Traffic Impact Study

Seay Farms Development
SR 212 and Oglesby Bridge Road
Rockdale County, Georgia

August 5, 2024

SEI ENGINEERING, INC.

in collaboration with

ACAMPORA TRAFFIC, LLC

Traffic Impact Study

Seay Farms Development
SR 212 and Oglesby Bridge Road
Rockdale County, Georgia

prepared for:

S.A. Goodsell Development Co.
3715 Northside Parkway
100 Northcreek, Suite 130
Atlanta, Georgia 30327

August 5, 2024

SEI ENGINEERING, INC.
2470 Sandy Plains Road, Suite C
Marietta, Georgia 30066
(770) 321-3936
info@sei.site

in collaboration with

ACAMPORA TRAFFIC, LLC
858 Myrtle Street, NE
Atlanta, Georgia 30308
(678) 637-1763
e-mail: acamporatraffic@comcast.net

Contents

Tables

Figures

Introduction

This study assesses the traffic impact of a proposed development which will include a residential subdivision and a retail tract in Rockdale County, Georgia. The site is located along the west side of SR 212 and the north side of Oglesby Bridge Road, as shown in Figure 1. The project will consist of 230 detached single family homes and 65,000 square feet of retail. The residential will be served by one full-movement access on SR 212 and two full-movement accesses on Oglesby Bridge Road and the retail tract will have one access on each road.

The purpose of this traffic impact study is to determine existing traffic operating conditions in the vicinity of the proposed development, project future traffic volumes, assess the impact of the subject development, then develop conclusions and recommendations to mitigate the project traffic impact and ensure safe and efficient existing and future traffic conditions in the vicinity of the project.

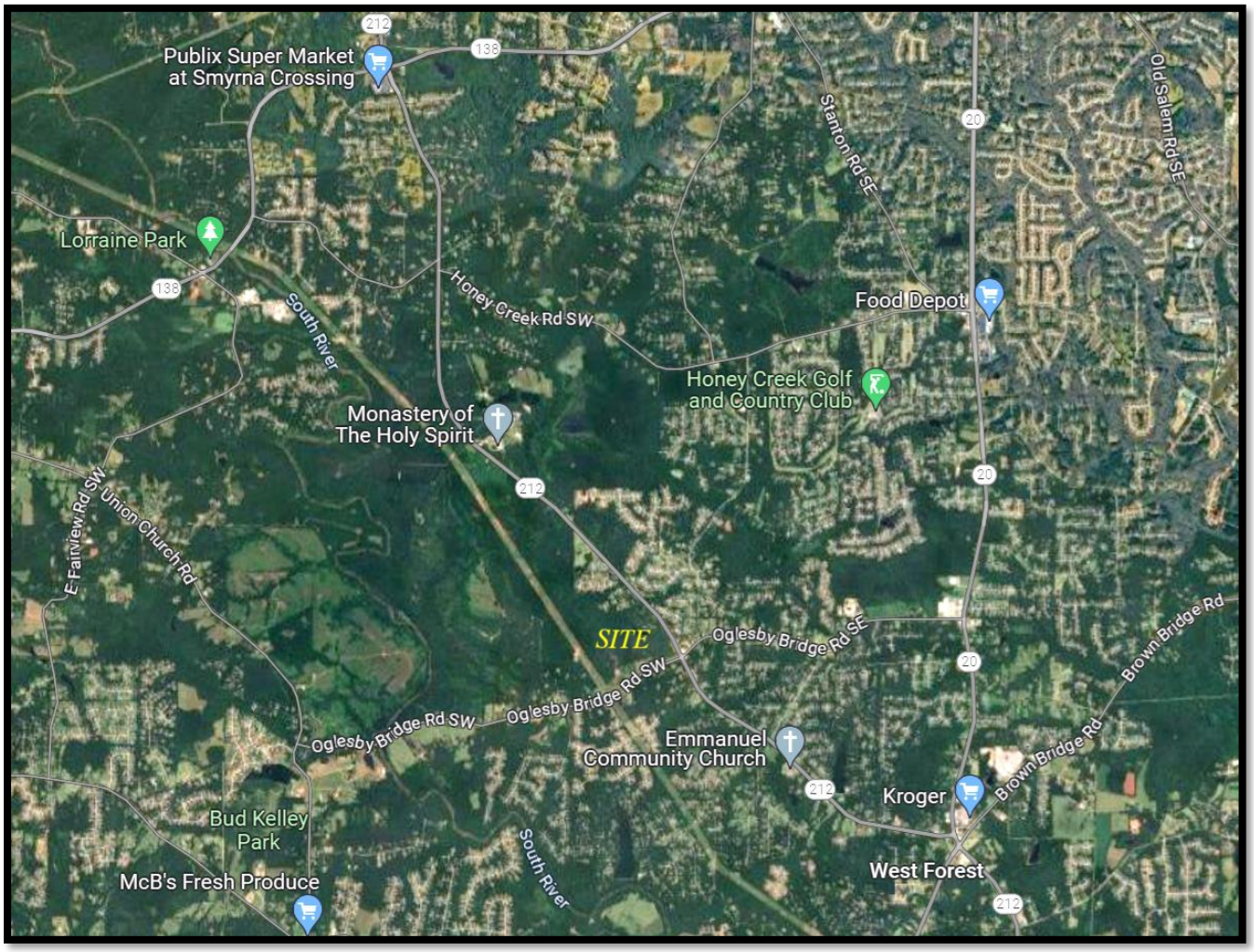


Figure 1 – Site Location Map

Existing Traffic Conditions

Existing traffic operating conditions in the vicinity of the proposed development were assessed. The following is a description of existing transportation facilities, traffic volumes, and intersection operations.

Description of Existing Roadways

SR 212 is a northwest-southeast urban minor arterial that begins at SR 155, passes the subject site, intersects SR 20, then has an offset and continues to the southeast. The road has one through travel lane in each direction with exclusive left and right turn lanes at major intersections. In the vicinity of the proposed development, the intersections of SR 212 at SR 138, Oglesby Bridge Road, and SR 20 are signalized. The terrain along SR 212 is gently rolling and the posted speed limit is 55 mph. The road has a rural cross-section with a small shoulder but no sidewalks (see below), or curb-and-gutter. In 2023 the Georgia DOT recorded an Annual Average Daily Traffic (AADT) volume of 7,600 vehicles per day (vpd) with 5% trucks on SR 212 near the project frontage. A 24-hour traffic volume count was collected for this study in May 2024 on SR 212 at the project frontage and recorded a volume of 9,834 vehicles.

Oglesby Bridge Road is a two lane east-west urban major collector that begins at Union Church Road / Airline Road, passes the subject site, intersects with SR 212 and terminates at SR 20. The terrain along Oglesby Bridge Road is level to very gently rolling and the posted speed limit is 45 mph. The road has a rural cross-section with no shoulder, sidewalks, or curb-and-gutter. In 2023 the Georgia DOT recorded an AADT volume of 3,770 vpd with 5% trucks on Oglesby Bridge Road west of the subject development site. A 24-hour traffic volume count was collected for this study in May 2024 on Oglesby Bridge Road at the project frontage and recorded a volume of 6,024 vehicles.

Pedestrian, Bicycle, and Transit Accessibility

There is no sidewalk along most of SR 212 and Oglesby Bridge Road or other nearby roadways. There are just short segments of sidewalk along the frontages of the retail sites at the corner of SR 212 at Oglesby Bridge Road. There are crosswalks and pedestrian signals at the SR 212 / Oglesby Bridge Road intersection and the other signalized intersections in this study. There are no dedicated bicycle lanes in this vicinity. There is no regularly-scheduled mass transit route or service within a reasonable walking distance of the proposed development.

Existing Traffic Volumes

Existing full turning movement peak hour traffic volume counts were collected at the following intersections in the vicinity of the site:

1. SR 212 at Oglesby Bridge Road (signal)
2. Union Church Road / Airline Road at Oglesby Bridge Road (side street stop sign)
3. SR 138 at SR 212 (signal)
4. SR 20 at SR 212 / CVS Access (signal)

The counts were collected on Tuesday, May 7, 2024, from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m. In addition to the intersection counts, a 24-hour bi-directional traffic volume count was collected on SR 212 and on Oglesby Bridge Road adjacent to the site. Area schools were in session on the day on which the counts were recorded. The locations of the traffic counts are presented in Figure 2.

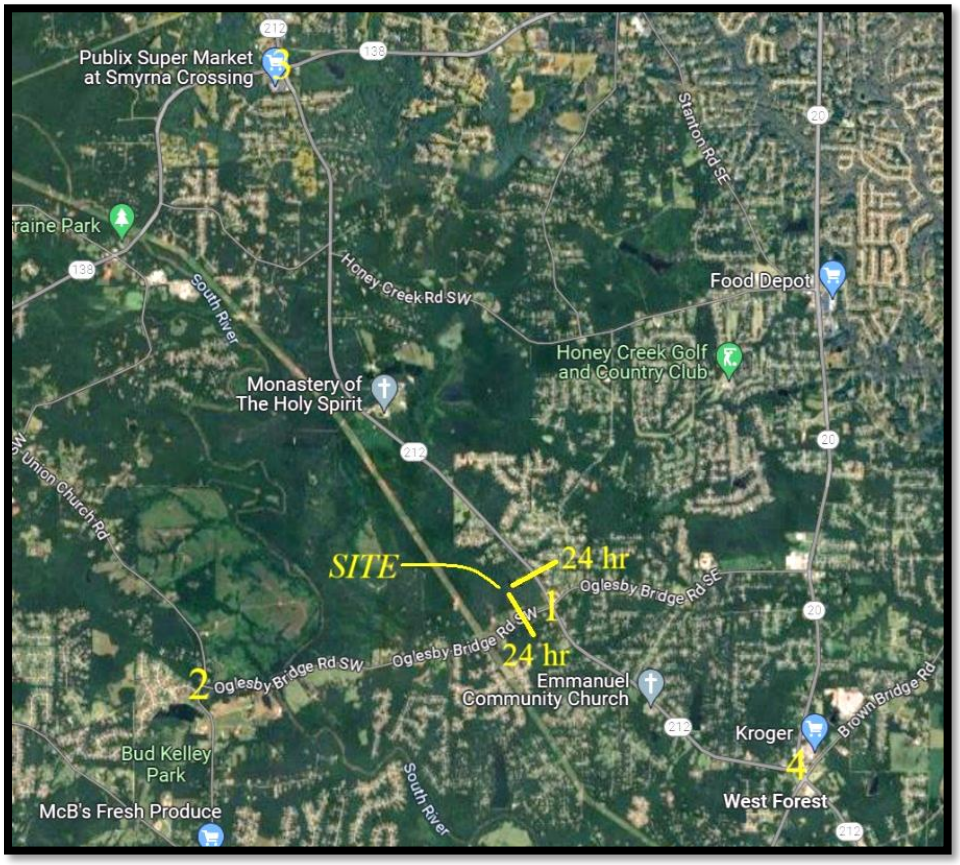


Figure 2 – Traffic Volume Count Location Map

From the intersection turning movement count data, the highest four consecutive 15-minute interval volumes at each intersection, during each time period, were determined. These volumes make up the existing weekday a.m. and p.m. peak hour traffic volumes at the intersections and are shown in Figure 3. The raw count data is found in Appendix A.

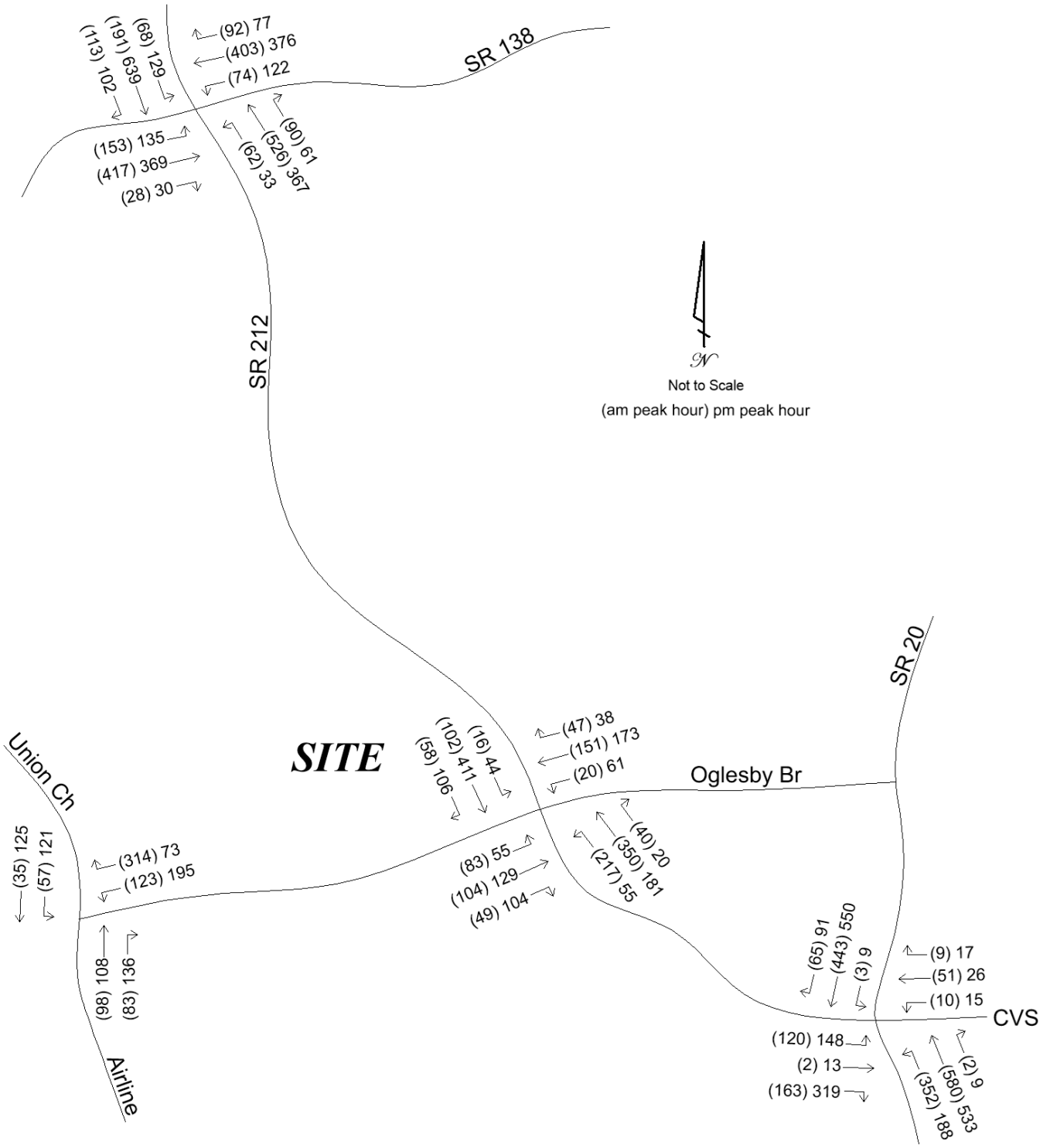


Figure 3 – Existing Weekday A.M. and P.M. Peak Hour Traffic Volumes

Existing Intersection Operations

Existing traffic operations were analyzed at the counted intersections using Synchro software, version 12, in accordance with the methodology presented in the Transportation Research Board's 2022 *Highway Capacity Manual* 7th Edition (*HCM 7*). This methodology is presented in Appendix B. The analysis was based on the existing volumes, lanes, and control. The results of the analysis are shown in Table 1. Computer printouts containing detailed results of the existing analysis are located in Appendix C. Levels of service and delays are provided for each overall intersection and for each controlled approach or movement. Locations that operate unacceptably (LOS E or LOS F) are presented in bold type.

Table 1 – Existing Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. SR 212 at Oglesby Bridge Rd (signal)	B	11.9	B	13.4
northbound approach	A	8.3	A	7.7
southbound approach	A	9.8	B	10.9
eastbound approach	B	18.5	B	19.0
westbound approach	B	17.6	B	19.5
2. Union Church Rd at Oglesby Bridge Rd (side street stop)	C	16.8	B	12.1
southbound left turn	A	7.8	A	8.2
westbound approach	C	25.0	D	29.0
3. SR 138 at SR 212 (signal)	C	33.9	D	35.6
northbound approach	C	28.4	C	22.6
southbound approach	B	18.0	C	28.3
eastbound approach	D	39.4	D	43.9
westbound approach	D	43.0	D	49.4
4. SR 20 at SR 212 / CVS Access (signal)	A	9.9	B	10.8
northbound approach	A	5.9	A	5.6
southbound approach	B	11.9	B	11.7
eastbound approach	C	25.9	C	26.0
westbound approach	C	24.6	C	23.3

The existing analysis reveals acceptable traffic operations at all study locations. Therefore, no mitigation is identified for the existing condition.

No-Build Traffic Conditions

A 2029 no-build condition was developed. This represents the traffic conditions that will exist in the future at the anticipated date of the build-out of the proposed development, but not including the project's trips. The purpose of the analysis of this condition is to isolate the traffic impacts of the proposed development from background growth in volumes that is expected to occur in the area while the project is under construction.

In order to develop no-build volumes, a background growth factor was developed based on a review of historic Georgia DOT AADT traffic counts, as shown in Table 2.

Table 2 – Historic Georgia DOT Traffic Volume Counts and Annual Growth Rates

Year	SR 212 at site	Annual Growth	Oglesby Br W of site	Annual Growth	Oglesby Br E of Hull	Annual Growth	SR 212 W of SR 20	Annual Growth
Station ID	247-0101		247-0298		247-0300		217-0111	
2019	7,980		3,050		4,360		7,310	
2020	7,350	-7.9%	2,830	-7.2%	4,050	-7.1%	6,740	-7.8%
2021	7,380	0.4%	3,150	11.3%	4,300	6.2%	7,280	8.0%
2022	7,540	2.2%	3,230	2.5%	4,220	-1.9%	6,920	-4.9%
2023	7,600	0.8%	3,770	16.7%	4,330	2.6%	6,970	0.7%
avg growth		*-1.0%*		*4.3%*		*-0.1%*		*-0.9%*

Growth in the area has fluctuated. All four Georgia DOT count stations experienced a decrease in volumes between 2019 and 2020 which is considered an anomaly due to the pandemic. There was positive growth at all locations the following year, which is somewhat attributable to a return to pre-pandemic levels and not necessarily new growth. In the last year of the data there were small increases at three of the four locations and a strong increase at the fourth. Overall, the location at the site frontage experienced a decrease (-1.0%), one location experienced moderate growth, and the other two locations also experienced small decreasing trends. Based on the growth trends identified in Table 2, and taking the pandemic into consideration, it was decided that a modest background annual growth rate of 2.0% could be expected on the roads in this study while the proposed development is built-out. This equates to a 10.4% increase in volumes from existing to the anticipated 2029 project buildout year. The 10.4% background growth factor was applied to the counted volumes at each study intersection to develop the 2029 no-build volumes.

Programmed Transportation Infrastructure Improvements

The Georgia DOT projects website and the *Rockdale in Motion Comprehensive Transportation Plan Update*, September 2018, were reviewed for transportation projects in the vicinity of the subject development. The following programmed (scheduled and funded) or planned (anticipated) transportation infrastructure project was identified:

CTP 102 – Widening of SR 138 from SR 155 to Ebenezer Road – This project recommends widening SR 138 from two to four lanes. This would include the study intersection of SR 212 at SR 138. It is listed in the Rockdale CTP as a mid-term project, but is not programmed by the Georgia DOT. Therefore, this widening was not modeled in the no-build or future build analysis in this traffic impact study.

No-Build Intersection Operations

The no-build condition includes the no-build traffic volumes, as described above, applied to the existing lanes and control. The no-build volumes were entered into the Synchro 12 model and the 2029 no-build traffic operations were analyzed at each study intersection. The results of the no-build analysis are shown in Table 3. Computer printouts containing detailed results of the no-build analysis are located in Appendix D. Levels of service and delays are provided for each overall intersection and for each controlled approach or movement. Locations that operate unacceptably (LOS E or LOS F) are presented in bold type.

Table 3 – No-Build Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. SR 212 at Oglesby Bridge Rd (signal)	B	12.6	B	14.2
northbound approach	A	9.3	A	8.5
southbound approach	B	10.9	B	12.6
eastbound approach	B	18.6	B	19.1
westbound approach	B	17.5	B	19.6
2. Union Church Rd at Oglesby Bridge Rd (side street stop)	D	25.4	C	18.5
southbound left turn	A	7.9	A	8.3
westbound approach	***E***	***38.1***	***E***	***46.3***
3. SR 138 at SR 212 (signal)	D	40.7	D	44.1
northbound approach	D	38.0	C	27.3
southbound approach	C	20.3	D	48.1
eastbound approach	D	45.9	D	47.1
westbound approach	D	49.5	D	50.2
4. SR 20 at SR 212 / CVS Access (signal)	B	11.8	B	12.2
northbound approach	A	7.7	A	6.6
southbound approach	B	14.6	B	14.1
eastbound approach	C	25.9	C	26.1
westbound approach	C	24.4	C	23.1

The no-build analysis reveals slight deteriorations in operations due to growth in volumes, but most locations will continue to experience acceptable traffic operations. One location, the westbound approach of Oglesby Church Road at Union Church Road, drops to LOS E in the a.m. and p.m. peaks. It is recommended that a westbound right turn lane be added on Oglesby Church Road at this intersection. This will separate the more challenging left turn movement from the easier right turn movement, substantially reducing their delay. In the a.m. peak, this improvement will produce acceptable operations for all movements. In the p.m. peak the westbound left turn will continue to operate at LOS E but the right turn will improve to LOS B and the overall approach will operate at LOS D. This right turn lane is considered a system improvement which should be built whether or not the development that is the subject of this study is built. A signal warrant analysis should be performed to determine if and when signalization of this intersection will be appropriate. Alternatively, this intersection is a good candidate for conversion to a roundabout. A change in control here would also be a system improvement, which should be considered for implementation, whether or not the proposed development is built. All other study intersections will operate acceptably and, therefore, no other mitigation is identified for the no-build condition.

Project Traffic Characteristics

This section describes the anticipated traffic characteristics of the proposed development, including a site description, how much traffic the project will generate, and where that traffic will travel.

Project Description

The proposed development will consist of 230 detached single family homes and 65,000 square feet of retail. The residential will be served by one full-movement access on SR 212 and two full-movement accesses on Oglesby Bridge Road and the retail will have one access on each road. The site plan is presented in Figure 4.

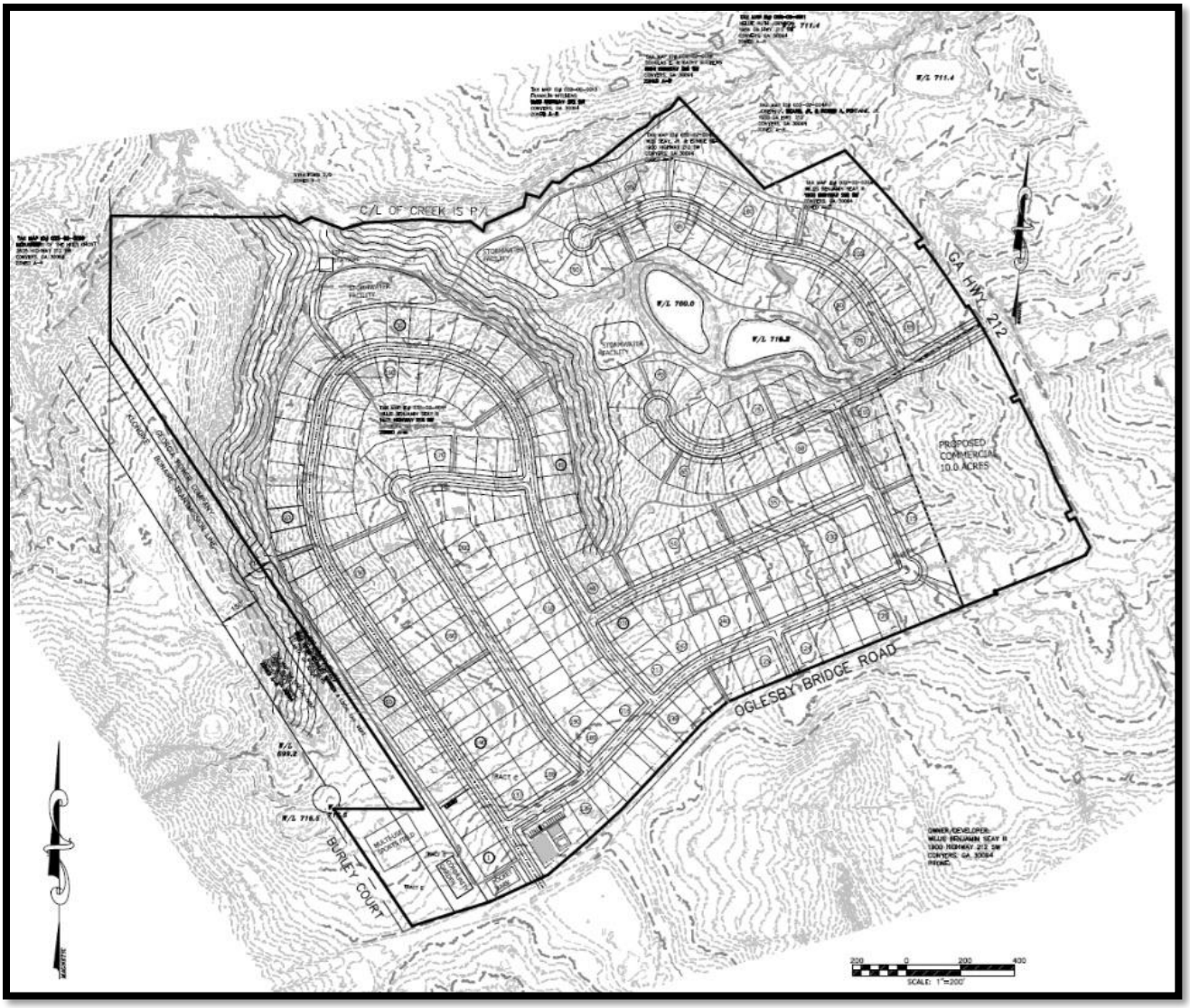


Figure 4 – Site Plan

Trip Generation

Trip generation is an estimate of the number of entering and exiting vehicular trips that will be generated by the proposed development. The volume of traffic that will be generated by the mixed-use development was calculated using the equations and rates in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition (the current edition). ITE Land Use 210 – Single Family Detached Housing was chosen as representative of the single family homes. The retail trips were calculated using ITE Land Use 821 – Shopping Plaza (40-150K).

An adjustment was made to the retail trips to account for pass-by trips. These are trips that are already passing the site in the existing counts, but will turn into the site for retail shopping purposes, then resume their original trip. These are new trips entering and exiting the retail site driveways but are not new to the adjacent intersections. The ITE *Trip Generation Manual* provides a p.m. pass-by percentage for Land Use 821 of 40%. For the a.m. and 24-hour periods, 30% was assumed.

The trip generation for the project is presented in Table 4.

Table 4 – Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Single Family Detached	210	230 homes	40	119	159	137	80	217	2,172
Shopping Center	820	65,000 ft²	142	87	229	296	321	617	6,416
-pass-by trips		30/40/30%	-43	-26	-69	-118	-128	-246	-1,924
Shopping Center New Trips			99	61	160	178	193	371	4,492
			139	180	319	315	273	588	6,664

The proposed mixed-use development will generate 319 new a.m. peak hour trips, 588 new p.m. peak hour trips, and 6,664 new weekday trips. The retail driveway volumes will be higher because they will also include the pass-by trips which already exist passing the site.

Trip Distribution and Assignment

The trips that will be generated by the proposed mixed-use development were distributed and assigned to the roadway network. The trip distribution percentages indicate what proportion of the project's trips will travel to and from various directions. The trip distribution percentages for the residential were developed based on the locations and proximity of likely trip origins and destinations including regional employment centers, retail and offices in the area, nearby schools, other regional trip attractors, and also considered the major routes of travel in the area. The new retail trips were distributed based on the locations of residential populations in the area and the distances of those populations to the site, as well as the major routes of travel in the area. The retail pass-by trips were assigned based on the existing flows of traffic passing the site. The trip distribution percentages and the a.m. and p.m. peak

hour trips expected to be generated by the proposed development are shown in Figure 5. The traffic volume worksheets in Appendix A show the trips separately for the residential and retail uses and the pass-by trips at each study intersection.

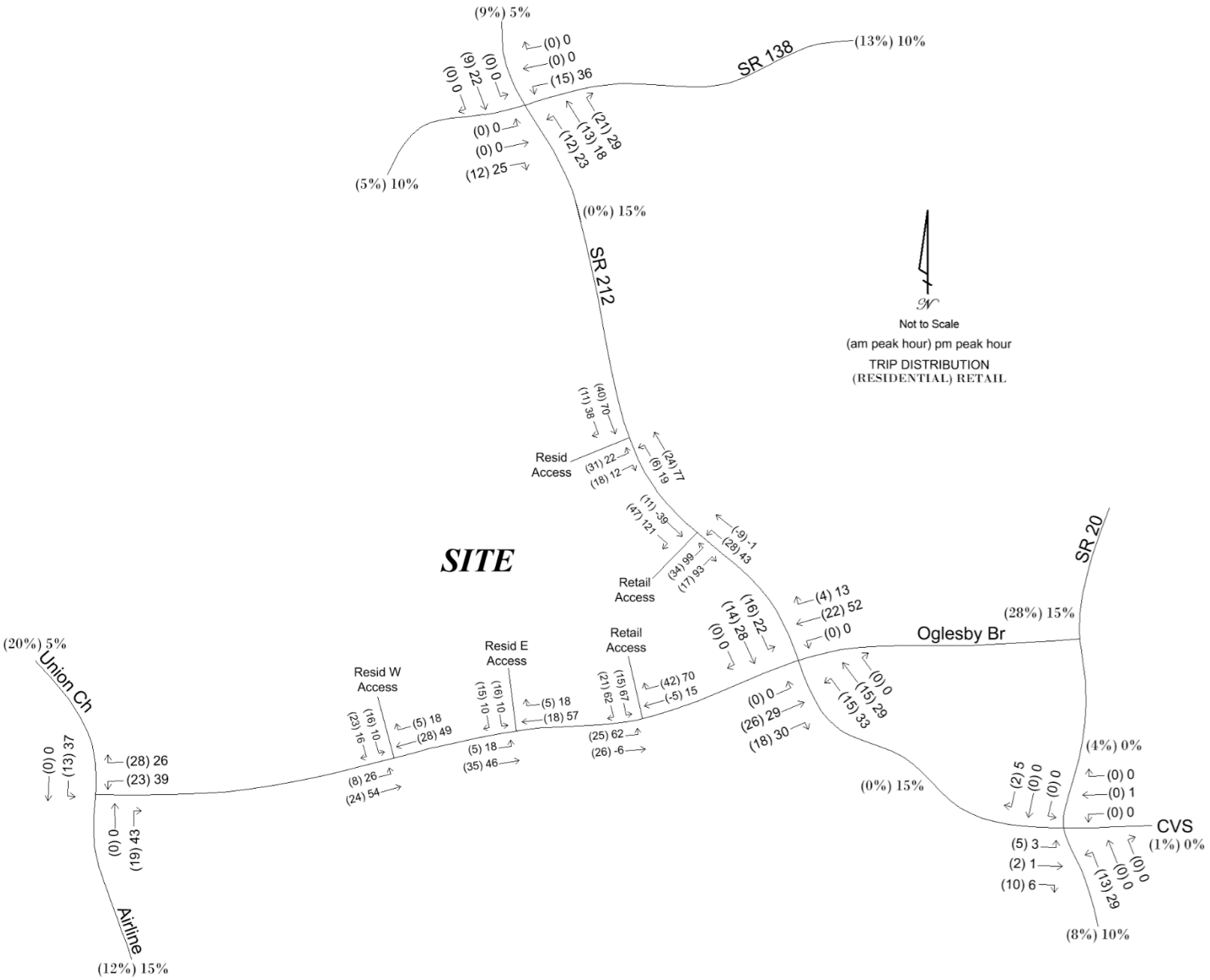


Figure 5 – Weekday A.M. and P.M. Peak Hour Project Trips and Distribution Percentages

Future Traffic Conditions

The future volumes consist of the no-build volumes plus the trips that will be generated by the proposed mixed-use development. The future volumes are shown in Figure 6.

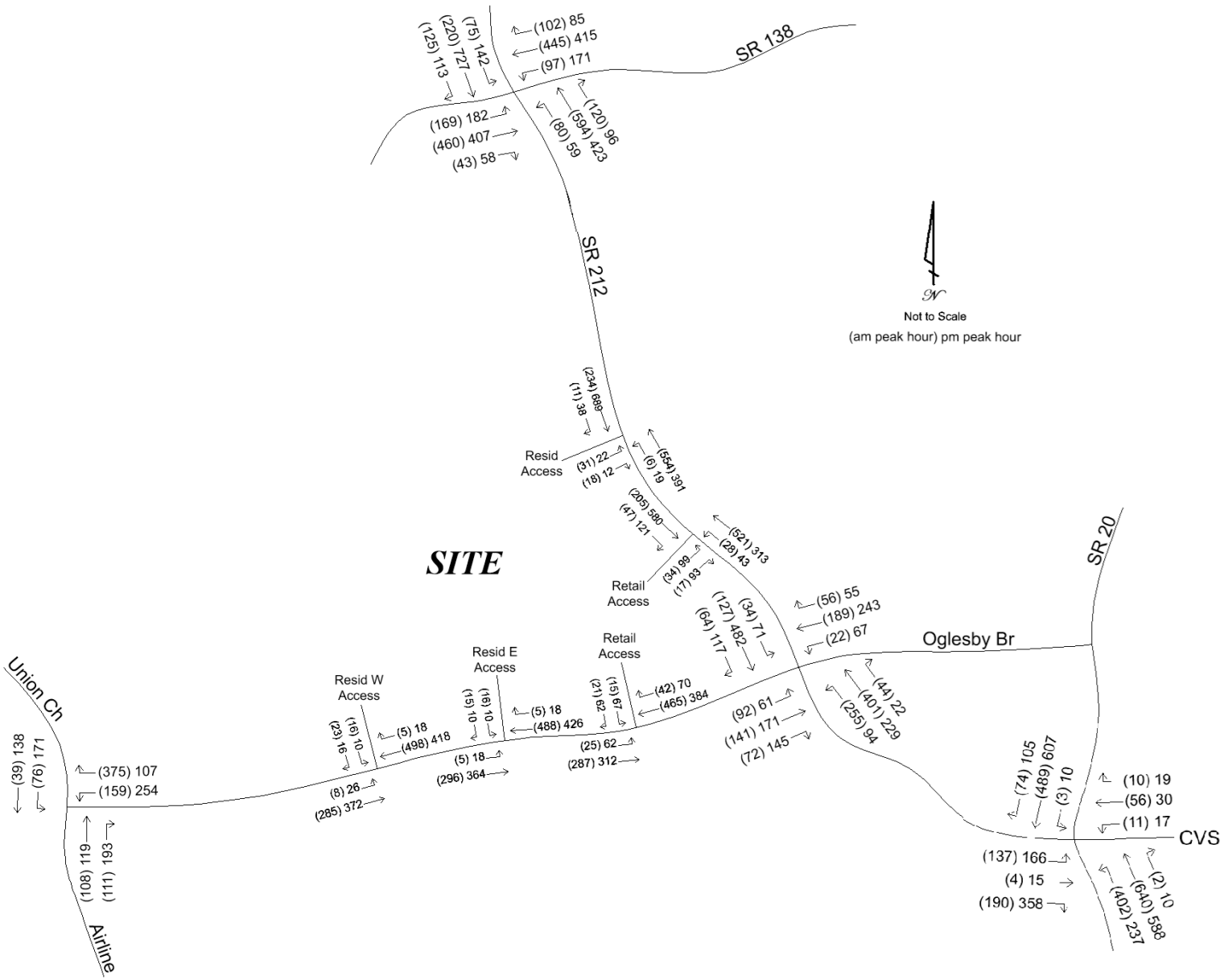


Figure 6 – Future Weekday A.M. and P.M. Peak Hour Volumes

Auxiliary Lane Requirements at Project Accesses

The auxiliary turn lane standards were reviewed at each project access to determine the need for left and/or right turn lanes on the public roadways to serve the project. The project accesses on SR 212 were reviewed according to the Georgia DOT standards while the Rockdale County standards were reviewed for the Oglesby Bridge Road accesses.

SR 212 Accesses

To determine if southbound right turn lanes or northbound left turn lanes should be added on SR 212 at the two project accesses, the Georgia DOT standards for determining the need for these auxiliary lanes, as set forth in their *Regulations for Driveway and Encroachment Control (Driveway Manual)*, revision 5.4 dated 2/10/2023, were evaluated. The right turn lane analysis is based on *Driveway Manual* Table 4-6, Minimum Volumes Requiring Right Turn Lanes, which is shown below as Table 5.

Table 5 – Georgia DOT Right Turn Lane Standards

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6,000	>=6,000	<10,000	>=10,000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

Table 4-6 Minimum Volumes Requiring Right Turn Lanes

The 2023 AADT on SR 212 is 7,600 vpd and the counted volume is 9,834 vehicles, both of which are above the 6,000 vpd threshold for roads with two lanes. On a road with two lanes, a 55 mph speed limit, and a 24-hour volume above 6,000 vpd, the right turn volume (RTV) above which a right turn lane is required is 50 right turn vehicles (RTV) per day. The future right turn volume (RTV) projection on SR 212 at the project residential access is 293 daily southbound right turn vehicles, while the RTV projection at the retail access is 1,183 RTV. These RTVs are both above the minimum threshold. Therefore a southbound right turn lane is required on SR 212 at each project access and this study agrees with those requirements.

The left turn lane analysis is based on *Driveway Manual* Table 4-7a, Minimum Volumes Requiring Left Turn Lanes, which is shown below as Table 6.

Table 6 – Georgia DOT Left Turn Lane Standards

LEFT TURN REQUIREMENTS-FULL CONSTRUCTION				
Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	ADT		ADT	
	<6,000	>=6,000	<10,000	>=10,000
35 MPH or Less	300 LTV a day	200 LTV a day	400 LTV a day	300 LTV a day
40 to 50 MPH	250 LTV a day	175 LTV a day	325 LTV a day	250 LTV a day
>= 55 MPH	200 LTV a day	150 LTV a day	250 LTV a day	200 LTV a day

Table 4-7a Minimum Volumes Requiring Left Turn Lanes

The 2023 AADT on SR 212 is 7,600 vpd and the counted volume is 9,834 vehicles, both of which are above the 6,000 vpd threshold for roads with two lanes. On a road with two lanes, a 55 mph speed limit, and a 24-hour volume above 6,000 vpd, the left turn volume (LTV) above which a left turn lane is required is 150 left turn vehicles (LTV) per day. The future left turn volume (LTV) projection on SR 212 at the project residential access is 155 daily northbound left turn vehicles, while the LTV projection at the retail access is 540 LTV. These LTVs are both above the minimum threshold. Therefore a northbound left turn lane is required on SR 212 at each project access and this study agrees with those requirements. It is noted that the southbound left turn lane on SR 212 at Oglesby Bridge Road extends along much of the project frontage and may conflict with the left turn lanes at the project accesses, especially the retail access. The retail access, and possibly the residential access, may need to be restricted to right-in/right-out (RIRO) movements if a suitable left turn lane design cannot be accommodated.

Oglesby Bridge Road Accesses

To determine if westbound right turn lanes or eastbound left turn lanes should be added on Oglesby Bridge Road at the three project accesses, the Rockdale County's Code of Ordinances, as approved June 10, 2021, were reviewed. The Code states the following pertaining to turn lane requirements at development accesses:

Section 332-3 – Driveway Design Standards, (d) Auxiliary Lanes

(1) Along any arterial or major collector street, a deceleration lane, acceleration lane, larger turning radius, traffic islands or other devices or designs may be required to avoid specific traffic hazards that, otherwise, would be created by the proposed driveway location.

(2) Deceleration lanes shall be required by Rockdale County at each access point on roads classified as arterials or collectors when the posted speed limit is 30 mph or higher and otherwise where considered necessary by the director based on traffic volumes. Deceleration lanes are required on county roads classified as arterial and major collector streets when the posted speed limit is 30 mph or higher. Minimum deceleration lengths are specified in the "Table of deceleration lane requirements." The director may vary length requirements based upon a consideration of available sight distance and traffic volumes.

Based on the Code, the classification of Oglesby Bridge Road as a major collector, and the posted speed limit of 45 mph, a westbound right turn lane is required on Oglesby Bridge Road at all three project accesses and this study agrees with those requirements.

A left turn lane standard is not provided in the County Code. Therefore, to determine if an eastbound left turn lane is required on Oglesby Bridge Road at each project access, the Georgia DOT standards for determining the need for these auxiliary lanes, as set forth in their *Regulations for Driveway and Encroachment Control (Driveway Manual)*, revision 5.4 dated 2/10/2023, were evaluated. The left turn lane analysis is based on *Driveway Manual* Table 4-7a, Minimum Volumes Requiring Left Turn Lanes, which was presented above as Table 6.

The 2023 AADT on Oglesby Bridge Road is 3,770 vpd which is below the 6,000 vpd threshold for roads with two lanes. However, the count that was collected for this study in May 2024 revealed a 24-hour volume of 6,024 vehicles, which is above the 6,000 vpd threshold. Because this count was recorded directly adjacent to the site, while the AADT count was collected west of the site, the higher, closer count was applied in this analysis. On a road with two lanes, a 45 mph speed limit, and a 24-hour volume above 6,000 vpd, the left turn volume (LTV) above which a left turn lane is required is 175 left turn vehicles (LTV) per day. The future left turn volume (LTV) projection on Oglesby Bridge Road at the project west residential access is 209 daily eastbound left turn vehicles, while the LTV projection at the east residential access is 139 LTV. The left turn volume at the west access is above the 175 LTV threshold but the LTV at the east access is below the threshold. Therefore, an eastbound left turn lane is required at the west residential access and this study agrees with that requirement. At the retail access the eastbound LTV is projected at 617 LTV. This LTV is above the minimum threshold and, therefore an eastbound left turn lane is required on Oglesby Bridge Road at the retail access and this study agrees with that requirement. While an eastbound left turn lane is not required at the east residential access, consideration should be given to providing one at this access, given that Oglesby Bridge Road will be widened to accommodate left turn lanes at the adjacent access on either side of this access.

Future Intersection Operations

An operational analysis was performed for the anticipated future project build-out at the study intersections and the project accesses. The analysis at the accesses assumed that the turn lanes recommended above will be constructed, each access will be constructed with one entering lane and one exiting lane, and the side street approaches exiting the project will be controlled by side street stop sign. Table 7 presents the results of the future analysis. Computer printouts containing detailed results of the future analysis are located in Appendix E. Levels of service and delays are provided for each overall intersection and for each controlled approach or movement. Locations that operate unacceptably (LOS E or LOS F) are presented in bold type.

Table 7 – Future Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. SR 212 at Oglesby Bridge Rd (signal)	B	13.5	B	15.9
northbound approach	B	10.5	B	10.1
southbound approach	B	11.7	B	15.5
eastbound approach	B	18.8	B	19.3
westbound approach	B	17.8	C	20.1
2. Union Church Rd at Oglesby Bridge Rd (side street stop)	***E***	***46.7***	***F***	***60.2***
southbound left turn	A	8.0	A	8.6
westbound approach	***F***	***70.8***	***F***	***151.7***
3. SR 138 at SR 212 (signal)	D	43.0	D	46.5
northbound approach	D	37.9	C	26.9
southbound approach	C	20.5	D	54.3
eastbound approach	D	51.5	D	47.5
westbound approach	D	52.3	D	52.6
4. SR 20 at SR 212 / CVS Access (signal)	B	12.4	B	12.6
northbound approach	A	8.2	A	7.0
southbound approach	B	15.5	B	14.9
eastbound approach	C	25.9	C	26.1
westbound approach	C	24.2	C	23.0
5. SR 212 at Project Residential Access (side street stop)	A	1.1	A	1.1
northbound left turn (entering project)	A	7.8	A	9.5
eastbound approach (exiting project)	C	15.6	C	24.2
6. SR 212 at Project Retail Access (side street stop)	A	1.3	A	8.7
northbound left turn (entering project)	A	7.9	A	9.5
eastbound approach (exiting project)	C	15.7	***E***	***48.8***
7. Oglesby Br Rd at Project W Residential Access (side street stop)	A	0.9	A	0.8
southbound approach (exiting residential)	C	16.1	B	14.6
eastbound left turn (entering residential)	A	8.8	A	8.5
8. Oglesby Br Rd at Project E Residential Access (side street stop)	A	0.7	A	0.6
southbound approach (exiting residential)	C	16.4	C	15.1
eastbound left turn (entering residential)	A	8.7	A	8.5
9. Oglesby Br Rd at Project Retail Access (side street stop)	A	0.9	A	3.7
southbound approach (exiting retail)	C	15.8	C	21.2
eastbound left turn (entering retail)	A	8.9	A	8.7

The future analysis with the addition of the proposed mixed-use development's trips reveals a slight deterioration in operations at each study intersection, with all locations continuing to operate comparably to the no-build condition. As in the no-build condition, the westbound approach of Oglesby Bridge Road at Union Church Road will continue to fail, with the approach dropping from LOS E to LOS F. The westbound right turn lane recommended in the no-build analysis will continue to be appropriate. Likewise, a change in control to a signal or a roundabout was advised for consideration in the no-build condition, and this recommendation continues to be appropriate in the future.

The project accesses are expected to operate acceptably with the lanes and control recommended, with just one approach at one access during one time period operating at LOS E. This is the exiting approach of the retail access at SR 212. As advised previously in this report, the left turns to and from this access may conflict with the southbound left turn lane on SR 212 at Oglesby Bridge Road and restriction to right-in/right-out (RIRO) movements will be appropriate if a workable design solution cannot be achieved. All other accesses will operate acceptably and no mitigation, other than the lanes recommended at the project accesses, is identified as a consequence of the proposed development.

Conclusions and Recommendations

This study assesses the traffic impact of a proposed development which will include a residential subdivision and a retail tract in Rockdale County. The site is located along the west side of SR 212 and the north side of Oglesby Bridge Road. The project will consist of 230 detached single family homes and 65,000 square feet of retail. The residential will be served by one full-movement access on SR 212 and two full-movement accesses on Oglesby Bridge Road and the retail tract will have one access on each road. The following are the findings and recommendations of this study:

1. The existing analysis reveals acceptable traffic operations at all study locations. Therefore, no mitigation is identified for the existing condition.

2. Traffic volume growth in this area has been a mix of positive and negative. An annual growth rate of 2.0%, applied for five years, for a total of 10.4% growth, was used in developing future volume projections.

3. The no-build analysis reveals continued acceptable traffic operations at most study locations, comparable to the existing condition, with just modest increases in delays due to anticipated growth in volumes. One location, the westbound approach of Oglesby Bridge Road at Union Church Road, will fail. A westbound right turn lane is recommended to be added on Oglesby Bridge Road. A change in control to a signal or roundabout should be evaluated and implemented if and when appropriate. The mitigation identified here are considered system improvements, which are recommended whether or not the proposed mixed-use development is built.

4. The proposed mixed-use development will generate 319 new a.m. peak hour trips, 588 new p.m. peak hour trips, and 6,664 new weekday trips. The retail driveway volumes will be higher because they will also include the pass-by trips which already exist passing the site.

5. The future analysis with the addition of the proposed development's trips reveals a slight deterioration in operations at each study intersection. The mitigation recommended at the Union Church Road / Oglesby Bridge Road intersection will continue to be appropriate. No mitigation, other than the lanes recommended at the project accesses, is identified as a consequence of the proposed mixed-use development.

6. On SR 212, a southbound right turn lane and a northbound left turn lane are required at both the residential access and the retail access. These turn lanes should be designed and constructed to Georgia DOT standards. The northbound left turn lanes, notably for the retail access, may conflict with the existing southbound left turn lane on SR 212 at Oglesby Bridge Road. Should a design solution not be achievable, the retail access should be restricted to RIRO movements.

7. A westbound right turn lane should be built on Oglesby Bridge Road at the west and east residential accesses and the retail access. These lanes are required by the County and should be designed and built to applicable standards.

8. An eastbound left turn lane is required on Oglesby Bridge Road at the west residential access and at the retail access. A left turn lane at the east residential access merits consideration given the widening of the road to accommodate the left turn lanes at the adjacent accesses.

9. All project accesses should be built with one entering lane and one exiting lane and each exiting approach should be controlled by side street stop sign and accompanying stop bar.

10. An interparcel vehicular connection between the residential and retail portions of the project would provide for mobility between the tracts without the need for traveling out of the project onto the public roadways. Therefore, this connection is recommended.

11. The project civil/site engineer should comply with all applicable design standards including sight distances, turn lane storage and taper lengths, turn radii, driveway widths, islands, angles with the adjacent roadways, and grades.

Appendix A

Traffic Count Data

Seay Farms Development Traffic Impact Study
Rockdale County, Georgia

August 2024

Intersection: 1. SR 212 at Oglesby Bridge Road

Weekday A.M. Peak Hour	Northbound SR 212				Southbound SR 212				Eastbound Oglesby Bridge Road				Westbound Oglesby Bridge Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tuesday, May 7, 2024 7:00-8:00)	217	350	40	607	16	102	58	176	83	104	49	236	20	151	47	218
Annual Background Growth to 2029	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
2029 No-Build Volumes	240	386	44	670	18	113	64	194	92	115	54	261	22	167	52	241
Oglesby Farms Residential Trips	3	2	0	5	12	6	0	18	0	21	11	32	0	7	4	11
Oglesby Farms Retail New Trips	12	13	0	25	4	8	0	12	0	5	7	12	0	15	0	15
Oglesby Farms Retail Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Oglesby Farms Trips	15	15	0	30	16	14	0	30	0	26	18	44	0	22	4	26
2029 Build Volumes	255	401	44	700	34	127	64	224	92	141	72	305	22	189	56	267

Weekday P.M. Peak Hour	Northbound SR 212				Southbound SR 212				Eastbound Oglesby Bridge Road				Westbound Oglesby Bridge Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tuesday, May 7, 2024 5:00-6:00)	55	181	20	256	44	411	106	561	55	129	104	288	61	173	38	272
Annual Background Growth to 2029	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
2029 No-Build Volumes	61	200	22	283	49	454	117	619	61	142	115	318	67	191	42	300
Oglesby Farms Residential Trips	11	6	0	17	8	4	0	12	0	14	6	20	0	25	13	38
Oglesby Farms Retail New Trips	22	23	0	45	14	24	0	38	0	15	24	39	0	27	0	27
Oglesby Farms Retail Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Oglesby Farms Trips	33	29	0	62	22	28	0	50	0	29	30	59	0	52	13	65
2029 Build Volumes	94	229	22	345	71	482	117	669	61	171	145	377	67	243	55	365

Seay Farms Development Traffic Impact Study
Rockdale County, Georgia

August 2024

Intersection: 2. Union Church Road at Oglesby Bridge Road

Weekday A.M. Peak Hour	**Northbound Airline Road**			**Southbound Airline Road**				**Westbound Oglesby Bridge Road**		
	T	**R**	**Tot**	**L**	**T**	**Tot**		**L**	**R**	**Tot**
Counted Volumes (Tuesday, May 7, 2024 7:00-8:00)	98	83	181	57	35	92		123	314	437
Annual Background Growth to 2029	10.4%	10.4%		10.4%	10.4%			10.4%	10.4%	
2029 No-Build Volumes	108	92	200	63	39	102		136	347	482
Oglesby Farms Residential Trips	0	5	5	8	0	8		14	24	38
Oglesby Farms Retail New Trips	0	14	14	5	0	5		9	4	13
Oglesby Farms Retail Pass-by Trips	0	0	0	0	0	0		0	0	0
Total Oglesby Farms Trips	0	19	19	13	0	13		23	28	51
2029 Build Volumes	108	111	219	76	39	115		159	375	533

Weekday P.M. Peak Hour	**Northbound Airline Road**			**Southbound Airline Road**				**Westbound Oglesby Bridge Road**		
	T	**R**	**Tot**	**L**	**T**	**Tot**		**L**	**R**	**Tot**
Counted Volumes (Tuesday, May 7, 2024 5:00-6:00)	108	136	244	121	125	246		195	73	268
Annual Background Growth to 2029	10.4%	10.4%		10.4%	10.4%			10.4%	10.4%	
2029 No-Build Volumes	119	150	269	134	138	272		215	81	296
Oglesby Farms Residential Trips	0	16	16	28	0	28		10	16	26
Oglesby Farms Retail New Trips	0	27	27	9	0	9		29	10	39
Oglesby Farms Retail Pass-by Trips	0	0	0	0	0	0		0	0	0
Total Oglesby Farms Trips	0	43	43	37	0	37		39	26	65
2029 Build Volumes	119	193	312	171	138	309		254	107	361

Seay Farms Development Traffic Impact Study
Rockdale County, Georgia

August 2024

Intersection: 3. SR 212 at SR 138

Weekday A.M. Peak Hour	Northbound SR 212				Southbound SR 212				Eastbound SR 138				Westbound SR 138			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tuesday, May 7, 2024 7:15-8:15)	62	526	90	678	68	191	113	372	153	417	28	598	74	403	92	569
Annual Background Growth to 2029	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
2029 No-Build Volumes	68	581	99	749	75	211	125	411	169	460	31	660	82	445	102	628
Oglesby Farms Residential Trips	6	10	15	31	0	4	0	4	0	0	2	2	5	0	0	5
Oglesby Farms Retail New Trips	6	3	6	15	0	5	0	5	0	0	10	10	10	0	0	10
Oglesby Farms Retail Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Oglesby Farms Trips	12	13	21	46	0	9	0	9	0	0	12	12	15	0	0	15
2029 Build Volumes	80	594	120	795	75	220	125	420	169	460	43	672	97	445	102	643

Weekday P.M. Peak Hour	Northbound SR 212				Southbound SR 212				Eastbound SR 138				Westbound SR 138			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tuesday, May 7, 2024 4:45-5:45)	33	367	61	461	129	639	102	870	165	369	30	564	122	376	77	575
Annual Background Growth to 2029	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
2029 No-Build Volumes	36	405	67	509	142	705	113	960	182	407	33	623	135	415	85	635
Oglesby Farms Residential Trips	4	8	10	22	0	13	0	13	0	0	7	7	18	0	0	18
Oglesby Farms Retail New Trips	19	10	19	48	0	9	0	9	0	0	18	18	18	0	0	18
Oglesby Farms Retail Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Oglesby Farms Trips	23	18	29	70	0	22	0	22	0	0	25	25	36	0	0	36
2029 Build Volumes	59	423	96	579	142	727	113	982	182	407	58	648	171	415	85	671

Seay Farms Development Traffic Impact Study
Rockdale County, Georgia

August 2024

Intersection: 4. SR 212 at SR 20

Weekday A.M. Peak Hour	Northbound SR 20				Southbound SR 20				Eastbound SR 212				Westbound CVS Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tuesday, May 7, 2024 7:30-8:30)	352	580	2	934	3	443	65	511	120	2	163	285	10	51	9	70
Annual Background Growth to 2029	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
2029 No-Build Volumes	389	640	2	1031	3	489	72	564	132	2	180	315	11	56	10	77
Oglesby Farms Residential Trips	3	0	0	3	0	0	2	2	5	2	10	17	0	0	0	0
Oglesby Farms Retail New Trips	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Oglesby Farms Retail Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Oglesby Farms Trips	13	0	0	13	0	0	2	2	5	2	10	17	0	0	0	0
2029 Build Volumes	402	640	2	1044	3	489	74	566	137	4	190	332	11	56	10	77

Weekday P.M. Peak Hour	Northbound SR 212				Southbound SR 212				Eastbound SR 212				Westbound CVS Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tuesday, May 7, 2024 5:00-6:00)	188	533	9	730	9	550	91	650	148	13	319	480	15	26	17	58
Annual Background Growth to 2029	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
2029 No-Build Volumes	208	588	10	806	10	607	100	718	163	14	352	530	17	29	19	64
Oglesby Farms Residential Trips	11	0	0	11	0	0	5	5	3	1	6	10	0	1	0	1
Oglesby Farms Retail New Trips	18	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0
Oglesby Farms Retail Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Oglesby Farms Trips	29	0	0	29	0	0	5	5	3	1	6	10	0	1	0	1
2029 Build Volumes	237	588	10	835	10	607	105	723	166	15	358	540	17	30	19	65

Seay Farms Development Traffic Impact Study
Rockdale County, Georgia

August 2024

Intersection: 5. SR 212 at Residential Access

Weekday A.M. Peak Hour	**Northbound SR 212**			**Southbound SR 212**			**Eastbound Residential Access**			
	L	**T**	**Tot**	**T**	**R**	**Tot**	**L**	**R**	**Tot**	
Counted Volumes (Tuesday, May 7, 2024 7:00-8:00)		480	480	176		176				
Annual Background Growth to 2029		10.4%		10.4%						
2029 No-Build Volumes		530	530	194		194				
Oglesby Farms Residential Trips	6	0	6	0	11	11	31	18	49	
Oglesby Farms Retail New Trips	0	24	24	40	0	40	0	0	0	
Oglesby Farms Retail Pass-by Trips	0	0	0	0	0	0	0	0	0	
Total Oglesby Farms Trips	6	24	30	40	11	51	31	18	49	
2029 Build Volumes	6	554	560	234	11	245	31	18	49	

Weekday P.M. Peak Hour	**Northbound SR 212**			**Southbound SR 212**			**Eastbound Residential Access**			
	L	**T**	**Tot**	**T**	**R**	**Tot**	**L**	**R**	**Tot**	
Counted Volumes (Tuesday, May 7, 2024 5:00-6:00)		284	284	561		561				
Annual Background Growth to 2029		10.4%		10.4%						
2029 No-Build Volumes		314	314	619		619				
Oglesby Farms Residential Trips	19	0	19	0	38	38	22	12	34	
Oglesby Farms Retail New Trips	0	77	77	70	0	70	0	0	0	
Oglesby Farms Retail Pass-by Trips	0	0	0	0	0	0	0	0	0	
Total Oglesby Farms Trips	19	77	96	70	38	108	22	12	34	
2029 Build Volumes	19	391	410	689	38	727	22	12	34	

Seay Farms Development Traffic Impact Study
Rockdale County, Georgia

August 2024

Intersection: 6. SR 212 at Retail Access

Weekday A.M. Peak Hour	**Northbound SR 212**			**Southbound SR 212**			**Eastbound Retail Access**			
	L	**T**	**Tot**	**T**	**R**	**Tot**	**L**	**R**	**Tot**	
Counted Volumes (Tuesday, May 7, 2024 7:00-8:00)		480	480	176		176				
Annual Background Growth to 2029		10.4%		10.4%						
2029 No-Build Volumes		530	530	194		194				
Oglesby Farms Residential Trips	0	6	6	18	0	18	0	0	0	
Oglesby Farms Retail New Trips	13	0	13	0	40	40	24	12	36	
Oglesby Farms Retail Pass-by Trips	15	-15	0	-7	7	0	10	5	15	
Total Oglesby Farms Trips	28	-9	19	11	47	58	34	17	51	
2029 Build Volumes	28	521	549	205	47	252	34	17	51	

Weekday P.M. Peak Hour	**Northbound SR 212**			**Southbound SR 212**			**Eastbound Retail Access**			
	L	**T**	**Tot**	**T**	**R**	**Tot**	**L**	**R**	**Tot**	
Counted Volumes (Tuesday, May 7, 2024 5:00-6:00)		284	284	561		561				
Annual Background Growth to 2029		10.4%		10.4%						
2029 No-Build Volumes		314	314	619		619				
Oglesby Farms Residential Trips	0	19	19	12	0	12	0	0	0	
Oglesby Farms Retail New Trips	23	0	23	0	70	70	77	38	115	
Oglesby Farms Retail Pass-by Trips	20	-20	0	-51	51	0	22	55	77	
Total Oglesby Farms Trips	43	-1	42	-39	121	82	99	93	192	
2029 Build Volumes	43	313	356	580	121	701	99	93	192	

Seay Farms Development Traffic Impact Study
Rockdale County, Georgia

August 2024

Intersection: 7. Oglesby Bridge Road at Residential West Access

Weekday A.M. Peak Hour		**Southbound Residential West Access**			**Eastbound Oglesby Bridge Road**			**Westbound Oglesby Bridge Road**		
		L	**R**	**Tot**	**L**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 7, 2024 7:00-8:00)						236	236	426		426
Annual Background Growth to 2029						10.4%		10.4%		
2029 No-Build Volumes						261	261	470		470
Oglesby Farms Residential Trips		16	23	39	8	5	13	15	5	20
Oglesby Farms Retail New Trips		0	0	0	0	19	19	13	0	13
Oglesby Farms Retail Pass-by Trips		0	0	0	0	0	0	0	0	0
Total Oglesby Farms Trips		16	23	39	8	24	32	28	5	33
2029 Build Volumes		16	23	39	8	285	293	498	5	503

Weekday P.M. Peak Hour		**Southbound Residential West Access**			**Eastbound Oglesby Bridge Road**			**Westbound Oglesby Bridge Road**		
		L	**R**	**Tot**	**L**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 7, 2024 5:00-6:00)						288	288	334		334
Annual Background Growth to 2029						10.4%		10.4%		
2029 No-Build Volumes						318	318	369		369
Oglesby Farms Residential Trips		10	16	26	26	18	44	10	18	28
Oglesby Farms Retail New Trips		0	0	0	0	36	36	39	0	39
Oglesby Farms Retail Pass-by Trips		0	0	0	0	0	0	0	0	0
Total Oglesby Farms Trips		10	16	26	26	54	80	49	18	67
2029 Build Volumes		10	16	26	26	372	398	418	18	436

Seay Farms Development Traffic Impact Study
Rockdale County, Georgia

August 2024

Intersection: 8. Oglesby Bridge Road at Residential East Access

Weekday A.M. Peak Hour		**Southbound Residential East Access**			**Eastbound Oglesby Bridge Road**			**Westbound Oglesby Bridge Road**		
		L	**R**	**Tot**	**L**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 7, 2024 7:00-8:00)						236	236	426		426
Annual Background Growth to 2029						10.4%		10.4%		
2029 No-Build Volumes						261	261	470		470
Oglesby Farms Residential Trips		16	15	31	5	16	21	5	5	10
Oglesby Farms Retail New Trips		0	0	0	0	19	19	13	0	13
Oglesby Farms Retail Pass-by Trips		0	0	0	0	0	0	0	0	0
Total Oglesby Farms Trips		16	15	31	5	35	40	18	5	23
2029 Build Volumes		16	15	31	5	296	301	488	5	493

Weekday P.M. Peak Hour		**Southbound Residential East Access**			**Eastbound Oglesby Bridge Road**			**Westbound Oglesby Bridge Road**		
		L	**R**	**Tot**	**L**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 7, 2024 5:00-6:00)						288	288	334		334
Annual Background Growth to 2029						10.4%		10.4%		
2029 No-Build Volumes						318	318	369		369
Oglesby Farms Residential Trips		10	10	20	18	10	28	18	18	36
Oglesby Farms Retail New Trips		0	0	0	0	36	36	39	0	39
Oglesby Farms Retail Pass-by Trips		0	0	0	0	0	0	0	0	0
Total Oglesby Farms Trips		10	10	20	18	46	64	57	18	75
2029 Build Volumes		10	10	20	18	364	382	426	18	444

Seay Farms Development Traffic Impact Study
Rockdale County, Georgia

August 2024

Intersection: 9. Oglesby Bridge Road at Retail Access

Weekday A.M. Peak Hour		**Southbound Retail Access**			**Eastbound Oglesby Bridge Road**			**Westbound Oglesby Bridge Road**		
		L	**R**	**Tot**	**L**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 7, 2024 7:00-8:00)						236	236	426		426
Annual Background Growth to 2029						10.4%		10.4%		
2029 No-Build Volumes						261	261	470		470
Oglesby Farms Residential Trips		0	0	0	0	32	32	10	0	10
Oglesby Farms Retail New Trips		12	13	25	19	0	19	0	27	27
Oglesby Farms Retail Pass-by Trips		3	8	11	6	-6	0	-15	15	0
Total Oglesby Farms Trips		15	21	36	25	26	51	-5	42	37
2029 Build Volumes		15	21	36	25	287	312	465	42	507

Weekday P.M. Peak Hour		**Southbound Retail Access**			**Eastbound Oglesby Bridge Road**			**Westbound Oglesby Bridge Road**		
		L	**R**	**Tot**	**L**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 7, 2024 5:00-6:00)						288	288	334		334
Annual Background Growth to 2029						10.4%		10.4%		
2029 No-Build Volumes						318	318	369		369
Oglesby Farms Residential Trips		0	0	0	0	20	20	36	0	36
Oglesby Farms Retail New Trips		39	39	78	36	0	36	0	49	49
Oglesby Farms Retail Pass-by Trips		28	23	51	26	-26	0	-21	21	0
Total Oglesby Farms Trips		67	62	129	62	-6	56	15	70	85
2029 Build Volumes		67	62	129	62	312	374	384	70	454

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
SR 212 @ Oglesby Bridge Rd
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880001
Site Code : 48880001
Start Date : 5/7/2024
Page No : 1

Groups Printed- Cars, Buses and Trucks

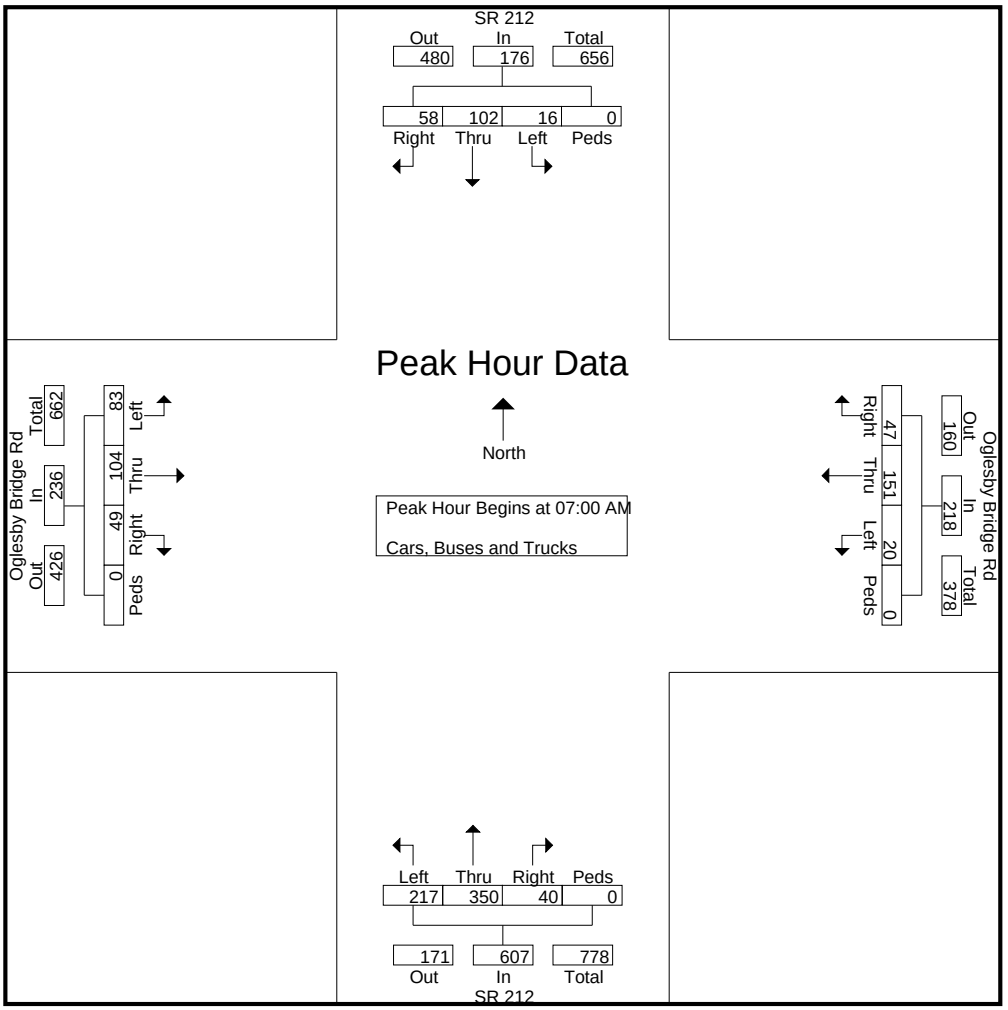
	SR 212 Northbound					SR 212 Southbound					Oglesby Bridge Rd Eastbound					Oglesby Bridge Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	67	76	8	0	151	7	16	12	0	35	18	28	12	0	58	2	46	10	0	58	302
07:15 AM	55	68	16	0	139	4	20	14	0	38	16	16	17	0	49	10	46	11	0	67	293
07:30 AM	51	99	6	0	156	3	33	15	0	51	29	32	8	0	69	2	32	17	0	51	327
07:45 AM	44	107	10	0	161	2	33	17	0	52	20	28	12	0	60	6	27	9	0	42	315
Total	217	350	40	0	607	16	102	58	0	176	83	104	49	0	236	20	151	47	0	218	1237
08:00 AM	30	82	6	0	118	5	26	20	0	51	15	25	11	0	51	2	34	9	0	45	265
08:15 AM	25	79	9	0	113	3	26	13	0	42	24	22	16	0	62	7	31	15	0	53	270
08:30 AM	21	77	7	0	105	3	26	10	0	39	12	19	14	0	45	4	13	13	0	30	219
08:45 AM	10	65	8	0	83	5	34	15	0	54	17	16	11	0	44	3	9	10	0	22	203
Total	86	303	30	0	419	16	112	58	0	186	68	82	52	0	202	16	87	47	0	150	957
*** BREAK ***																					
04:00 PM	11	32	7	0	50	18	102	17	0	137	13	36	17	0	66	5	38	5	0	48	301
04:15 PM	10	50	3	0	63	11	73	11	0	95	15	28	26	0	69	16	32	6	0	54	281
04:30 PM	17	48	2	0	67	16	99	16	0	131	12	26	32	0	70	12	29	7	0	48	316
04:45 PM	8	48	8	0	64	15	96	17	0	128	10	30	25	0	65	14	40	9	0	63	320
Total	46	178	20	0	244	60	370	61	0	491	50	120	100	0	270	47	139	27	0	213	1218
05:00 PM	15	51	3	0	69	16	102	20	0	138	11	26	23	0	60	12	27	8	0	47	314
05:15 PM	12	41	6	0	59	12	115	28	0	155	12	34	29	0	75	19	50	8	0	77	366
05:30 PM	18	46	6	0	70	11	104	29	0	144	20	30	26	0	76	15	55	10	0	80	370
05:45 PM	10	43	5	0	58	5	90	29	0	124	12	39	26	0	77	15	41	12	0	68	327
Total	55	181	20	0	256	44	411	106	0	561	55	129	104	0	288	61	173	38	0	272	1377
Grand Total	404	1012	110	0	1526	136	995	283	0	1414	256	435	305	0	996	144	550	159	0	853	4789
Apprch %	26.5	66.3	7.2	0		9.6	70.4	20	0		25.7	43.7	30.6	0		16.9	64.5	18.6	0		
Total %	8.4	21.1	2.3	0	31.9	2.8	20.8	5.9	0	29.5	5.3	9.1	6.4	0	20.8	3	11.5	3.3	0	17.8	

Reliable Traffic Data Services
Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
SR 212 @ Oglesby Bridge Rd
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880001
Site Code : 48880001
Start Date : 5/7/2024
Page No : 2

	SR 212 Northbound					SR 212 Southbound					Oglesby Bridge Rd Eastbound					Oglesby Bridge Rd 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 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	**67**	76	8	0	151	**7**	16	12	0	35	18	28	12	0	58	2	**46**	10	0	58	302
07:15 AM	55	68	**16**	0	139	4	20	14	0	38	16	16	**17**	0	49	**10**	46	11	0	**67**	293
07:30 AM	51	99	6	0	156	3	**33**	15	0	51	**29**	**32**	8	0	**69**	2	32	**17**	0	51	**327**
07:45 AM	44	**107**	10	0	**161**	2	33	**17**	0	**52**	20	28	12	0	60	6	27	9	0	42	315
Total Volume	217	350	40	0	607	16	102	58	0	176	83	104	49	0	236	20	151	47	0	218	1237
% App. Total	35.7	57.7									35.2	44.1	20.8				69.3	21.6			
PHF	.810	.818	.625	.000	.943	.571	.773	.853	.000	.846	.716	.813	.721	.000	.855	.500	.821	.691	.000	.813	.946



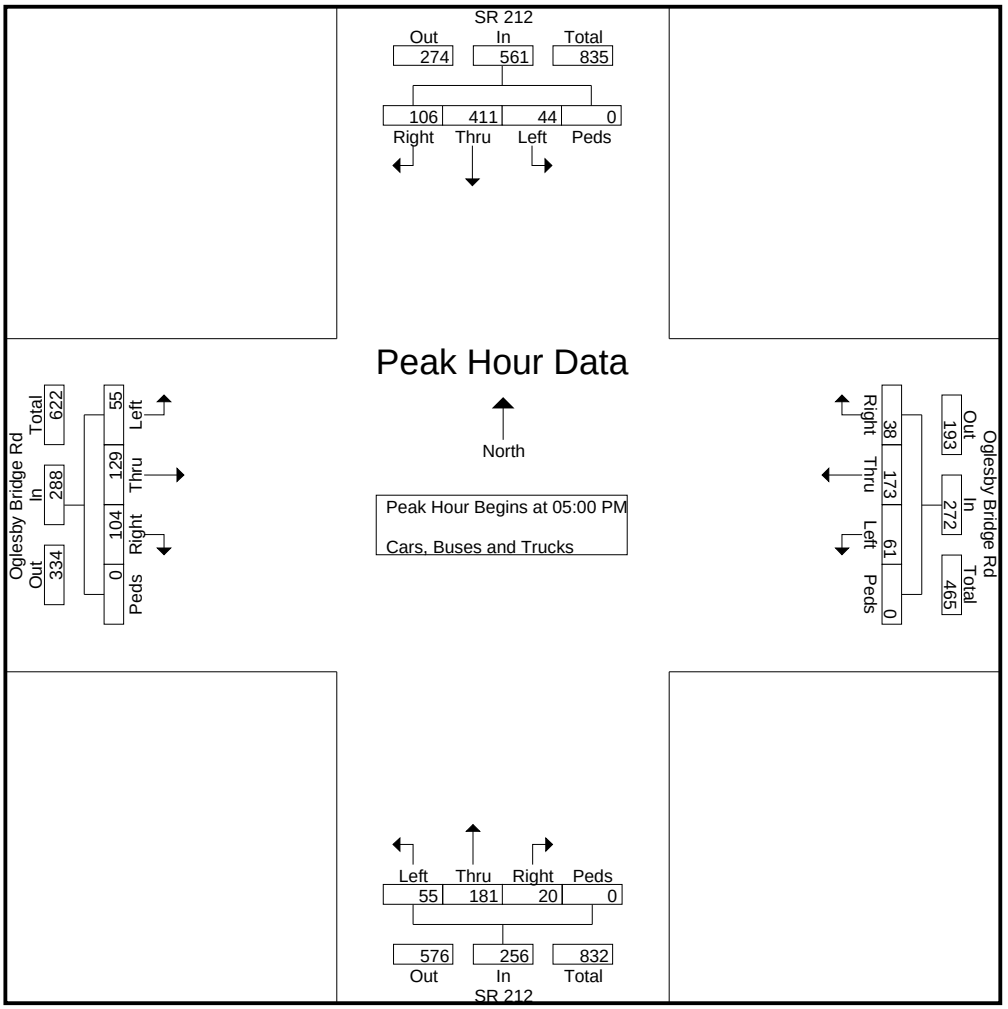
Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
SR 212 @ Oglesby Bridge Rd
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880001
Site Code : 48880001
Start Date : 5/7/2024
Page No : 3

	SR 212 Northbound					SR 212 Southbound					Oglesby Bridge Rd Eastbound					Oglesby Bridge Rd 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 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	15	**51**	3	0	69	**16**	102	20	0	138	11	26	23	0	60	12	27	8	0	47	314
05:15 PM	12	41	**6**	0	59	12	**115**	28	0	**155**	12	34	**29**	0	75	**19**	50	8	0	77	366
05:30 PM	**18**	46	6	0	**70**	11	104	**29**	0	144	**20**	30	26	0	76	15	**55**	10	0	**80**	**370**
05:45 PM	10	43	5	0	58	5	90	29	0	124	12	**39**	26	0	**77**	15	41	**12**	0	68	327
Total Volume	55	181	20	0	256	44	411	106	0	561	55	129	104	0	288	61	173	38	0	272	1377
% App. Total	21.5	70.7					73.3	18.9			19.1	44.8	36.1			22.4	63.6				
PHF	.764	.887	.833	.000	.914	.688	.893	.914	.000	.905	.688	.827	.897	.000	.935	.803	.786	.792	.000	.850	.930



Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
Oglesby Bridge Rd @ Union Church Rd
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880002
Site Code : 48880002
Start Date : 5/7/2024
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Oglesby Bridge Rd Northbound					Union Church Rd Southbound					Eastbound					Oglesby Bridge Rd 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	23	19	0	42	13	6	0	0	19	0	0	0	0	0	18	0	85	0	103	164
07:15 AM	0	30	14	0	44	14	10	0	0	24	0	0	0	0	0	37	0	116	0	153	221
07:30 AM	0	26	29	0	55	17	10	0	0	27	0	0	0	0	0	32	0	49	0	81	163
07:45 AM	0	19	21	0	40	13	9	0	0	22	0	0	0	0	0	36	0	64	0	100	162
Total	0	98	83	0	181	57	35	0	0	92	0	0	0	0	0	123	0	314	0	437	710
08:00 AM	0	25	27	0	52	11	6	0	0	17	0	0	0	0	0	22	0	29	0	51	120
08:15 AM	0	29	17	0	46	23	8	0	0	31	0	0	0	0	0	45	0	53	0	98	175
08:30 AM	0	27	14	0	41	22	11	0	0	33	0	0	0	0	0	19	0	40	0	59	133
08:45 AM	0	12	13	0	25	10	8	0	0	18	0	0	0	0	0	17	0	18	0	35	78
Total	0	93	71	0	164	66	33	0	0	99	0	0	0	0	0	103	0	140	0	243	506
*** BREAK ***																					
04:00 PM	0	18	28	0	46	35	24	0	0	59	0	0	0	0	0	21	0	15	0	36	141
04:15 PM	0	24	32	0	56	26	35	0	0	61	0	0	0	0	0	26	0	14	0	40	157
04:30 PM	0	32	31	0	63	43	32	0	0	75	0	0	0	0	0	28	0	14	0	42	180
04:45 PM	0	29	24	0	53	32	33	0	0	65	0	0	0	0	0	30	0	14	0	44	162
Total	0	103	115	0	218	136	124	0	0	260	0	0	0	0	0	105	0	57	0	162	640
05:00 PM	0	22	28	0	50	33	29	0	0	62	0	0	0	0	0	26	0	15	0	41	153
05:15 PM	0	25	29	0	54	33	33	0	0	66	0	0	0	0	0	55	0	23	0	78	198
05:30 PM	0	29	39	0	68	23	28	0	0	51	0	0	0	0	0	66	0	17	0	83	202
05:45 PM	0	32	40	0	72	32	35	0	0	67	0	0	0	0	0	48	0	18	0	66	205
Total	0	108	136	0	244	121	125	0	0	246	0	0	0	0	0	195	0	73	0	268	758
Grand Total	0	402	405	0	807	380	317	0	0	697	0	0	0	0	0	526	0	584	0	1110	2614
Apprch %	0	49.8	50.2	0		54.5	45.5	0	0		0	0	0	0		47.4	0	52.6	0		
Total %	0	15.4	15.5	0	30.9	14.5	12.1	0	0	26.7	0	0	0	0	0	20.1	0	22.3	0	42.5	

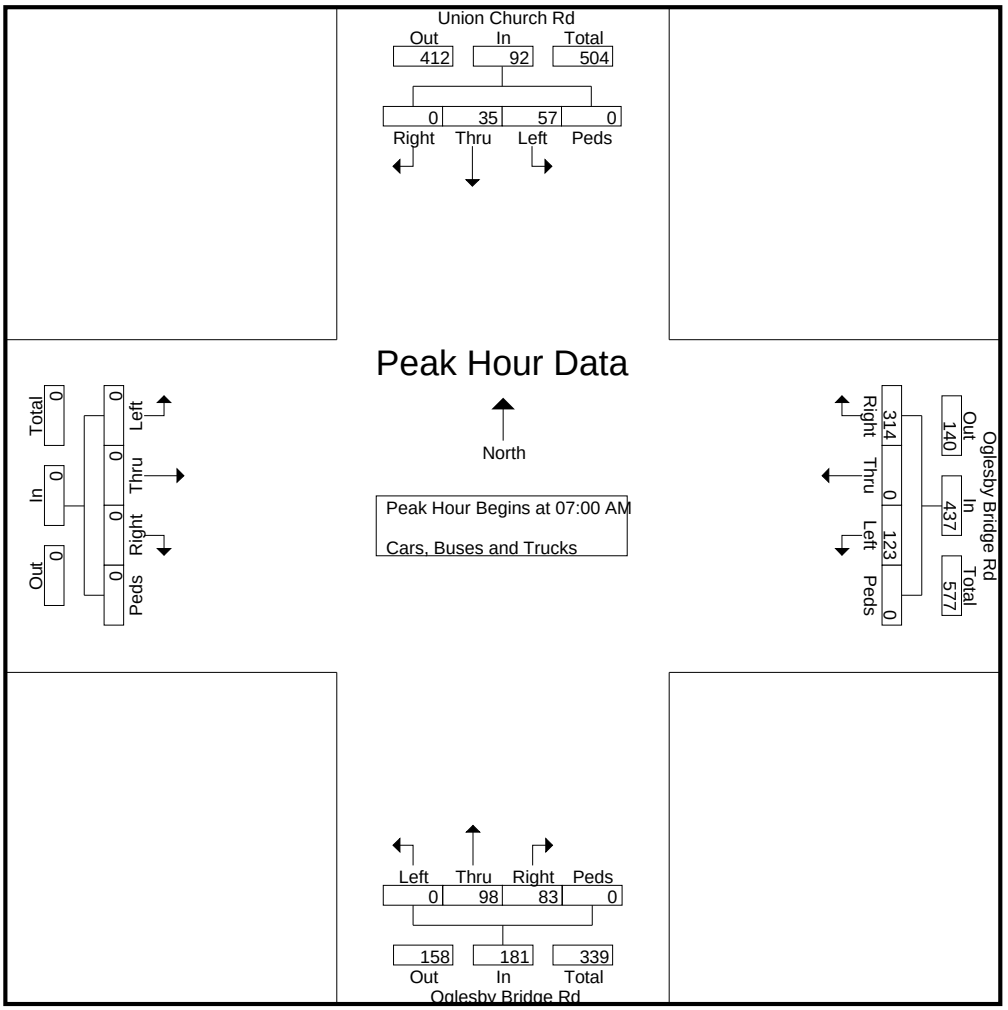
Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
Oglesby Bridge Rd @ Union Church Rd
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880002
Site Code : 48880002
Start Date : 5/7/2024
Page No : 2

	Oglesby Bridge Rd Northbound					Union Church Rd Southbound					Eastbound					Oglesby Bridge Rd 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 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	23	19	0	42	13	6	0	0	19	0	0	0	0	0	18	0	85	0	103	164
07:15 AM	0	**30**	14	0	44	14	**10**	0	0	24	0	0	0	0	0	**37**	0	**116**	0	**153**	**221**
07:30 AM	0	26	**29**	0	**55**	**17**	10	0	0	**27**	0	0	0	0	0	32	0	49	0	81	163
07:45 AM	0	19	21	0	40	13	9	0	0	22	0	0	0	0	0	36	0	64	0	100	162
Total Volume	0	98	83	0	181	57	35	0	0	92	0	0	0	0	0	123	0	314	0	437	710
% App. Total		54.1	45.9													28.1		71.9			
PHF	.000	.817	.716	.000	.823	.838	.875	.000	.000	.852	.000	.000	.000	.000	.000	.831	.000	.677	.000	.714	.803



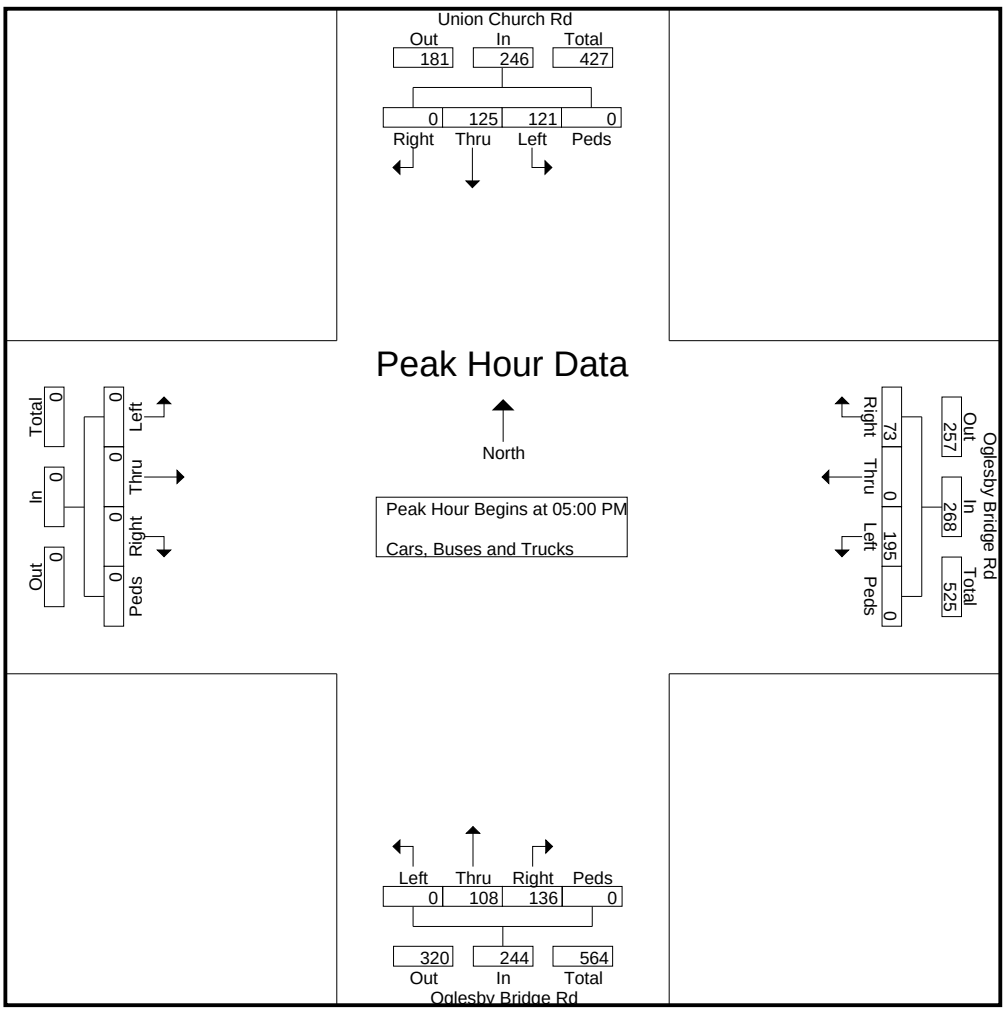
Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
Oglesby Bridge Rd @ Union Church Rd
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880002
Site Code : 48880002
Start Date : 5/7/2024
Page No : 3

	Oglesby Bridge Rd Northbound					Union Church Rd Southbound					Eastbound					Oglesby Bridge Rd 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 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	22	28	0	50	**33**	29	0	0	62	0	0	0	0	0	26	0	15	0	41	153
05:15 PM	0	25	29	0	54	33	33	0	0	66	0	0	0	0	0	55	0	**23**	0	78	198
05:30 PM	0	29	39	0	68	23	28	0	0	51	0	0	0	0	0	**66**	0	17	0	**83**	202
05:45 PM	0	**32**	**40**	0	**72**	32	**35**	0	0	**67**	0	0	0	0	0	48	0	18	0	66	**205**
Total Volume	0	108	136	0	244	121	125	0	0	246	0	0	0	0	0	195	0	73	0	268	758
% App. Total		44.3	55.7			49.2	50.8									72.8		27.2			
PHF	.000	.844	.850	.000	.847	.917	.893	.000	.000	.918	.000	.000	.000	.000	.000	.739	.000	.793	.000	.807	.924



Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
SR 138 @ SR 212
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880003
Site Code : 48880003
Start Date : 5/7/2024
Page No : 1

Groups Printed- Cars, Buses and Trucks

	SR 212 Northbound					SR 212 Southbound					SR 138 Eastbound					SR 138 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	18	109	8	0	135	12	35	31	0	78	32	78	6	0	116	7	93	25	0	125	454
07:15 AM	29	122	15	0	166	15	32	27	0	74	38	102	5	0	145	11	114	27	0	152	537
07:30 AM	15	137	32	0	184	13	60	23	0	96	29	116	16	0	161	22	97	19	0	138	579
07:45 AM	6	147	25	0	178	18	58	30	0	106	45	117	4	0	166	19	87	23	0	129	579
Total	68	515	80	0	663	58	185	111	0	354	144	413	31	0	588	59	391	94	0	544	2149
08:00 AM	12	120	18	0	150	22	41	33	0	96	41	82	3	0	126	22	105	23	0	150	522
08:15 AM	14	112	18	0	144	4	33	39	0	76	41	85	4	0	130	10	102	18	0	130	480
08:30 AM	11	121	14	0	146	17	42	16	0	75	51	108	3	0	162	16	75	21	0	112	495
08:45 AM	6	108	10	0	124	12	48	13	0	73	71	100	6	0	177	10	61	37	0	108	482
Total	43	461	60	0	564	55	164	101	0	320	204	375	16	0	595	58	343	99	0	500	1979
*** BREAK ***																					
04:00 PM	13	82	20	0	115	21	122	11	0	154	46	112	16	0	174	16	91	14	0	121	564
04:15 PM	5	88	14	0	107	31	155	18	0	204	46	86	10	0	142	34	84	27	0	145	598
04:30 PM	8	81	13	0	102	20	126	16	0	162	52	110	3	0	165	35	88	22	0	145	574
04:45 PM	10	90	18	0	118	33	157	17	0	207	44	83	8	0	135	35	84	14	0	133	593
Total	36	341	65	0	442	105	560	62	0	727	188	391	37	0	616	120	347	77	0	544	2329
05:00 PM	7	91	12	0	110	31	146	31	0	208	35	102	12	0	149	21	99	28	0	148	615
05:15 PM	12	113	16	0	141	33	165	27	0	225	41	82	6	0	129	30	91	16	0	137	632
05:30 PM	4	73	15	0	92	32	171	27	0	230	45	102	4	0	151	36	102	19	0	157	630
05:45 PM	13	73	14	0	100	24	154	30	0	208	42	85	7	0	134	25	74	21	0	120	562
Total	36	350	57	0	443	120	636	115	0	871	163	371	29	0	563	112	366	84	0	562	2439
Grand Total	183	1667	262	0	2112	338	1545	389	0	2272	699	1550	113	0	2362	349	1447	354	0	2150	8896
Apprch %	8.7	78.9	12.4	0		14.9	68	17.1	0		29.6	65.6	4.8	0		16.2	67.3	16.5	0		
Total %	2.1	18.7	2.9	0	23.7	3.8	17.4	4.4	0	25.5	7.9	17.4	1.3	0	26.6	3.9	16.3	4	0	24.2	

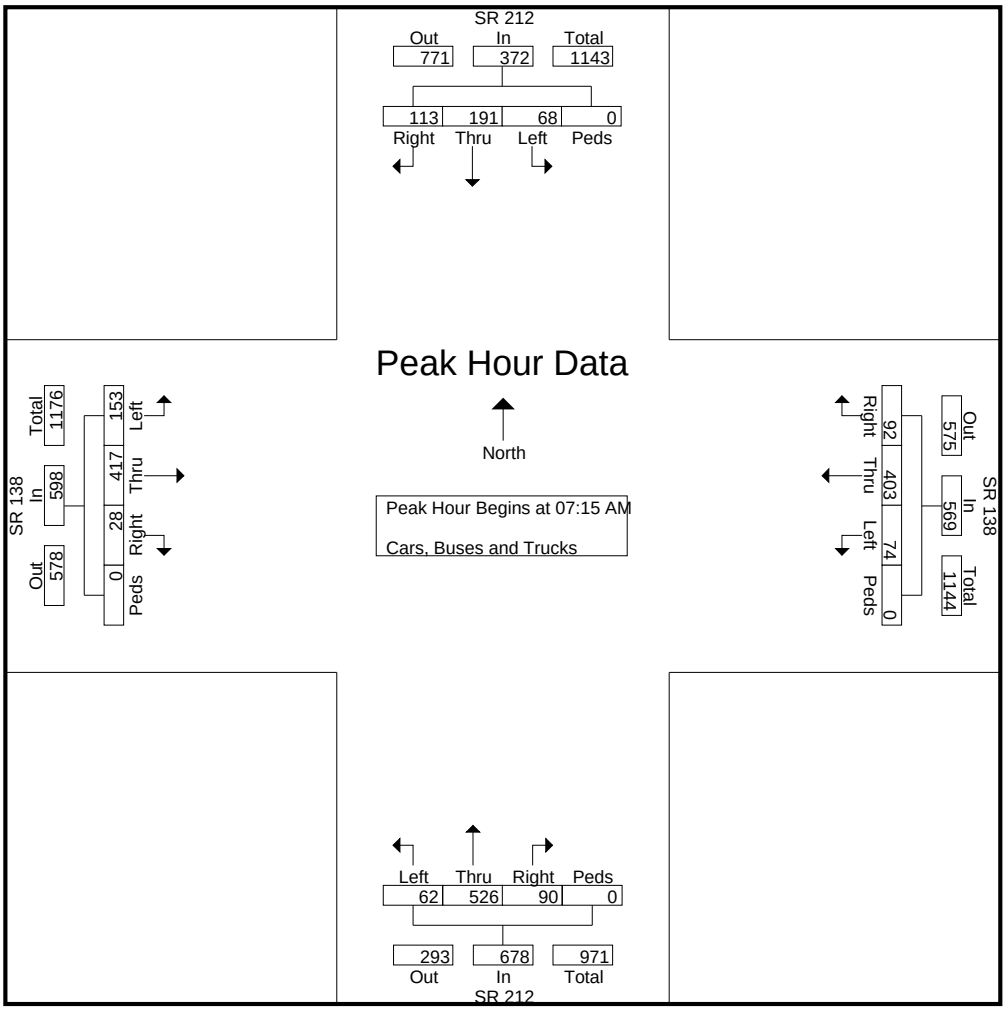
Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
SR 138 @ SR 212
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880003
Site Code : 48880003
Start Date : 5/7/2024
Page No : 2

	SR 212 Northbound					SR 212 Southbound					SR 138 Eastbound					SR 138 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 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	**29**	122	15	0	166	15	32	27	0	74	38	102	5	0	145	11	**114**	**27**	0	**152**	537
07:30 AM	15	137	**32**	0	**184**	13	**60**	23	0	96	29	116	**16**	0	161	**22**	97	19	0	138	**579**
07:45 AM	6	**147**	25	0	178	18	58	30	0	**106**	**45**	**117**	4	0	**166**	19	87	23	0	129	579
08:00 AM	12	120	18	0	150	**22**	41	**33**	0	96	41	82	3	0	126	22	105	23	0	150	522
Total Volume	62	526	90	0	678	68	191	113	0	372	153	417	28	0	598	74	403	92	0	569	2217
% App. Total		77.6	13.3			18.3	51.3	30.4			25.6	69.7					70.8	16.2			
PHF	.534	.895	.703	.000	.921	.773	.796	.856	.000	.877	.850	.891	.438	.000	.901	.841	.884	.852	.000	.936	.957



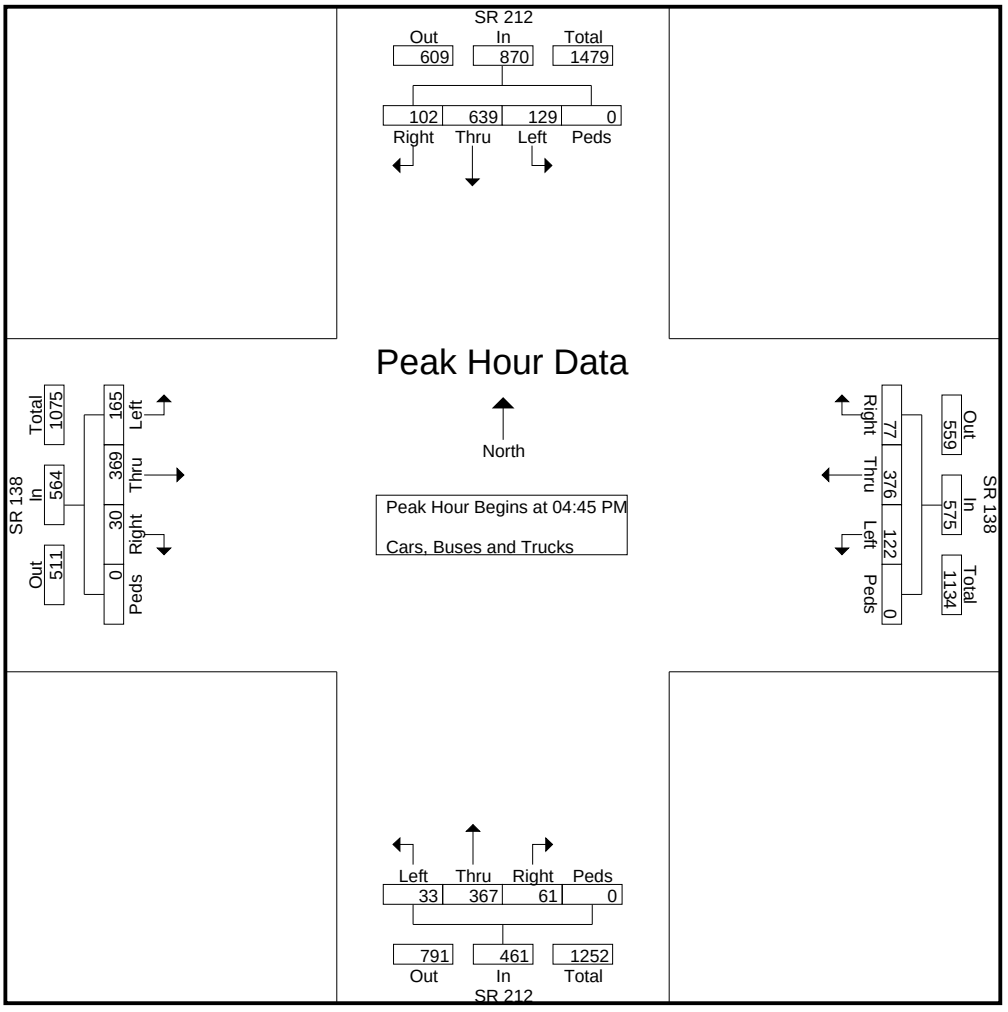
Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
SR 138 @ SR 212
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880003
Site Code : 48880003
Start Date : 5/7/2024
Page No : 3

	SR 212 Northbound					SR 212 Southbound					SR 138 Eastbound					SR 138 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 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	10	90	**18**	0	118	**33**	157	17	0	207	44	83	8	0	135	35	84	14	0	133	593
05:00 PM	7	91	12	0	110	31	146	**31**	0	208	35	**102**	**12**	0	149	21	99	**28**	0	148	615
05:15 PM	**12**	**113**	16	0	**141**	33	165	27	0	225	41	82	6	0	129	30	91	16	0	137	**632**
05:30 PM	4	73	15	0	92	32	**171**	27	0	**230**	**45**	102	4	0	**151**	**36**	**102**	19	0	**157**	630
Total Volume	33	367	61	0	461	129	639	102	0	870	165	369	30	0	564	122	376	77	0	575	2470
% App. Total		79.6	13.2			14.8	73.4	11.7			29.3	65.4				21.2	65.4	13.4			
PHF	.688	.812	.847	.000	.817	.977	.934	.823	.000	.946	.917	.904	.625	.000	.934	.847	.922	.688	.000	.916	.977



Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
SR 212 @ SR 20
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880004
Site Code : 48880004
Start Date : 5/7/2024
Page No : 1

Groups Printed- Cars, Buses and Trucks

	SR 20 Northbound					SR 20 Southbound					SR 212 Eastbound					CVS Drwy 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	92	123	1	0	216	0	81	12	0	93	20	0	24	0	44	2	10	1	0	13	366
07:15 AM	87	149	0	0	236	0	88	10	0	98	30	1	33	0	64	0	8	0	0	8	406
07:30 AM	106	164	0	0	270	0	112	12	0	124	36	2	41	0	79	2	16	2	0	20	493
07:45 AM	101	159	0	0	260	0	109	18	0	127	30	0	47	0	77	2	17	3	0	22	486
Total	386	595	1	0	982	0	390	52	0	442	116	3	145	0	264	6	51	6	0	63	1751
08:00 AM	68	124	2	0	194	2	97	18	0	117	25	0	33	0	58	2	10	1	0	13	382
08:15 AM	77	133	0	0	210	1	125	17	0	143	29	0	42	0	71	4	8	3	0	15	439
08:30 AM	52	125	4	0	181	4	101	14	0	119	31	0	24	0	55	3	7	4	0	14	369
08:45 AM	60	135	2	0	197	1	109	9	0	119	16	1	35	0	52	0	9	5	0	14	382
Total	257	517	8	0	782	8	432	58	0	498	101	1	134	0	236	9	34	13	0	56	1572
*** BREAK ***																					
04:00 PM	37	129	0	0	166	3	140	18	0	161	28	3	88	0	119	2	1	2	0	5	451
04:15 PM	47	122	0	0	169	3	147	19	0	169	38	2	81	0	121	0	2	5	0	7	466
04:30 PM	43	137	5	0	185	2	153	29	0	184	39	4	70	0	113	1	5	4	0	10	492
04:45 PM	38	113	0	0	151	1	160	25	0	186	34	4	83	0	121	3	3	4	0	10	468
Total	165	501	5	0	671	9	600	91	0	700	139	13	322	0	474	6	11	15	0	32	1877
05:00 PM	46	127	0	0	173	4	126	20	0	150	30	3	77	0	110	7	8	3	0	18	451
05:15 PM	45	147	4	0	196	2	151	24	0	177	37	5	79	0	121	3	4	4	0	11	505
05:30 PM	58	124	2	0	184	0	133	19	0	152	42	2	87	0	131	4	5	4	0	13	480
05:45 PM	39	135	3	0	177	3	140	28	0	171	39	3	76	0	118	1	9	6	0	16	482
Total	188	533	9	0	730	9	550	91	0	650	148	13	319	0	480	15	26	17	0	58	1918
Grand Total	996	2146	23	0	3165	26	1972	292	0	2290	504	30	920	0	1454	36	122	51	0	209	7118
Apprch %	31.5	67.8	0.7	0		1.1	86.1	12.8	0		34.7	2.1	63.3	0		17.2	58.4	24.4	0		
Total %	14	30.1	0.3	0	44.5	0.4	27.7	4.1	0	32.2	7.1	0.4	12.9	0	20.4	0.5	1.7	0.7	0	2.9	

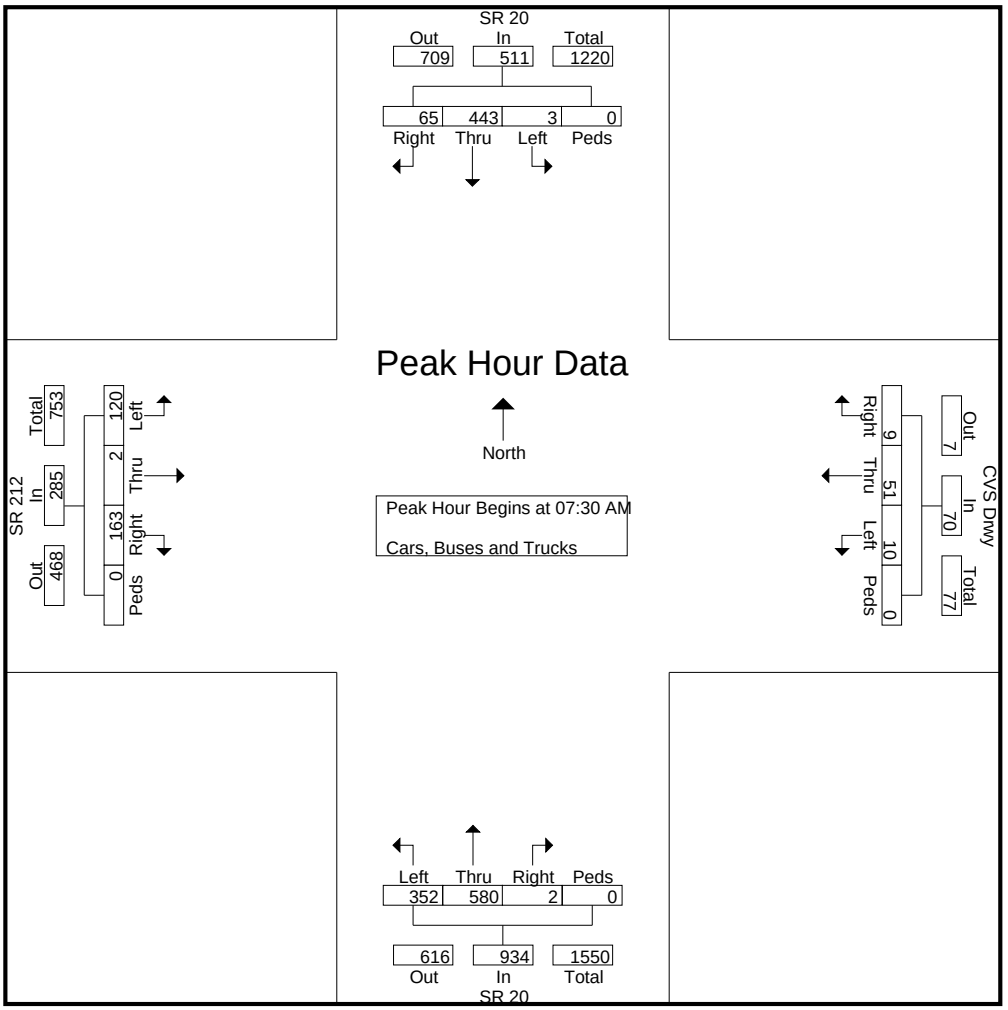
Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
SR 212 @ SR 20
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880004
Site Code : 48880004
Start Date : 5/7/2024
Page No : 2

	SR 20 Northbound					SR 20 Southbound					SR 212 Eastbound					CVS Drwy 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 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	**106**	**164**	0	0	**270**	0	112	12	0	124	**36**	**2**	41	0	**79**	2	16	2	0	20	**493**
07:45 AM	101	159	0	0	260	0	109	**18**	0	127	30	0	**47**	0	77	2	**17**	**3**	0	**22**	486
08:00 AM	68	124	**2**	0	194	**2**	97	18	0	117	25	0	33	0	58	2	10	1	0	13	382
08:15 AM	77	133	0	0	210	1	**125**	17	0	**143**	29	0	42	0	71	**4**	8	3	0	15	439
Total Volume	352	580	2	0	934	3	443	65	0	511	120	2	163	0	285	10	51	9	0	70	1800
% App. Total	37.7	62.1					86.7	12.7			42.1		57.2			14.3	72.9	12.9			
PHF	.830	.884	.250	.000	.865	.375	.886	.903	.000	.893	.833	.250	.867	.000	.902	.625	.750	.750	.000	.795	.913



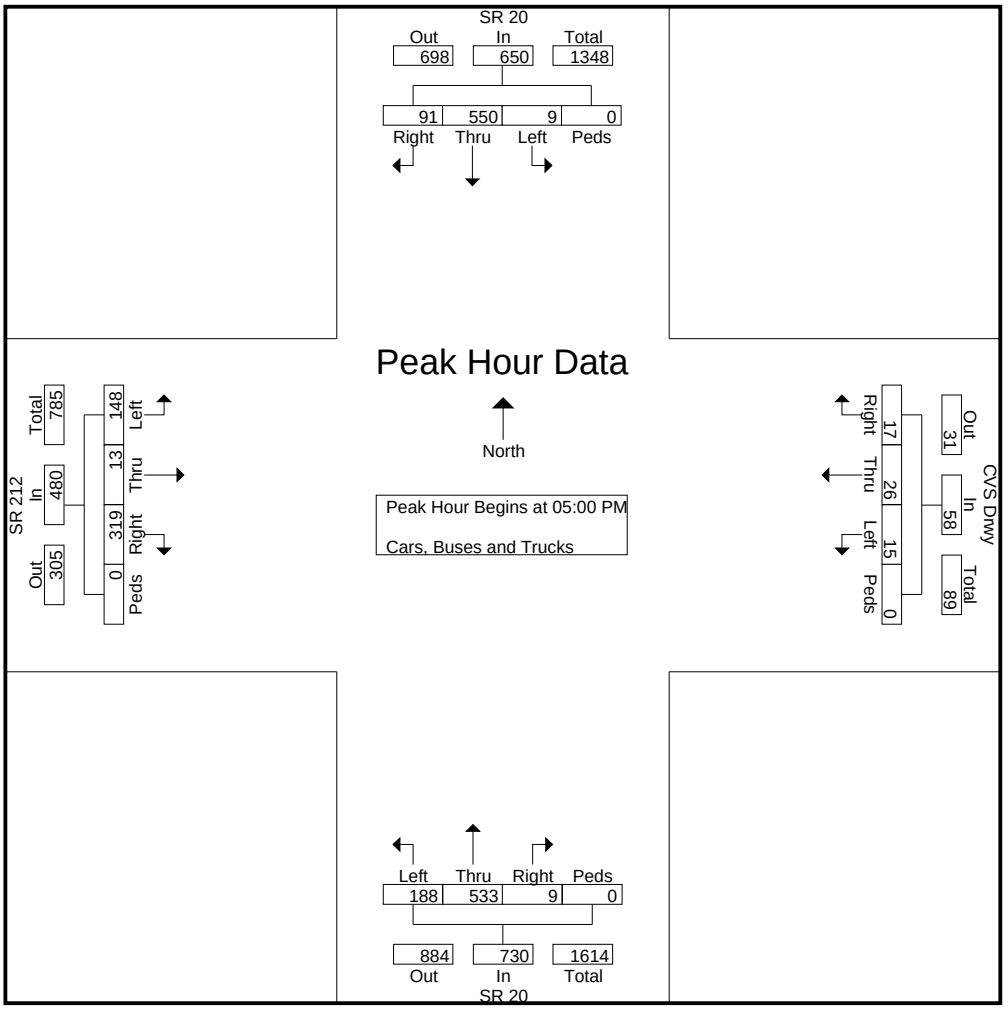
Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

TMC Data
SR 212 @ SR 20
Conyers, GA
7-9 AM | 4-6 PM

File Name : 48880004
Site Code : 48880004
Start Date : 5/7/2024
Page No : 3

	SR 20 Northbound					SR 20 Southbound					SR 212 Eastbound					CVS Drwy 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 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	46	127	0	0	173	**4**	126	20	0	150	30	3	77	0	110	**7**	8	3	0	**18**	451
05:15 PM	45	**147**	**4**	0	**196**	2	**151**	24	0	**177**	37	**5**	79	0	121	3	4	4	0	11	**505**
05:30 PM	**58**	124	2	0	184	0	133	19	0	152	**42**	2	**87**	0	**131**	4	5	4	0	13	480
05:45 PM	39	135	3	0	177	3	140	**28**	0	171	39	3	76	0	118	1	**9**	**6**	0	16	482
Total Volume	188	533	9	0	730	9	550	91	0	650	148	13	319	0	480	15	26	17	0	58	1918
% App. Total	25.8						84.6				30.8		66.5			25.9	44.8	29.3			
PHF	.810	.906	.563	.000	.931	.563	.911	.813	.000	.918	.881	.650	.917	.000	.916	.536	.722	.708	.000	.806	.950



Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

ADT Data

Site Code: 48880101
Oglesby Bridge Rd west of SR212
Conyers, GA

Start Time	07-May-24 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	27			3	24				
12:15		2	29			6	37				
12:30		0	24			3	18				
12:45		1	39	4	119	4	37	16	116	20	235
01:00		3	31			2	31				
01:15		1	40			1	30				
01:30		2	44			3	30				
01:45		3	35	9	150	4	38	10	129	19	279
02:00		0	34			3	39				
02:15		5	41			2	47				
02:30		1	37			2	49				
02:45		2	52	8	164	2	34	9	169	17	333
03:00		1	53			1	44				
03:15		2	44			3	56				
03:30		4	56			2	53				
03:45		3	67	10	220	4	61	10	214	20	434
04:00		2	61			4	56				
04:15		7	65			3	57				
04:30		7	70			3	63				
04:45		10	69	26	265	8	63	18	239	44	504
05:00		11	53			5	58				
05:15		11	84			11	99				
05:30		9	70			12	90				
05:45		21	84	52	291	14	87	42	334	94	625
06:00		18	78			17	54				
06:15		19	60			32	66				
06:30		26	58			58	48				
06:45		31	50	94	246	71	52	178	220	272	466
07:00		53	45			116	36				
07:15		49	50			121	31				
07:30		63	39			94	30				
07:45		65	35	230	169	89	50	420	147	650	316
08:00		38	29			86	30				
08:15		65	21			72	34				
08:30		52	26			44	24				
08:45		47	26	202	102	35	28	237	116	439	218
09:00		29	25			40	21				
09:15		34	10			33	18				
09:30		38	22			31	20				
09:45		28	13	129	70	30	22	134	81	263	151
10:00		30	12			33	23				
10:15		23	8			24	17				
10:30		21	6			32	12				
10:45		31	9	105	35	30	12	119	64	224	99
11:00		39	8			30	9				
11:15		31	11			20	3				
11:30		35	4			30	8				
11:45		30	4	135	27	38	2	118	22	253	49
Total		1004	1858			1311	1851			2315	3709
Percent		35.1%	64.9%			41.5%	58.5%			38.4%	61.6%
Grand Total		1004	1858			1311	1851			2315	3709
Percent		35.1%	64.9%			41.5%	58.5%			38.4%	61.6%

ADT ADT 6,024 AADT 6,024

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159

ADT Data

Site Code: 48880102
SR212 north of Oglesby Bridge Rd
Conyers, GA

Start Time	07-May-24 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		4	60			17	61				
12:15		10	58			20	63				
12:30		4	52			6	46				
12:45		11	63	29	233	8	64	51	234	80	467
01:00		4	54			6	61				
01:15		5	66			7	65				
01:30		5	56			6	62				
01:45		3	72	17	248	5	78	24	266	41	514
02:00		5	52			9	70				
02:15		6	63			4	84				
02:30		5	62			2	93				
02:45		3	57	19	234	2	85	17	332	36	566
03:00		4	65			2	91				
03:15		13	42			1	98				
03:30		9	53			3	115				
03:45		11	56	37	216	3	122	9	426	46	642
04:00		18	51			8	127				
04:15		17	67			3	114				
04:30		29	63			3	123				
04:45		35	71	99	252	5	131	19	495	118	747
05:00		62	61			6	137				
05:15		83	71			5	163				
05:30		76	77			5	153				
05:45		102	65	323	274	8	119	24	572	347	846
06:00		122	54			8	127				
06:15		158	69			18	122				
06:30		140	66			20	115				
06:45		127	37	547	226	34	84	80	448	627	674
07:00		106	49			31	93				
07:15		124	36			35	88				
07:30		130	36			50	85				
07:45		124	46	484	167	54	91	170	357	654	524
08:00		111	47			47	84				
08:15		115	29			39	74				
08:30		106	34			42	56				
08:45		97	39	429	149	54	58	182	272	611	421
09:00		64	25			47	47				
09:15		85	25			36	44				
09:30		75	26			41	36				
09:45		80	22	304	98	51	39	175	166	479	264
10:00		78	15			66	43				
10:15		64	25			34	21				
10:30		56	13			46	23				
10:45		50	13	248	66	48	20	194	107	442	173
11:00		49	14			48	17				
11:15		47	7			40	22				
11:30		55	8			51	21				
11:45		52	8	203	37	57	19	196	79	399	116
Total		2739	2200			1141	3754			3880	5954
Percent		55.5%	44.5%			23.3%	76.7%			39.5%	60.5%
Grand Total		2739	2200			1141	3754			3880	5954
Percent		55.5%	44.5%			23.3%	76.7%			39.5%	60.5%
ADT		ADT 9,834		AADT 9,834							

Appendix B

Intersection Analysis Methodology

Intersection Analysis Methodology

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board's 2022 *Highway Capacity Manual*, 7th Edition (HCM 7). Synchro 12 software, which emulates the HCM 7 methodology, was used for all analyses. The following is an overview of the methodology employed for the analysis of signalized intersections and roundabouts and stop-sign controlled (unsignalized) intersections. Levels of service (LOS) are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay.

Signalized Intersections and Roundabouts – Level of service for a signalized intersection and a roundabout is defined in terms of control delay per vehicle. For signalized intersections and roundabouts, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections and roundabouts than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals/roundabouts, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections and roundabouts are shown in Table A.

Table A – Level of Service Criteria for Signalized Intersections and Roundabouts

Control Delay (s/veh)	LOS
≤ 10	A
> 10 and ≤ 20	B
> 20 and ≤ 35	C
> 35 and ≤ 55	D
> 55 and ≤ 80	E
> 80	F

Source: Highway Capacity Manual 7

Unsignalized Intersections – Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory, factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream. The level of service criteria for unsignalized intersections are presented in Table B.

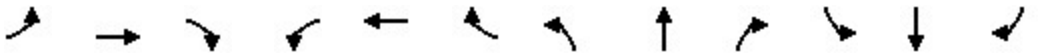
Table B – Level of Service Criteria for Unsignalized Intersections

Control Delay (s/veh)	LOS
0 – 10	A
> 10 and ≤ 15	B
> 15 and ≤ 25	C
> 25 and ≤ 35	D
> 35 and ≤ 50	E
> 50	F

Source: Highway Capacity Manual 7

Appendix C

Existing Intersection Operational Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	104	49	20	151	47	217	350	40	16	102	58
Future Volume (veh/h)	83	104	49	20	151	47	217	350	40	16	102	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	97	121	0	25	186	0	231	372	43	19	120	0
Peak Hour Factor	0.86	0.86	0.86	0.81	0.81	0.81	0.94	0.94	0.94	0.85	0.85	0.85
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	298	398		348	398		778	884	749	521	725	
Arrive On Green	0.22	0.22	0.00	0.22	0.22	0.00	0.11	0.48	0.48	0.02	0.40	0.00
Sat Flow, veh/h	1169	1826	1547	1240	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	97	121	0	25	186	0	231	372	43	19	120	0
Grp Sat Flow(s),veh/h/ln	1169	1826	1547	1240	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	3.9	2.7	0.0	0.8	4.4	0.0	3.4	6.5	0.7	0.3	2.1	0.0
Cycle Q Clear(g_c), s	8.2	2.7	0.0	3.6	4.4	0.0	3.4	6.5	0.7	0.3	2.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	298	398		348	398		778	884	749	521	725	
V/C Ratio(X)	0.33	0.30		0.07	0.47		0.30	0.42	0.06	0.04	0.17	
Avail Cap(c_a), veh/h	471	669		532	669		905	884	749	657	725	
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.3	16.1	0.0	17.6	16.7	0.0	6.1	8.2	6.7	8.4	9.6	0.0
Incr Delay (d2), s/veh	0.6	0.4	0.0	0.1	0.9	0.0	0.2	1.5	0.1	0.0	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.0	0.0	0.2	1.6	0.0	0.8	2.0	0.2	0.1	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.9	16.5	0.0	17.7	17.6	0.0	6.3	9.7	6.9	8.4	10.0	0.0
LnGrp LOS	C	B		B	B		A	A	A	A	B	
Approach Vol, veh/h		218			211			646			139	
Approach Delay, s/veh		18.5			17.6			8.3			9.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	28.3		15.2	9.9	24.0		15.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	23.5		18.0	9.0	19.5		18.0				
Max Q Clear Time (g_c+I1), s	2.3	8.5		10.2	5.4	4.1		6.4				
Green Ext Time (p_c), s	0.0	1.9		0.5	0.2	0.4		0.7				

Intersection Summary		
HCM 7th Control Delay, s/veh		11.9
HCM 7th LOS		B

Notes

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

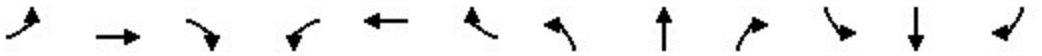
Intersection	
Int Delay, s/veh	16.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	123	314	98	83	57	35
Future Vol, veh/h	123	314	98	83	57	35
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	71	71	82	82	85	85
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	173	442	120	101	67	41

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	345	170	0	0	221	0
Stage 1	170	-	-	-	-	-
Stage 2	175	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	645	866	-	-	1331	-
Stage 1	853	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	612	866	-	-	1331	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	804	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	24.98	0	4.86
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	775	1115	-
HCM Lane V/C Ratio	-	-	0.794	0.05	-
HCM Control Delay (s/veh)	-	-	25	7.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	8.2	0.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	417	28	74	403	92	62	526	90	68	191	113
Future Volume (veh/h)	153	417	28	74	403	92	62	526	90	68	191	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	170	463	0	79	429	0	67	572	0	77	217	0
Peak Hour Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	249	526		212	478		535	736		277	741	
Arrive On Green	0.08	0.29	0.00	0.05	0.26	0.00	0.05	0.40	0.00	0.05	0.41	0.00
Sat Flow, veh/h	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	170	463	0	79	429	0	67	572	0	77	217	0
Grp Sat Flow(s),veh/h/ln	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	6.1	20.7	0.0	2.8	19.4	0.0	1.9	23.3	0.0	2.2	6.9	0.0
Cycle Q Clear(g_c), s	6.1	20.7	0.0	2.8	19.4	0.0	1.9	23.3	0.0	2.2	6.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	526		212	478		535	736		277	741	
V/C Ratio(X)	0.68	0.88		0.37	0.90		0.13	0.78		0.28	0.29	
Avail Cap(c_a), veh/h	249	587		228	555		558	736		293	741	
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.5	29.1	0.0	23.5	30.5	0.0	13.8	22.2	0.0	16.9	17.2	0.0
Incr Delay (d2), s/veh	7.5	13.5	0.0	1.1	15.9	0.0	0.1	7.9	0.0	0.5	1.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	10.3	0.0	1.1	9.9	0.0	0.7	10.5	0.0	0.8	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.9	42.5	0.0	24.5	46.4	0.0	13.9	30.1	0.0	17.5	18.2	0.0
LnGrp LOS	C	D		C	D		B	C		B	B	
Approach Vol, veh/h		633			508			639			294	
Approach Delay, s/veh		39.4			43.0			28.4			18.0	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	39.0	8.7	29.2	8.5	39.2	11.0	26.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	34.5	5.0	27.5	5.1	34.4	6.5	26.0
Max Q Clear Time (g_c+I1), s	4.2	25.3	4.8	22.7	3.9	8.9	8.1	21.4
Green Ext Time (p_c), s	0.0	2.3	0.0	1.1	0.0	1.1	0.0	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	33.9
HCM 7th LOS	C

Notes

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

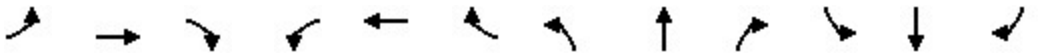
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	2	163	10	51	9	352	580	2	3	443	65
Future Volume (veh/h)	120	2	163	10	51	9	352	580	2	3	443	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1870	1826	1870	1870	1870	1826	1826	1870	1870	1826	1826
Adj Flow Rate, veh/h	133	2	0	12	64	11	405	667	2	3	498	0
Peak Hour Factor	0.90	0.90	0.90	0.80	0.80	0.80	0.87	0.87	0.87	0.89	0.89	0.89
Percent Heavy Veh, %	5	2	5	2	2	2	5	5	2	2	5	5
Cap, veh/h	299	3		86	175	28	653	1327	1152	514	933	
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.12	0.14	0.73	0.73	0.51	0.51	0.00
Sat Flow, veh/h	1472	22	1547	135	1447	229	1739	1826	1585	768	1826	1547
Grp Volume(v), veh/h	135	0	0	87	0	0	405	667	2	3	498	0
Grp Sat Flow(s),veh/h/ln	1495	0	1547	1811	0	0	1739	1826	1585	768	1826	1547
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.0	0.0	5.7	9.3	0.0	0.1	10.8	0.0
Cycle Q Clear(g_c), s	4.9	0.0	0.0	2.6	0.0	0.0	5.7	9.3	0.0	0.1	10.8	0.0
Prop In Lane	0.99		1.00	0.14		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	302	0		288	0	0	653	1327	1152	514	933	
V/C Ratio(X)	0.45	0.00		0.30	0.00	0.00	0.62	0.50	0.00	0.01	0.53	
Avail Cap(c_a), veh/h	545	0		610	0	0	777	1327	1152	514	933	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	0.0	24.0	0.0	0.0	6.4	3.5	2.2	7.1	9.7	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.6	0.0	0.0	1.1	1.4	0.0	0.0	2.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	1.1	0.0	0.0	1.4	2.2	0.0	0.0	4.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.9	0.0	0.0	24.6	0.0	0.0	7.5	4.8	2.2	7.1	11.9	0.0
LnGrp LOS	C			C			A	A	A	A	B	
Approach Vol, veh/h		135			87			1074			501	
Approach Delay, s/veh		25.9			24.6			5.9			11.9	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.5		11.7	12.8	34.7		11.7				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		43.0		18.0	12.5	26.0		18.0				
Max Q Clear Time (g_c+I1), s		11.3		6.9	7.7	12.8		4.6				
Green Ext Time (p_c), s		5.3		0.5	0.6	2.7		0.3				

Intersection Summary	
HCM 7th Control Delay, s/veh	9.9
HCM 7th LOS	A

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	129	104	61	173	38	55	181	20	44	411	106
Future Volume (veh/h)	55	129	104	61	173	38	55	181	20	44	411	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	59	137	0	72	204	0	60	199	22	48	452	0
Peak Hour Factor	0.94	0.94	0.94	0.85	0.85	0.85	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	258	364		309	364		517	877	743	702	863	
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.00	0.06	0.48	0.48	0.05	0.47	0.00
Sat Flow, veh/h	1150	1826	1547	1222	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	59	137	0	72	204	0	60	199	22	48	452	0
Grp Sat Flow(s),veh/h/ln	1150	1826	1547	1222	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	2.4	3.2	0.0	2.7	5.0	0.0	0.8	3.2	0.4	0.7	8.6	0.0
Cycle Q Clear(g_c), s	7.4	3.2	0.0	5.9	5.0	0.0	0.8	3.2	0.4	0.7	8.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	364		309	364		517	877	743	702	863	
V/C Ratio(X)	0.23	0.38		0.23	0.56		0.12	0.23	0.03	0.07	0.52	
Avail Cap(c_a), veh/h	445	661		508	661		594	877	743	792	863	
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.3	17.2	0.0	19.8	17.9	0.0	6.5	7.5	6.8	5.9	9.2	0.0
Incr Delay (d2), s/veh	0.4	0.6	0.0	0.4	1.4	0.0	0.1	0.6	0.1	0.0	2.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.2	0.0	0.7	1.9	0.0	0.2	1.0	0.1	0.2	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.7	17.9	0.0	20.2	19.3	0.0	6.6	8.1	6.9	6.0	11.5	0.0
LnGrp LOS	C	B		C	B		A	A	A	A	B	
Approach Vol, veh/h		196			276			281			500	
Approach Delay, s/veh		19.0			19.5			7.7			10.9	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.4		14.4	7.3	28.0		14.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	23.5		18.0	5.0	23.5		18.0				
Max Q Clear Time (g_c+I1), s	2.7	5.2		9.4	2.8	10.6		7.9				
Green Ext Time (p_c), s	0.0	0.9		0.5	0.0	2.0		0.9				

Intersection Summary	
HCM 7th Control Delay, s/veh	13.4
HCM 7th LOS	B

Notes

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

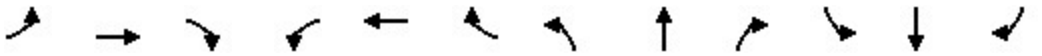
Intersection	
Int Delay, s/veh	12.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	195	73	108	136	121	125
Future Vol, veh/h	195	73	108	136	121	125
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	81	81	85	85	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	241	90	127	160	132	136

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	606	207	0	0	287	0
Stage 1	207	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	455	826	-	-	1258	-
Stage 1	820	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	404	826	-	-	1258	-
Mov Cap-2 Maneuver	404	-	-	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	595	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	29.02	0	4.03
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	469	885	-
HCM Lane V/C Ratio	-	-	0.705	0.105	-
HCM Control Delay (s/veh)	-	-	29	8.2	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	5.5	0.3	-



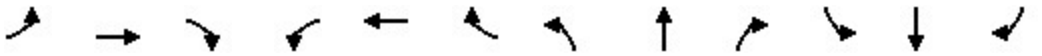
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	369	30	122	376	77	33	367	61	129	639	102
Future Volume (veh/h)	165	369	30	122	376	77	33	367	61	129	639	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	177	397	0	133	409	0	40	448	0	136	673	0
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.82	0.82	0.82	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	231	465		234	445		234	769		400	816	
Arrive On Green	0.07	0.25	0.00	0.06	0.24	0.00	0.04	0.42	0.00	0.06	0.45	0.00
Sat Flow, veh/h	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	177	397	0	133	409	0	40	448	0	136	673	0
Grp Sat Flow(s),veh/h/ln	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	6.5	18.5	0.0	5.1	19.5	0.0	1.1	16.8	0.0	3.9	28.8	0.0
Cycle Q Clear(g_c), s	6.5	18.5	0.0	5.1	19.5	0.0	1.1	16.8	0.0	3.9	28.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	465		234	445		234	769		400	816	
V/C Ratio(X)	0.77	0.85		0.57	0.92		0.17	0.58		0.34	0.83	
Avail Cap(c_a), veh/h	231	481		234	460		271	769		400	816	
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.6	31.7	0.0	25.3	32.9	0.0	17.7	19.8	0.0	14.8	21.6	0.0
Incr Delay (d2), s/veh	14.1	13.6	0.0	3.2	23.3	0.0	0.3	3.2	0.0	0.5	9.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	9.3	0.0	2.2	10.9	0.0	0.4	7.1	0.0	1.4	12.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.7	45.3	0.0	28.5	56.2	0.0	18.0	23.0	0.0	15.3	30.9	0.0
LnGrp LOS	D	D		C	E		B	C		B	C	
Approach Vol, veh/h		574			542			488			809	
Approach Delay, s/veh		43.9			49.4			22.6			28.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	42.1	10.0	27.2	7.6	44.4	11.0	26.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.4	37.6	5.5	23.5	5.0	38.0	6.5	22.5
Max Q Clear Time (g_c+I1), s	5.9	18.8	7.1	20.5	3.1	30.8	8.5	21.5
Green Ext Time (p_c), s	0.0	2.4	0.0	0.6	0.0	2.4	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	35.6
HCM 7th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	13	319	15	26	17	188	533	9	9	550	91
Future Volume (veh/h)	148	13	319	15	26	17	188	533	9	9	550	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1870	1826	1870	1870	1870	1826	1826	1870	1870	1826	1826
Adj Flow Rate, veh/h	161	14	0	19	32	21	202	573	10	10	598	0
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	5	2	5	2	2	2	5	5	2	2	5	5
Cap, veh/h	318	18		113	149	77	520	1283	1113	575	1004	
Arrive On Green	0.15	0.15	0.00	0.15	0.15	0.15	0.08	0.70	0.70	0.55	0.55	0.00
Sat Flow, veh/h	1360	118	1547	259	988	514	1739	1826	1585	832	1826	1547
Grp Volume(v), veh/h	175	0	0	72	0	0	202	573	10	10	598	0
Grp Sat Flow(s),veh/h/ln	1479	0	1547	1761	0	0	1739	1826	1585	832	1826	1547
Q Serve(g_s), s	4.6	0.0	0.0	0.0	0.0	0.0	2.7	8.3	0.1	0.3	13.4	0.0
Cycle Q Clear(g_c), s	6.8	0.0	0.0	2.2	0.0	0.0	2.7	8.3	0.1	0.3	13.4	0.0
Prop In Lane	0.92		1.00	0.26		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	0		340	0	0	520	1283	1113	575	1004	
V/C Ratio(X)	0.52	0.00		0.21	0.00	0.00	0.39	0.45	0.01	0.02	0.60	
Avail Cap(c_a), veh/h	534	0		575	0	0	595	1283	1113	575	1004	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	0.0	23.0	0.0	0.0	6.6	4.0	2.7	6.3	9.2	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.3	0.0	0.0	0.5	1.1	0.0	0.1	2.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	0.9	0.0	0.0	0.7	2.2	0.0	0.1	5.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.0	0.0	0.0	23.3	0.0	0.0	7.0	5.1	2.7	6.3	11.8	0.0
LnGrp LOS	C			C			A	A	A	A	B	
Approach Vol, veh/h		175			72			785			608	
Approach Delay, s/veh		26.0			23.3			5.6			11.7	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.5		13.7	9.3	38.2		13.7				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		43.0		18.0	7.5	31.0		18.0				
Max Q Clear Time (g_c+I1), s		10.3		8.8	4.7	15.4		4.2				
Green Ext Time (p_c), s		4.3		0.6	0.1	3.7		0.2				

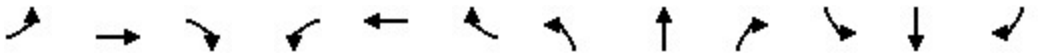
Intersection Summary	
HCM 7th Control Delay, s/veh	10.8
HCM 7th LOS	B

Notes

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

Appendix D

No-Build Intersection Operational Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	115	54	22	167	52	240	386	44	18	113	64
Future Volume (veh/h)	92	115	54	22	167	52	240	386	44	18	113	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	107	134	0	27	206	0	255	411	47	21	133	0
Peak Hour Factor	0.86	0.86	0.86	0.81	0.81	0.81	0.94	0.94	0.94	0.85	0.85	0.85
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	301	430		357	430		755	863	731	477	689	
Arrive On Green	0.24	0.24	0.00	0.24	0.24	0.00	0.12	0.47	0.47	0.03	0.38	0.00
Sat Flow, veh/h	1148	1826	1547	1226	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	107	134	0	27	206	0	255	411	47	21	133	0
Grp Sat Flow(s),veh/h/ln	1148	1826	1547	1226	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	4.5	3.1	0.0	0.9	4.9	0.0	4.0	7.8	0.8	0.4	2.5	0.0
Cycle Q Clear(g_c), s	9.4	3.1	0.0	4.0	4.9	0.0	4.0	7.8	0.8	0.4	2.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	301	430		357	430		755	863	731	477	689	
V/C Ratio(X)	0.36	0.31		0.08	0.48		0.34	0.48	0.06	0.04	0.19	
Avail Cap(c_a), veh/h	439	650		504	650		869	863	731	605	689	
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.7	16.0	0.0	17.6	16.7	0.0	6.6	9.1	7.3	9.2	10.6	0.0
Incr Delay (d2), s/veh	0.7	0.4	0.0	0.1	0.8	0.0	0.3	1.9	0.2	0.0	0.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.1	0.0	0.2	1.8	0.0	0.9	2.5	0.2	0.1	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.4	16.4	0.0	17.7	17.5	0.0	6.9	11.0	7.4	9.3	11.2	0.0
LnGrp LOS	C	B		B	B		A	B	A	A	B	
Approach Vol, veh/h		241			233			713			154	
Approach Delay, s/veh		18.6			17.5			9.3			10.9	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	28.4		16.4	10.6	23.6		16.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	23.5		18.0	9.4	19.1		18.0				
Max Q Clear Time (g_c+I1), s	2.4	9.8		11.4	6.0	4.5		6.9				
Green Ext Time (p_c), s	0.0	2.0		0.5	0.2	0.5		0.8				

Intersection Summary		
HCM 7th Control Delay, s/veh		12.6
HCM 7th LOS		B

Notes

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

Intersection	
Int Delay, s/veh	25.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	136	347	108	92	63	39
Future Vol, veh/h	136	347	108	92	63	39
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	71	71	82	82	85	85
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	192	489	132	112	74	46

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	382	188	0	0	244	0
Stage 1	188	-	-	-	-	-
Stage 2	194	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	615	847	-	-	1305	-
Stage 1	837	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	579	847	-	-	1305	-
Mov Cap-2 Maneuver	579	-	-	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	38.06	0	4.89
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	749	1112	-
HCM Lane V/C Ratio	-	-	0.908	0.057	-
HCM Control Delay (s/veh)	-	-	38.1	7.9	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	12.2	0.2	-

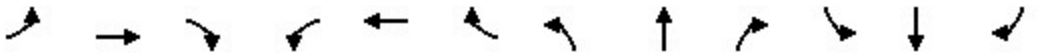
Intersection	
Int Delay, s/veh	10.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	136	347	108	92	63	39
Future Vol, veh/h	136	347	108	92	63	39
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	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	82	82	85	85
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	192	489	132	112	74	46

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	382	188	0	0	244	0
Stage 1	188	-	-	-	-	-
Stage 2	194	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	615	847	-	-	1305	-
Stage 1	837	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	579	847	-	-	1305	-
Mov Cap-2 Maneuver	579	-	-	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	14.72	0	4.89
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	579	847	1112	-
HCM Lane V/C Ratio	-	-	0.331	0.577	0.057	-
HCM Control Delay (s/veh)	-	-	14.3	14.9	7.9	0
HCM Lane LOS	-	-	B	B	A	A
HCM 95th %tile Q(veh)	-	-	1.4	3.8	0.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	460	31	82	445	102	68	581	99	75	211	125
Future Volume (veh/h)	169	460	31	82	445	102	68	581	99	75	211	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	188	511	0	87	473	0	74	632	0	85	240	0
Peak Hour Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	242	560		202	509		497	711		219	715	
Arrive On Green	0.08	0.31	0.00	0.05	0.28	0.00	0.05	0.39	0.00	0.05	0.39	0.00
Sat Flow, veh/h	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	188	511	0	87	473	0	74	632	0	85	240	0
Grp Sat Flow(s),veh/h/ln	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	6.9	23.9	0.0	3.1	22.3	0.0	2.2	28.6	0.0	2.6	8.2	0.0
Cycle Q Clear(g_c), s	6.9	23.9	0.0	3.1	22.3	0.0	2.2	28.6	0.0	2.6	8.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	560		202	509		497	711		219	715	
V/C Ratio(X)	0.78	0.91		0.43	0.93		0.15	0.89		0.39	0.34	
Avail Cap(c_a), veh/h	242	567		212	526		515	711		231	715	
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.8	29.6	0.0	23.8	31.1	0.0	15.0	25.2	0.0	19.8	18.9	0.0
Incr Delay (d2), s/veh	14.5	19.1	0.0	1.4	22.9	0.0	0.1	15.4	0.0	1.1	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	12.6	0.0	1.3	12.3	0.0	0.8	14.1	0.0	1.0	3.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.3	48.7	0.0	25.3	54.0	0.0	15.2	40.6	0.0	21.0	20.1	0.0
LnGrp LOS	D	D		C	D		B	D		C	C	
Approach Vol, veh/h		699			560			706			325	
Approach Delay, s/veh		45.9			49.5			38.0			20.3	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	39.0	9.0	31.6	8.7	39.2	11.5	29.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	34.5	5.0	27.5	5.1	34.4	7.0	25.5
Max Q Clear Time (g_c+I1), s	4.6	30.6	5.1	25.9	4.2	10.2	8.9	24.3
Green Ext Time (p_c), s	0.0	1.4	0.0	0.5	0.0	1.2	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	40.7
HCM 7th LOS	D

Notes

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

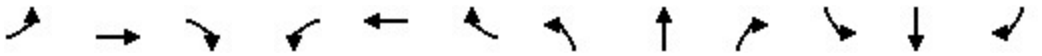
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	2	180	11	56	10	389	640	2	3	489	72
Future Volume (veh/h)	132	2	180	11	56	10	389	640	2	3	489	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1870	1826	1870	1870	1870	1826	1826	1870	1870	1826	1826
Adj Flow Rate, veh/h	147	2	0	14	70	12	447	736	2	3	549	0
Peak Hour Factor	0.90	0.90	0.90	0.80	0.80	0.80	0.87	0.87	0.87	0.89	0.89	0.89
Percent Heavy Veh, %	5	2	5	2	2	2	5	5	2	2	5	5
Cap, veh/h	312	3		88	189	30	617	1312	1139	469	885	
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.13	0.16	0.72	0.72	0.48	0.48	0.00
Sat Flow, veh/h	1471	20	1547	143	1442	226	1739	1826	1585	720	1826	1547
Grp Volume(v), veh/h	149	0	0	96	0	0	447	736	2	3	549	0
Grp Sat Flow(s),veh/h/ln	1491	0	1547	1812	0	0	1739	1826	1585	720	1826	1547
Q Serve(g_s), s	2.6	0.0	0.0	0.0	0.0	0.0	6.7	11.4	0.0	0.1	13.3	0.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0	2.9	0.0	0.0	6.7	11.4	0.0	0.1	13.3	0.0
Prop In Lane	0.99		1.00	0.15		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	0		306	0	0	617	1312	1139	469	885	
V/C Ratio(X)	0.47	0.00		0.31	0.00	0.00	0.72	0.56	0.00	0.01	0.62	
Avail Cap(c_a), veh/h	539	0		603	0	0	762	1312	1139	469	885	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	0.0	23.8	0.0	0.0	8.4	4.0	2.4	8.0	11.4	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.6	0.0	0.0	2.6	1.7	0.0	0.0	3.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	1.2	0.0	0.0	1.9	2.8	0.0	0.0	5.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.9	0.0	0.0	24.4	0.0	0.0	11.0	5.7	2.4	8.0	14.6	0.0
LnGrp LOS	C			C			B	A	A	A	B	
Approach Vol, veh/h		149			96			1185			552	
Approach Delay, s/veh		25.9			24.4			7.7			14.6	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.5		12.3	14.0	33.5		12.3				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		43.0		18.0	14.5	24.0		18.0				
Max Q Clear Time (g_c+I1), s		13.4		7.5	8.7	15.3		4.9				
Green Ext Time (p_c), s		6.0		0.5	0.8	2.4		0.3				

Intersection Summary		
HCM 7th Control Delay, s/veh	11.8	
HCM 7th LOS	B	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	142	115	67	191	42	61	200	22	49	454	117
Future Volume (veh/h)	61	142	115	67	191	42	61	200	22	49	454	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	65	151	0	79	225	0	67	220	24	54	499	0
Peak Hour Factor	0.94	0.94	0.94	0.85	0.85	0.85	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	259	392		315	392		472	855	725	671	841	
Arrive On Green	0.21	0.21	0.00	0.21	0.21	0.00	0.06	0.47	0.47	0.05	0.46	0.00
Sat Flow, veh/h	1128	1826	1547	1207	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	65	151	0	79	225	0	67	220	24	54	499	0
Grp Sat Flow(s),veh/h/ln	1128	1826	1547	1207	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	2.8	3.6	0.0	3.1	5.6	0.0	1.0	3.7	0.4	0.8	10.3	0.0
Cycle Q Clear(g_c), s	8.4	3.6	0.0	6.7	5.6	0.0	1.0	3.7	0.4	0.8	10.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	392		315	392		472	855	725	671	841	
V/C Ratio(X)	0.25	0.39		0.25	0.57		0.14	0.26	0.03	0.08	0.59	
Avail Cap(c_a), veh/h	415	644		482	644		538	855	725	750	841	
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.7	17.2	0.0	20.0	17.9	0.0	7.2	8.2	7.3	6.4	10.2	0.0
Incr Delay (d2), s/veh	0.5	0.6	0.0	0.4	1.3	0.0	0.1	0.7	0.1	0.1	3.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	0.0	0.8	2.1	0.0	0.2	1.2	0.1	0.2	3.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.2	17.8	0.0	20.4	19.3	0.0	7.4	8.9	7.4	6.4	13.3	0.0
LnGrp LOS	C	B		C	B		A	A	A	A	B	
Approach Vol, veh/h		216			304			311			553	
Approach Delay, s/veh		19.1			19.6			8.5			12.6	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	28.4		15.4	7.6	28.0		15.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	23.5		18.0	5.0	23.5		18.0				
Max Q Clear Time (g_c+I1), s	2.8	5.7		10.4	3.0	12.3		8.7				
Green Ext Time (p_c), s	0.0	1.0		0.5	0.0	2.2		0.9				

Intersection Summary		
HCM 7th Control Delay, s/veh		14.2
HCM 7th LOS		B

Notes

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

Intersection	
Int Delay, s/veh	18.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	215	81	119	150	134	138
Future Vol, veh/h	215	81	119	150	134	138
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	81	81	85	85	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	265	100	140	176	146	150

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	670	228	0	0	316	0
Stage 1	228	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	418	804	-	-	1227	-
Stage 1	803	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	364	804	-	-	1227	-
Mov Cap-2 Maneuver	364	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	559	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	46.26	0	4.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	428	887	-
HCM Lane V/C Ratio	-	-	0.854	0.119	-
HCM Control Delay (s/veh)	-	-	46.3	8.3	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	8.4	0.4	-

Intersection	
Int Delay, s/veh	12.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	215	81	119	150	134	138
Future Vol, veh/h	215	81	119	150	134	138
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	200	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	85	85	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	265	100	140	176	146	150

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	670	228	0	0	316	0
Stage 1	228	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	418	804	-	-	1227	-
Stage 1	803	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	364	804	-	-	1227	-
Mov Cap-2 Maneuver	364	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	559	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	29.96	0	4.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	364	804	887	-
HCM Lane V/C Ratio	-	-	0.73	0.124	0.119	-
HCM Control Delay (s/veh)	-	-	37.4	10.1	8.3	0
HCM Lane LOS	-	-	E	B	A	A
HCM 95th %tile Q(veh)	-	-	5.6	0.4	0.4	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	407	33	135	415	85	36	405	67	142	705	113
Future Volume (veh/h)	182	407	33	135	415	85	36	405	67	142	705	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	196	438	0	147	451	0	44	494	0	149	742	0
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.82	0.82	0.82	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	246	491		253	483		155	721		329	757	
Arrive On Green	0.08	0.27	0.00	0.08	0.26	0.00	0.04	0.40	0.00	0.06	0.41	0.00
Sat Flow, veh/h	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	196	438	0	147	451	0	44	494	0	149	742	0
Grp Sat Flow(s),veh/h/ln	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	7.4	20.7	0.0	5.4	21.7	0.0	1.3	20.2	0.0	4.6	36.0	0.0
Cycle Q Clear(g_c), s	7.4	20.7	0.0	5.4	21.7	0.0	1.3	20.2	0.0	4.6	36.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	491		253	483		155	721		329	757	
V/C Ratio(X)	0.80	0.89		0.58	0.93		0.28	0.68		0.45	0.98	
Avail Cap(c_a), veh/h	246	494		253	486		187	721		329	757	
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.6	31.6	0.0	23.9	32.3	0.0	21.7	22.5	0.0	17.5	25.9	0.0
Incr Delay (d2), s/veh	16.4	18.2	0.0	3.3	25.4	0.0	1.0	5.2	0.0	1.0	28.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	10.9	0.0	2.3	12.3	0.0	0.5	8.9	0.0	1.7	19.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.0	49.8	0.0	27.2	57.7	0.0	22.7	27.8	0.0	18.5	54.0	0.0
LnGrp LOS	D	D		C	E		C	C		B	D	
Approach Vol, veh/h		634			598			538			891	
Approach Delay, s/veh		47.1			50.2			27.3			48.1	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	40.0	11.6	28.6	7.8	41.8	12.0	28.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	35.5	7.1	24.3	5.0	35.6	7.5	23.9
Max Q Clear Time (g_c+I1), s	6.6	22.2	7.4	22.7	3.3	38.0	9.4	23.7
Green Ext Time (p_c), s	0.0	2.3	0.0	0.4	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	44.1
HCM 7th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	14	352	17	29	19	208	588	10	10	607	100
Future Volume (veh/h)	163	14	352	17	29	19	208	588	10	10	607	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1870	1826	1870	1870	1870	1826	1826	1870	1870	1826	1826
Adj Flow Rate, veh/h	177	15	0	21	36	23	224	632	11	11	660	0
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	5	2	5	2	2	2	5	5	2	2	5	5
Cap, veh/h	332	19		115	162	82	469	1264	1098	533	978	
Arrive On Green	0.16	0.16	0.00	0.16	0.16	0.16	0.08	0.69	0.69	0.54	0.54	0.00
Sat Flow, veh/h	1359	115	1547	259	998	508	1739	1826	1585	787	1826	1547
Grp Volume(v), veh/h	192	0	0	80	0	0	224	632	11	11	660	0
Grp Sat Flow(s),veh/h/ln	1475	0	1547	1765	0	0	1739	1826	1585	787	1826	1547
Q Serve(g_s), s	5.1	0.0	0.0	0.0	0.0	0.0	3.2	10.1	0.1	0.4	16.3	0.0
Cycle Q Clear(g_c), s	7.6	0.0	0.0	2.4	0.0	0.0	3.2	10.1	0.1	0.8	16.3	0.0
Prop In Lane	0.92		1.00	0.26		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	0		360	0	0	469	1264	1098	533	978	
V/C Ratio(X)	0.55	0.00		0.22	0.00	0.00	0.48	0.50	0.01	0.02	0.67	
Avail Cap(c_a), veh/h	526	0		569	0	0	532	1264	1098	533	978	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.7	0.0	0.0	22.8	0.0	0.0	8.1	4.5	3.0	7.0	10.5	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.3	0.0	0.0	0.8	1.4	0.0	0.1	3.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	1.0	0.0	0.0	0.9	2.8	0.0	0.1	6.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.1	0.0	0.0	23.1	0.0	0.0	8.9	5.9	3.0	7.0	14.2	0.0
LnGrp LOS	C			C			A	A	A	A	B	
Approach Vol, veh/h		192			80			867			671	
Approach Delay, s/veh		26.1			23.1			6.6			14.1	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.5		14.6	9.7	37.8		14.6				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		43.0		18.0	7.5	31.0		18.0				
Max Q Clear Time (g_c+I1), s		12.1		9.6	5.2	18.3		4.4				
Green Ext Time (p_c), s		4.9		0.6	0.1	3.8		0.3				

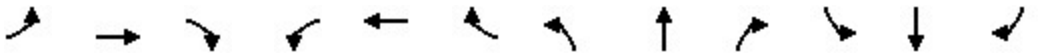
Intersection Summary	
HCM 7th Control Delay, s/veh	12.2
HCM 7th LOS	B

Notes

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

Appendix E

Future Intersection Operational Analysis



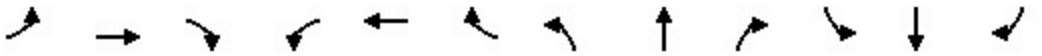
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	141	72	22	189	56	255	401	44	34	127	64
Future Volume (veh/h)	92	141	72	22	189	56	255	401	44	34	127	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	107	164	0	27	233	0	271	427	47	40	149	0
Peak Hour Factor	0.86	0.86	0.86	0.81	0.81	0.81	0.94	0.94	0.94	0.85	0.85	0.85
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	294	455		347	455		732	822	696	464	666	
Arrive On Green	0.25	0.25	0.00	0.25	0.25	0.00	0.13	0.45	0.45	0.04	0.36	0.00
Sat Flow, veh/h	1120	1826	1547	1193	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	107	164	0	27	233	0	271	427	47	40	149	0
Grp Sat Flow(s),veh/h/ln	1120	1826	1547	1193	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	4.7	3.9	0.0	1.0	5.7	0.0	4.5	8.8	0.9	0.7	2.9	0.0
Cycle Q Clear(g_c), s	10.5	3.9	0.0	4.9	5.7	0.0	4.5	8.8	0.9	0.7	2.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	294	455		347	455		732	822	696	464	666	
V/C Ratio(X)	0.36	0.36		0.08	0.51		0.37	0.52	0.07	0.09	0.22	
Avail Cap(c_a), veh/h	401	629		461	629		840	822	696	558	666	
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.4	16.2	0.0	18.2	16.9	0.0	7.1	10.3	8.1	9.6	11.5	0.0
Incr Delay (d2), s/veh	0.8	0.5	0.0	0.1	0.9	0.0	0.3	2.3	0.2	0.1	0.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.4	0.0	0.2	2.1	0.0	1.1	3.0	0.3	0.2	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.1	16.6	0.0	18.3	17.8	0.0	7.5	12.7	8.3	9.7	12.3	0.0
LnGrp LOS	C	B		B	B		A	B	A	A	B	
Approach Vol, veh/h		271			260			745			189	
Approach Delay, s/veh		18.8			17.8			10.5			11.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	28.0		17.5	11.2	23.5		17.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	23.5		18.0	9.9	18.6		18.0				
Max Q Clear Time (g_c+I1), s	2.7	10.8		12.5	6.5	4.9		7.7				
Green Ext Time (p_c), s	0.0	2.0		0.6	0.3	0.5		0.9				

Intersection Summary	
HCM 7th Control Delay, s/veh	13.5
HCM 7th LOS	B

Notes

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



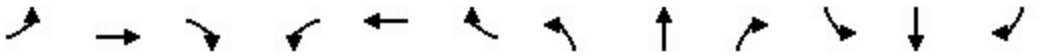
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	460	43	97	445	102	80	594	120	75	220	125
Future Volume (veh/h)	169	460	43	97	445	102	80	594	120	75	220	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	188	511	0	103	473	0	87	646	0	85	250	0
Peak Hour Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	236	543		199	502		497	723		216	722	
Arrive On Green	0.08	0.30	0.00	0.06	0.28	0.00	0.05	0.40	0.00	0.05	0.40	0.00
Sat Flow, veh/h	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	188	511	0	103	473	0	87	646	0	85	250	0
Grp Sat Flow(s),veh/h/ln	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	7.0	24.4	0.0	3.8	22.7	0.0	2.6	29.6	0.0	2.6	8.6	0.0
Cycle Q Clear(g_c), s	7.0	24.4	0.0	3.8	22.7	0.0	2.6	29.6	0.0	2.6	8.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	236	543		199	502		497	723		216	722	
V/C Ratio(X)	0.80	0.94		0.52	0.94		0.17	0.89		0.39	0.35	
Avail Cap(c_a), veh/h	236	543		199	502		514	723		228	722	
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.2	30.6	0.0	24.4	31.7	0.0	14.9	25.2	0.0	20.0	18.9	0.0
Incr Delay (d2), s/veh	17.0	24.7	0.0	2.3	26.2	0.0	0.2	15.7	0.0	1.2	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	13.6	0.0	1.6	12.9	0.0	1.0	14.6	0.0	1.0	3.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.3	55.3	0.0	26.7	57.9	0.0	15.1	41.0	0.0	21.1	20.2	0.0
LnGrp LOS	D	E		C	E		B	D		C	C	
Approach Vol, veh/h		699			576			733			335	
Approach Delay, s/veh		51.5			52.3			37.9			20.5	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	39.9	9.5	31.1	8.9	39.9	11.5	29.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	35.4	5.0	26.6	5.3	35.1	7.0	24.6
Max Q Clear Time (g_c+I1), s	4.6	31.6	5.8	26.4	4.6	10.6	9.0	24.7
Green Ext Time (p_c), s	0.0	1.4	0.0	0.1	0.0	1.3	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	43.0
HCM 7th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	4	190	11	56	10	402	640	2	3	489	74
Future Volume (veh/h)	137	4	190	11	56	10	402	640	2	3	489	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1870	1826	1870	1870	1870	1826	1826	1870	1870	1826	1826
Adj Flow Rate, veh/h	152	4	0	14	70	12	462	736	2	3	549	0
Peak Hour Factor	0.90	0.90	0.90	0.80	0.80	0.80	0.87	0.87	0.87	0.89	0.89	0.89
Percent Heavy Veh, %	5	2	5	2	2	2	5	5	2	2	5	5
Cap, veh/h	316	5		88	197	31	615	1304	1132	460	864	
Arrive On Green	0.14	0.14	0.00	0.14	0.14	0.14	0.17	0.71	0.71	0.47	0.47	0.00
Sat Flow, veh/h	1449	38	1547	140	1445	227	1739	1826	1585	720	1826	1547
Grp Volume(v), veh/h	156	0	0	96	0	0	462	736	2	3	549	0
Grp Sat Flow(s),veh/h/ln	1487	0	1547	1812	0	0	1739	1826	1585	720	1826	1547
Q Serve(g_s), s	2.9	0.0	0.0	0.0	0.0	0.0	7.1	11.6	0.0	0.1	13.6	0.0
Cycle Q Clear(g_c), s	5.8	0.0	0.0	2.9	0.0	0.0	7.1	11.6	0.0	0.1	13.6	0.0
Prop In Lane	0.97		1.00	0.15		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	0		316	0	0	615	1304	1132	460	864	
V/C Ratio(X)	0.49	0.00		0.30	0.00	0.00	0.75	0.56	0.00	0.01	0.64	
Avail Cap(c_a), veh/h	536	0		600	0	0	774	1304	1132	460	864	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	0.0	23.7	0.0	0.0	8.8	4.1	2.5	8.4	11.9	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.5	0.0	0.0	3.2	1.8	0.0	0.0	3.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	1.2	0.0	0.0	2.1	3.0	0.0	0.0	5.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.9	0.0	0.0	24.2	0.0	0.0	11.9	5.9	2.5	8.4	15.5	0.0
LnGrp LOS	C			C			B	A	A	A	B	
Approach Vol, veh/h		156			96			1200			552	
Approach Delay, s/veh		25.9			24.2			8.2			15.5	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.5		12.7	14.5	33.0		12.7				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		43.0		18.0	15.5	23.0		18.0				
Max Q Clear Time (g_c+I1), s		13.6		7.8	9.1	15.6		4.9				
Green Ext Time (p_c), s		6.0		0.5	0.9	2.1		0.3				

Intersection Summary		
HCM 7th Control Delay, s/veh	12.4	
HCM 7th LOS	B	

Notes

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

Intersection	
Int Delay, s/veh	46.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	159	375	108	111	76	39
Future Vol, veh/h	159	375	108	111	76	39
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	71	71	82	82	85	85
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	224	528	132	135	89	46

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	424	199	0	0	267	0
Stage 1	199	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	581	834	-	-	1280	-
Stage 1	827	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	539	834	-	-	1280	-
Mov Cap-2 Maneuver	539	-	-	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	70.79	0	5.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	717	1190	-
HCM Lane V/C Ratio	-	-	1.048	0.07	-
HCM Control Delay (s/veh)	-	-	70.8	8	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	19.1	0.2	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	18	6	554	234	11
Future Vol, veh/h	31	18	6	554	234	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	94	94	85	85
Heavy Vehicles, %	2	2	2	5	5	2
Mvmt Flow	41	24	6	589	275	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	877	275	288	0	-	0
Stage 1	275	-	-	-	-	-
Stage 2	602	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	319	763	1274	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	317	763	1274	-	-	-
Mov Cap-2 Maneuver	317	-	-	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	547	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.63	0.08	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1274	-	404	-	-
HCM Lane V/C Ratio	0.005	-	0.162	-	-
HCM Control Delay (s/veh)	7.8	-	15.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	17	28	521	205	47
Future Vol, veh/h	34	17	28	521	205	47
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	-	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	94	94	85	85
Heavy Vehicles, %	2	2	2	5	5	2
Mvmt Flow	43	21	30	554	241	55

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	855	241	296	0	-	0
Stage 1	241	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	329	798	1265	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	321	798	1265	-	-	-
Mov Cap-2 Maneuver	321	-	-	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.68	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1265	-	401	-	-
HCM Lane V/C Ratio	0.024	-	0.159	-	-
HCM Control Delay (s/veh)	7.9	-	15.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	285	498	5	16	23
Future Vol, veh/h	8	285	498	5	16	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	81	81	75	75
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	9	331	615	6	21	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	621	0	-	0	965	615
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	350	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	960	-	-	-	283	491
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	713	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	960	-	-	-	280	491
Mov Cap-2 Maneuver	-	-	-	-	280	-
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	713	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.24	0	16.13
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	960	-	-	-	375
HCM Lane V/C Ratio	0.01	-	-	-	0.139
HCM Control Delay (s/veh)	8.8	-	-	-	16.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	296	488	5	16	15
Future Vol, veh/h	5	296	488	5	16	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	81	81	75	75
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	6	344	602	6	21	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	609	0	-	0	958	602
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	356	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	970	-	-	-	285	499
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	709	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	970	-	-	-	284	499
Mov Cap-2 Maneuver	-	-	-	-	284	-
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	709	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.15	0	16.34
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	970	-	-	-	359
HCM Lane V/C Ratio	0.006	-	-	-	0.115
HCM Control Delay (s/veh)	8.7	-	-	-	16.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

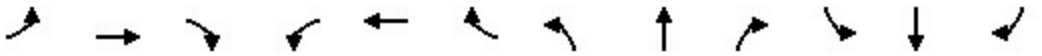
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	287	465	42	15	21
Future Vol, veh/h	25	287	465	42	15	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	81	81	80	80
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	29	334	574	52	19	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	626	0	-	0	966	574
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	392	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	956	-	-	-	282	518
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	683	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	956	-	-	-	274	518
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	683	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.71	0	15.82
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	956	-	-	-	378
HCM Lane V/C Ratio	0.03	-	-	-	0.119
HCM Control Delay (s/veh)	8.9	-	-	-	15.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4



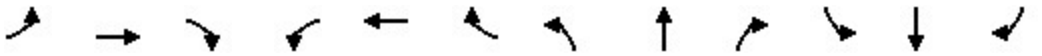
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	171	145	67	243	55	94	229	22	71	482	117
Future Volume (veh/h)	61	171	145	67	243	55	94	229	22	71	482	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	65	182	0	79	286	0	103	252	24	78	530	0
Peak Hour Factor	0.94	0.94	0.94	0.85	0.85	0.85	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	244	446		322	446		432	808	685	624	792	
Arrive On Green	0.24	0.24	0.00	0.24	0.24	0.00	0.07	0.44	0.44	0.06	0.43	0.00
Sat Flow, veh/h	1067	1826	1547	1173	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	65	182	0	79	286	0	103	252	24	78	530	0
Grp Sat Flow(s),veh/h/ln	1067	1826	1547	1173	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	3.1	4.5	0.0	3.3	7.6	0.0	1.7	4.8	0.5	1.3	12.5	0.0
Cycle Q Clear(g_c), s	10.8	4.5	0.0	7.8	7.6	0.0	1.7	4.8	0.5	1.3	12.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	446		322	446		432	808	685	624	792	
V/C Ratio(X)	0.27	0.41		0.25	0.64		0.24	0.31	0.04	0.12	0.67	
Avail Cap(c_a), veh/h	338	607		425	607		466	808	685	677	792	
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.2	17.2	0.0	20.5	18.3	0.0	8.7	9.8	8.5	7.4	12.2	0.0
Incr Delay (d2), s/veh	0.6	0.6	0.0	0.4	1.5	0.0	0.3	1.0	0.1	0.1	4.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.7	0.0	0.8	2.8	0.0	0.5	1.6	0.1	0.3	4.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.7	17.8	0.0	20.9	19.9	0.0	9.0	10.8	8.6	7.4	16.7	0.0
LnGrp LOS	C	B		C	B		A	B	A	A	B	
Approach Vol, veh/h		247			365			379			608	
Approach Delay, s/veh		19.3			20.1			10.1			15.5	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	28.5		17.7	8.4	28.0		17.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.1	23.4		18.0	5.0	23.5		18.0				
Max Q Clear Time (g_c+I1), s	3.3	6.8		12.8	3.7	14.5		9.8				
Green Ext Time (p_c), s	0.0	1.2		0.5	0.0	2.1		1.1				

Intersection Summary		
HCM 7th Control Delay, s/veh	15.9	
HCM 7th LOS	B	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	407	58	171	415	85	59	423	96	142	727	113
Future Volume (veh/h)	182	407	58	171	415	85	59	423	96	142	727	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	196	438	0	186	451	0	72	516	0	149	765	0
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.82	0.82	0.82	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	225	509		228	488		162	738		327	757	
Arrive On Green	0.07	0.28	0.00	0.06	0.27	0.00	0.05	0.40	0.00	0.06	0.41	0.00
Sat Flow, veh/h	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	196	438	0	186	451	0	72	516	0	149	765	0
Grp Sat Flow(s),veh/h/ln	1739	1826	1547	1739	1826	1547	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	6.1	20.2	0.0	5.1	21.4	0.0	2.1	20.9	0.0	4.5	36.8	0.0
Cycle Q Clear(g_c), s	6.1	20.2	0.0	5.1	21.4	0.0	2.1	20.9	0.0	4.5	36.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	509		228	488		162	738		327	757	
V/C Ratio(X)	0.87	0.86		0.82	0.92		0.44	0.70		0.46	1.01	
Avail Cap(c_a), veh/h	225	532		228	512		189	738		327	757	
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.9	30.4	0.0	29.7	31.7	0.0	21.2	22.0	0.0	17.1	26.0	0.0
Incr Delay (d2), s/veh	28.6	13.1	0.0	19.9	22.1	0.0	1.9	5.5	0.0	1.0	35.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	10.1	0.0	2.7	11.7	0.0	0.8	9.1	0.0	1.7	21.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.6	43.5	0.0	49.7	53.8	0.0	23.1	27.5	0.0	18.0	61.3	0.0
LnGrp LOS	E	D		D	D		C	C		B	F	
Approach Vol, veh/h		634			637			588			914	
Approach Delay, s/veh		47.5			52.6			26.9			54.3	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	40.4	9.6	29.3	8.7	41.3	10.6	28.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	35.9	5.1	25.9	5.5	35.5	6.1	24.9
Max Q Clear Time (g_c+I1), s	6.5	22.9	7.1	22.2	4.1	38.8	8.1	23.4
Green Ext Time (p_c), s	0.0	2.4	0.0	0.8	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	46.5
HCM 7th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	15	358	17	30	19	237	588	10	10	607	105
Future Volume (veh/h)	166	15	358	17	30	19	237	588	10	10	607	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1870	1826	1870	1870	1870	1826	1826	1870	1870	1826	1826
Adj Flow Rate, veh/h	180	16	0	21	37	23	255	632	11	11	660	0
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	5	2	5	2	2	2	5	5	2	2	5	5
Cap, veh/h	335	20		115	167	83	471	1260	1094	528	958	
Arrive On Green	0.17	0.17	0.00	0.17	0.17	0.17	0.09	0.69	0.69	0.52	0.52	0.00
Sat Flow, veh/h	1354	120	1547	257	1009	502	1739	1826	1585	787	1826	1547
Grp Volume(v), veh/h	196	0	0	81	0	0	255	632	11	11	660	0
Grp Sat Flow(s),veh/h/ln	1474	0	1547	1767	0	0	1739	1826	1585	787	1826	1547
Q Serve(g_s), s	5.3	0.0	0.0	0.0	0.0	0.0	3.7	10.2	0.1	0.4	16.8	0.0
Cycle Q Clear(g_c), s	7.8	0.0	0.0	2.5	0.0	0.0	3.7	10.2	0.1	0.4	16.8	0.0
Prop In Lane	0.92		1.00	0.26		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	0		365	0	0	471	1260	1094	528	958	
V/C Ratio(X)	0.55	0.00		0.22	0.00	0.00	0.54	0.50	0.01	0.02	0.69	
Avail Cap(c_a), veh/h	524	0		568	0	0	518	1260	1094	528	958	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.7	0.0	0.0	22.7	0.0	0.0	8.7	4.6	3.0	7.1	11.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.3	0.0	0.0	1.0	1.4	0.0	0.1	4.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	1.0	0.0	0.0	1.1	2.9	0.0	0.1	6.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.1	0.0	0.0	23.0	0.0	0.0	9.7	6.0	3.0	7.2	15.1	0.0
LnGrp LOS	C			C			A	A	A	A	B	
Approach Vol, veh/h		196			81			898			671	
Approach Delay, s/veh		26.1			23.0			7.0			14.9	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.5		14.8	10.3	37.2		14.8				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		43.0		18.0	7.5	31.0		18.0				
Max Q Clear Time (g_c+I1), s		12.2		9.8	5.7	18.8		4.5				
Green Ext Time (p_c), s		4.9		0.6	0.1	3.7		0.3				

Intersection Summary		
HCM 7th Control Delay, s/veh	12.6	
HCM 7th LOS	B	

Notes

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

Intersection	
Int Delay, s/veh	60.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	254	107	119	193	171	138
Future Vol, veh/h	254	107	119	193	171	138
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	81	81	85	85	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	314	132	140	227	186	150

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	775	254	0	0	367	0
Stage 1	254	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	362	778	-	-	1175	-
Stage 1	782	-	-	-	-	-
Stage 2	589	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 300	778	-	-	1175	-
Mov Cap-2 Maneuver	~ 300	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	488	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	51.66	0	4.78
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	366	996	-
HCM Lane V/C Ratio	-	-	1.217	0.158	-
HCM Control Delay (s/veh)	-	-	151.7	8.6	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	18.8	0.6	-

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	12	19	391	689	38
Future Vol, veh/h	22	12	19	391	689	38
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	-	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	91	91	91	91
Heavy Vehicles, %	2	2	2	5	5	2
Mvmt Flow	31	17	21	430	757	42

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1229	757	799	0	-	0
Stage 1	757	-	-	-	-	-
Stage 2	471	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	197	407	824	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	192	407	824	-	-	-
Mov Cap-2 Maneuver	192	-	-	-	-	-
Stage 1	451	-	-	-	-	-
Stage 2	628	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	24.2	0.44	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	824	-	236	-	-
HCM Lane V/C Ratio	0.025	-	0.206	-	-
HCM Control Delay (s/veh)	9.5	-	24.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	99	93	43	313	580	121
Future Vol, veh/h	99	93	43	313	580	121
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	-	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	91	91	91	91
Heavy Vehicles, %	2	2	2	5	5	2
Mvmt Flow	124	116	47	344	637	133

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1076	637	770	0	-	0
Stage 1	637	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	243	477	844	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	229	477	844	-	-	-
Mov Cap-2 Maneuver	229	-	-	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	650	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	48.78	1.15	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	844	-	306	-	-
HCM Lane V/C Ratio	0.056	-	0.784	-	-
HCM Control Delay (s/veh)	9.5	-	48.8	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0.2	-	6.2	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	372	418	18	10	16
Future Vol, veh/h	26	372	418	18	10	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	85	85	70	70
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	28	396	492	21	14	23

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	513	0	-	0	943	492
Stage 1	-	-	-	-	492	-
Stage 2	-	-	-	-	451	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1052	-	-	-	291	577
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1052	-	-	-	284	577
Mov Cap-2 Maneuver	-	-	-	-	284	-
Stage 1	-	-	-	-	599	-
Stage 2	-	-	-	-	642	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.56	0	14.58
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1052	-	-	-	413
HCM Lane V/C Ratio	0.026	-	-	-	0.09
HCM Control Delay (s/veh)	8.5	-	-	-	14.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	364	426	18	10	10
Future Vol, veh/h	18	364	426	18	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	85	85	70	70
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	19	387	501	21	14	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	522	0	-	0	927	501
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	426	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1044	-	-	-	298	570
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	659	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1044	-	-	-	293	570
Mov Cap-2 Maneuver	-	-	-	-	293	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	659	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.4	0	15.05
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1044	-	-	-	387
HCM Lane V/C Ratio	0.018	-	-	-	0.074
HCM Control Delay (s/veh)	8.5	-	-	-	15.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	312	384	70	67	62
Future Vol, veh/h	62	312	384	70	67	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	85	85	80	80
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	66	332	452	82	84	78

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	534	0	-	0	916	452
Stage 1	-	-	-	-	452	-
Stage 2	-	-	-	-	464	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1034	-	-	-	303	608
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	633	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1034	-	-	-	283	608
Mov Cap-2 Maneuver	-	-	-	-	283	-
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	633	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.45	0	21.21
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1034	-	-	-	381
HCM Lane V/C Ratio	0.064	-	-	-	0.423
HCM Control Delay (s/veh)	8.7	-	-	-	21.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	2