722	160	200	178	305	63	88	1
Future Volume (veh/h)	16	1373	404	418	722	160	200	178	305	63	88	1
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	1604	1604	1604	1648	1648	1648	1752	1752	1752	1885	1885	1885
Adj Flow Rate, veh/h	17	1492	0	454	785	174	217	193	0	68	96	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	20	20	20	17	17	17	10	10	10	1	1	1
Cap, veh/h	315	1593		498	2276	1015	255	337		141	137	1
Arrive On Green	0.52	0.52	0.00	0.16	0.73	0.73	0.08	0.19	0.00	0.07	0.07	0.07
Sat Flow, veh/h	502	3047	1359	3045	3131	1397	3237	1752	1485	1199	1862	19
Grp Volume(v), veh/h	17	1492	0	454	785	174	217	193	0	68	0	97
Grp Sat Flow(s),veh/h/ln	502	1523	1359	1522	1566	1397	1618	1752	1485	1199	0	1882
Q Serve(g_s), s	2.3	62.3	0.0	19.9	12.4	5.3	9.0	13.6	0.0	7.6	0.0	6.9
Cycle Q Clear(g_c), s	2.3	62.3	0.0	19.9	12.4	5.3	9.0	13.6	0.0	7.6	0.0	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	315	1593		498	2276	1015	255	337		141	0	138
V/C Ratio(X)	0.05	0.94		0.91	0.34	0.17	0.85	0.57		0.48	0.00	0.70
Avail Cap(c_a), veh/h	328	1668		526	2382	1062	255	457		223	0	267
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	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.0	30.4	0.0	56.0	6.8	5.8	61.9	49.9	0.0	61.9	0.0	61.6
Incr Delay (d2), s/veh	0.1	10.2	0.0	19.7	0.1	0.1	23.3	1.5	0.0	2.5	0.0	6.3
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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	23.4	0.0	8.8	3.6	1.4	4.5	6.0	0.0	2.4	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	40.6	0.0	75.6	6.9	5.9	85.2	51.4	0.0	64.5	0.0	67.9
LnGrp LOS	B	D		E	A	A	F	D		E	A	E
Approach Vol, veh/h		1509	A		1413			410	A		165	
Approach Delay, s/veh		40.3			28.8			69.3			66.5	
Approach LOS		D			C			E			E	

Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		31.7	27.7	76.6	16.2	15.5		104.4				
Change Period (Y+Rc), s		5.5	5.5	5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		35.5	23.5	74.5	10.7	19.3		103.5				
Max Q Clear Time (g_c+I1), s		15.6	21.9	64.3	11.0	9.6		14.4				
Green Ext Time (p_c), s		0.9	0.3	6.8	0.0	0.4		6.7				

Intersection Summary			
HCM 6th Ctrl Delay		40.3	
HCM 6th LOS		D	

Notes

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1120	5	3	478	9	6
Future Vol, veh/h	1120	5	3	478	9	6
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	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	22	22	25	25	1	1
Mvmt Flow	1400	6	4	598	11	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1406	0	1710	703
Stage 1	-	-	-	-	1403	-
Stage 2	-	-	-	-	307	-
Critical Hdwy	-	-	4.6	-	6.82	6.92
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	-	-	2.45	-	3.51	3.31
Pot Cap-1 Maneuver	-	-	379	-	83	382
Stage 1	-	-	-	-	195	-
Stage 2	-	-	-	-	722	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	379	-	82	382
Mov Cap-2 Maneuver	-	-	-	-	82	-
Stage 1	-	-	-	-	195	-
Stage 2	-	-	-	-	710	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	40.5
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	120	-	-	379	-
HCM Lane V/C Ratio	0.156	-	-	0.01	-
HCM Control Delay (s)	40.5	-	-	14.6	0.1
HCM Lane LOS	E	-	-	B	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	648	14	19	1257	11	3
Future Vol, veh/h	648	14	19	1257	11	3
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	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	16	16	16	16	7	7
Mvmt Flow	753	16	22	1462	13	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	769	0	1536	385
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	775	-
Critical Hdwy	-	-	4.42	-	6.94	7.04
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	-	-	2.36	-	3.57	3.37
Pot Cap-1 Maneuver	-	-	755	-	102	599
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	402	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	755	-	86	599
Mov Cap-2 Maneuver	-	-	-	-	86	-
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	340	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	45.5
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	105	-	-	755	-
HCM Lane V/C Ratio	0.155	-	-	0.029	-
HCM Control Delay (s)	45.5	-	-	9.9	0.7
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

HCM 6th Signalized Intersection Summary
9: US 80 and Olive Branch Road

2040 Build Out AM Peak Hr

03/23/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1120	5	3	478	153	9	37	6	46	10	45
Future Volume (veh/h)	150	1120	5	3	478	153	9	37	6	46	10	45
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	1604	1722	1722	1722	1722	1604	1604	1604	1604	1604	1604	1604
Adj Flow Rate, veh/h	163	1217	5	3	520	166	10	40	7	50	11	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	20	12	12	12	12	20	20	20	20	20	20	20
Cap, veh/h	517	1993	8	99	1173	499	131	122	20	335	28	126
Arrive On Green	0.11	0.60	0.60	0.37	0.37	0.37	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1527	3342	14	4	3195	1359	164	1108	178	1165	256	1142
Grp Volume(v), veh/h	163	596	626	280	243	166	57	0	0	50	0	60
Grp Sat Flow(s),veh/h/ln	1527	1636	1720	1710	1489	1359	1450	0	0	1165	0	1398
Q Serve(g_s), s	2.1	8.7	8.7	0.0	4.6	3.3	0.0	0.0	0.0	0.0	0.0	1.5
Cycle Q Clear(g_c), s	2.1	8.7	8.7	4.6	4.6	3.3	1.5	0.0	0.0	1.1	0.0	1.5
Prop In Lane	1.00		0.01	0.01		1.00	0.18		0.12	1.00		0.82
Lane Grp Cap(c), veh/h	517	976	1026	725	547	499	272	0	0	335	0	154
V/C Ratio(X)	0.32	0.61	0.61	0.39	0.44	0.33	0.21	0.00	0.00	0.15	0.00	0.39
Avail Cap(c_a), veh/h	778	2773	2915	2271	1927	1759	719	0	0	689	0	578
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	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.4	4.8	4.8	9.0	9.0	8.5	15.4	0.0	0.0	15.3	0.0	15.5
Incr Delay (d2), s/veh	0.3	0.6	0.6	0.3	0.6	0.4	0.4	0.0	0.0	0.2	0.0	1.6
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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.4	1.5	1.3	1.2	0.8	0.4	0.0	0.0	0.3	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.8	5.4	5.4	9.3	9.5	8.9	15.8	0.0	0.0	15.5	0.0	17.1
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h		1385			689			57			110	
Approach Delay, s/veh		5.4			9.3			15.8			16.4	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		9.6		27.8		9.6	8.6	19.3				
Change Period (Y+Rc), s		5.5		5.5		5.5	4.5	5.5				
Max Green Setting (Gmax), s		15.5		63.5		15.5	10.5	48.5				
Max Q Clear Time (g_c+I1), s		3.5		10.7		3.5	4.1	6.6				
Green Ext Time (p_c), s		0.1		11.7		0.3	0.2	4.2				
Intersection Summary												
HCM 6th Ctrl Delay			7.4									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary
9: US 80 and Olive Branch Road

2040 Build Out PM Peak Hr

03/23/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	648	14	19	1257	69	11	15	3	162	40	159
Future Volume (veh/h)	59	648	14	19	1257	69	11	15	3	162	40	159
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	1604	1722	1722	1722	1722	1604	1604	1604	1604	1604	1604	1604
Adj Flow Rate, veh/h	64	704	15	21	1366	75	12	16	3	176	43	173
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	20	12	12	12	12	20	20	20	20	20	20	20
Cap, veh/h	229	2044	44	67	1588	683	108	108	15	308	58	233
Arrive On Green	0.05	0.62	0.62	0.50	0.50	0.50	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1527	3276	70	20	3161	1359	150	522	72	1195	279	1123
Grp Volume(v), veh/h	64	352	367	740	647	75	31	0	0	176	0	216
Grp Sat Flow(s),veh/h/ln	1527	1636	1710	1692	1489	1359	744	0	0	1195	0	1402
Q Serve(g_s), s	1.2	6.7	6.7	5.8	24.9	1.9	0.2	0.0	0.0	2.6	0.0	9.4
Cycle Q Clear(g_c), s	1.2	6.7	6.7	24.9	24.9	1.9	9.6	0.0	0.0	12.1	0.0	9.4
Prop In Lane	1.00		0.04	0.03		1.00	0.39		0.10	1.00		0.80
Lane Grp Cap(c), veh/h	229	1021	1067	907	748	683	231	0	0	308	0	290
V/C Ratio(X)	0.28	0.34	0.34	0.82	0.87	0.11	0.13	0.00	0.00	0.57	0.00	0.74
Avail Cap(c_a), veh/h	277	1142	1194	977	811	740	231	0	0	308	0	290
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	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.8	5.9	5.9	14.2	14.3	8.5	21.2	0.0	0.0	25.7	0.0	24.2
Incr Delay (d2), s/veh	0.7	0.2	0.2	5.1	9.2	0.1	0.3	0.0	0.0	2.5	0.0	9.9
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	0.4	1.8	1.9	9.2	8.9	0.5	0.4	0.0	0.0	2.7	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	6.1	6.1	19.3	23.4	8.6	21.5	0.0	0.0	28.2	0.0	34.1
LnGrp LOS	B	A	A	B	C	A	C	A	A	C	A	C
Approach Vol, veh/h		783			1462			31			392	
Approach Delay, s/veh		6.7			20.6			21.5			31.5	
Approach LOS		A			C			C			C	
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		19.0		46.2		19.0	7.9	38.2				
Change Period (Y+Rc), s		5.5		5.5		5.5	4.5	5.5				
Max Green Setting (Gmax), s		13.5		45.5		13.5	5.5	35.5				
Max Q Clear Time (g_c+I1), s		11.6		8.7		14.1	3.2	26.9				
Green Ext Time (p_c), s		0.0		5.2		0.0	0.0	5.8				
Intersection Summary												
HCM 6th Ctrl Delay			18.1									
HCM 6th LOS			B									

Intersection 10

HCS7 Roundabouts Report

General Information

Analyst	MB
Agency or Co.	Thomas & Hutton
Date Performed	10/28/2020
Analysis Year	2040
Time Analyzed	AM Pk Build Out 2040
Project Description	North Bryan Industrial Park

Site Information

Intersection	US 80 and SR 119
E/W Street Name	US 80
N/S Street Name	SR 119
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.78
Jurisdiction	Bryan County

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	0
Lane Assignment			T		L		T			L						
Volume (V), veh/h	0		348	60	0	205	326		0	52		688				
Percent Heavy Vehicles, %	3		21	21	3	16	16		3	23		23				
Flow Rate (v_{PCE}), pc/h	0		502	87	0	288	458		0	76		1004				
Right-Turn Bypass	Yielding				None				Non-Yielding				None			
Conflicting Lanes	1				1				1							
Pedestrians Crossing, p/h	0				0				0							

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.9763	4.9763	4.5436	4.5436			4.9763				
Follow-Up Headway (s)		2.6087	2.6087	2.5352	2.5352			2.6087				

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		502	87	288	458			76	1004			
Entry Volume, veh/h		446	77	263	418			67	882			
Circulating Flow (v_c), pc/h		288			76			502			822	
Exiting Flow (v_{ex}), pc/h		502			534			0			288	
Capacity (c_{pce}), pc/h		1029	1029	1325	1325			827				
Capacity (c), veh/h		914	914	1209	1209			727				
v/c Ratio (x)		0.49	0.08	0.22	0.35			0.09				

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		10.1	4.7	4.9	6.3			5.9				
Lane LOS		B	A	A	A			A	A			
95% Queue, veh		2.7	0.3	0.8	1.6			0.3				
Approach Delay, s/veh	9.3			5.7			0.4					
Approach LOS	A			A			A					
Intersection Delay, s/veh | LOS	4.3						A					

HCS7 Roundabouts Report

General Information

Analyst	MB
Agency or Co.	Thomas & Hutton
Date Performed	10/28/2020
Analysis Year	2040
Time Analyzed	PM Pk Build Out 2040
Project Description	North Bryan Industrial Park

Site Information

Intersection	US 80 and SR 119
E/W Street Name	US 80
N/S Street Name	SR 119
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.90
Jurisdiction	Bryan County

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	0
Lane Assignment			T		L		T			L						
Volume (V), veh/h	0		412	110	0	731	426		0	82		273				
Percent Heavy Vehicles, %	3		14	14	3	18	18		3	17		17				
Flow Rate (v_{PCE}), pc/h	0		496	132	0	900	524		0	100		334				
Right-Turn Bypass	Yielding				None				Non-Yielding				None			
Conflicting Lanes	1				1				1							
Pedestrians Crossing, p/h	0				0				0							

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.9763	4.9763	4.5436	4.5436			4.9763				
Follow-Up Headway (s)		2.6087	2.6087	2.5352	2.5352			2.6087				

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		496	132	900	524			100	334			
Entry Volume, veh/h		458	122	812	473			91	303			
Circulating Flow (v_c), pc/h		900			100			496			1524	
Exiting Flow (v_{ex}), pc/h		496			624			0			900	
Capacity (c_{pce}), pc/h		551	551	1296	1296			832				
Capacity (c), veh/h		508	508	1170	1170			755				
v/c Ratio (x)		0.90	0.24	0.69	0.40			0.12				

Delay and Level of Service

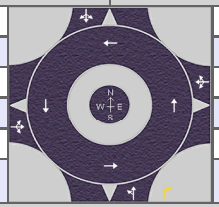
Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		47.2	10.5	13.2	7.2			6.0				
Lane LOS		E	B	B	A			A	A			
95% Queue, veh		10.3	0.9	6.0	2.0			0.4				
Approach Delay, s/veh	39.5			11.0			1.4					
Approach LOS	E			B			A					
Intersection Delay, s/veh | LOS	16.6						C					

Intersection 11

HCS7 Roundabouts Report

General Information

Analyst	MB
Agency or Co.	Thomas and Hutton
Date Performed	10/29/2020
Analysis Year	2040
Time Analyzed	am peak Build out 2040
Project Description	North Bryan Industrial Park



Site Information

Intersection	SR 119, Old GA 46
E/W Street Name	SR 119 & Old Ga 46
N/S Street Name	SR 119 & Butler
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.76
Jurisdiction	Bryan County

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LT				LTR	
Volume (V), veh/h	0	0	17	11	0	220	20	0	0	21	0	740	0	1	0	0
Percent Heavy Vehicles, %	0	0	9	9	0	28	28	0	0	26	0	26	0	0	0	0
Flow Rate (v_{PCE}), pc/h	0	0	24	15	0	338	31	0	0	32	0	1126	0	1	0	0
Right-Turn Bypass	None				None				Yielding				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.9763			4.9763			4.9763	4.9763		4.9763	
Follow-Up Headway (s)		2.6087			2.6087			2.6087	2.6087		2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		39			369			32	1126		1	
Entry Volume, veh/h		37			316			28	974		1	
Circulating Flow (v_c), pc/h	339			32			25			401		
Exiting Flow (v_{ex}), pc/h	25			63			0			353		
Capacity (c_{pce}), pc/h		977			1336			1345	1345		917	
Capacity (c), veh/h		927			1144			1164	1164		917	
v/c Ratio (x)		0.04			0.28			0.02	0.84		0.00	

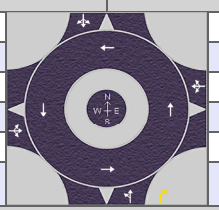
Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		4.2			5.7			3.3	20.7		3.9	
Lane LOS		A			A			A	C		A	
95% Queue, veh		0.1			1.1			0.1	10.6		0.0	
Approach Delay, s/veh	4.2			5.7			20.2			3.9		
Approach LOS	A			A			C			A		
Intersection Delay, s/veh | LOS	16.4						C					

HCS7 Roundabouts Report

General Information

Analyst	MB
Agency or Co.	Thomas and Hutton
Date Performed	10/29/2020
Analysis Year	2040
Time Analyzed	pm peak Build out 2040
Project Description	North Bryan Industrial Park



Site Information

Intersection	SR 119, Old GA 46
E/W Street Name	SR 119 & Old Ga 46
N/S Street Name	SR 119 & Butler
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.89
Jurisdiction	Bryan County

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LT				LTR	
Volume (V), veh/h	0	0	32	17	0	825	66	0	0	44	0	427	0	1	0	0
Percent Heavy Vehicles, %	0	0	3	3	0	17	17	0	0	15	0	15	0	0	0	0
Flow Rate (v_{PCE}), pc/h	0	0	37	19	0	1022	82	0	0	54	0	523	0	1	0	0
Right-Turn Bypass	None				None				Yielding				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.9763			4.9763			4.9763	4.9763		4.9763	
Follow-Up Headway (s)		2.6087			2.6087			2.6087	2.6087		2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		56			1104			54	523		1	
Entry Volume, veh/h		55			1002			50	480		1	
Circulating Flow (v_c), pc/h	1023			54			38			1158		
Exiting Flow (v_{ex}), pc/h	38			136			0			1041		
Capacity (c_{pce}), pc/h		486			1306			1328	1328		424	
Capacity (c), veh/h		477			1185			1218	1218		424	
v/c Ratio (x)		0.12			0.85			0.04	0.39		0.00	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		9.1			21.1			3.3	6.8		8.5	
Lane LOS		A			C			A	A		A	
95% Queue, veh		0.4			11.1			0.1	1.9		0.0	
Approach Delay, s/veh	9.1			21.1			6.5			8.5		
Approach LOS	A			C			A			A		
Intersection Delay, s/veh | LOS	15.8						C					